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JAY IGNACIO, P. E.
President

October 27, 2016 2016 OCT 27 P 3:02

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: Hawai'i Electric Light Energy Cost Adjustment Factor for November 2016

Hawai'i Electric Light Company, Inc.'s ("Hawai'i Electric Light") energy cost adjustment factor for November 2016 is -3.514 cents per kilowatt-hour ("kWh"), a decrease of 0.087 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$159.72, a decrease of \$0.25 compared to the rates effective October 1, 2016. The decrease in the typical residential bill is due to the decrease in the energy cost adjustment factor (-\$0.43) and the increase in the Purchased Power Adjustment Clause rate (+\$0.18).

Hawai'i Electric Light's fuel composite cost of generation decreased 52.72 cents per million BTU to 952.11 cents per million BTU. The composite cost of distributed generation increased 0.869 cents per kWh to 12.557 cents per kWh. The composite cost of purchased energy increased 0.115 cents per kWh to 11.440 cents per kWh.

The attached sheets set forth the energy cost adjustment in cents per kWh for each rate schedule that is applicable for pro rata use beginning November 1, 2016.

Sincerely,

Attachments

cc: Division of Consumer Advocacy

HAWAII ELECTRIC LIGHT COMPANY, INC.

ENERGY COST ADJUSTMENT FACTOR

	<u>EFFECTIVE DATES</u>		
	<u>10/01/16</u>	<u>11/01/16</u>	<u>Change</u>
<u>Composite Cost</u>			
Generation, ¢/mmbtu	1,004.83	952.11	(52.72)
Dispersed Generation Energy, ¢/kWh	11.688	12.557	0.869
Purchased Energy, ¢/kWh	11.325	11.440	0.115
<u>Residential Schedule "R"</u>			
Energy Cost Adjustment - ¢/kWh	(3.427)	(3.514)	(0.087)
<u>Others - "G,J,P,F"</u>			
Energy Cost Adjustment - ¢/kWh	(3.427)	(3.514)	(0.087)
Residential Customer with:			
500 KWH Consumption - \$/Bill	\$159.97	\$159.72	(\$0.25)
600 KWH Consumption - \$/Bill	\$191.65	\$191.35	(\$0.30)

HAWAII ELECTRIC LIGHT COMPANY, INC.
ENERGY COST ADJUSTMENT (ECA) FILING

ENERGY COST ADJUSTMENT (ECA) FILING - November 1, 2016 (Page 1 of 2)

<u>Line</u>		
1	Effective Date	November 1, 2016
2	Supercedes Factors of	October 1, 2016

GENERATION COMPONENT

<u>CENTRAL STATION WITH WIND/HYDRO COMPONENT</u>						
FUEL PRICES, ¢/mmbtu						
3						
4	Hill Industrial		691.54			
5	Puna Industrial		704.09			
6	Keahole Diesel		1,222.69			
6a	Keahole ULSD		1,258.33			
7	Waimea ULSD Diesel		1,254.16			
8	Hilo Diesel		1,185.86			
8a	Hilo (Kanoelehua) ULSD Diesel ¹		1,227.30			
9	Puna Diesel		1,198.22			
10	Wind		0.00			
11	Hydro		0.00			
BTU MIX, %						
12						
13	Hill Industrial		39.680			
14	Puna Industrial		0.000			
15	Keahole Diesel		52.195			
15a	Keahole ULSD		0.252			
16	Waimea ULSD Diesel		0.151			
17	Hilo Diesel		0.050			
17a	Hilo (Kanoelehua) ULSD Diesel ¹		0.101			
18	Puna Diesel		2.723			
19	Wind		0.000			
20	Hydro		4.848			
			100.000			
21	COMPOSITE COST OF GENERATION, CENTRAL STATION + WIND/HYDRO ¢/mmb		952.11			
22	% Input to System kWh Mix		41.966			
EFFICIENCY FACTOR, mmbtu/kWh						
	(A)	(B)	(C)	(D)		
			Percent of			
	Fuel Type	Eff Factor	Centrl Stn +	Weighted		
		mmbtu/kwh	Wind/Hydro	Eff Factor		
23	Industrial	0.015148	32.998	0.004999		
24	Diesel	0.010424	62.154	0.006479		
25	Other	0.012621	4.848	0.000612		
	(Lines 23, 24, 25): Col(B) x Col(C) = Col(D)					
26	Weighted Efficiency Factor, mmbtu/kWh [Lines 23(D) + 24(D) + 25(D)]			0.0120900		
27	WEIGHTED COMPOSITE CENTRAL STATION + WIND/HYDRO GENERATION COST, ¢/kWh (Lines (21 x 22 x 26))			4.83071		
28	BASE CENTRAL STATION + WIND/HYDRO GENERATION COST, ¢/mmbtu			1,224.44		
29	Base % Input to Sys kWh Mix			46.06		
30	Efficiency Factor, mmbtu/kwh			0.012621		
31	WEIGHTED BASE CENTRAL STATION + WIND/HYDRO GENERATION COST ¢/kWh (Lines (28 x 29 x 30))			7.11795		
32	COST LESS BASE (Line 27 - 31)			(2.28724)		
33	Revenue Tax Req Multiplier			1.0975		
34	CENTRAL STATION + WIND/HYDRO GENERATION FACTOR, ¢/kWh (Line (32 x 33))			(2.51025)		
				<u>DG ENERGY COMPONENT</u>		
				35	COMPOSITE COST OF DG ENERGY, ¢/kWh	12.557
				36	% Input to System kWh Mix	0.089
				37	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 35 x 36)	0.01118
				38	BASE DG ENERGY COMPOSITE COS	15.702
				39	Base % Input to System kWh Mix	0.06
				40	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 38 x 39)	0.00942
				41	Cost Less Base (Line 37 - 40)	0.00176
				42	Loss Factor	1.067
				43	Revenue Tax Req Multiplier	1.0975
				44	DG FACTOR, ¢/kWh (Line 41 x 42 x 43)	0.00206
				SUMMARY OF		
				TOTAL GENERATION FACTOR, ¢/kWh		
				45	Cntrl Stn+Wind/Hydro (line 34)	(2.51025)
				46	DG (line 44)	0.00206
				47	TOTAL GENERATION FACTOR, ¢/kWh (lines 45 + 46)	(2.50819)

¹ Hilo ULSD same location as Kanoelehua ULSD

HAWAII ELECTRIC LIGHT COMPANY, INC.
ENERGY COST ADJUSTMENT (ECA) FILING

ENERGY COST ADJUSTMENT (ECA) FILING - November 1, 2016 (Page 2 of 2)

Line	<u>PURCHASED ENERGY COMPONENT</u>		
	PURCHASED ENERGY PRICE, ¢/kWh		
48	HEP		11.916
49	PGV	On Peak	9.210
50	PGV	Off Peak	10.426
51	PGV - Add'l 5 MW	On Peak	12.480
52	PGV - Add'l 5 MW	Off Peak	12.480
53	PGV - Add'l 8 MW	On Peak	9.520
54	PGV - Add'l 8 MW	Off Peak	6.340
55	Wailuku Hydro	On Peak	9.210
56	Wailuku Hydro	Off Peak	10.426
57	Hawi Renewable Dev.	On Peak	9.210
58	Hawi Renewable Dev.	Off Peak	10.426
59	Tawhiri (Pakini Nui)	On Peak	15.020
60	Tawhiri (Pakini Nui)	Off Peak	13.010
61			
62	Small Hydro (>100 KW)	On Peak	9.210
63	Small Hydro (>100 KW)	Off Peak	10.426
64	Sch Q Hydro (<100 KW)		9.440
65	FIT		23.800
	PURCHASED ENERGY KWH MIX, %		
66	HEP		32.814
67	PGV	On Peak	20.040
68	PGV	Off Peak	12.447
69	PGV - Addt'l	On Peak	3.271
70	PGV - Addt'l	Off Peak	2.871
71	PGV - Add'l 8 MW	On Peak	0.970
72	PGV - Add'l 8 MW	Off Peak	3.378
73	Wailuku Hydro	On Peak	1.022
74	Wailuku Hydro	Off Peak	0.658
75	Hawi Renewable Dev.	On Peak	3.325
76	Hawi Renewable Dev.	Off Peak	1.658
77	Tawhiri (Pakini Nui)	On Peak	10.066
78	Tawhiri (Pakini Nui)	Off Peak	5.532
79			
80	Small Hydro (>100 KW)	On Peak	0.000
81	Small Hydro (>100 KW)	Off Peak	0.000
82	Sch Q Hydro (<100 KW)		0.165
83	FIT		1.783
			100.000
84	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh		11.440
85	% Input to System kWh Mix		57.945
86	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (Lines (84 x 85))		6.62891
87	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh		13.354
88	Base % Input to Sys kWh Mix		53.88
89	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (Lines (87 x 88))		7.19514
90	COST LESS BASE (Lines (86 - 89))		(0.56623)
91	Loss Factor		1.067
92	Revenue Tax Req Multiplier		1.0975
93	PURCHASED ENERGY FACTOR, ¢/kWh (Lines (90 x 91 x 92))		(0.66307)

Line	SYSTEM COMPOSITE	
94	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (Lines (47 + 93))	(3.17126)
95	Not Used	0.000
96	Not Used	0.000
97	ECA Reconciliation Adjustment	(0.343)
98	ECA FACTOR, ¢/kWh (Lines (94 + 95+ 96 + 97))	(3.514)

Hawaii Electric Light Company, Inc.
FUEL OIL INVENTORY PRICES FOR November 1, 2016

INDUSTRIAL FUEL COSTS:

	<u>HILO</u>	<u>PUNA</u>
Average Industrial Fuel Cost - \$/BBL	43.5670	43.5670
Land Transportation Cost - \$/BBL	--	0.7904
Industrial Costs For Filing - \$/BBL	43.5670	44.3574
Conversion Factors - mmbtu/BBL	6.30	6.30
Industrial Costs For Filing - ¢/mmbtu	691.54	704.09

DIESEL FUEL COSTS:

	KEAHOLE	PUNA CT-3	HILO
Average Diesel Fuel Cost - \$/BBL	68.8393	68.8393	68.8393
Land Transportation Cost - \$/BBL	2.8104	1.3766	0.6521
Diesel Costs For Filing - \$/BBL	71.6496	70.2158	69.4913
Conversion Factors - mmbtu/BBL	5.86	5.86	5.86
Diesel Costs For Filing - ¢/mmbtu	1,222.69	1,198.22	1,185.86

ULSD FUEL COSTS:

	KEAHOLE	WAIMEA	HILO	DISPERSED GENERATION
Average ULSD Fuel Cost - \$/BBL	69.5185	69.5185	69.5185	69.5185
Land Transportation Cost - \$/BBL	2.5841	2.3450	0.8059	-
ULSD Costs For Filing - \$/BBL	72.1026	71.8635	70.3245	69.5185
Conversion Factors - mmbtu/BBL	5.73	5.73	5.73	5.73
ULSD Costs For Filing - ¢/mmbtu	1,258.33	1,254.16	1,227.30	1,213.24

Dispersed Generation, cents per kWh

	COMPOSITE COST OF DISP. GEN.
BBIs Fuel:	144.5026
\$/BBI Inv Cost:	69.5185
Fuel \$ (Prod Sim Consumption x Unit Cost)	10,045.61
Net kWh (from Prod Sim)	80,000
cents/kWh:	12.557

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2016

	SHIPMAN INDUSTRIAL		HILL INDUSTRIAL		COST PER BARREL		
	BBL	COST	BBL	COST	EXCL LT	LT Total	
Balance at 09/30/2016	0	0.00	40,385	1,700,084.08			
Less: Est'd Inventory Addn			0	0.00			
Purchases: Estimate	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Actual	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfers out: Estimate	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Actual	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfers in: Estimate	0	0.00	(29,321)	(1,218,019.25)			
Actual	0	0.00	33,772	1,404,131.04			
Consumed: Estimate	0	0.00	23,903	1,037,084.24			
Actual	0	0.00	(26,884)	(1,166,421.08)			
Balance Per G/L 09/30/2016	0	0.00	41,855	1,756,859.03			
Purchases	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfer out	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfer in	0	0.00	32,975	1,425,792.62			
Consumed	0	0.00	(36,586)	(1,541,203.54)	106.5901	0.0000	106.5901
Balance @ 10/31/2016	0	0.00	38,244	1,641,448.11			
Inv From Offsite/Transfers	0	0.00	0	0.00			
Est'd Inventory Addition	0	0.00	0	0.00			
Fuel Balance @ 10/31/2016	0	0.00	38,244	1,641,448.11			
Reverse Fuel Balance	xxxxxx	0.00	xxxxxx	(1,641,448.11)			
Fuel Bal @ Avg Price	xxxxxx	0.00	xxxxxx	1,666,175.82			
Total @ 9/30/2013 Avg Price	0	0.00	38,244	1,666,175.82			

Weighted Avg Cost/BBL by Location #DIV/0! 42.9204

Weighted Avg Cost/BBL @ Avg Cost #DIV/0! 43.5670

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2016

PUNA INDUSTRIAL

	BBL	COST	LAND TRANSP	COST PER BAF		TOTAL
				EXCLUDE LT	LT	
Balance at 09/30/2016	8,819	382,341.70	8,215.38			
Less: Est'd Inventory Addition	0	0.00	0.00			
Purchases: Estimate	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers out: Estimate	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers in: Estimate	(4,449)	(190,796.92)	(5,319.85)			
	4,119	179,597.44	5,124.94			
Consumed: Estimate	2,964	128,599.66	2,737.55			
	(2,956)	(128,252.52)	(4,624.32)			
Balance Per G/L 09/30/2016	8,497	371,489.36	6,133.70			
Purchases	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer out	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer in	2,240	104,036	2,678.46			
Consumed	(2,305)	(97,099.28)	(2,147.34)	42.1255	0.9316	43.0571
Balance @ 10/31/2016	8,432	378,426.30	6,664.82			
Inventory From Offsite/Transfers	0	0.00	0.00			
Est'd Inventory Addition	0	0.00	0.00			
Fuel Bal @ Avg Price	8,432	378,426.30	6,664.82		0.7904	
Reverse Fuel Balance	XXXXXXXXXXXX	(378,426.30)	XXXXXXXXXXXX			
Fuel Balance @ Avg Price	XXXXXXXXXXXX	367,356.83	XXXXXXXXXXXX			
Total @ 11/01/2016 Avg Price	8,432	367,356.83	6,664.82			

Weighted Avg Cost/BBL by Location

44.8798

0.7904

Weighted Avg Cost/BBL @ Avg Cost

43.5670

0.7904

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2016

KEAHOLE CT

HS Diesel	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL EXCLUD LT	LT	TOTAL
Balance at 09/30/2016	51,881.8	2,179,036.0	3,463,371.6	147,613.9			
Less: Est'd Inventory Addition	0.0	0.0	0.0	0.0			
Purchases: Estimate	(1,456.0)	(61,152.0)	(80,720.6)	0.0			
Actual	1,456.0	61,152.0	80,720.6	0.0			
Transfers out: Estimate		xxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxx			
Actual		xxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxx			
Transfers in: Estimate	(42,125.5)	(1,769,270.0)	(2,868,901.8)	(112,593.0)			
Actual	40,746.9	1,711,370.0	2,887,190.1	110,855.01			
Consumed: Estimate	40,040.9	1,681,717.0	2,845,008.7	103,085.25			
Actual	(39,116.8)	(1,642,904.0)	(2,779,349.0)	(97,560.4)	71.0526		
Balance Per G/L 09/30/2016	51,427.4	2,159,949	3,547,319.67	151,400.84	68.9773		
Purchases	xxxxxxxxxxxx	xxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxx			
Transfer out	xxxxxxxxxxxx	xxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxx			
Transfer in	39,444.5	1,656,667.0	2,583,736.4	105,427.1	65.5032		
Consumed	(41,466.0)	(1,741,570.0)	(2,798,586.9)	(117,978.93)	67.4912	2.8452	70.3364
Balance @ 10/31/2016	49,405.9	2,075,046	3,332,469.22	138,849.04	67.4509		
Inventory From Offsite/Transfers	0.0	0.0	0.0	0.00			
Est'd Inventory Addition	0.0	0	0.0	0.00			
Fuel Balance @ Avg Price	49,405.9	2,075,046	3,332,469.22	138,849.04	67.4509		
Reverse Fuel Balance	xxxxxxxxxxxx	xxxxxxxxxxxxxxxx	(3,332,469.2)	xxxxxxxxxxxxxxxx			
Fuel Balance @ Avg Price	xxxxxxxxxxxx	xxxxxxxxxxxxxxxx	3,401,062.3	xxxxxxxxxxxxxxxx			
Total @ 11/01/2016 Avg Price	49,405.9	2,075,046	3,401,062.32	138,849.04	68.8393		

Weighted Avg Cost/BBL by Location 67.4509 2.8104

Weighted Avg Cost/BBL @ Avg Cost 68.8393 2.8104

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2016

PUNA CT-3

HS Diesel	BBL	GALLONS	COST EXCLUD LT	LAND TRANSP	COBER EXCL LT	BARREL LT	TOTAL
Balance at 09/30/2016	4,437.4	186,372.0	330,045.4	5,520.0			
Less: Est'd Inven Addition	0.0	0.0	0.0	0.0			
Purchases: Estimate		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers out: Estimate		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers in: Estimate	(660.0)	(27,721.0)	(42,434.2)	(687.9)			
	335.8	14,103.0	41,265.3	589.4			
Consumed: Estimate	621.3	26,093.0	44,142.3	657.0			
	(801.7)	(33,671.0)	(56,962.2)	(685.4)			
Balance Per G/L 09/30/2016	3,932.8	165,176	316,056.57	5,393.02			
Purchases		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer out		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer in	85.4	3,586.0	4,574.2	89.0	53.5743		
Consumed	(371.2)	(15,591)	(25,053.70)	(461.79)	67.4912	1.2440	68.7352
Balance @ 10/31/2016	3,646.9	153,171	295,577.10	5,020.22	81.0482		
Inven From Offsite/Transfers	0.0	0	0.00	0.00			
Est'd Inventory Addition	0.0	0	0.00	0.00			
Fuel Balance @ 10/31/2016	3,646.9	153,171	295,577.10	5,020.22	81.0482		
Reverse Fuel Balance		XXXXXXXXXXXXXXXXXXXX	(295,577.10)	XXXXXXXXXXXX			
Fuel Balance @ Avg Price		XXXXXXXXXXXXXXXXXXXX	251,051.84	XXXXXXXXXXXX			
Total @ 11/01/2016 Avg Price	3,646.9	153,171	251,051.84	5,020.22	68.8393		

Weighted Avg Cost/BBL by Location 81.0482 1.3766

Weighted Avg Cost/BBL @ Avg Cost 68.8393 1.3766

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2016

TOTAL HILO HS-DIESEL

HS Diesel	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER EXCL LT	BARREL LT	TOTAL
Balance at 09/30/2016	1568.2	65,866	111,684	1,137			
Less: Est'd Inven Addition	0.0	0	0	0			
Purchases: Estimate		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Actual		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers out: Estimate		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Actual		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers in: Estimate	0.0	0.0	0.0	0.0			
Actual	0.0	0.0	0.0	0.0			
Consumed: Estimate	10.8	454.0	768.1	7.6			
Actual	-47.2	-1984.0	-3356.4	-22.0			
Balance Per G/L 09/30/2016	1531.8	64,336	109,095.93	1,122.65	71.2203		
Purchases		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer out		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer in	205.9	8648.0	13194.0	15.0	0.0000		
Consumed	-62.4	-2620.0	-4210.2	-45.2	67.4912	0.7250	68.2162
Balance @ 10/31/2016	1,675.3	70,364	118,079.72	1,092.41	70.4813		
Inven From Offsite/Transfers	0.0	0.0	0.0	0.0			
Est'd Inventory Addition	0.0	0.0	0.0	0.0			
Fuel Balance @ Avg Price	1,675.3	70,364	118,079.72	1,092.41	70.4813		
Reverse Fuel Balance		XXXXXXXXXXXX	XXXXXXXXXXXX -118,079.72	XXXXXXXXXXXX			
Fuel Balance @ Avg Price		XXXXXXXXXXXX	XXXXXXXXXXXX 115,328.70	XXXXXXXXXXXX			
Total @ 11/01/2016 Avg Price	1,675.3	70,364	115,328.70	1,092.41	68.8393		

Weighted Avg Cost/BBL by Location

70.4813 0.6521

Weighted Avg Cost/BBL @ Avg Cost

68.8393 0.6521

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2016

KEAHOLE DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL EXCLUD LT	LT	TOTAL
Balance at 09/30/2016	2,011.7	84,491	136,954.28	5,179.95			
Less: Est'd Inventory Addition	0.0						
Purchases: Estimate	(376.9)	(15,829)	(24,436.83)	(1,007.33)			
Actual	376.9	15,829	24,436.82	0.00			
Transfers out: Estimate		xxxxxxxxxxxx	xxxxxxxxxxxxxxxx	xxxxxxxxxxxx			
Actual		xxxxxxxxxxxx	xxxxxxxxxxxxxxxx	xxxxxxxxxxxx			
Transfers in: Estimate		41	0.00	2.61			
Actual		23	0.00	1,007.33			
Consumed: Estimate	297.5	12,494	20,621.32	768.35			
Actual	(236.5)	(9,934)	(16,396.04)	(610.91)	69.3209		
Balance Per G/L 09/30/2016	2,074.2	87,115	141,179.55	5,340.00	68.0657		
Purchases	188.6	7,921	13,170.26	504.08	0.0000		
Estimated Purchases	0.0	0	0.00	0.00			
Transfer in	(2.0)	(86)	0.00	(5.47)	0.00		
Consumed	(350.0)	(14,699)	(24,214.64)	(901.15)	69.1894	2.5749	71.7643
Balance @ 10/31/2016	1,910.7	80,251	130,135.17	4,937.45	68.1073		
Inventory From Offsite/Transfers	0.0	0	0.00	0.00			
Est'd Inventory Addition	0.0	0	0.00	0.00			
Fuel Balance @ Avg Price	1,910.7	80,251	130,135.17	4,937.45	68.1073		
Reverse Fuel Balance	xxxxxxxxxxxx	xxxxxxxxxxxx	(130,135.17)	xxxxxxxxxxxx			
Fuel Balance @ Avg Price	xxxxxxxxxxxx	xxxxxxxxxxxx	132,831.71	xxxxxxxxxxxx			
Total @ 11/01/2016 Avg Price	1,910.7	80,251	132,831.71	4,937.45	69.5185		

Weighted Avg Cost/BBL by Location

68.1073 2.5841

Weighted Avg Cost/BBL @ Avg Cost

69.5185 2.5841

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2016

WAIMEA DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL	LT	TOTAL
Balance at 09/30/2016	1,459.5	61,299.0	100,679.8	3,458.73			
Less: Est'd Inven Addition	0.0	0.0	0.00	0.00			
Purchases: Estimate		(7,912)	(12,214.54)	(419.47)			
Actual		7,912.0	12,214.5	0.00			
Transfers out: Estimate		xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx			
Actual		xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx			
Transfers in: Estimate	5.1	216	0.00	0.00			
Actual	0.3	14	0.00	419.47			
Consumed: Estimate	124.7	5,239	8,646.96	290.38			
Actual	(250.4)	(10,517)	(17,358.28)	(556.14)			
Balance Per G/L 09/30/2016	1,339.3	56,251	91,968.48	3,192.97	68.6686		
ULSD Purchases	188.7	7,927	13,180.23	420.26	69.8334		
Estimated Purchases	190.0	7,980	13,268.35	423.07			
Transfer in	xxxxxxxxxxxx	4	0.00	0.00	#DIV/0!		
Consumed	(295.0)	(12,389)	(20,409.23)	(699.03)	69.1894	2.3698	71.5592
Balance @ 10/31/2016	1,423.2	59,773	98,007.84	3,337.27	68.8660		
Inven From Offsite/Transfers	0.0	0	0.00	0.00			
Est'd Inventory Addition	0.0	0	0.00	0.00			
Fuel Balance @ Avg Price	1,423.2	59,773	98,007.84	3,337.27	68.8660		
Reverse Fuel Balance	xxxxxxxxxxxx	xxxxxxxxxxxx	(98,007.84)	xxxxxxxxxxxx			
Fuel Balance @ Avg Price	xxxxxxxxxxxx	xxxxxxxxxxxx	98,936.46	xxxxxxxxxxxx			
Total @ 11/01/2016 Avg Price	1,423.2	59,773	98,936.46	3,337.27	69.5185		

Weighted Avg Cost/BBL by Location

68.8660 2.3450

Weighted Avg Cost/BBL @ Avg Cost

69.5185 2.3450

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2016

KANOELEHUA DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP		
Balance at 09/30/2016	1,296.0	54,430.0	91,076.8	1,027.6		
Less: Est'd Inventory Addition	0.0	0	0.00	0.00		
Purchases: Estimate	0.0	0	0.00	0.00		
	0.0	0	0.00	0.00		
Transfers out: Estimate		x	x	x		
		x	x	x		
Transfers in: Estimate		380	0.00	8.32		
		(533)	0.00	0.00		
Consumed: Estimate	107.5	4,513	7,448.70	78.52		
	(77.0)	(3,235)	(5,339.36)	(43.41)		
Balance Per G/L 09/30/2016	1,322.7	55,555	93,186.16	1,071.00		
ULSD Purchases	188	7,894	13,125.35	172.90	1.66	
Estimated Purchases	0	-	-	-		
Transfer in	(18)	(737)	0.00	(16.14)		
Consumed	(46.4)	(1,947)	(3,207.42)	(61.75)	69.1894	0.7929
Balance @ 10/31/2016	1,446.8	60,765	103,104.09	1,166.00		
Inventory From Offsite/Transfers	0.0	0	0.00	0.00		
Est'd Inventory Addition	0.0	0	0.00	0.00		
Fuel Balance @ Avg Price	1,446.8	60,765	103,104.09	1,166.00		
Reverse Fuel Balance	x	x	(103,104.09)	x		
Fuel Balance @ Avg Price	x	x	100,578.42	x		
Total @ 11/01/2016 Avg Price	1,446.8	60,765	100,578.42	1,166.00		

Weighted Avg Cost/BBL by Location

71.2642 0.8059

Weighted Avg Cost/BBL @ Avg Cost

69.5185 0.8059

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2016

DISPERSED GENERATION

	BBL	GALLONS	COST	COST/BBL
Balance at 09/30/2016	91.2	3,829	7,432.52	
Less: Est'd Inven Addition	0.0	XXXXXXXXXXXXXXXXXXXX		
Purchases: Estimate	0.0	0	0.00	
Actual	0.0	0	0.00	
Consumed: Estimate	0.8	33	54.47	
Actual	(3.8)	(158)	(260.78)	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Balance Per G/L 09/30/2016	88.19	3,704	7,226.21	81.9387
Purchases	0.0	0	0.00	0.0000
Transfer out	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Transfer in	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Consumed	(12.7)	(532)	(876.40)	69.1894
Balance @ 10/31/2016	75.5	3,172	6,349.81	84.0769
Est'd Inventory Addition	0.0	0	0.00	
Fuel Balance @ 10/31/2016	75.5	3,172	6,349.81	
Reverse Fuel Balance	XXXXXXXXXX	XXXXXXXXXX	(6,349.81)	xxxx
Fuel Balance @ Avg Price	XXXXXXXXXX	XXXXXXXXXX	5,250.30	xxxx
Total @ 11/01/2016 Avg Price	75.5	3,172	5,250.30	69.5185

HAWAII ELECTRIC LIGHT COMPANY, INC.
CONTRACT PRICES EFFECTIVE October 1, 2016

TYPE OF OIL BURNED

	<u>Hilo Industrial</u>		<u>Puna Industrial</u>	
INDUSTRIAL *	<u>¢/MBTU</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>	<u>\$/BBL</u>
Tax ¹	44.43	2.7987	44.43	2.7987
Ocean Transportation	49.63	3.1264	49.63	3.1264
Storage	17.03	1.0729	17.03	1.0729
Wharfage	3.97	0.2500	3.97	0.2500
	<u>Hilo Diesel</u>		<u>Waimea Diesel</u>	
DIESEL *	<u>¢/MBTU</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>	<u>\$/BBL</u>
Tax ¹	73.48	4.3054	73.48	4.3054
Ocean Transportation	53.35	3.1264	53.35	3.1264
Storage	18.31	1.0729	18.31	1.0729
Wharfage	4.27	0.2500	4.27	0.2500
	<u>Kona Diesel</u>		<u>CT3 Diesel</u>	
	<u>¢/MBTU</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>	<u>\$/BBL</u>
Tax ¹	73.48	4.3054	73.48	4.3054
Ocean Transportation	53.35	3.1264	53.35	3.1264
Storage	18.31	1.0729	18.31	1.0729
Wharfage	4.27	0.2500	4.27	0.2500
	<u>ULSD</u>			
ULSD **	<u>¢/MBTU</u>	<u>\$/BBL</u>		
Tax ¹	20.65	1.6226		
Ocean Transportation	0.00	0.0000		
Storage	0.00	0.0000		
Wharfage	0.00	0.0000		

¹ Tax includes HGET, Hawaii Use Tax, Liquid Fuel Tax, LUST Tax and Environmental Response Tax.

Note: Since the components above 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 fuel.

* Land Transportation Costs are shown in Attachment 3, Sheet 1.

** ULSD includes Waimea, Kanoelehua, and Keahole.

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

Hawaii Electric Light Company, Inc.
PURCHASED POWER PRICES FOR November 1, 2016

		November 1, 2016 <u>(¢/kWh)</u>	Floor Rates <u>(¢/kWh)</u>
PGV (25 MW)	- on peak	9.210	6.560
PGV (22 MW)	- off peak	10.426	5.430
WAILUKU HYDRO	- on peak	9.210	7.240
	.	10.426	5.970
Other: (<100 KW)	Sch Q Rate	9.440	

		November 1, 2016 <u>(¢/kWh)</u>	Floor Rates <u>(¢/kWh)</u>
HEP		11.916	
PGV Addtl 5 MW	- on peak	12.4800	0.0000
	- off peak	12.4800	0.0000
PGV Addtl 8 MW	- on peak	9.5200	0.0000
	- off peak	6.3400	0.0000

Hawaii Electric Light Company, Inc.
Energy Cost Reconciliation Adjustment
November 1, 2016

<u>Line No.</u>	<u>Description</u>	<u>Amount</u>
1	Amount to be returned or collected	(\$785,400)
2	Monthly Amount ($\frac{1}{3}$ x Line 1)	(\$261,800)
3	Revenue Tax Divisor	0.91115
4	Total (Line 2 / Line 3)	(\$287,329)
5	Estimated MWh Sales (November 1, 2016)	83,825 mwh
6	Adjustment (Line 4 / Line 5)	(0.343) ¢/kwh

HAWAII ELECTRIC LIGHT COMPANY, INC.
2016 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY
(Thousand \$)

<u>LINE</u>	<u>DESCRIPTION</u>	Info Only September 2016 YTD Total <u>No Deadband</u>	collectn by company*	Basis for Recon September 2016 YTD Total <u>Deadband</u>	Collection or Refund by <u>Company</u>
ACTUAL COSTS:					
1	Generation	\$40,717.9		\$40,717.9	
2	Distributed Generation	\$6.8		\$6.8	
3	Purch Power	\$45,320.0		\$45,320.0	
4	TOTAL	<u>\$86,044.7</u>		<u>\$86,044.7</u>	
FUEL FILING COST (1)					
5	Generation	\$40,893.8		\$41,048.5	
6	Distributed Generation	\$6.8		\$6.8	
7	Purch Power	\$45,320.0		\$45,320.0	
8	TOTAL	<u>\$86,220.6</u>		<u>\$86,375.3</u>	
BASE FUEL COST					
9	Generation	\$59,796.7		\$59,796.7	
10	Distributed Generation	\$5.4		\$5.4	
11	Purch Power	\$57,393.4		\$57,393.4	
12	TOTAL	<u>\$117,195.6</u>		<u>\$117,195.6</u>	
13	FUEL-BASE COST (Line 8-12)	-\$30,975.0		-\$30,820.3	
14	ACTUAL FOA LESS TAX	-\$29,800.9		-\$29,800.9	
15	Less: FOA reconciliation adj for prior year	\$18.9		\$18.9	
16	ADJUSTED FOA LESS TAX	<u>-\$29,819.8</u>		<u>-\$29,819.8</u>	
17	FOA-(FUEL-BASE) (Line 16-13)	\$1,155.2	over	\$1,000.5	over
ADJUSTMENTS:					
18	Current year FOA accrual reversal	\$2,751.0		\$2,751.0	
19	Other prior year FOA	\$0.0		\$0.0	
20	Other	<u>\$0.0</u>		<u>\$0.0</u>	
21	QUARTERLY FOA RECONCILIATION (Line 17+18+19+20)	<u>\$3,906.2</u>	over	<u>\$3,751.5</u>	over
22	Second Quarter FOA reconciliation			2,966.1	over
23	FOA Reconciliation to be Returned or Collected			785.4	over

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

**Hawai'i Electric Light Company
DEADBAND CALCULATION
2016**

Jan 1 - Sep 2016
YTD

	Notes	
<u>Industrial</u>		
Industrial Efficiency Factor (per D&O), BTU/kWh*	f	15,148
Industrial Deadband Definition, +/- BTU/kWh	d	100
Industrial Portion of Recorded Sales, kWh	a	174,868,766
Industrial Consumption (Recorded), MMBTU	b	2,511,474
Industrial Efficiency Factor (Recorded), BTU/kWh	c=(b/a) x 1000	14,362
Lower limit of Industrial Deadband, BTU/kWh	e= f-d	15,048
Higher limit of Industrial Deadband, BTU/kWh	g=f+d	15,248
Industrial Efficiency Factor for cost-recovery, BTU/kWh	h=c, e, or g	15,048
<u>Diesel</u>		
Diesel Efficiency Factor (per D&O), BTU/kWh*	f	10,424
Diesel Deadband Definition, +/- BTU/kWh	d	100
Diesel Portion of Recorded Sales, MWh	a	218,717,701
Diesel Consumption (Recorded), MMBTU	b	2,331,174
Diesel Efficiency Factor (Recorded), BTU/kWh	c=(b/a) x 1000	10,658
Lower limit of Diesel Deadband, BTU/kWh	e= f-d	10,324
Higher limit of Diesel Deadband, BTU/kWh	g=f+d	10,524
Diesel Efficiency Factor for cost-recovery, BTU/kWh	h=c, e, or g	10,524
<u>Biodiesel</u>		
Biodiesel Efficiency Factor (per D&O), BTU/kWh*	f	0
Biodiesel Deadband Definition, +/- BTU/kWh	d	100
Biodiesel Portion of Recorded Sales, MWh	a	0
Biodiesel Consumption (Recorded), MMBTU	b	0
Biodiesel Efficiency Factor (Recorded), BTU/kWh	c=(b/a) x 1000	0
Lower limit of Biodiesel Deadband, BTU/kWh	e= f-d	-100
Higher limit of Biodiesel Deadband, BTU/kWh	g=f+d	100
Biodiesel Efficiency Factor for cost-recovery, BTU/kWh	h=c, e, or g	0
<u>Hydro</u>		
Hydro Efficiency Factor (per D&O), BTU/kWh*	f	12,621
Hydro Deadband Definition, +/- BTU/kWh	d	100
Hydro Portion of Recorded Sales, MWh	a	12,115,002
Hydro Consumption (Recorded), MMBTU	b	150,193
Hydro Efficiency Factor (Recorded), BTU/kWh	c=(b/a) x 1000	12,397
Lower limit of Hydro Deadband, BTU/kWh	e= f-d	12,521
Higher limit of Hydro Deadband, BTU/kWh	g=f+d	12,721
Hydro Efficiency Factor for cost-recovery, BTU/kWh	h=c, e, or g	12,521

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

HAWAII ELECTRIC LIGHT COMPANY, INC.
GENERATION FUEL FILING COST AND GENERATION BASE FUEL COST
WITHOUT and WITH DEADBAND
2016

	Without Deadband	With Deadband
	<u>Jan 1 - Sep 30</u>	<u>Jan 1 - Sep 30</u>
<u>INDUSTRIAL FUEL FILING COST</u>		
Industrial Portion of Recorded Sales , kWh	174,868,766	174,868,766
Industrial Efficiency Factor (mmbtu/kwh)	0.015148	0.015048
Mmbtu adjusted for Sales Efficiency Factor	2,648,912	2,631,425
\$/mmbtu	<u>\$5.5399</u>	<u>\$5.5399</u>
TOTAL INDUSTRIAL \$000s TO BE RECOVERED	\$14,674.690	\$14,577.814
<u>DIESEL FUEL FILING COST</u>		
Diesel Portion of Recorded Sales, kWh	218,717,701	218,717,701
Diesel Efficiency Factor (mmbtu/kwh)	0.010424	0.010524
Mmbtu adjusted for Sales Efficiency Factor	2,279,913	2,301,785
\$/mmbtu	<u>\$11.5001</u>	<u>\$11.5001</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$26,219.122	\$26,470.649
<u>HYDRO FUEL FILING COST</u>		
Hydro Portion of Recorded Sales , kWh	12,115,002	12,115,002
Hydro Efficiency Factor (mmbtu/kwh)	0.012621	0.012521
Mmbtu adjusted for Sales Efficiency Factor	152,903	151,692
\$/mmbtu	<u>\$0.0000</u>	<u>\$0.0000</u>
TOTAL HYDRO \$000s TO BE RECOVERED	\$0.000	\$0.000
TOTAL GENERATION FUEL FILING COST, \$000s	\$40,893.8	\$41,048.5
<u>CALCULATION OF GENERATION BASE FUEL COST</u>		
TOTAL GENERATION BASE FUEL COST, \$000s	\$59,796.7	\$59,796.7
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$40,893.8	\$41,048.5
TOTAL GENERATION BASE FUEL COST YTD	\$59,796.7	\$59,796.7

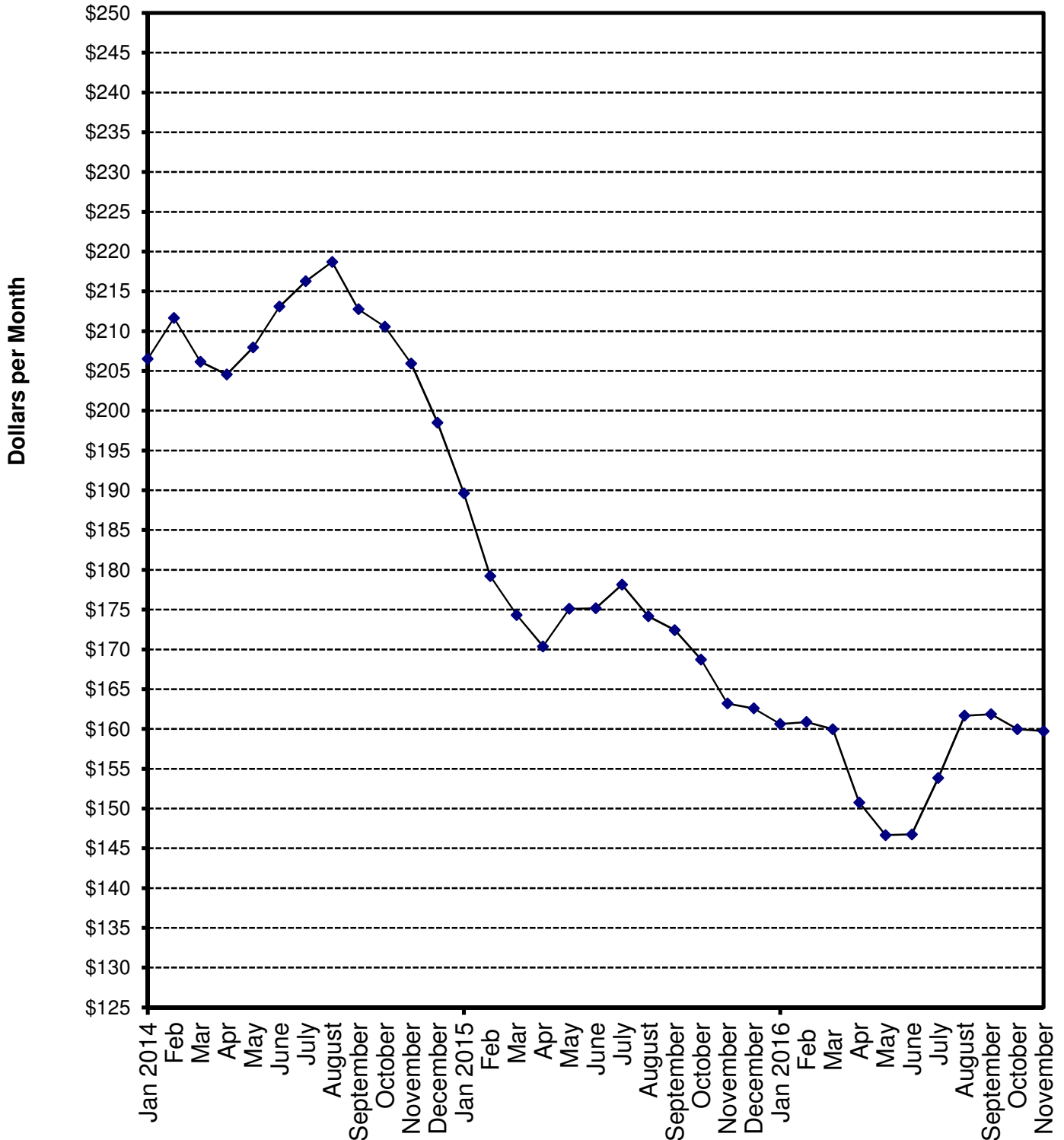
HAWAII ELECTRIC LIGHT COMPANY, INC.
2016 Cumulative Reconciliation Balance

Month	(1) YTD FOA Reconciliation	Qtr	(2) FOA Rec Adjust Variance	(3) FOA Rec Less Variance	(4) Try to Collect	(5) Actual Collect	(6) Month-end Cumulative Balance
November	791,200	[3]	44,375	746,825	(263,733)	(262,906)	565,708
December 15					(263,733)	(256,311)	309,397
January 16					(263,733)	(264,541)	44,856
February	(282,600)	[4]	10,260	(292,860)	94,200	95,382	(152,622)
March					94,200	96,004	(56,618)
April					94,200	97,345	40,727
May	2,320,900	[1]	2,178	2,318,722	(773,633)	(790,776)	1,568,673
June					(773,633)	(817,839)	750,834
July					(773,633)	(821,946)	(71,112)
August	645,200	[2]	(58,204)	703,404	(215,067)	(232,600)	399,692
September					(215,067)	(231,769)	167,923
October					(215,067)		
November	785,400	[3]	(82,548)	867,948	(261,800)		
December							

NOTES:

- Col(1): Quarterly FOA reconciliation amounts. (Refer to Attachment 6)
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))

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



**HAWAII ELECTRIC LIGHT COMPANY, INC.
FUEL OIL ADJUSTMENT FACTOR DATA**

<u>EFFECTIVE DATE</u>	<u>FUEL FACTOR CENTS / KWH</u>		
	<u>RESIDENTIAL & COMMERCIAL</u>	<u>@ 500 KWH</u>	<u>RESIDENTIAL BILL (\$) @ 600 KWH</u>
January 1, 2012	9.690	214.24	256.34
January 3, 2012	10.759	219.59	262.75
February 1, 2012	9.220	211.89	253.52
March 1, 2012	10.165	216.62	259.19
April 1, 2012	10.031	215.03	257.28
April 9, 2012	8.553	210.84	252.91
May 1, 2012	8.749	213.77	256.42
June 1, 2012	9.747	218.76	262.41
July 1, 2012	9.320	215.64	258.68
August 1, 2012	7.991	209.09	250.82
September 1, 2012	8.636	212.31	254.69
October 1, 2012	8.294	210.60	252.63
November 1, 2012	6.967	203.82	244.49
December 1, 2012	6.629	202.13	242.46
January 1, 2013	6.897	204.02	244.72
February 1, 2013	7.250	205.19	246.14
March 1, 2013	7.659	207.24	248.59
April 1, 2013	8.128	208.10	249.63
May 1, 2013	7.378	205.53	246.54
June 1, 2013	7.159	207.61	249.02
July 1, 2013	6.537	204.73	245.57
August 1, 2013	6.470	206.02	247.13
September 1, 2013	7.377	210.60	252.62
October 1, 2013	8.458	216.00	259.11
November 1, 2013	7.878	211.84	254.11
December 1, 2013	7.910	212.03	254.35
January 1, 2014	6.796	206.51	247.73
February 1, 2014	7.754	211.65	253.89
March 1, 2014	6.650	206.15	247.28
April 1, 2014	6.679	204.55	245.36
May 1, 2014	7.005	207.96	249.46
June 1, 2014	7.247	213.09	255.62
July 1, 2014	7.697	216.27	259.42
August 1, 2014	8.086	218.71	262.36
September 1, 2014	6.885	212.75	255.20
October 1, 2014	6.447	210.55	252.56
November 1, 2014	5.634	205.93	247.03
December 1, 2014	4.143	198.49	237.84
January 1, 2015	2.369	189.62	227.20
February 1, 2015	0.485	179.22	214.71
March 1, 2015	-0.519	174.32	208.85
April 1, 2015	-0.990	170.37	204.10
May 1, 2015	-0.420	175.10	209.79
June 8, 2015	-0.579	175.16	209.85
July 1, 2015	0.264	178.14	213.38
August 1, 2015	-0.586	174.16	208.61
September 1, 2015	-0.927	172.43	206.54
October 1, 2015	-1.671	168.73	202.10
November 1, 2015	-2.727	163.20	195.47
December 1, 2015	-2.859	162.59	194.74
January 1, 2016	-3.223	160.63	192.41
February 1, 2016	-2.962	160.87	192.69
March 1, 2016	-4.311	154.26	184.76
April 1, 2016	-4.715	150.76	180.57
May 1, 2016	-5.554	146.66	175.64
June 1, 2016	-5.546	146.74	175.74
July 1, 2016	-4.248	153.85	184.31
August 1, 2016	-3.094	161.67	193.69
September 1, 2016	-3.040	161.85	193.90
October 1, 2016	-3.427	159.97	191.65
November 1, 2016	-3.514	159.72	191.35

**HAWAII ELECTRIC LIGHT COMPANY, INC.
RESIDENTIAL SURCHARGE DATA**

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
01/01/12 - 12/31/12	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.6766 CENTS/KWH
01/01/12 - 04/08/12	INTERIM RATE INCREASE 2010 TEST YEAR	1.74 PERCENT ON BASE
04/01/12 - 04/08/12	FIRM CAPACITY SURCHARGE	0.6427 PERCENT ON BASE
04/01/12 - 04/30/12	SOLARSAVER ADJUSTMENT	-0.3899 CENTS/KWH
04/09/12	FINAL RATE INCREASE (1.28%), DOCKET NO. 2009-0164 (2010 TEST YEAR)	
04/09/12 - 7/31/2012	PURCHASED POWER ADJUSTMENT CLAUSE	2.4355 CENTS/KWH
05/01/12-3/31/13	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/18/12 - 5/31/2013	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	-0.1952 CENTS/KWH
8/1/2012 - 10/31/2012	PURCHASED POWER ADJUSTMENT CLAUSE	2.4540 CENTS/KWH
11/1/2012-1/31/13	PURCHASED POWER ADJUSTMENT CLAUSE	2.4237 CENTS/KWH
01/01/13-6/30/13	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.7850 CENTS/KWH
02/01/13-4/30/13	PURCHASED POWER ADJUSTMENT CLAUSE	2.3063 CENTS/KWH
04/01/13 - 04/30/13	SOLARSAVER ADJUSTMENT	-0.2964 CENTS/KWH
05/01/13 - 03/31/14	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/01/13- 07/31/2013	PURCHASED POWER ADJUSTMENT CLAUSE	2.2452 CENTS/KWH
6/1/2013-5/31/14	RBA RATE ADJUSTMENT	0.4383 CENTS/KWH
7/1/2013-6/30/14	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.8312 CENTS/KWH
8/1/2013-8/31/2013	PURCHASED POWER ADJUSTMENT CLAUSE	2.5712 CENTS/KWH
9/1/2013-9/30/2013	PURCHASED POWER ADJUSTMENT CLAUSE	2.5832 CENTS/KWH
10/1/2013-10/31/2013	PURCHASED POWER ADJUSTMENT CLAUSE	2.5802 CENTS/KWH
11/1/2013-11/30/2013	PURCHASED POWER ADJUSTMENT CLAUSE	2.3272 CENTS/KWH
12/1/2013-12/31/2013	PURCHASED POWER ADJUSTMENT CLAUSE	2.3347 CENTS/KWH
1/1/2014-1/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.3444 CENTS/KWH
2/1/2014-2/28/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.4149 CENTS/KWH
3/1/2014-3/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.4170 CENTS/KWH
4/1/2014-4/30/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.4162 CENTS/KWH
4/1/2014-4/30/2014	SOLARSAVER ADJUSTMENT	-0.3486 CENTS/KWH
5/1/2014-5/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.4248 CENTS/KWH
5/1/2014-5/31/2014	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
6/1/2014-6/30/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.4244 CENTS/KWH
6/1/2014-5/31/15	RBA RATE ADJUSTMENT	1.2225 CENTS/KWH
7/1/2014-7/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.4252 CENTS/KWH
7/1/2014-11/30/14	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	1.0157 CENTS/KWH
8/1/2014-8/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.5250 CENTS/KWH
9/1/2014-9/30/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.5341 CENTS/KWH
10/1/2014-10/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.5314 CENTS/KWH
11/1/2014-11/30/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.4226 CENTS/KWH
12/1/2014-12/31/2014	PURCHASED POWER ADJUSTMENT CLAUSE	2.4235 CENTS/KWH
12/1/2014-6/30/15	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.7583 CENTS/KWH
12/1/2014-6/30/15	GREEN INFRASTRUCTURE FEE	1.2900 DOLLARS/MONTH
1/1/2015-1/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.4245 CENTS/KWH
2/1/2015-2/28/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.2273 CENTS/KWH
3/1/2015-3/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.2539 CENTS/KWH
4/1/2015-4/30/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.2424 CENTS/KWH
4/1/2015-4/30/2015	SOLARSAVER ADJUSTMENT	-0.3084 CENTS/KWH
5/1/2015-5/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.3109 CENTS/KWH
5/1/2015-4/30/16	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
6/1/2015-6/30/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.3064 CENTS/KWH
6/1/2015-6/7/2015	RBA RATE ADJUSTMENT	0.0000 CENTS/KWH
6/8/2015-05/31/16	RBA RATE ADJUSTMENT	1.3971 CENTS/KWH
7/1/2015-7/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.3157 CENTS/KWH
7/1/2015-06/30/16	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.4749 CENTS/KWH
7/1/2015-12/31/2015	GREEN INFRASTRUCTURE FEE	1.4200 DOLLARS/MONTH
8/1/2015-8/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.3703 CENTS/KWH
9/1/2015-9/30/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.3651 CENTS/KWH
10/1/2015-10/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.3699 CENTS/KWH
11/1/2015-11/30/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.3204 CENTS/KWH
12/1/2015-12/31/2015	PURCHASED POWER ADJUSTMENT CLAUSE	2.3299 CENTS/KWH
1/1/2016-1/31/2016	PURCHASED POWER ADJUSTMENT CLAUSE	2.3260 CENTS/KWH
1/1/2016-06/30/16	GREEN INFRASTRUCTURE FEE	1.3000 DOLLARS/MONTH
2/1/2016 - 2/29/16	PURCHASED POWER ADJUSTMENT CLAUSE	2.1114 CENTS/KWH
3/1/2016 - 3/31/16	PURCHASED POWER ADJUSTMENT CLAUSE	2.1401 CENTS/KWH
4/1/2016 - 4/30/16	PURCHASED POWER ADJUSTMENT CLAUSE	2.1228 CENTS/KWH
4/1/2016 - 4/30/16	SOLARSAVER ADJUSTMENT	-0.2779 CENTS/KWH
5/1/2016 - 5/31/16	PURCHASED POWER ADJUSTMENT CLAUSE	1.8623 CENTS/KWH
5/1/2016	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
6/1/2016 - 6/30/16	PURCHASED POWER ADJUSTMENT CLAUSE	1.8442 CENTS/KWH
6/1/2016	RBA RATE ADJUSTMENT	1.4241 CENTS/KWH
7/1/2016-7/31/16	PURCHASED POWER ADJUSTMENT CLAUSE	1.8909 CENTS/KWH
7/1/2016	GREEN INFRASTRUCTURE FEE	1.1300 DOLLARS/MONTH
7/1/2016	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.5865 CENTS/KWH
8/1/2016-8/31/16	PURCHASED POWER ADJUSTMENT CLAUSE	2.3000 CENTS/KWH
9/1/2016-9/30/16	PURCHASED POWER ADJUSTMENT CLAUSE	2.2824 CENTS/KWH
10/1/2016-10/31/16	PURCHASED POWER ADJUSTMENT CLAUSE	2.2930 CENTS/KWH
11/1/2016-11/30/16	PURCHASED POWER ADJUSTMENT CLAUSE	2.3298 CENTS/KWH

**Base charges include customer charge, demand charge, energy charge, power factor adjustment, voltage discount, and minimum charge.

**Hawaii Electric Light Company, Inc.
Calculations of the Average Residential Customer Bill**

	Rate		Charge (\$) at 500 Kwh			
	10/01/16	11/01/16	10/01/16	11/01/16	Difference	
Base Rates	effective date:	4/9/2012	4/9/2012			
Base Fuel Energy Charge	¢/kwh	16.2487	16.2487	\$81.24	\$81.24	\$0.00
Non-fuel Fuel Energy Charge	¢/kwh			\$62.72	\$62.72	\$0.00
First 300 kWh per month	¢/kwh	11.2019	11.2019	\$33.61	\$33.61	\$0.00
Next 700 kWh per month	¢/kwh	14.5537	14.5537	\$29.11	\$29.11	\$0.00
Customer Charge	\$	10.50	10.50	\$10.50	\$10.50	\$0.00
Total Base Charges				\$154.46	\$154.46	\$0.00
RBA Rate Adjustment	¢/kwh	1.4241	1.4241	\$7.12	\$7.12	\$0.00
Purchased Power Adj. Clause	¢/kwh	2.2930	2.3298	\$11.47	\$11.65	\$0.18
PBF Surcharge	¢/kwh	0.5865	0.5865	\$2.93	\$2.93	\$0.00
DSM Adjustment	¢/kwh	0.0000	0.0000	\$0.00	\$0.00	\$0.00
SolarSaver Adjustment	¢/kwh	0.0000	0.0000	\$0.00	\$0.00	\$0.00
Energy Cost Adjustment	¢/kwh	(3.4270)	(3.5140)	-\$17.14	-\$17.57	-\$0.43
Green Infrastructure Fee	\$	1.1300	1.1300	\$1.13	\$1.13	\$0.00
Avg Residential Bill at 500 kwh				\$159.97	\$159.72	

Increase (Decrease -)	-\$0.25
% Change	-0.16%

	Rate		Charge (\$) at 600 Kwh			
	10/01/16	11/01/16	10/01/16	11/01/16	Difference	
Base Rates	effective date:	4/9/2012	4/9/2012			
Base Fuel/Energy Charge	¢/kwh	16.2487	16.2487	\$97.49	\$97.49	\$0.00
Non-fuel Fuel Energy Charge	¢/kwh			\$77.27	\$77.27	\$0.00
First 300 kWh per month	¢/kwh	11.2019	11.2019	\$33.61	\$33.61	\$0.00
Next 700 kWh per month	¢/kwh	14.5537	14.5537	\$43.66	\$43.66	\$0.00
Customer Charge	\$	10.50	10.50	\$10.50	\$10.50	\$0.00
Total Base Charges				\$185.26	\$185.26	\$0.00
RBA Rate Adjustment	¢/kwh	1.4241	1.4241	\$8.54	\$8.54	\$0.00
Purchased Power Adj. Clause	¢/kwh	2.2930	2.3298	\$13.76	\$13.98	\$0.22
PBF Surcharge	¢/kwh	0.5865	0.5865	\$3.52	\$3.52	\$0.00
DSM Adjustment	¢/kwh	0.0000	0.0000	\$0.00	\$0.00	\$0.00
SolarSaver Adjustment	¢/kwh	0.0000	0.0000	\$0.00	\$0.00	\$0.00
Energy Cost Adjustment	¢/kwh	(3.4270)	(3.5140)	-\$20.56	-\$21.08	-\$0.52
Green Infrastructure Fee	\$	1.1300	1.1300	\$1.13	\$1.13	\$0.00
Avg Residential Bill at 600 kwh				\$191.65	\$191.35	

Increase (Decrease -)	-\$0.30
% Change	-0.16%