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JAY IGNACIO, P. E.
President

October 29, 2018

2018 OCT 29 P 3:19

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

PUBLIC UTILITIES
COMMISSION

Dear Commissioners:

Subject: Hawai'i Electric Light Energy Cost Adjustment Factor for November 2018

Hawai'i Electric Light Company, Inc.'s ("Hawai'i Electric Light") Energy Cost Adjustment factor for November 2018 is 8.913 cents per kilowatt-hour ("kWh"), an increase of 0.55 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$197.99, an increase of \$3.78 compared to rates effective October 1, 2018. The increase in the typical residential bill is due to the increase in the Energy Cost Adjustment (+\$2.77) and the increase in the Purchase Power Adjustment Clause rate (+\$1.01).

Hawai'i Electric Light's fuel composite cost of generation increased 25.65 cents per million BTU to 1,530.61 cents per million BTU. The distributed generation increased 0.16 cents per kWh to 16.549 cents per kWh. The composite cost of purchased energy increased 0.62 cents per kWh to 15.525 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, 2018.

Sincerely,

Attachments

cc: Division of Consumer Advocacy

HAWAII ELECTRIC LIGHT COMPANY, INC.

ENERGY COST ADJUSTMENT FACTOR

	<u>EFFECTIVE DATES</u>		
	<u>10/01/18</u>	<u>11/01/18</u>	<u>Change</u>
<u>Composite Cost</u>			
Generation, ¢/mmbtu	1,504.96	1,530.61	25.65
Dispersed Generation Energy, ¢/kWh	16.393	16.549	0.16
Purchased Energy, ¢/kWh	14.903	15.525	0.62
<u>Residential Schedule "R"</u>			
Energy Cost Adjustment - ¢/kWh	8.359	8.913	0.55
<u>Others - "G,J,P,F"</u>			
Energy Cost Adjustment - ¢/kWh	8.359	8.913	0.55
Residential Customer with:			
500 KWH Consumption - \$/Bill	\$194.21	\$197.99	\$3.78
600 KWH Consumption - \$/Bill	\$232.50	\$237.04	\$4.54

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

ENERGY COST ADJUSTMENT (ECA) FILING - November 1, 2018 (Page 1 of 2)

Line

1 Effective Date November 1, 2018
2 Supercedes Factors of October 1, 2018

GENERATION COMPONENT

CENTRAL STATION WITH WIND/HYDRO COMPONENT			
FUEL PRICES, ¢/mmbtu			
3			
4	Hill Industrial		1,214.22
5	Puna Industrial		1,234.76
6	Keahole Diesel		1,899.88
6a	Keahole ULSD		1,676.30
7	Waimea ULSD Diesel		1,667.87
8	Hilo Diesel		1,866.02
8a	Hilo (Kanoelehua) ULSD Diesel ¹		1,652.03
9	Puna Diesel		1,869.37
10	Wind		0.00
11	Hydro		0.00
BTU MIX, %			
12			
13	Hill Industrial		36.840
14	Puna Industrial		6.721
15	Keahole Diesel		48.781
15a	Keahole ULSD		1.115
16	Waimea ULSD Diesel		0.467
17	Hilo Diesel		0.166
17a	Hilo (Kanoelehua) ULSD Diesel ¹		0.180
18	Puna Diesel		2.192
19	Wind		0.000
20	Hydro		3.538
			100.000
21	COMPOSITE COST OF GENERATION, CENTRAL STATION + WIND/HYDRO ¢/mmb		1,530.61
22	% Input to System kWh Mix		53.382
EFFICIENCY FACTOR, mmbtu/kWh			
	(A)	(B)	(C) (D)
			Percent of
			Centrl Stn +
			Weighted
	Fuel Type	Eff Factor	Eff Factor
		mmbtu/kwh	
			Wind/Hydro
23	Industrial	0.014437	43.561
24	Diesel	0.010515	52.901
25	Other	0.012351	3.538
	(Lines 23, 2		
26	Weighted Efficiency Factor, mmbtu/kWh [Lines 23(D) + 24(D) + 25(D)]		0.0122890
27	WEIGHTED COMPOSITE CENTRAL STATION + WIND/HYDRO GENERATION COST, ¢/kWh (Lines (21 x 22 x 26))		10.04098
28	BASE CENTRAL STATION + WIND/HYDRO GENERATION COST, ¢/mmbtu		661.02
29	Base % Input to Sys kWh Mix		53.67
30	Efficiency Factor, mmbtu/kwh		0.012451
31	WEIGHTED BASE CENTRAL STATION + WIND/HYDRO GENERATION COST ¢/kWh (Lines (28 x 29 x 30))		4.41723
32	COST LESS BASE (Line 27 - 31)		5.62375
33	Revenue Tax Req Multiplier		1.0975
34	CENTRAL STATION + WIND/HYDRO GENERATION FACTOR, ¢/kWh (Line (32 x 33))		6.17207

DG ENERGY COMPONENT		
35	COMPOSITE COST OF DG ENERGY, ¢/kWh	16.549
36	% Input to System kWh Mix	0.827
37	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 35 x 36)	0.13686
38	BASE DG ENERGY COMPOSITE COS	13.932
39	Base % Input to System kWh Mix	0.01
40	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 38 x 39)	0.00139
41	Cost Less Base (Line 37 - 40)	0.13547
42	Loss Factor	1.072
43	Revenue Tax Req Multiplier	1.0975
44	DG FACTOR, ¢/kWh (Line 41 x 42 x 43)	0.15938

SUMMARY OF TOTAL GENERATION FACTOR, ¢/kWh		
45	Cntrl Stn+Wind/Hydro (line 34)	6.17207
46	DG (line 44)	0.15938
47	TOTAL GENERATION FACTOR, ¢/kWh (lines 45 + 46)	6.33145

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, 2018 (Page 2 of 2)

Line	PURCHASED ENERGY COMPONENT		
	PURCHASED ENERGY PRICE, ¢/kWh		
48	HEP		16.584
49	PGV	On Peak	16.785
50	PGV	Off Peak	16.409
51	PGV - Add'l 5 MW	On Peak	12.860
52	PGV - Add'l 5 MW	Off Peak	12.860
53	PGV - Add'l 8 MW	On Peak	6.540
54	PGV - Add'l 8 MW	Off Peak	6.540
55	Wailuku Hydro	On Peak	16.785
56	Wailuku Hydro	Off Peak	16.409
57	Hawi Renewable Dev.	On Peak	16.785
58	Hawi Renewable Dev.	Off Peak	16.409
59	Tawhiri (Pakini Nui)	On Peak	11.490
60	Tawhiri (Pakini Nui)	Off Peak	11.570
61			
62	Small Hydro (>100 KW)	On Peak	16.785
63	Small Hydro (>100 KW)	Off Peak	16.409
64	Sch Q Hydro (<100 KW)		16.220
65	FIT		23.800
	PURCHASED ENERGY KWH MIX, %		
66	HEP		59.577
67	PGV	On Peak	0.000
68	PGV	Off Peak	0.000
69	PGV - Addt'l	On Peak	0.000
70	PGV - Addt'l	Off Peak	0.000
71	PGV - Add'l 8 MW	On Peak	0.000
72	PGV - Add'l 8 MW	Off Peak	0.000
73	Wailuku Hydro	On Peak	4.275
74	Wailuku Hydro	Off Peak	3.180
75	Hawi Renewable Dev.	On Peak	5.010
76	Hawi Renewable Dev.	Off Peak	2.839
77	Tawhiri (Pakini Nui)	On Peak	14.262
78	Tawhiri (Pakini Nui)	Off Peak	9.056
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)		0.217
83	FIT		1.584
			100.000
84	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh		15.525
85	% Input to System kWh Mix		45.791
86	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (Lines (84 x 85))		7.10905
87	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh		9.895
88	Base % Input to Sys kWh Mix		46.32
89	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (Lines (87 x 88))		4.58336
90	COST LESS BASE (Lines (86 - 89))		2.52569
91	Loss Factor		1.072
92	Revenue Tax *		1.0975
93	PURCHASED ENERGY FACTOR, ¢/kWh (Lines (90 x 91 x 92))		2.97152

Line	SYSTEM COMPOSITE		
94	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (Lines (47 + 93))		9.30297
95	Not Used		0.000
96	Not Used		0.000
97	ECA Reconciliation Adjustment		(0.390)
98	ECA FACTOR, ¢/kWh (Lines (94 + 95+ 96 + 97))		8.913

Hawaii Electric Light Company, Inc.
FUEL OIL INVENTORY PRICES FOR November 1, 2018

INDUSTRIAL FUEL COSTS:

	<u>HILO</u>	<u>PUNA</u>
Average Industrial Fuel Cost - \$/BBL	76.4957	76.4957
Land Transportation Cost - \$/BBL	--	1.2943
Industrial Costs For Filing - \$/BBL	76.4957	77.7899
Conversion Factors - mmbtu/BBL	6.30	6.30
Industrial Costs For Filing - ¢/mmbtu	1,214.22	1,234.76

DIESEL FUEL COSTS:

	<u>KEAHOLE</u>	<u>PUNA CT-3</u>	<u>HILO</u>
Average Diesel Fuel Cost - \$/BBL	108.5285	108.5285	108.5285
Land Transportation Cost - \$/BBL	2.8047	1.0164	0.8202
Diesel Costs For Filing - \$/BBL	111.3332	109.5450	109.3487
Conversion Factors - mmbtu/BBL	5.86	5.86	5.86
Diesel Costs For Filing - ¢/mmbtu	1,899.88	1,869.37	1,866.02

ULSD FUEL COSTS:

	<u>KEAHOLE</u>	<u>WAIMEA</u>	<u>HILO</u>	<u>DISPERSED GENERATION</u>
Average ULSD Fuel Cost - \$/BBL	93.2315	93.2315	93.2315	93.2315
Land Transportation Cost - \$/BBL	2.8207	2.3372	1.4298	-
ULSD Costs For Filing - \$/BBL	96.0523	95.5687	94.6613	93.2315
Conversion Factors - mmbtu/BBL	5.73	5.73	5.73	5.73
ULSD Costs For Filing - ¢/mmbtu	1,676.30	1,667.87	1,652.03	1,627.08

Dispersed Generation, cents per kWh

	<u>COMPOSITE COST OF DISP. GEN.</u>
BBIs Fuel:	1141.3834
\$/BBI Inv Cost:	93.2315
Fuel \$ (Prod Sim Consumption x Unit Cost)	106,412.90
Net kWh (from Prod Sim)	643,000
cents/kWh:	16.549

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2018

	SHIPMAN INDUSTRIAL		HILL INDUSTRIAL		COST PER BARREL		
	BBL	COST	BBL	COST	EXCL LT	LT Total	
Balance at 09/30/2018	0	0.00	34,621	2,646,925.26			
Less: Est'd Inventory Addn			0	0.00			
Purchases: Estimate	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Actual	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfers out: Estimate	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Actual	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfers in: Estimate	0	0.00	(14,782)	(1,094,712.21)			
Actual	0	0.00	19,344	1,462,896.13			
Consumed: Estimate	0	0.00	18,868	1,444,564.40			
Actual	0	0.00	(23,699)	(1,814,433.36)			
Balance Per G/L 09/30/2018	<u>0</u>	<u>0.00</u>	<u>34,352</u>	<u>2,645,240.22</u>			
Purchases	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfer out	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfer in	0	0.00	32,972	2,467,819.69			
Consumed	<u>0</u>	<u>0.00</u>	<u>(34,633)</u>	<u>(2,637,819.59)</u>	106.5901	0.0000	106.5901
Balance @ 10/31/2018	0	0.00	32,691	2,475,240.32			
Inv From Offsite/Transfers	0	0.00	0	0.00			
Est'd Inventory Addition	0	0.00	0	0.00			
Fuel Balance @ 10/31/2018	<u>0</u>	<u>0.00</u>	<u>32,691</u>	<u>2,475,240.32</u>			
Reverse Fuel Balance	xxxxxx	0.00	xxxxxx	(2,475,240.32)			
Fuel Bal @ Avg Price	xxxxxx	0.00	xxxxxx	2,500,719.88			
Total @ 11/01/2018 Avg Price	<u>0</u>	<u>0.00</u>	<u>32,691</u>	<u>2,500,719.88</u>			

Weighted Avg Cost/BBL by Location #DIV/0! 75.7163
 Weighted Avg Cost/BBL @ Avg Cost #DIV/0! 76.4957

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2018

PUNA INDUSTRIAL

	BBL	COST	LAND TRANSP	COST PER BARREL		TOTAL
				EXCLUDE LT	LT	
Balance at 09/30/2018	4,218	354,714.60	5,092.08			
Less: Est'd Inventory Addition	0	0.00	0.00			
Purchases: Estimate	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Actual	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers out: Estimate	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Actual	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers in: Estimate	(10,078)	(774,975.46)	(12,050.67)			
Actual	10,069	797,418.93	12,574.40			
Consumed: Estimate	12,175	932,137.56	15,226.23			
Actual	(9,863)	(774,196.47)	(12,334.67)			
Balance Per G/L 09/30/2018	<u>6,521</u>	<u>535,099.17</u>	<u>8,507.37</u>			
Purchases	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer out	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer in	1,309	103,226	1,565.22			
Consumed	(706)	<u>(53,772.43)</u>	(852.30)	76.1649	1.2072	77.3721
Balance @ 10/31/2018	<u>7,124</u>	<u>584,552.32</u>	<u>9,220.29</u>			
Inventory From Offsite/Transfers	0	0.00	0.00			
Est'd Inventory Addition	0	0.00	0.00			
Fuel Bal @ Avg Price	<u>7,124</u>	<u>584,552.32</u>	<u>9,220.29</u>		<u>1.2943</u>	
Reverse Fuel Balance	XXXXXXXXXXXX	(584,552.32)	XXXXXXXXXXXX			
Fuel Balance @ Avg Price	XXXXXXXXXXXX	544,955.14	XXXXXXXXXXXX			
Total @ 11/01/2018 Avg Price	<u>7,124</u>	<u>544,955.14</u>	<u>9,220.29</u>			
Weighted Avg Cost/BBL by Location		82.0539	1.2943			
Weighted Avg Cost/BBL @ Avg Cost		76.4957	1.2943			

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2018

KEAHOLE CT

HS Diesel	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL EXCLUD LT	BARREL LT	TOTAL
Balance at 09/30/2018	46,279.1	1,943,723.0	4,838,957.0	130,868.2			
Less: Est'd Inventory Addition	0.0	0.0	0.0	0.0			
Purchases: Estimate	0.0	0.0	0.0	0.0			
Actual	0.0	0.0	0.0	0.0			
Transfers out: Estimate		XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Actual		XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Transfers in: Estimate	(53,982.1)	(2,267,247.0)	(5,388,016.8)	(153,492.6)			
Actual	56,676.2	2,380,402.0	5,843,678.8	159,220.17			
Consumed: Estimate	48,079.0	2,019,319.0	4,681,684.3	135,939.47			
Actual	(48,052.0)	(2,018,184.0)	(4,679,053.9)	(135,862.2)	97.3748		
Balance Per G/L 09/30/2018	49,000.3	2,058,013	5,297,249.44	136,672.97	108.1064		
Purchases	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Transfer out	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Transfer in	52,434.8	2,202,260.0	5,481,365.9	149,093.0	104.5369		
Consumed	(55,084.2)	(2,313,536.0)	(5,714,291.6)	(155,767.16)	103.7374	2.8278	106.5652
Balance @ 10/31/2018	46,350.9	1,946,737	5,064,323.77	129,998.81	109.2606		
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	46,350.9	1,946,737	5,064,323.77	129,998.81	109.2606		
Reverse Fuel Balance	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	(5,064,323.8)	XXXXXXXXXXXXXXXXXX			
Fuel Balance @ Avg Price	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	5,030,393.8	XXXXXXXXXXXXXXXXXX			
Total @ 11/01/2018 Avg Price	46,350.9	1,946,737	5,030,393.83	129,998.81	108.5285		

Weighted Avg Cost/BBL by Location

109.2606

2.8047

Weighted Avg Cost/BBL @ Avg Cost

108.5285

2.8047

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2018

PUNA CT-3

HS Diesel	BBL	GALLONS	COST EXCLUD LT	LAND TRANSP	COST PER EXCL LT	BARREL LT	TOTAL
Balance at 09/30/2018	2,269.9	95,336.0	246,374.4	2,670.9			
Less: Est'd Inven Addition	0.0	0.0	0.0	0.0			
Purchases: Estimate		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX			
Actual		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX			
Transfers out: Estimate		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX			
Actual		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX			
Transfers in: Estimate	(7,156.5)	(300,574.0)	(702,896.4)	(7,935.2)			
Actual	8,243.9	346,245.0	869,760.4	9,160.7			
Consumed: Estimate	8,765.6	368,154.0	853,545.6	9,564.1			
Actual	(7,874.5)	(330,731.0)	(766,782.5)	(8,591.9)			
Balance Per G/L 09/30/2018	4,248.3	178,430	500,001.46	4,868.61			
Purchases		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX			
Transfer out		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX			
Transfer in	6,528.5	274,197.0	681,163.5	7,238.8	104.3369		
Consumed	(7,199.7)	(302,387)	(746,877.28)	(8,471.46)	103.7374	1.1766	104.9141
Balance @ 10/31/2018	3,577.1	150,240	434,287.67	3,635.96	121.4063		
Inven From Offsite/Transfers	0.0	0	0.00	0.00			
Est'd Inventory Addition	0.0	0	0.00	0.00			
Fuel Balance @ 10/31/2018	3,577.1	150,240	434,287.67	3,635.96	121.4063		
Reverse Fuel Balance		XXXXXXXXXXXXXXXXXXXX	(434,287.67)	XXXXXXXXXXXXXXXXXXXX			
Fuel Balance @ Avg Price		XXXXXXXXXXXXXXXXXXXX	388,222.12	XXXXXXXXXXXXXXXXXXXX			
Total @ 11/01/2018 Avg Price	3,577.1	150,240	388,222.12	3,635.96	108.5285		

Weighted Avg Cost/BBL by Location
Weighted Avg Cost/BBL @ Avg Cost

121.4063 1.0164
108.5285 1.0164

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2018

TOTAL HILO HS-DIESEL

HS Diesel	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL EXCL LT	BARREL LT	TOTAL
Balance at 09/30/2018	1011.5	42,482	108,211	860			
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	-192.5	-8084.0	-18649.6	0.0			
Actual	192.5	8084.0	19756.6	0.0			
Consumed: Estimate	1151.8	48374.0	112152.6	1290.0			
Actual	-731.1	-30706.0	-71190.3	-1003.0			
Balance Per G/L 09/30/2018	1432.1	60,150	150,280.31	1,147.51	104.9339		
Purchases		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer out		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer in	185.4	7786.0	19573.6	181.4	#DIV/0!		
Consumed	-74.8	-3140.0	-7755.6	-63.6	103.7374	0.8507	104.5881
Balance @ 10/31/2018	1,542.8	64,796	162,098.30	1,265.32	105.0702		
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	1,542.8	64,796	162,098.30	1,265.32	105.0702		
Reverse Fuel Balance		XXXXXXXXXXXX	XXXXXXXXXXXX -162,098.30	XXXXXXXXXXXX			
Fuel Balance @ Avg Price		XXXXXXXXXXXX	XXXXXXXXXXXX 167,433.71	XXXXXXXXXXXX			
Total @ 11/01/2018 Avg Price	1,542.8	64,796	167,433.71	1,265.32	108.5285		

Weighted Avg Cost/BBL by Location

105.0702 0.8202

Weighted Avg Cost/BBL @ Avg Cost

108.5285 0.8202

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2018

KEAHOLE DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL EXCLUD LT	LT	TOTAL
Balance at 09/30/2018	1,975.4	82,967	174,805.64	5,552.79			
Less: Est'd Inventory Addition	0.0						
Purchases: Estimate	(187.8)	(7,887)	(19,081.89)	(533.95)			
Actual	187.8	7,887	20,161.82	0.00			
Transfers out: Estimate		XXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX			
Actual		XXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers in: Estimate		89	0.00	6.03			
Actual		(104)	0.00	533.95			
Consumed: Estimate	172.1	7,227	15,289.99	480.93			
Actual	(233.5)	(9,806)	(20,746.32)	(652.65)	88.8584		
Balance Per G/L 09/30/2018	1,913.6	80,373	170,429.24	5,387.10	89.0601		
Purchases	185.9	7,809	19,774.34	528.67	0.0000		
Estimated Purchases	190.0	7,980	20,207.35	540.25			
Transfer in	4.2	176	0.00	11.92	0.00		
Consumed	(222.7)	(9,352)	(20,547.31)	(625.91)	92.2783	2.8110	95.0893
Balance @ 10/31/2018	2,071.1	86,986	189,863.63	5,842.02	91.6731		
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	2,071.1	86,986	189,863.63	5,842.02	91.6731		
Reverse Fuel Balance	XXXXXXXXXXXX	XXXXXXXXXXXX	(189,863.63)	XXXXXXXXXXXX			
Fuel Balance @ Avg Price	XXXXXXXXXXXX	XXXXXXXXXXXX	193,091.34	XXXXXXXXXXXX			
Total @ 11/01/2018 Avg Price	2,071.1	86,986	193,091.34	5,842.02	93.2315		

Weighted Avg Cost/BBL by Location

91.6731 2.8207

Weighted Avg Cost/BBL @ Avg Cost

93.2315 2.8207

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2018

WAIMEA DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL	LT	TOTAL
Balance at 09/30/2018	1,547.7	65,002.0	137,487.9	3,624.92			
Less: Est'd Inven Addition	0.0	0.0	0.00	0.00			
Purchases: Estimate		(7,922)	(19,166.57)	(446.80)			
Actual		7,922.0	20,251.4	0.00			
Transfers out: Estimate		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Actual		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers in: Estimate	(1.7)	(73)	0.00	0.00			
Actual	8.6	363	0.00	446.80			
Consumed: Estimate	182.8	7,677	16,242.05	427.33			
Actual	(196.4)	(8,249)	(17,452.21)	(459.17)			
Balance Per G/L 09/30/2018	1,541.0	64,720	137,362.58	3,593.08	89.1414		
ULSD Purchases	0.0	0	0.00	0.00	#DIV/0!		
Estimated Purchases	190.0	7,980	20,189.40	450.07			
Transfer in	XXXXXXXXXXXX	(63)	0.00	0.00	#DIV/0!		
Consumed	(228.9)	(9,614)	(21,122.95)	(536.14)	92.2783	2.3422	94.6205
Balance @ 10/31/2018	1,500.5	63,023	136,429.03	3,507.02	90.9195		
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	1,500.5	63,023	136,429.03	3,507.02	90.9195		
Reverse Fuel Balance	XXXXXXXXXXXX	XXXXXXXXXXXX	(136,429.03)	XXXXXXXXXXXX			
Fuel Balance @ Avg Price	XXXXXXXXXXXX	XXXXXXXXXXXX	139,898.32	XXXXXXXXXXXX			
Total @ 11/01/2018 Avg Price	1,500.5	63,023	139,898.32	3,507.02	93.2315		

Weighted Avg Cost/BBL by Location

90.9195 2.3372

Weighted Avg Cost/BBL @ Avg Cost

93.2315 2.3372

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2018

KANOELEHUA DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP		
Balance at 09/30/2018	1,352.9	56,823.0	136,791.9	1,962.0		
Less: Est'd Inventory Addition	0.0	0	0.00	0.00		
Purchases: Estimate	(188.1)	(7,902)	(19,118.18)	(184.12)		
Actual	188.1	7,902	20,200.69	0.00		
Transfers out: Estimate			x	x	x	
Actual			x	x	x	
Transfers in: Estimate		0	0.00	0.00		
Actual		0	0.00	367.77		
Consumed: Estimate	196.9	8,271	967.04	26.58		
Actual	(156.4)	(6,570)	(13,899.99)	(197.16)		
Balance Per G/L 09/30/2018	1,393.4	58,524	124,941.45	1,975.05		
ULSD Purchases	0	0	0.00	0.00	#DIV/0!	
Estimated Purchases	190	-	-	-		
Transfer in	0	0	0.00	0.00		
Consumed	(90.6)	(3,807)	(967.04)	(26.58)	92.27832562	1.4502
Balance @ 10/31/2018	1,492.8	62,697	144,163.81	2,134.40		
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	1,492.8	62,697	144,163.81	2,134.40		
Reverse Fuel Balance	x	x	(144,163.81)	x		
Fuel Balance @ Avg Price	x	x	139,174.67	x		
Total @ 11/01/2018 Avg Price	1,492.8	62,697	139,174.67	2,134.40		

Weighted Avg Cost/BBL by Location 96.5737 1.4298

Weighted Avg Cost/BBL @ Avg Cost 93.2315 1.4298

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
October 2018

DISPERSED GENERATION

	BBL	GALLONS	COST	COST/BBL
Balance at 09/30/2018	58.0	2,435	6,213.60	
Less: Est'd Inven Addition	0.0	XXXXXXXXX	XXXXXXXXXX	
Purchases: Estimate	0.0	0	0.00	
Actual	0.0	0	0.00	
Consumed: Estimate	38.2	1,604	3,393.54	
Actual	(32.5)	(1,363)	(2,334.98)	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Balance Per G/L 09/30/2018	63.71	2,676	7,272.16	114.1370
Purchases	28.3	1,188	3,008.70	106.3682
Transfer out	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Transfer in	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Consumed	(4.5)	(189)	(415.25)	92.2783
Balance @ 10/31/2018	87.5	3,675	9,865.61	112.7498
Est'd Inventory Addition	0.0	0	0.00	
Fuel Balance @ 10/31/2018	87.5	3,675	9,865.61	
Reverse Fuel Balance	XXXXXXXXXX	XXXXXXXXXX	(9,865.61)	xxxx
Fuel Balance @ Avg Price	XXXXXXXXXX	XXXXXXXXXX	8,157.76	xxxx
Total @ 11/01/2018 Avg Price	87.5	3,675	8,157.76	93.2315

HAWAII ELECTRIC LIGHT COMPANY, INC.
CONTRACT PRICES EFFECTIVE October 1, 2018

TYPE OF OIL BURNED

INDUSTRIAL *	<u>Hill Industrial</u>		<u>Puna Industrial</u>	
	<u>¢/MBTU</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>	<u>\$/BBL</u>
Tax ¹	66.41	4.1835	66.41	4.1835
Ocean Transportation	39.81	2.4173	38.37	2.4173
Storage	29.89	2.0521	32.57	2.0521
Wharfage	6.43	0.3900	6.19	0.3900
Fees ²	2.26	0.1425	2.26	0.1425
	<u>Hilo Diesel</u>		<u>Waimea Diesel</u>	
DIESEL *	<u>¢/MBTU</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>	<u>\$/BBL</u>
Tax ¹	100.77	5.9048	100.77	5.9048
Ocean Transportation	41.25	2.4173	41.25	2.4173
Storage	27.20	1.5937	27.20	1.5937
Wharfage	6.66	0.3900	6.66	0.3900
Fees ²	3.33	0.1950	3.33	0.1950
	<u>Kona Diesel</u>		<u>CT3 Diesel</u>	
	<u>¢/MBTU</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>	<u>\$/BBL</u>
Tax ¹	100.77	5.9048	100.77	5.9048
Ocean Transportation	41.25	2.4173	41.25	2.4173
Storage	27.20	1.5937	27.20	1.5937
Wharfage	6.66	0.3900	6.66	0.3900
Fees ²	3.33	0.1950	3.33	0.1950
	<u>ULSD</u>			
ULSD **	<u>¢/MBTU</u>	<u>\$/BBL</u>		
Tax ¹	26.38	2.0337		
Ocean Transportation	0.00	0.0000		
Storage	0.00	0.0000		
Wharfage	0.00	0.0000		
Fees ²	3.40	0.1950		

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

² Fees include Custom Duty and Fed Oil Spill Recovery

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, 2018

		November 1, 2018 <u>(¢/kWh)</u>	Floor Rates <u>(¢/kWh)</u>
PGV (25 MW)	- on peak	16.785	6.560
PGV (22 MW)	- off peak	16.409	5.430
WAILUKU HYDRO	- on peak	16.785	7.240
	off peak	16.409	5.970
Other: (<100 KW)	Sch Q Rate	16.220	
		November 1, 2018 <u>(¢/kWh)</u>	Floor Rates <u>(¢/kWh)</u>
HEP		16.584	
PGV Addtl 5 MW	- on peak	12.8600	0.0000
	- off peak	12.8600	0.0000
PGV Addtl 8 MW	- on peak	6.5400	0.0000
	- off peak	6.5400	0.0000

Hawaii Electric Light Company, Inc.
Energy Cost Reconciliation Adjustment
November 1, 2018

<u>Line No.</u>	<u>Description</u>	<u>Amount</u>
1	Amount to be (returned) or collected	(\$917,000)
2	Monthly Amount ($\frac{1}{3}$ x Line 1)	(\$305,667)
3	Revenue Tax Divisor	0.91115
4	Total (Line 2 / Line 3)	(\$335,473)
5	Estimated MWh Sales (November 1, 2018)	86,032 mwh
6	Adjustment (Line 4 / Line 5)	(0.390) ¢/kwh

HAWAII ELECTRIC LIGHT COMPANY, INC.
2018 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY
(Thousand \$)

LINE	DESCRIPTION	Info Only	collectn by company*	Basis for Recon	Collection or Refund by Company
		September 2018 YTD Total No Deadband		September 2018 YTD Total Deadband	
ACTUAL COSTS:					
1	Generation	\$64,338.6		\$64,338.6	
2	Distributed Generation	\$9.2		\$9.2	
3	Purch Power	\$58,367.5		\$58,367.5	
4	TOTAL	<u>\$122,715.3</u>		<u>\$122,715.3</u>	
FUEL FILING COST (1)					
5	Generation	\$64,990.3		\$64,829.6	
6	Distributed Generation	\$9.2		\$9.2	
7	Purch Power	\$58,367.5		\$58,367.5	
8	TOTAL	<u>\$123,367.0</u>		<u>\$123,206.3</u>	
BASE FUEL COST					
9	Generation	\$58,081.5		\$58,081.5	
10	Distributed Generation	\$4.0		\$4.0	
11	Purch Power	\$59,263.3		\$59,263.3	
12	TOTAL	<u>\$117,348.8</u>		<u>\$117,348.8</u>	
13	FUEL-BASE COST (Line 8-12)	\$6,018.2		\$5,857.5	
14	ACTUAL FOA LESS TAX	\$5,944.9		\$5,944.9	
15	Less: FOA reconciliation adj for prior year	<u>-\$1,063.1</u>		<u>-\$1,063.1</u>	
16	ADJUSTED FOA LESS TAX	\$7,008.0		\$7,008.0	
17	FOA-(FUEL-BASE) (Line 16-13)	\$989.8	over	\$1,150.5	over
ADJUSTMENTS:					
18	Current year FOA accrual reversal	\$1,620.4		\$1,620.4	
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>\$2,610.2</u>	over	<u>\$2,770.9</u>	over
22	Second Quarter FOA reconciliation			1,853.8	over
23	FOA Reconciliation to be Returned or Collected			917.0	over

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

**Hawai'i Electric Light Company
DEADBAND CALCULATION
2018**

Jan 1 - Sep 2018
YTD

Industrial

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	124,517,742
Industrial Consumption (Recorded), MMBTU	b	1,826,127
Industrial Efficiency Factor (Recorded), BTU/kWh	c	14,666
Lower limit of Industrial Deadband, BTU/kWh	e	15,048
Higher limit of Industrial Deadband, BTU/kWh	g	15,248
Industrial Efficiency Factor for cost-recovery, BTU/kWh	h	15,048

Diesel

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	253,935,302
Diesel Consumption (Recorded), MMBTU	b	2,645,608
Diesel Efficiency Factor (Recorded), BTU/kWh	c	10,418
Lower limit of Diesel Deadband, BTU/kWh	e	10,324
Higher limit of Diesel Deadband, BTU/kWh	g	10,524
Diesel Efficiency Factor for cost-recovery, BTU/kWh	h	10,418

Biodiesel

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	0
Lower limit of Biodiesel Deadband, BTU/kWh	e	-100
Higher limit of Biodiesel Deadband, BTU/kWh	g	100
Biodiesel Efficiency Factor for cost-recovery, BTU/kWh	h	0

Hydro

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	15,610,750
Hydro Consumption (Recorded), MMBTU	b	184,471
Hydro Efficiency Factor (Recorded), BTU/kWh	c	11,817
Lower limit of Hydro Deadband, BTU/kWh	e	12,521
Higher limit of Hydro Deadband, BTU/kWh	g	12,721
Hydro Efficiency Factor for cost-recovery, BTU/kWh	h	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
2018

	Without Deadband	With Deadband
	Jan 1 - Sep 30	As Filed
	Jan 1 - Sep 30	Jan 1 - Sep 30
<u>INDUSTRIAL FUEL FILING COST</u>		
Industrial Portion of Recorded Sales , kWh	124,517,742	124,517,742
Industrial Efficiency Factor (mmbtu/kwh)	0.015148	0.015048
Mmbtu adjusted for Sales Efficiency Factor	1,886,195	1,873,743
\$/mmbtu	<u>\$10.8469</u>	<u>\$10.8469</u>
TOTAL INDUSTRIAL \$000s TO BE RECOVERED	\$20,459.276	\$20,324.213
<u>DIESEL FUEL FILING COST</u>		
Diesel Portion of Recorded Sales, kWh	253,935,302	253,935,302
Diesel Efficiency Factor (mmbtu/kwh)	0.010424	0.010418
Mmbtu adjusted for Sales Efficiency Factor	2,647,022	2,645,498
\$/mmbtu	<u>\$16.8231</u>	<u>\$16.8231</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$44,531.022	\$44,505.390
<u>HYDRO FUEL FILING COST</u>		
Hydro Portion of Recorded Sales , kWh	15,610,750	15,610,750
Hydro Efficiency Factor (mmbtu/kwh)	0.012621	0.012521
Mmbtu adjusted for Sales Efficiency Factor	197,023	195,462
\$/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	\$64,990.3	\$64,829.6
<u>CALCULATION OF GENERATION BASE FUEL COST</u>		
TOTAL GENERATION BASE FUEL COST, \$000s	\$58,081.5	\$58,081.5
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$64,990.3	\$64,829.6
TOTAL GENERATION BASE FUEL COST YTD	\$58,081.5	\$58,081.5

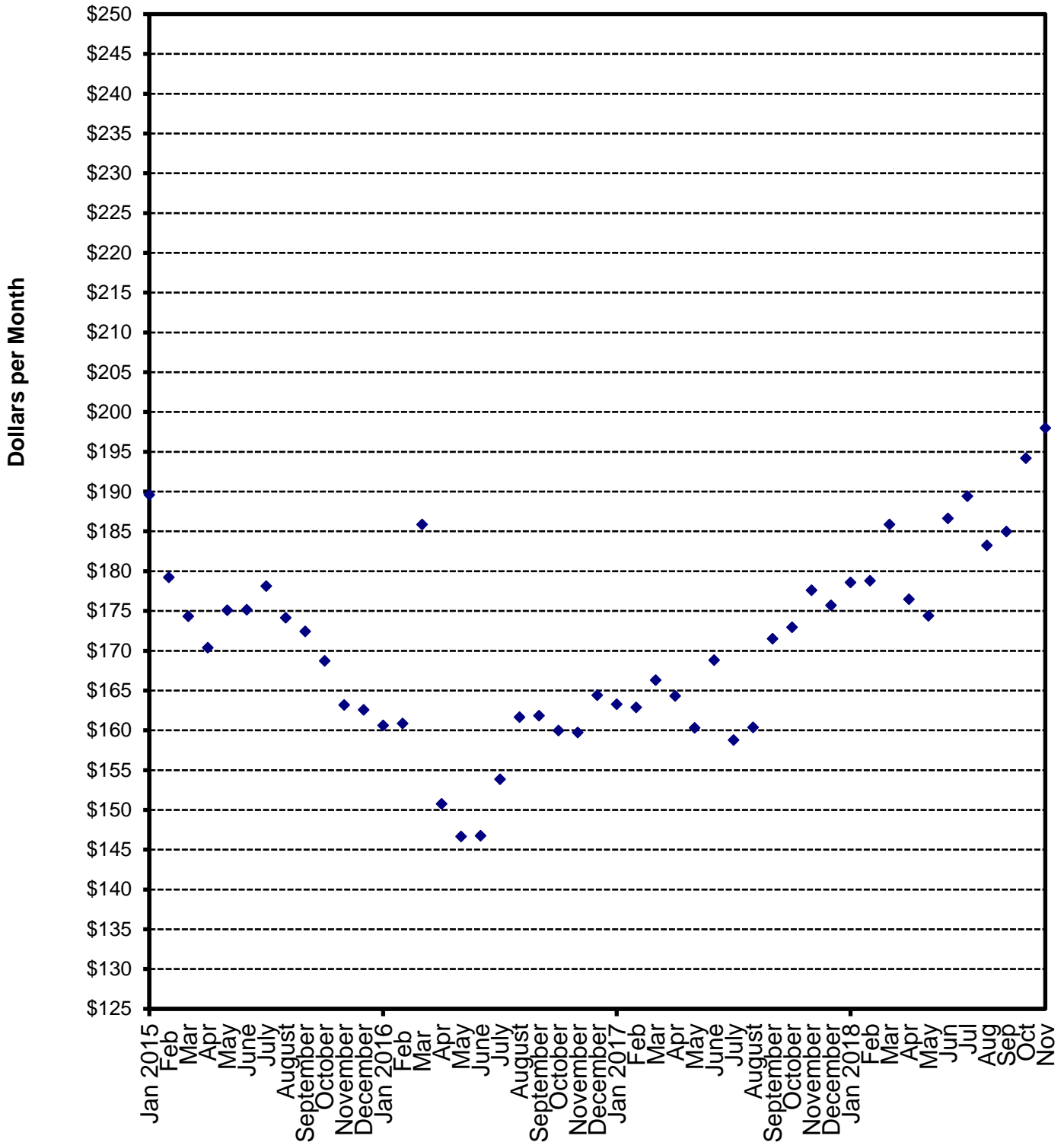
HAWAII ELECTRIC LIGHT COMPANY, INC.
2018 Cumulative Reconciliation Balance

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	785,400	[3]	(82,548)	867,948	(261,800)	(268,646)	534,241
December 16					(261,800)	(283,626)	250,615
January 17					(261,800)	(265,764)	(15,149)
February	1,366,400	[4]	(46,589)	1,412,989	(455,467)	(473,124)	924,716
March					(455,467)	(479,559)	445,157
April					(455,467)	(478,693)	(33,536)
May	445,100	(1)	(45,713)	490,813	(148,367)	(154,562)	302,715
June					(148,367)	(151,295)	151,420
July					(148,367)	(157,548)	(6,128)
August	500,800	[2]	(32,349)	533,149	(166,933)	(180,924)	346,097
September					(166,933)	(178,788)	167,309
October					(166,933)	(178,629)	(11,320)
November	714,200	[3]	(35,027)	749,227	(238,067)	(250,818)	487,089
December					(238,067)	(243,403)	243,686
January 18					(238,067)	(242,224)	1,462
February	825,100	[4]	(29,783)	854,883	(275,033)	(279,869)	576,476
March					(275,033)	(283,895)	292,581
April					(275,033)	(291,829)	752
May	1,153,900	(1)	(17,855)	1,171,755	(384,633)	(398,709)	773,798
June					(384,633)	(387,715)	386,083
July					(384,633)	(399,033)	(12,950)
August	699,900	[2]	(33,954)	733,854	(233,300)	(244,658)	476,246
September					(233,300)	(240,110)	236,136
October					(233,300)		
November	917,000	[3]	(32,568)	949,568	(305,667)		

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</u>		
	<u>CENTS / KWH</u>	<u>RESIDENTIAL BILL (\$)</u>	
	<u>RESIDENTIAL & COMMERCIAL</u>	<u>@ 500 KWH</u>	<u>@ 600 KWH</u>
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
December 1, 2016	-2.584	164.41	196.97
January 1, 2017	-2.842	163.27	195.58
February 1, 2017	-2.956	162.87	195.09
March 1, 2017	-2.274	166.31	199.24
April 1, 2017	-2.425	164.31	196.83
May 1, 2017	-3.035	160.30	192.02
June 1, 2017	-1.343	168.82	202.25
July 1, 2017	-3.220	158.79	190.22
August 1, 2017	-3.643	160.39	192.15
September 1, 2017	-2.447	171.52	205.50
October 1, 2017	-2.131	172.97	207.23
November 1, 2017	-0.885	177.60	212.80
December 1, 2017	-1.405	175.02	209.69
January 1, 2018	-0.723	178.59	213.95
February 1, 2018	-0.579	178.81	214.22
March 1, 2018	0.816	185.87	222.68
April 1, 2018	-0.912	176.46	211.39
May 1, 2018	-0.452	174.38	208.90
June 1, 2018	2.301	186.65	223.63
July 1, 2018	2.831	189.43	226.97
August 1, 2018	1.665	183.25	219.55
September 1, 2018	2.027	184.98	221.62
October 1, 2018	8.359	194.21	232.50
November 1, 2018	8.913	197.99	237.04

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

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
04/09/12	FINAL RATE INCREASE (1.28%), DOCKET NO. 2009-0164 (2010 TEST YEAR)	
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
12/1/2016-12/31/16	PURCHASED POWER ADJUSTMENT CLAUSE	2.3371 CENTS/KWH
1/1/2017-1/31/2017	PURCHASED POWER ADJUSTMENT CLAUSE	2.3400 CENTS/KWH
1/1/2017	GREEN INFRASTRUCTURE FEE	1.2700 DOLLARS/MONTH
2/1/2017 - 2/28/17	PURCHASED POWER ADJUSTMENT CLAUSE	2.3737 CENTS/KWH
3/1/2017 - 3/31/17	PURCHASED POWER ADJUSTMENT CLAUSE	2.3809 CENTS/KWH
4/1/2017-4/30/17	PURCHASED POWER ADJUSTMENT CLAUSE	2.3781 CENTS/KWH
4/1/2017-4/30/17	SOLARSAVER ADJUSTMENT	-0.2462 CENTS/KWH
5/1/2017-5/31/17	PURCHASED POWER ADJUSTMENT CLAUSE	1.9396 CENTS/KWH
5/1/2017	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
6/1/2017-6/30/17	PURCHASED POWER ADJUSTMENT CLAUSE	1.9225 CENTS/KWH
6/1/2017	RBA RATE ADJUSTMENT	1.4533 CENTS/KWH
7/1/2017 - 7/31/2017	PURCHASED POWER ADJUSTMENT CLAUSE	1.9710 CENTS/KWH
7/1/2017- 12/31/17	GREEN INFRASTRUCTURE FEE	1.1800 DOLLARS/MONTH
7/1/2017	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.4244 CENTS/KWH
8/1/2017-8/31/17	PURCHASED POWER ADJUSTMENT CLAUSE	2.7161 CENTS/KWH
9/1/2017-9/30/17	PURCHASED POWER ADJUSTMENT CLAUSE	2.7515 CENTS/KWH
8/31/2017-4/30/18	INTERIM RATE INCREASE 2016	5.8800 PERCENT ON BASE
8/31/2017	RBA RATE ADJUSTMENT	0.6313 CENTS/KWH
10/1/2017 - 10/31/17	PURCHASED POWER ADJUSTMENT CLAUSE	2.7257 CENTS/KWH
11/1/2017 - 11/30/17	PURCHASED POWER ADJUSTMENT CLAUSE	2.4067 CENTS/KWH
12/1/2017 - 12/31/17	PURCHASED POWER ADJUSTMENT CLAUSE	2.4090 CENTS/KWH
1/1/2018 - 1/31/18	PURCHASED POWER ADJUSTMENT CLAUSE	2.4105 CENTS/KWH
1/1/18-6/30/18	GREEN INFRASTRUCTURE FEE	1.3400 DOLLARS/MONTH
2/1/18-2/28/18	PURCHASED POWER ADJUSTMENT CLAUSE	2.3101 CENTS/KWH
3/1/18 - 3/31/18	PURCHASED POWER ADJUSTMENT CLAUSE	2.3258 CENTS/KWH
04/1/18-04/30/18	PURCHASED POWER ADJUSTMENT CLAUSE	2.3184 CENTS/KWH
04/1/18-04/30/18	SOLARSAVER ADJUSTMENT	-0.1464 CENTS/KWH
05/1/18-05/31/18	PURCHASED POWER ADJUSTMENT CLAUSE	2.3395 CENTS/KWH
05/1/18-05/31/18	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
5/1/2018	INTERIM RATE INCREASE 2016	2.5000 PERCENT ON BASE
06/01/18-06/30/18	PURCHASED POWER ADJUSTMENT CLAUSE	1.6729 CENTS/KWH
6/1/2018	RBA RATE ADJUSTMENT	1.0006 CENTS/KWH
07/01/18-07/31/18	PURCHASED POWER ADJUSTMENT CLAUSE	1.6811 CENTS/KWH
7/1/2018- 12/31/18	GREEN INFRASTRUCTURE FEE	1.2100 DOLLARS/MONTH
7/1/2018	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.4658 CENTS/KWH
08/01/18-08/31/18	PURCHASED POWER ADJUSTMENT CLAUSE	1.6110 CENTS/KWH
09/01/18-09/30/18	PURCHASED POWER ADJUSTMENT CLAUSE	1.5950 CENTS/KWH
10/01/18-10/31/18	PURCHASED POWER ADJUSTMENT CLAUSE	1.8602 CENTS/KWH
10/1/2018	INTERIM RATE INCREASE 2016	0.0000 PERCENT ON BASE
10/1/2018	FINAL RATE INCREASE (TY 2016) 0.53% EFFECTIVE 10/01/18, DOCKET NO. 2015-0170	
11/1/2018-11/30/18	PURCHASED POWER ADJUSTMENT CLAUSE	2.0617 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			
	10/01/18	11/01/18	10/01/18	11/01/18	Difference	
Base Rates	effective date:	10/1/2018	10/1/2018			
Base Fuel Energy Charge	¢/kwh	10.244	10.2440	\$51.22	\$51.22	\$0.00
Non-fuel Fuel Energy Charge	¢/kwh			\$71.85	\$71.85	\$0.00
First 300 kWh per month	¢/kwh	13.0289	13.0289	\$39.09	\$39.09	\$0.00
Next 700 kWh per month	¢/kwh	16.3807	16.3807	\$32.76	\$32.76	\$0.00
Customer Charge	\$	11.50	11.50	\$11.50	\$11.50	\$0.00
Total Base Charges				\$134.57	\$134.57	\$0.00
Interim Rate Increase 2016 TY	% on base	0.0000%	0.0000%	\$0.00	\$0.00	\$0.00
RBA Rate Adjustment	¢/kwh	1.0006	1.0006	\$5.00	\$5.00	\$0.00
Purchased Power Adj. Clause	¢/kwh	1.8602	2.0617	\$9.30	\$10.31	\$1.01
PBF Surcharge	¢/kwh	0.4658	0.4658	\$2.33	\$2.33	\$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	8.3590	8.9130	\$41.80	\$44.57	\$2.77
Green Infrastructure Fee	\$	1.2100	1.2100	\$1.21	\$1.21	\$0.00
Avg Residential Bill at 500 kwh				\$194.21	\$197.99	

Increase (Decrease -)	\$3.78
% Change	1.95%

	Rate		Charge (\$) at 600 Kwh			
	10/01/18	11/01/18	10/01/18	11/01/18	Difference	
Base Rates	effective date:	10/1/2018	10/1/2018			
Base Fuel/Energy Charge	¢/kwh	10.244	10.2440	\$61.46	\$61.46	\$0.00
Non-fuel Fuel Energy Charge	¢/kwh			\$88.23	\$88.23	\$0.00
First 300 kWh per month	¢/kwh	13.0289	13.0289	\$39.09	\$39.09	\$0.00
Next 700 kWh per month	¢/kwh	16.3807	16.3807	\$49.14	\$49.14	\$0.00
Customer Charge	\$	11.50	11.50	\$11.50	\$11.50	\$0.00
Total Base Charges				\$161.19	\$161.19	\$0.00
Interim Rate Increase 2016 TY	% on base	0.0000%	0.0000%	\$0.00	\$0.00	\$0.00
RBA Rate Adjustment	¢/kwh	1.0006	1.0006	\$6.00	\$6.00	\$0.00
Purchased Power Adj. Clause	¢/kwh	1.8602	2.0617	\$11.16	\$12.37	\$1.21
PBF Surcharge	¢/kwh	0.4658	0.4658	\$2.79	\$2.79	\$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	8.3590	8.9130	\$50.15	\$53.48	\$3.33
Green Infrastructure Fee	\$	1.2100	1.2100	\$1.21	\$1.21	\$0.00
Avg Residential Bill at 600 kwh				\$232.50	\$237.04	

Increase (Decrease -)	\$4.54
% Change	1.95%