



April 27, 2016

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PUBLIC UTILITIES
COMMISSION

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

Dear Commissioners:

Subject: Hawaiian Electric Energy Cost Adjustment Factor for May 2016

Hawaiian Electric Company Inc.'s ("Hawaiian Electric" or "Company") May 2016 energy cost adjustment factor is -5.527 cents per kilowatt-hour ("kWh"), a decrease of 0.134 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$124.85, an increase of \$1.51 compared to rates effective April 1, 2016. The increase in the typical residential bill is due to the increase in the Purchased Power Adjustment Clause rate (+\$1.57), the decrease in the energy cost adjustment factor (-\$0.67), and the termination of the April 2016 credit for the SolarSaver Adjustment (+\$0.61).

The Company's fuel composite cost of generation increased 64.26 cents per million BTU to 649.65 cents per million BTU. The Company's Distributed Generation ("DG") energy component increased 0.001 cents per kWh to 0.004 cents per kWh. The composite cost of purchased energy decreased 0.402 cents per kWh to 6.880 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 prorata use beginning May 1, 2016.

Very truly yours,

Dean K. Matsuura
Manager, Regulatory Rate Proceedings

Attachments

cc: Division of Consumer Advocacy

Hawaiian Electric Company, Inc.
ENERGY COST ADJUSTMENT FACTOR

	<u>Effective Dates</u>		<u>Change</u>
	<u>4/1/16</u>	<u>05/01/16</u>	
Composite Cost Of Generation, ¢/mmbtu	585.39	649.65	64.26
DG Energy Component, ¢/kWh	0.003	0.004	0.001
Composite Cost Of Purchased Energy, ¢/kWh	7.282	6.880	(0.402)
 <u>Residential, Schedule "R"</u>			
Energy Cost Adjustment, ¢/kWh	(5.393)	(5.527)	(0.134)
 <u>Others, Schedules "G,J,DS,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(5.393)	(5.527)	(0.134)
 <u>Residential Customer with:</u>			
600 kWh Consumption, \$/bill	146.76	148.58	1.82
500 kWh Consumption, \$/bill	123.34	124.85	1.51

Supersedes Sheet Effective:

April 1, 2016

Hawaiian Electric Company, Inc.
ENERGY COST ADJUSTMENT FILING

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

Line		
1	Effective Date	- May 1, 2016
2	Supersedes Factor	- April 1, 2016

GENERATION COMPONENT

<u>CENTRAL STATION</u>							
FUEL PRICES, ¢/MBTU							
3	Honolulu			626.83			
4	Kahe			627.15			
5	Waiau-Steam			626.83			
6	Waiau-Diesel			1,086.07			
7	CIP-Diesel			N/A			
8	CIP-Biodiesel			2,311.03			
9	Other			0			
BTU MIX, %							
10	Honolulu			0.00			
11	Kahe			73.02			
12	Waiau-Steam			24.89			
13	Waiau-Diesel			1.03			
14	CIP-Diesel			N/A			
15	CIP-Biodiesel			1.06			
16	Other			0.00			
				100.00			
17	COMPOSITE COST OF GENERATION, CNTRL STN + OTHER ¢/mmbtu			649.65			
18	% Input to system kWh Mix			44.23			
EFFICIENCY FACTOR, mmbtu/kWh							
	(A)	(B)	(C)	(D)			
		Eff Factor	Percent of	Weighted			
	<u>Fuel Type</u>	<u>mmbtu/kWh</u>	Centrl Stn +	<u>Eff Factor</u>			
			<u>Other</u>				
19	LSFO	0.011079	98.94	0.010962			
20	Diesel	0.019721	0.51	0.000101			
21	Biodiesel	0.020169	0.55	0.000111			
22	Other	0.011143	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))]			0.011174			
24	WGTD. COMPOSITE CNTRL STN + OTHER GEN COST, ¢/kWh (lines 17 x 18 x 23)			3.21074			
25	BASE CNTRL STN + OTHER GEN. COST, ¢/Mbtu			1,354.58			
26	Base % Input to System kWh Mix			57.59			
27	Efficiency Factor, Mbtu/kWh			0.011142			
28	WEIGHTED BASE CNTRL STN + OTHER GEN COST ¢/KWH (lines 25 x 26 x 27)			8.69190			
29	Cost Less Base (Line 24 - 28)			(5.48116)			
30	Revenue Tax Req Multiplier			1.0975			
31	CNTRL STN + OTHER GENERATION FACTOR, ¢/KWH (Line 29 x 30)			(6.01557)			
					<u>DG ENERGY COMPONENT</u>		
					32	COMPOSITE COST OF DG ENERGY, ¢/kWh	7.480
					33	% Input to System kWh Mix	0.05
					34	WTD COMP DG ENRGY COST, ¢/kWh (Lines 32 x 33)	0.00374
					35	BASE DG ENERGY COMP COST	0.000
					36	Base % Input to System kWh Mix	0.00
					37	WTD BASE DG ENERGY COST, ¢/kWh (Line 35 x 36)	0.00000
					38	Cost Less Base (Line 34 - 37)	0.00374
					39	Loss Factor	1.053
					40	Revenue Tax Req Multiplier	1.0975
					41	DG FACTOR, ¢/kWh (Line 38 x 39 x 40)	0.00432
					SUMMARY OF		
					TOTAL GENERATION FACTOR, ¢/kWh		
					42	CNTRL STN + OTHER (line 31)	(6.01557)
					43	DG (line 41)	0.00432
					44	TOTAL GENERATION FACTOR, ¢/KWH (lines 42 + 43)	(6.01125)

Hawaiian Electric Company, Inc.
ENERGY COST ADJUSTMENT FILING

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

Line

1 **Effective Date** - May 1, 2016
2 **Supersedes Factor** - April 1, 2016

<u>Line</u>	<u>PURCHASED ENERGY COMPONENT</u>		
	PURCHASED ENERGY PRICE - ¢/KWH		
45	THC	- On Peak	6.786
46		- Off Peak	6.641
47	HRRV	- On Peak	16.65
48		- Off Peak	16.17
49	HRRV	- On Peak (excess)	10.60
50		- Off Peak (excess)	6.36
51	Chevron	- On Peak	6.786
52		- Off Peak	6.641
53	Kalaeloa		6.427
54	AES-HI		3.135
55	Kawailoa		21.417
56	Kahuku Wind		19.273
57	As Available I		21.410
58	FIT		18.989
	PURCHASED ENERGY KWH MIX, %		
59	THC	- On Peak	0.21
60		- Off Peak	0.15
61	HRRV	- On Peak	7.78
62		- Off Peak	2.34
63	HRRV	- On Peak (excess)	0.00
64		- Off Peak (excess)	0.88
65	Chevron	- On Peak	0.00
66		- Off Peak	0.00
67	Kalaeloa		42.78
68	AES-HI		40.46
69	Kawailoa		2.63
70	Kahuku Wind		1.34
71	As Available I		0.63
72	FIT		0.80
			100.00
73	COMPOSITE COST OF PURCHASED ENERGY, ¢/KWH		6.880
74	% Input to System kWh Mix		55.72
75	WTD CMP PURCH ENRGY COST, ¢/KWH (lines 73 x 74)		3.83354
76	BASE PURCH ENERGY COMP COST		8.328
77	Base % Input to System kWh Mix		42.41
78	WEIGHTED COMP. PURCH. ENERGY COST, ¢/KWH (lines 76 x 77)		3.53190
79	Cost Less Base (Line 75 - 78)		0.30164
80	Loss Factor		1.053
81	Revenue Tax Req Multiplier		1.0975
82	PURCHASED ENERGY FACTOR, ¢/KWH (lines 79 x 80 x 81)		0.34860

Line SYSTEM COMPOSITE

83 GEN AND PURCHASED ENERGY FACTOR, ¢/kWh (lines 44 + 82) (5.66265)
84 Adjustment, ¢/kWh 0.000
85 ECA Reconciliation Adjustment 0.136
86 ECA FACTOR, ¢/kWh (lines 83 + 84 + 85) (5.527)

Hawaiian Electric Company, Inc.
FUEL OIL INVENTORY PRICES FOR 05-01-16

	Honolulu	Kahe	Waiau
Average Low Sulfur Fuel Oil, ¢/Mbtu	626.83	626.83	626.83
Kahe Fuel Additive, ¢/Mbtu	-	0.32	-
Honolulu Trucking Cost, ¢/Mbtu	-	-	-
Low Sulfur Fuel Oil Prices Used For Filing, ¢/Mbtu	626.83	627.15	626.83
	Waiau	CIP	
Average Diesel / Biodiesel Oil, ¢/Mbtu	1,086.07	2,311.03	
Thruput Charges, ¢/Mbtu	-	-	
Diesel / Biodiesel Oil Prices Used for Filing, ¢/Mbtu	1,086.07	2,311.03	
	Honolulu	Kahe	Waiau
Average Low Sulfur Fuel Oil, \$/bbl	39.45	39.45	39.45
Kahe Fuel Additive, \$/bbl	-	0.02	-
Honolulu Trucking Cost, \$/bbl	-	-	-
Low Sulfur Fuel Oil Prices Used For Filing, \$/bbl	39.45	39.47	39.45
	Waiau	CIP	
Average Diesel / Biodiesel Oil, \$/bbl	62.43	121.96	
Thruput Charges, ¢/Mbtu	-	-	
Diesel / Biodiesel Oil Prices Used for Filing, \$/bbl	62.43	121.96	
Distributed Generation Fuel Prices Used for Filing, ¢/kWh			7.480

FOAC May 2016

<u>LSFO</u>	BARRELS	MBTU	AMOUNT	AVE \$/MBTU
Per FOAC run	772,580	4,862,326.49	30,478,333.05	6.268261
Additional	-	-	-	-
Forecast Amt	772,580	4,862,326.49	30,478,333.05	6.268261
	-	6.20	-	ADD'L BBL
	4,862,326	772,580	6.2936	MBTU / BBL
	30,478,333	772,580	39.45	DOLLARS / BBL
<u>WAI AU DIESEL</u>	20,437	117,475.65	1,275,869.30	10.860713
	1,275,869	20,437	62.43	DOLLARS / BBL
<u>CIP BIODIESEL</u>	46,412	244,928.50	5,660,375.37	23.110317
	5,660,375	46,412	121.96	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

* Annualized amount per HECO T-4 in Docket No. 2010-0080

Hawaiian Electric Company, Inc.

CONTRACT PRICES EFFECTIVE 4-1-16

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
LOW SULFUR FUEL OIL		
Tax *	3.4745	56.05
Ocean Transportation	0.0000	0.00
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
DIESEL		
Tax *	4.0960	69.91
Ocean Transportation	0.0000	0.00
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
BIODIESEL		
Tax *	0.0000	0.00
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>		
L1	Estimated Distributed Generation Fuel Cost (\$/mbtu)	\$7.34
L2	Estimated Distributed Generation Fuel Transport Cost (\$/mbtu)	\$0.00
L3 = L1+ L2	Estimated Total Fuel and Transportation Cost (\$/mbtu)	\$7.34
L4	Estimated Mbtu Generation for month (May 2016)	2,600
L5 = L3 x L4	Estimated Distributed Generation Total Fuel Cost (\$)	\$19,075
L6	Estimated Distributed Generation kWh Produced (May 2016)	255,000
L7 = (L5 ÷ L6) x 100	Distributed Generation Fuel Prices Used for Filing, (¢/kWh)	7.4800

Hawaiian Electric Company, Inc.
ECA RECONCILIATION ADJUSTMENT
May 2016

1.	Amount to be collected	\$	2,067,034
2.	Monthly Amount (Line 1 x 1/3)	\$	689,011
3.	Revenue Tax Divisor		0.91115
4.	Total (Line 2 / Line 3)	\$	756,200
5.	Estimated MWh Sales (May 2016)		557,700
6.	ECA Reconciliation Adjustment, ¢/kWh (Line 4 ÷ Line 5)		<u><u>0.136</u></u>

Hawaiian Electric Company, Inc.
2016 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY
(Thousand \$)

<u>Line</u>	<u>Description</u>	Info Only		Basis for Recon	
		W/O DeadBand March 2016 Cumulative <u>YTD Total</u>	collection by company*	W/ DeadBand March 2016 Cumulative <u>YTD Total</u>	collectn by company*
ACTUAL COSTS:					
1	Generation	\$71,189.4		\$71,189.4	
2	Distributed Generation	-\$0.1		-\$0.1	
3	Purch Power	\$50,184.9		\$50,184.9	
4	TOTAL	\$121,374.2		\$121,374.2	
FUEL FILING COST					
5	Generation	\$71,479.7		\$71,525.3	
6	Distributed Generation	-\$0.1		-\$0.1	
7	Purch Power	\$50,184.9		\$50,184.9	
8	TOTAL	\$121,664.6		\$121,710.1	
BASE FUEL COST					
9	Generation	\$101,667.6		\$101,667.6	
10	Distributed Generation	\$0.0		\$0.0	
11	Purch Power	\$91,413.2		\$91,413.2	
12	TOTAL	\$193,080.8		\$193,080.8	
13	FUEL-BASE COST (Line 8-12)	-\$71,416.2		-\$71,370.7	
14	ACTUAL FOA LESS TAX	-\$66,007.2		-\$66,007.2	
15	Less: FOA reconciliation adj for prior year	\$7,430.5		\$7,430.5	
16	ADJUSTED FOA LESS TAX	-\$73,437.7		-\$73,437.7	
17	FOA-(FUEL-BASE) (Line 16-13)	-\$2,021.5	under	-\$2,067.0	under
ADJUSTMENTS:					
18	Current year FOA accrual reversal	\$0.0		\$0.0	
19	Other prior year FOA	\$0.0		\$0.0	
20	Other	\$0.0		\$0.0	
21	QUARTERLY FOA RECONCILIATION (Line 17+18+19+20)	-\$2,021.5	under	-\$2,067.0	under
22	Amount to be collected			-\$2,067.0	

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

Hawaiian Electric Company, Inc.
DEADBAND CALCULATION
2016

	Notes	YTD
Industrial		
Industrial Efficiency Factor (per D&O), BTU/kWh*	f	11,079
Industrial Deadband Definition, +/- BTU/kWh	d	50
Industrial Portion of Recorded Sales, kWh	a	808,629,038
Industrial Consumption (Recorded), MMBTU	b	8,967,154
Industrial Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	11,089
Lower limit of Industrial Deadband, BTU/kWh	e = f-d	11,029
Higher limit of Industrial Deadband, BTU/kWh	g = f+d	11,129
Industrial Efficiency Factor for cost-recovery, BTU/kWh	h = c, e or g	11,089
Diesel		
Diesel Efficiency Factor (per D&O), BTU/kWh*	f	19,721
Diesel Deadband Definition, +/- BTU/kWh	d	50
Diesel Portion of Recorded Sales, MWh	a	1,706,794
Diesel Consumption (Recorded), MMBTU	b	60,894
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	35,677
Lower limit of Diesel Deadband, BTU/kWh	e = f-d	19,671
Higher limit of Diesel Deadband, BTU/kWh	g = f+d	19,771
Diesel Efficiency Factor for cost-recovery, BTU/kWh	h = c, e or g	19,771
Biodiesel		
Biodiesel Efficiency Factor (per D&O), BTU/kWh*	f	20,169
Biodiesel Deadband Definition, +/- BTU/kWh	d	50
Biodiesel Portion of Recorded Sales, MWh	a	9,797,562
Biodiesel Consumption (Recorded), MMBTU	b	175,529
Biodiesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	17,916
Lower limit of Biodiesel Deadband, BTU/kWh	e = f-d	20,119
Higher limit of Biodiesel Deadband, BTU/kWh	g = f+d	20,219
Biodiesel Efficiency Factor for cost-recovery, BTU/kWh	h = c, e or g	20,119
Hydro		
Hydro Efficiency Factor (per D&O), BTU/kWh*	f	0
Hydro Deadband Definition, +/- BTU/kWh	d	50
Hydro Portion of Recorded Sales, MWh	a	0
Hydro Consumption (Recorded), MMBTU	b	0
Hydro Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	0
Lower limit of Hydro Deadband, BTU/kWh	e = f-d	-50
Higher limit of Hydro Deadband, BTU/kWh	g = f+d	50
Hydro Efficiency Factor for cost-recovery, BTU/kWh	h = c, e or g	0
Other		
Other Efficiency Factor (per D&O), BTU/kWh*	f	0
Other Deadband Definition, +/- BTU/kWh	d	50
Other Portion of Recorded Sales, MWh	a	0
Other Consumption (Recorded), MMBTU	b	0
Other Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	0
Lower limit of Other Deadband, BTU/kWh	e = f-d	-50
Higher limit of Other Deadband, BTU/kWh	g = f+d	50
Other Efficiency Factor for cost-recovery, BTU/kWh	h = c, e or g	0

* YTD Efficiency Factor (per D&O) is actual YTD & projected to the end of the year weighted by calendar days in the year.

HAWAIIAN ELECTRIC COMPANY, INC.
GENERATION FUEL FILING COST AND GENERATION BASE FUEL COST,
March 2016 Year-to-Date

	<u>Without Deadband</u>	<u>With Deadband - As Filed</u>
<u>INDUSTRIAL FUEL FILING COST</u>		
LSFO Portion of Recorded Sales , MWH	808,629,038	808,629,038
LSFO Sales Efficiency Factor (mmbtu/kwh)	0.011079	0.011089
Mmbtu adjusted for Sales Efficiency Factor	8,958,801,112	8,966,887,402
\$/mmbtu	<u>\$7.2827</u>	<u>\$7.2827</u>
TOTAL LSFO \$ TO BE RECOVERED	\$65,244,036	\$65,302,926
<u>DIESEL FUEL FILING COST</u>		
Diesel Portion of Recorded Sales, MWH	1,706,794	1,706,794
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.019721	0.019771
Mmbtu adjusted for Sales Efficiency Factor	33,659,684	33,745,024
\$/mmbtu	<u>\$12.6799</u>	<u>\$12.6799</u>
TOTAL DIESEL \$ TO BE RECOVERED	\$426,803	\$427,885
<u>BIODIESEL FUEL FILING COST</u>		
Biodiesel Portion of Recorded Sales , MWH	9,797,562	9,797,562
Biodiesel Sales Efficiency Factor (mmbtu/kwh)	0.020169	0.020119
Mmbtu adjusted for Sales Efficiency Factor	197,607,028	197,117,150
\$/mmbtu	<u>\$29.3961</u>	<u>\$29.3961</u>
TOTAL BIODIESEL \$ TO BE RECOVERED	\$5,808,883	\$5,794,483
<u>TOTAL GENERATION FUEL FILING COST</u>		
Generation Portion of Recorded Sales , MWH		
Sales Efficiency Factor (mmbtu/kwh)		
Mmbtu adjusted for Sales Efficiency Factor		
\$/mmbtu		
TOTAL GENERATION FUEL FILING COST \$	\$71,479,722	\$71,525,293
<u>GENERATION BASE FUEL COST</u>		
TOTAL GENERATION BASE FUEL COST	\$101,667,590	\$101,667,590
TOTAL GENERATION FUEL FILING COST \$ YTD	\$71,479,722	\$71,525,293
TOTAL GENERATION BASE FUEL COST YTD	\$101,667,590	\$101,667,590

HAWAIIAN ELECTRIC COMPANY, INC.
2016 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>
December '15					4,516,067	4,466,182	(4,472,032)
January '16					4,516,067	4,450,144	(21,888)
February	(4,371,700)	(4)	44,029	(4,415,729)	1,457,233	1,422,190	(3,015,427)
March					1,457,233	1,420,558	(1,594,869)
April					1,457,233		
May	(2,067,034)	(1)	(137,641)	(1,929,393)	689,011		

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.
FUEL OIL ADJUSTMENT FACTOR DATA

<u>EFFECTIVE DATE</u>	<u>FUEL FACTOR CENTS / KWH RESIDENTIAL & COMMERCIAL</u>	<u>RESIDENTIAL BILL (\$)</u>	
		<u>@ 500 KWH</u>	<u>@ 600 KWH</u>
January 1, 2012	11.428	171.04	204.17
February 1, 2012	10.924	167.64	200.11
March 1, 2012	11.530	170.67	203.74
April 1, 2012	11.600	170.71	203.79
May 1, 2012	13.122	180.63	215.69
June 1, 2012	13.274	183.06	218.60
July 1, 2012	12.917	181.60	216.85
August 1, 2012	12.332	180.60	215.65
September 1, 2012	7.083	175.67	209.82
October 1, 2012	7.023	176.13	210.37
November 1, 2012	5.828	167.64	200.18
December 1, 2012	5.029	163.64	195.38
January 1, 2013	5.885	168.27	200.91
February 1, 2013	7.674	180.93	216.11
March 1, 2013	8.113	183.12	218.75
April 1, 2013	5.602	170.09	203.11
May 1, 2013	5.631	167.15	199.59
June 1, 2013	5.502	171.23	204.47
July 1, 2013	5.422	171.06	204.27
August 1, 2013	5.844	175.95	210.14
September 1, 2013	4.640	170.05	203.06
October 1, 2013	5.521	174.43	208.32
November 1, 2013	5.406	174.29	208.15
December 1, 2013	5.087	172.67	206.20
January 1, 2014	5.946	176.84	211.22
February 1, 2014	7.338	181.96	217.36
March 1, 2014	5.978	176.41	210.70
April 1, 2014	6.057	177.55	212.05
May 1, 2014	5.541	176.07	210.28
June 1, 2014	5.685	180.90	216.08
July 1, 2014	5.721	181.86	217.24
August 1, 2014	5.901	182.65	218.17
September 1, 2014	5.988	183.30	218.96
October 1, 2014	5.155	179.10	213.91
November 1, 2014	3.694	170.67	203.79
December 1, 2014	2.659	165.48	197.32
January 1, 2015	1.065	157.06	187.22
February 1, 2015	-0.755	148.91	177.45
March 1, 2015	-1.863	142.92	170.25
April 1, 2015	-1.151	140.96	167.91
May 1, 2015	-1.931	140.48	167.34
June 8, 2015	-1.624	144.54	172.20
July 1, 2015	-0.997	146.21	174.20
August 1, 2015	-1.673	142.51	169.75
September 1, 2015	-1.343	144.33	171.94
October 1, 2015	-2.793	136.95	163.07
November 1, 2015	-3.179	132.36	157.57
December 1, 2015	-3.353	131.47	156.51
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

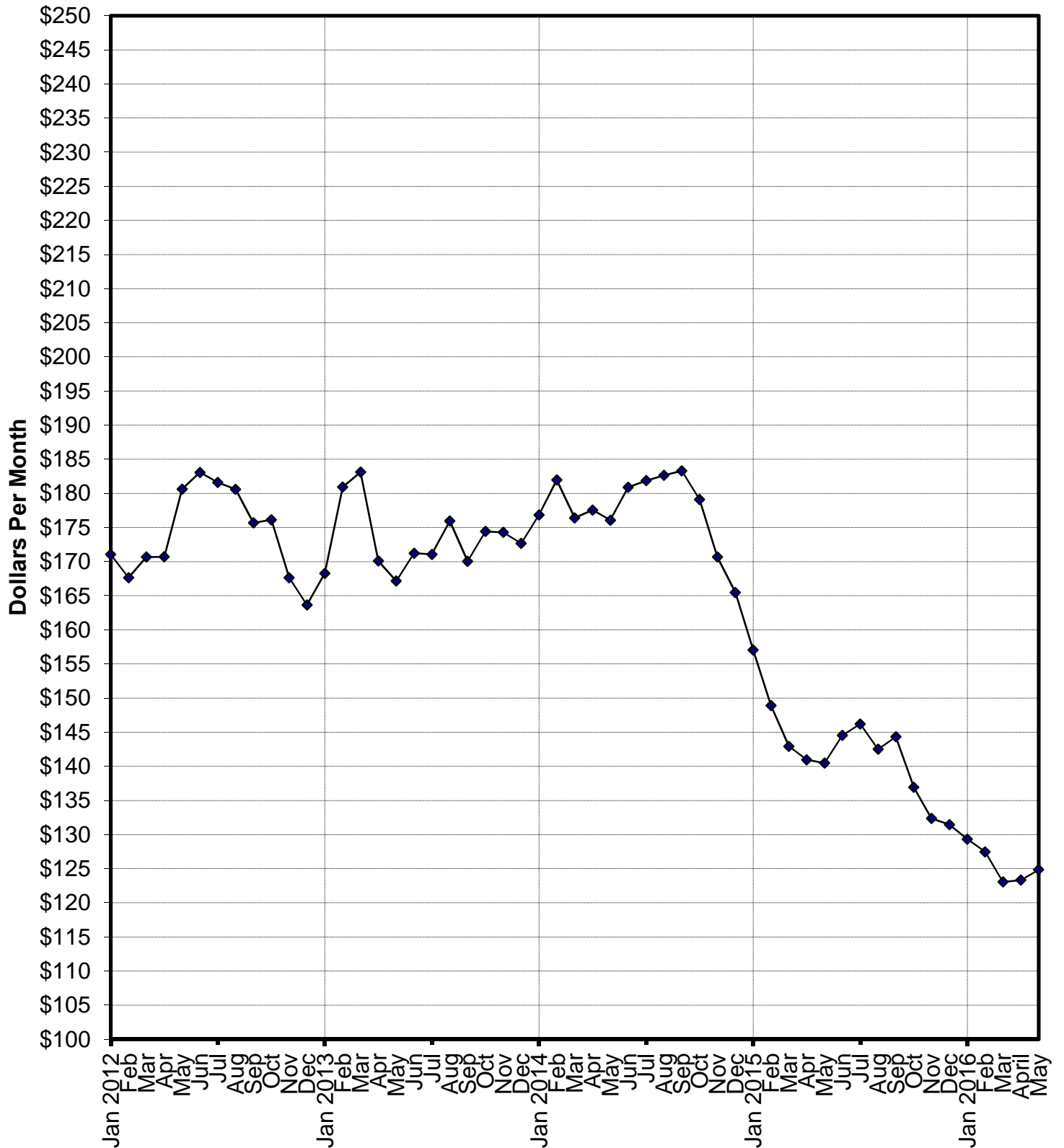
Hawaiian Electric Company, Inc.
RESIDENTIAL SURCHARGE DATA

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
09/01/12	FINAL RATE INCREASE (TY2011) 3.39% EFFECTIVE 09/01/12, DOCKET NO. 2010-0080	
9/1/2012 - 09/30/2012	REFUND OF 2011 INTERIM RATE INCREASE	-0.64 PERCENT ON BASE
10/1/2012 - 12/31/2012	REFUND OF 2011 INTERIM RATE INCREASE	0.00 PERCENT ON BASE
11/1/2012 - 01/31/2013	PURCHASED POWER ADJUSTMENT CLAUSE	2.6960 CENTS/KWH
1/1/2013 - 01/31/2013	REFUND OF 2011 INTERIM RATE INCREASE	-0.18 PERCENT ON BASE
1/1/2013 - 6/30/2013	RESID. PBF SURCHARGE ADJUSTMENT	0.7850 CENTS/KWH
2/1/2013	REFUND OF 2011 INTERIM RATE INCREASE	0.00 PERCENT ON BASE
2/1/2013 - 4/30/2013	PURCHASED POWER ADJUSTMENT CLAUSE	3.3989 CENTS/KWH
4/1/2013 - 4/30/2013	SOLARSAVER ADJUSTMENT	-0.1196 CENTS/KWH
4/1/2013 - 3/31/2014	RESIDENTIAL DSM ADJUSTMENT	0.1067 CENTS/KWH
5/1/2013 - 3/31/2014	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
5/1/2013 - 7/31/2013	PURCHASED POWER ADJUSTMENT CLAUSE	2.6617 CENTS/KWH
5/15/2013 - 2/28/2014	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0211 CENTS/KWH
6/1/2013 - 5/31/2014	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.3119 CENTS/KWH
7/1/2013 - 6/30/2014	RESID. PBF SURCHARGE ADJUSTMENT	0.8312 CENTS/KWH
8/1/2013 - 8/31/2013	PURCHASED POWER ADJUSTMENT CLAUSE	3.2174 CENTS/KWH
9/1/2013 - 9/30/2013	PURCHASED POWER ADJUSTMENT CLAUSE	3.2422 CENTS/KWH
10/1/2013 - 10/31/2013	PURCHASED POWER ADJUSTMENT CLAUSE	3.2377 CENTS/KWH
11/1/2013 - 11/30/2013	PURCHASED POWER ADJUSTMENT CLAUSE	3.3246 CENTS/KWH
12/1/2013 - 12/31/2013	PURCHASED POWER ADJUSTMENT CLAUSE	3.3179 CENTS/KWH
1/1/2014 - 1/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.2943 CENTS/KWH
2/1/2014 - 2/28/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.9263 CENTS/KWH
3/1/2014 - 3/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.1754 CENTS/KWH
3/1/2014 - 7/6/2014	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0226 CENTS/KWH
4/1/2014 - 4/30/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.4058 CENTS/KWH
4/1/2014 - 3/31/2015	RESIDENTIAL DSM ADJUSTMENT	0.1423 CENTS/KWH
4/1/2014 - 4/30/2014	SOLARSAVER ADJUSTMENT	-0.1177 CENTS/KWH
5/1/2014 - 5/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.4058 CENTS/KWH
5/1/2014 - 3/31/2015	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
6/1/2014 - 6/30/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.5152 CENTS/KWH
6/1/2014 - 5/31/2015	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	2.1269 CENTS/KWH
7/1/2014 - 7/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.4876 CENTS/KWH
7/1/2014 - 11/30/2014	RESID. PBF SURCHARGE ADJUSTMENT	1.0157 CENTS/KWH
7/7/2014 - 02/28/2015	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0223 CENTS/KWH
8/1/2014 - 8/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.4655 CENTS/KWH
9/1/2014 - 9/30/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.5100 CENTS/KWH
10/1/2014 - 10/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.5018 CENTS/KWH
11/1/2014 - 11/30/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.2773 CENTS/KWH
12/1/2014 - 12/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	3.2747 CENTS/KWH
12/1/2014 - 06/30/2015	GREEN INFRASTRUCTURE FEE	1.2900 DOLLARS/MONTH
12/1/2014 - 6/30/2015	RESID. PBF SURCHARGE ADJUSTMENT	0.7583 CENTS/KWH
01/1/2015 - 01/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	3.1849 CENTS/KWH
02/1/2015 - 02/28/2015	PURCHASED POWER ADJUSTMENT CLAUSE	3.3760 CENTS/KWH
03/1/2015 - 03/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	3.2873 CENTS/KWH
3/1/2015 - 08/16/2015	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0204 CENTS/KWH
04/1/2015 - 04/30/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.4105 CENTS/KWH
4/1/2015 - 4/30/2015	SOLARSAVER ADJUSTMENT	-0.1178 CENTS/KWH
4/1/2015 - 03/31/2016	RESIDENTIAL DSM ADJUSTMENT	0.0348 CENTS/KWH
05/1/2015 - 05/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.9760 CENTS/KWH
5/1/2015 - 03/31/2016	SOLAR SAVER ADJUSTMENT	0.00 CENTS/KWH
06/1/2015 - 06/30/2015	PURCHASED POWER ADJUSTMENT CLAUSE	3.4972 CENTS/KWH
06/1/2015 - 06/7/2015	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.00 CENTS/KWH
6/8/2015	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	2.1078 CENTS/KWH
07/1/2015 - 07/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	3.4646 CENTS/KWH
7/1/2015	RESID. PBF SURCHARGE ADJUSTMENT	0.4749 CENTS/KWH
7/1/2015 - 12/31/2015	GREEN INFRASTRUCTURE FEE	1.4200 DOLLARS/MONTH
08/1/2015 - 08/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	3.4002 CENTS/KWH
8/17/2015 - 12/16/2015	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0304 CENTS/KWH
09/1/2015 - 09/30/2015	PURCHASED POWER ADJUSTMENT CLAUSE	3.4246 CENTS/KWH
10/1/2015 - 10/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	3.3971 CENTS/KWH
11/1/2015 - 11/30/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.8651 CENTS/KWH
12/1/2015 - 12/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.8628 CENTS/KWH
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	RENEWABLE ENERGY INFRASTRUCTURE COST	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	RESIDENTIAL DSM ADJUSTMENT	0.0811 CENTS/KWH
5/1/2016	SOLAR SAVER ADJUSTMENT	0.00 CENTS/KWH
05/1/2016 - 05/31/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.6989 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			
	4/1/2016	5/1/2016	4/1/2016	5/1/2016	Difference	
Base Rates	effective date:	09/01/12	09/01/12			
Base Fuel/Energy Charge	¢/kWh	13.6062	13.6062	68.03	68.03	0.00
Non-fuel Fuel Energy Charge						
First 350 kWhr per month	¢/kWh	8.1034	8.1034	28.36	28.36	0.00
Next 850 kWhr per month	¢/kWh	9.2569	9.2569	13.89	13.89	0.00
Customer Charge	\$	9.00	9.00	9.00	9.00	0.00
Total Base Charges				119.28	119.28	0.00
Purchase Power Adjustment	¢/kWh	3.3834	3.6989	16.92	18.49	1.57
RBA Rate Adjustment	¢/kWh	2.1078	2.1078	10.54	10.54	0.00
DSM Adjustment	¢/kWh	0.0811	0.0811	0.41	0.41	0.00
Interim Rate Increase (TY 2011)	% 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	0.4749	0.4749	2.37	2.37	0.00
Renewable Energy Infrastructure Cost						
Recovery Provision	¢/kWh	0.0204	0.0204	0.10	0.10	0.00
SolarSaver Adjustment	¢/kWh	-0.1223	0.0000	-0.61	0.00	0.61
Energy Cost Adjustment	¢/kWh	-5.393	-5.527	-26.97	-27.64	-0.67
Green Infrastructure Fee	\$	1.30	1.30	1.30	1.30	0.00
Avg Residential Bill at 500 kWh				123.34	124.85	

Increase / (Decrease -)	1.51
% Change	1.22%

	Rate		Charge (\$) at 600 kWh			
	4/1/2016	5/1/2016	4/1/2016	5/1/2016	Difference	
Base Rates	effective date:	09/01/12	09/01/12			
Base Fuel/Energy Charge	¢/kWh	13.6062	13.6062	81.64	81.64	0.00
Non-fuel Fuel Energy Charge						
First 350 kWhr per month	¢/kWh	8.1034	8.1034	28.36	28.36	0.00
Next 850 kWhr per month	¢/kWh	9.2569	9.2569	23.14	23.14	0.00
Customer Charge	\$	9.00	9.00	9.00	9.00	0.00
Total Base Charges				142.14	142.14	0.00
Purchase Power Adjustment	¢/kWh	3.3834	3.6989	20.30	22.19	1.89
RBA Rate Adjustment	¢/kWh	2.1078	2.1078	12.65	12.65	0.00
DSM Adjustment	¢/kWh	0.0811	0.0811	0.49	0.49	0.00
Interim Rate Increase (TY 2011)	% 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	0.4749	0.4749	2.85	2.85	0.00
Renewable Energy Infrastructure Cost						
Recovery Provision	¢/kWh	0.0204	0.0204	0.12	0.12	0.00
SolarSaver Adjustment	¢/kWh	-0.1223	0.0000	-0.73	0.00	0.73
Energy Cost Adjustment	¢/kWh	-5.393	-5.527	-32.36	-33.16	-0.80
Green Infrastructure Fee	\$	1.30	1.30	1.30	1.30	0.00
Avg Residential Bill at 600 kWh				146.76	148.58	

Increase / (Decrease -)	1.82
% Change	1.24%