



December 27, 2018

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

FILED

2018 DEC 27 P 3:17

PUBLIC UTILITIES
COMMISSION

Dear Commissioners:

Subject: Hawaiian Electric Energy Cost Recovery Factor for January 2019

Hawaiian Electric Company, Inc.'s ("Hawaiian Electric" or "Company") January 2019 Energy Cost Recovery Factor is 14.095 cents per kilowatt-hour ("kWh"), an increase of 8.542 cents per kWh from last month. The Energy Cost Recovery Factor includes recovery of base fuel beginning January 1, 2019. A residential customer consuming 500 kWh of electricity will be paying \$161.36, a decrease of \$8.28 compared to rates effective December 1, 2018. The decrease in the residential typical bill is due to an increase in the Purchase Power Adjustment Clause rate (+\$0.01), the implementation of the Energy Cost Recovery Factor (+\$42.71), an increase to the Green Infrastructure Fee (+\$0.14), and the termination of the base fuel energy charge (-\$51.14) due to the implementation of the Energy Cost Recovery Factor.

The Company's fuel composite cost of major energy decreased 282.56 cents per million BTU to 1,336.12 cents per million BTU. The Company's composite cost of minor energy decreased 30.993 cents per kWh to 25.240 cents per kWh. The composite cost of purchased energy decreased 0.853 cents per kWh to 8.967 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 January 1, 2019.

Very truly yours,

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>12/01/18</u>	<u>01/01/19</u>	
Composite Cost Of Major Energy, ¢/mmbtu	1,618.68	1,336.12	(282.56)
Composite Cost Of Minor Energy, ¢/kwh	56.233	25.240	(30.993)
Composite Cost Of Purchased Energy, ¢/kWh	9.820	8.967	(0.853)
 <u>Residential, Schedule "R"</u>			
Energy Cost Recovery, ¢/kWh	5.553	14.095	8.542
 <u>Others, Schedules "G,J,DS,P,F"</u>			
Energy Cost Recovery, ¢/kWh	5.553	14.095	8.542
 <u>Residential Customer with:</u>			
500 kWh Consumption, \$/bill	169.64	161.36	(8.28)
600 kWh Consumption, \$/bill	201.82	191.85	(9.97)

Supersedes Sheet Effective: December 1, 2018

Hawaiian Electric Company, Inc.
ENERGY COST RECOVERY FILING

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

Line
1 **Effective Date** - January 1, 2019
2 **Supersedes Factor** - December 1, 2018

GENERATION COMPONENT

MAJOR ENERGY COMPONENT				MINOR ENERGY COMPONENT			
FUEL PRICES, ¢/mmbtu				Fuel Type	Gen Cost ¢/KWH	Percent of Minor Energy	Weighted Gen Cost ¢/KWH
3	Honolulu		0.00	32a Airport DG	33.46	0.91%	0.3059
4	Kahe		1,336.20	32b CIP-Biodiesel	0.00	0.00%	0.0000
5	Waiau-Steam		1,335.88	32c CIP-Diesel	34.09	13.92%	4.7456
6	(Future Use)		0.00	32d SGS - Biodiesel	50.43	26.26%	13.2410
7	(Future Use)		0.00	32e SGS - ULSD	18.48	3.69%	0.6812
8	(Future Use)		0.00	32f Waiau-Diesel	33.53	18.69%	6.2665
9	Other		0	32g West Loch PV	0.00	36.53%	0.0000
BTU MIX, %				32h COMPOSITE COST OF MINOR ENERGY, ¢/kWh			
10	Honolulu		0.00	ENERGY, ¢/kWh			
11	Kahe		74.93	33 % Input to System kWh Mix			
12	Waiau-Steam		25.07	34 WTD COMP MINOR ENERGY COST, ¢/kWh (Lines 32f x 33)			
13	(Future Use)		0.00	35 2017 TY Loss Factor			
14	(Future Use)		0.00	36 WTD COMP MINOR ENERGY COST, ¢/kWh (Line 34 x 35)			
15	(Future Use)		0.00	37 BASE MINOR ENERGY COMP COST			
16	Other		0.00	38 Base % Input to System kWh Mix			
			100.00	39 WTD BASE MINOR ENERGY COST, ¢/kWh (Line 37 x 38)			
17	COMPOSITE COST OF GENERATION, MAJOR ENERGY ¢/mmbtu			1,336.12	40 2017 TY Loss Factor		
18	% Input to system kWh Mix			50.99	41 WTD COMP MINOR ENERGY COST, ¢/kWh (Line 39 x 40)		
EFFICIENCY FACTOR, mmbtu/kWh				42 Cost Less Base (Line 36 - 41)			
	(A)	(B)	(C)	(D)	43 Revenue Tax Adjustment (1 / (1-0.08885))		
			Percent of	Weighted	44 MINOR ENERGY FACTOR, ¢/kWh (Line 42 x 43)		
	Fuel Type	Eff Factor	Centrl Stn +	Eff Factor			
		mmbtu/kwh	Other				
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)			7.60658			
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)			7.60658			
30	Revenue Tax Adjustment (1 / (1-0.08885))			1.097514			
31	MAJOR ENERGY GENERATION FACTOR, ¢/KWH (Line 29 x 30)			8.34833			

SUMMARY OF TOTAL GENERATION FACTOR, ¢/kWh	
45 MAJOR ENERGY (line 31)	8.34833
46 MINOR ENERGY (line 44)	- 0.50272
47 TOTAL GENERATION FACTOR, ¢/KWH (lines 45 + 46)	- 8.85105

Hawaiian Electric Company, Inc.
ENERGY COST RECOVERY FILING

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

Line		
1	Effective Date	- January 1, 2019
2	Supercedes Factor	- December 1, 2018

Line	PURCHASED ENERGY COMPONENT		
	PURCHASED ENERGY PRICE - FOSSIL - ¢/KWH		
48	PAR Hawaii	- On Peak	12.107
49	PAR Hawaii	- Off Peak	13.054
50	IES Downstream	- On Peak	12.107
51	IES Downstream	- Off Peak	13.054
52	Kalaeloa		11.021
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	Kawaiioa		22.395
59	Kahuku Wind		21.013
60	Waianae Solar PV		14.500
61	As Available I		22.397
62	FIT		19.254
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	0.27
69	PAR Hawaii	- Off Peak	0.19
70	IES Downstream	- On Peak	0.02
71	IES Downstream	- Off Peak	0.01
72	Kalaeloa		32.17
73	AES-HI		45.18
73a	Subtotal Fossil %		77.84
	PURCHASED ENERGY KWH MIX - RENEWABLE - %		
74	HRRV	- On Peak	7.73
75		- Off Peak	2.90
76	HRRV	- On Peak (excess)	0.00
77		- Off Peak (excess)	2.14
78	Kawaiioa		3.16
79	Kahuku Wind		2.01
80	Waianae Solar PV		1.96
81	As Available I		0.59
82	FIT		1.42
83	CBRE PV		0.25
84	(Future IPP)		0.00
85	(Future IPP)		0.00
86	(Future IPP)		0.00
87	(Future IPP)		0.00
87a	Subtotal Renewable %		22.16
87b	Total Purchased Energy %		100.00
87c	Composite Cost of Purchased Energy, Fossil		6.56
87d	Composite Cost of Purchased Energy, Renewable		17.42
88	COMPOSITE COST OF PURCHASED ENERGY, ¢/KWH		8.967
89	% Input to System kWh Mix		47.28
90	WTD CMP PURCH ENRGY COST, ¢/KWH (lines 88 x 89)		4.23960
91	2017 TY Loss Factor		1.0490
92	WTD CMP PURCH ENRGY COST, ¢/KWH (lines 90 x 91)		4.44734
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)		4.44734
99	Revenue Tax Adjustment (1 / (1-0.08885))		1.097514
100	PURCHASED ENERGY FACTOR, ¢/KWH (lines 98 x 99)		4.88102

Calculation of Monthly Fossil Fuel Cost Risk Sharing Component		
Baseline LSFO		
101	LSFO \$, baseline month	\$40,843,012
102	LSFO mmbtu, baseline	3,056,838
103	Baseline LSFO, ¢/mmbtu	1336.12
Baseline Diesel		
104	Diesel \$, baseline month	\$1,125,662
105	Diesel mmbtu, baseline	66,898
106	Baseline Diesel, ¢/mmbtu	1,682.66
Month LSFO		
107	LSFO mmbtu, budget	3,056,838
108	LSFO Cost, ¢/mmbtu	1,336.12
109	LSFO ECRC Fossil Cost	\$40,843,012
110	LSFO Base ECRC Recovery Target	\$40,843,012
111	LSFO differential	\$0
Month Diesel		
112	Diesel mmbtu, budget	66,898
113	Diesel Cost, ¢/mmbtu	1,682.66
114	Diesel ECRC Fossil Cost	\$1,125,662
115	Diesel Base ECRC Recovery Target	\$1,125,662
116	Diesel differential	\$0
117	Total Fossil	\$0
118	2% of above	\$0
118A	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	\$0
118B	Maximum Annual Cap (bi-directional)	\$2,500,000
118C	Applicable Monthly Fossil Fuel Cost Risk Sharing	\$0
118D	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	\$0
119	Fossil Cost Risk Sharing before taxes	\$0
120	Revenue Tax Adjustment	1.097514
121	Fossil Cost Risk Sharing w/revenue tax	\$0
122	Forecasted Month MWh Sales	530,400
123	Fossil Fuel Cost Risk Sharing Component, ¢/kWh	0.0000
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)	13.7321
125	(Future Use) Adjustment, ¢/kWh	0.0000
126	ECR Reconciliation Adjustment	0.2380
127	Non-Adjustable Component (line 80E)	0.1253
128	Fossil Fuel Cost Risk Sharing Component (line 123)	0.0000
129	Monthly Energy Cost Recovery Factor (lines 124 + 125 + 126 + 127 + 128)	14.095

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

	<u>Honolulu</u>	<u>Kahe</u>	<u>Waiau</u>
Average Low Sulfur Fuel Oil, ¢/Mbtu	1,335.88	1,335.88	1,335.88
Kahe Fuel Additive, ¢/Mbtu	-	0.32	-
Honolulu Trucking Cost, ¢/Mbtu	-	-	-
Low Sulfur Fuel Oil Prices Used For Filing, ¢/Mbtu	1,335.88	1,336.20	1,335.88
	<u>Waiau</u>	<u>CIP Biodiesel</u>	<u>CIP Diesel</u>
Average Diesel / Biodiesel Oil, ¢/Mbtu	1,738.49	2,794.43	1,579.63
Thruput Charges, ¢/Mbtu	-	-	0
Diesel / Biodiesel Oil Prices Used for Filing, ¢/Mbtu	1,738.49	2,794.43	1,579.63
	<u>SGS ULSD</u>	<u>SGS Biodiesel</u>	
Average Diesel / Biodiesel Oil, ¢/Mbtu	2,000.71	5,459.45	
Thruput Charges, ¢/Mbtu	-	-	
Diesel / Biodiesel Oil Prices Used for Filing, ¢/Mbtu	2,000.71	5,459.45	
	<u>Honolulu</u>	<u>Kahe</u>	<u>Waiau</u>
Average Low Sulfur Fuel Oil, \$/bbl	83.76	83.76	83.76
Kahe Fuel Additive, \$/bbl	-	0.02	-
Honolulu Trucking Cost, \$/bbl	-	-	-
Low Sulfur Fuel Oil Prices Used For Filing, \$/bbl	83.76	83.78	83.76
	<u>Waiau</u>	<u>CIP Biodiesel</u>	<u>CIP Diesel</u>
Average Diesel / Biodiesel Oil, \$/bbl	99.71	145.88	90.50
Thruput Charges, ¢/Mbtu	-	-	-
Diesel / Biodiesel Oil Prices Used for Filing, \$/bbl	99.71	145.88	90.50
	<u>SGS ULSD</u>	<u>SGS Biodiesel</u>	
Average Diesel / Biodiesel Oil, \$/bbl	115.96	292.23	
Thruput Charges, ¢/Mbtu	-	-	
Diesel / Biodiesel Oil Prices Used for Filing, \$/bbl	115.96	292.23	
Distributed Generation Fuel Prices Used for Filing, ¢/kWh			33.460

FOAC January 2019

<u>LSFO</u>	BARRELS	MBTU	AMOUNT	AVE \$/MBTU
Per FOAC run	573,098	3,593,518.56	48,005,036.45	13.358784
Additional	-	-	-	-
Forecast Amt	573,098	3,593,518.56	48,005,036.45	13.358784
	-	6.20	-	ADD'L BBL
	3,593,519	573,098	6.2703	MBTU / BBL
	48,005,036	573,098	83.76	DOLLARS / BBL
<u>WAIU DIESEL</u>	36,160	207,391.70	3,605,482.67	17.384894
	3,605,483	36,160	99.71	DOLLARS / BBL
<u>CIP BIODIESEL</u>	3,784	19,753.34	551,992.94	27.944286
	551,993	3,784	145.88	DOLLARS / BBL
<u>CIP DIESEL</u>	45,688	261,753.10	4,134,723.44	15.796273
	4,134,723	45,688	90.50	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>	11,691	62,578.30	3,416,432.35	54.59452368
	3,416,432	11,691	292.23	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 12-1-18

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
LOW SULFUR FUEL OIL		
Tax *	5.8564	94.47
Ocean Transportation	0.0000	0.00
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
DIESEL		
Tax *	6.7661	115.47
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 *	7.1768	125.24
Ocean Transportation	0.0000	0.00
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
BIODIESEL		
Tax *	7.5995	144.81
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)	\$ 29.80	\$ 54.59	\$ 20.01	Estimated Distributed Generation Fuel Cost (\$/MBTU)
(B)	988	23,347	3276	Estimated MBTU Consumption
(B1)	188	4,449	572	Estimated fuel consumption barrels
(C) = (A) x (B)	\$29,444	\$1,274,633	\$65,553	Estimated Distributed Generation Fuel Cost (\$)
(D)	88,000	2,527,340	354,817	Estimated Distributed Generation kWh
(E) = ((C) ÷ (D)) x 100	<u>33.460</u>	<u>50.430</u>	<u>18.480</u>	c/kWh

Hawaiian Electric Company, Inc.
ECA RECONCILIATION ADJUSTMENT
January 2019

1.	Amount to be collected	\$	3,451,000
2.	Monthly Amount (Line 1 x 1/3)	\$	1,150,333
3.	Revenue Tax Divisor		0.91115
4.	Total (Line 2 / Line 3)	\$	1,262,507
5.	Estimated MWh Sales (JANUARY 2019)		530,400
6.	ECA Reconciliation Adjustment, ¢/kWh (Line 4 ÷ Line 5)		<u><u>0.238</u></u>

HAWAIIAN ELECTRIC COMPANY, INC.
2018 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 '17	(988,400)	(3)	140,027	(1,128,427)	329,467	323,129	(663,027)
December					329,467	305,191	(357,836)
January '18					329,467	320,330	(37,506)
February	(6,640,300)	(4)	(28,376)	(6,611,924)	2,213,433	2,088,724	(4,560,707)
March					2,213,433	2,155,118	(2,405,589)
April					2,213,433	2,229,374	(176,215)
May	(7,499,100)	(1)	(192,161)	(7,306,939)	2,499,700	2,387,495	(5,095,658)
June					2,499,700	2,571,358	(2,524,300)
July					2,499,700	2,540,846	16,546
August	(417,100)	(2)	(24,606)	(392,494)	139,033	142,637	(233,311)
September					139,033	140,763	(92,548)
October					139,033	142,562	50,014
November	(3,451,000)	(3)	46,479	(3,497,479)	1,150,333	1,163,303	(2,284,162)
December					1,150,333		
January '19					1,150,333		

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, 2016	-3.748	129.34	153.97
February 1, 2016	-4.637	127.47	151.74
March 1, 2016	-5.498	123.06	146.43
April 1, 2016	-5.393	123.34	146.76
May 1, 2016	-5.527	124.85	148.58
June 1, 2016	-4.651	129.34	153.95
July 1, 2016	-3.854	133.43	158.90
August 1, 2016	-3.176	134.73	160.45
September 1, 2016	-3.345	133.98	159.57
October 1, 2016	-3.964	130.77	155.71
November 1, 2016	-3.848	131.04	156.03
December 1, 2016	-3.578	132.32	157.56
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

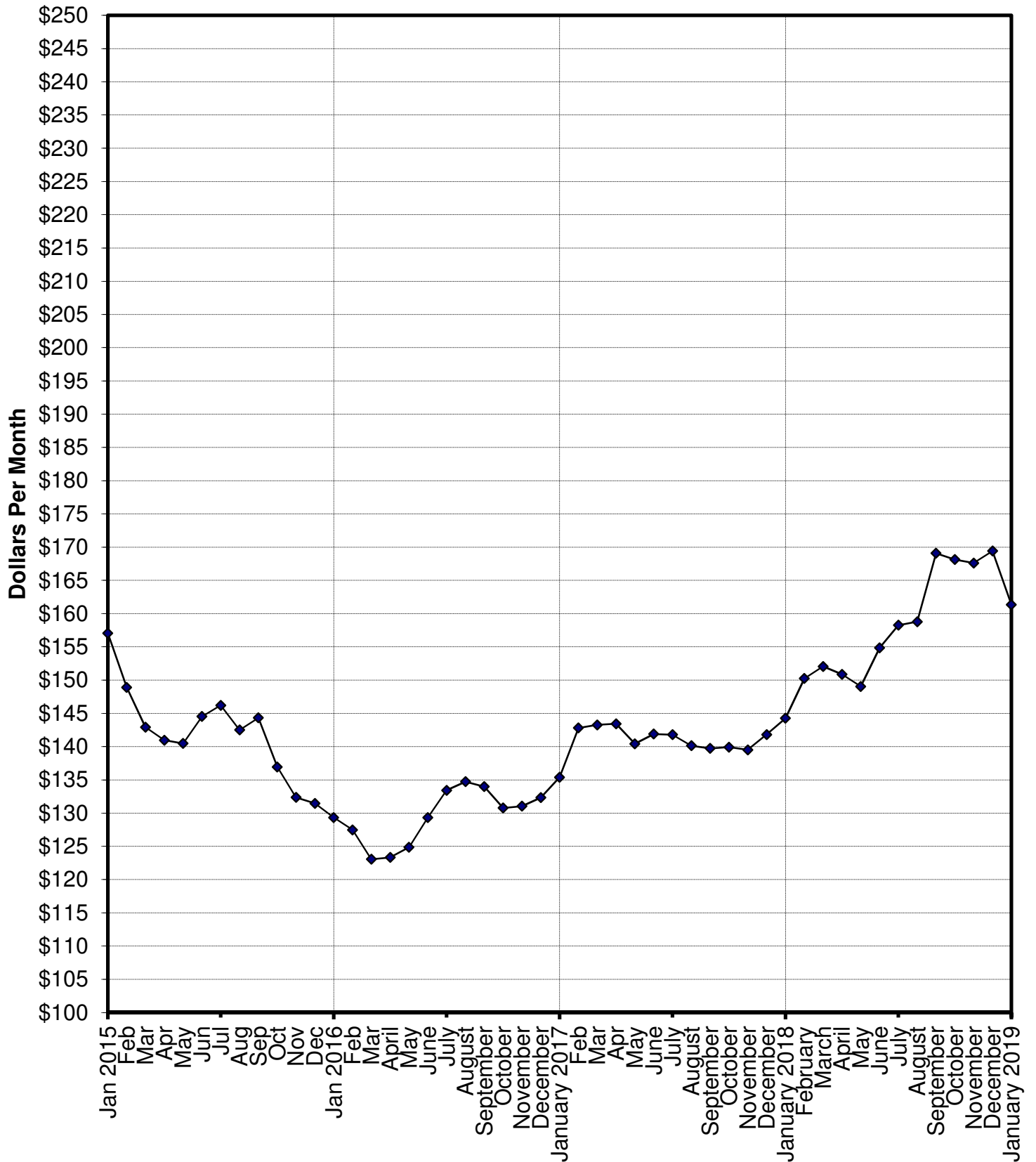
Hawaiian Electric Company, Inc.
RESIDENTIAL SURCHARGE DATA

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	RESIDENTIAL DSM ADJUSTMENT	0.0203 CENTS/KWH
12/1/2018 - 12/31/2018	PURCHASED POWER ADJUSTMENT CLAUSE	3.0553 CENTS/KWH
1/1/2019	PURCHASED POWER ADJUSTMENT CLAUSE	3.0574 CENTS/KWH
1/1/2019	GREEN INFRASTRUCTURE FEE	1.35 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.

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			
	12/1/2018	1/1/2019	12/1/2018	1/1/2019	Difference	
Base Rates	effective date:	09/01/18	01/01/19			
Base Fuel/Energy Charge	¢/kWh	10.2278	-	51.14	0.00	-51.14
Non-fuel Fuel Energy Charge						
First 350 kWh per month	¢/kWh	10.6812	10.6812	37.38	37.38	0.00
Next 850 kWh 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				117.77	66.63	-51.14
Purchase Power Adjustment	¢/kWh	3.0553	3.0574	15.28	15.29	0.01
RBA Rate Adjustment	¢/kWh	1.0350	1.0350	5.18	5.18	0.00
DSM Adjustment	¢/kWh	0.0203	0.0203	0.10	0.10	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	5.553	14.095	27.77	70.48	42.71
Green Infrastructure Fee	\$	1.21	1.35	1.21	1.35	0.14
Avg Residential Bill at 500 kWh				169.64	161.36	

Increase / (Decrease -)	-8.28
% Change	-4.88%

	Rate		Charge (\$) at 600 kWh			
	12/1/2018	1/1/2019	12/1/2018	1/1/2019	Difference	
Base Rates	effective date:	09/01/18	01/01/19			
Base Fuel/Energy Charge	¢/kWh	10.2278	-	61.37	0.00	-61.37
Non-fuel Fuel Energy Charge						
First 350 kWh per month	¢/kWh	10.6812	10.6812	37.38	37.38	0.00
Next 850 kWh 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				139.84	78.47	-61.37
Purchase Power Adjustment	¢/kWh	3.0539	3.0574	18.33	18.34	0.01
RBA Rate Adjustment	¢/kWh	1.0350	1.0350	6.21	6.21	0.00
DSM Adjustment	¢/kWh	0.0203	0.0203	0.12	0.12	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	5.553	14.095	33.32	84.57	51.25
Green Infrastructure Fee	\$	1.21	1.35	1.21	1.35	0.14
Avg Residential Bill at 600 kWh				201.82	191.85	

Increase / (Decrease -)	-9.97
% Change	-4.94%