



SHARON M. SUZUKI  
President

October 29, 2019

**FILED**

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

2019 OCT 29 P 3: 16

PUBLIC UTILITIES  
COMMISSION

Dear Commissioners:

Subject: Hawai'i Electric Light Energy Cost Recovery Factor for November 2019

Hawai'i Electric Light Company, Inc.'s ("Hawai'i Electric Light") Energy Cost Recovery factor for November 2019 is 16.302 cents per kilowatt-hour ("kWh"), an increase of 1.61 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$181.76, an increase of \$6.83 compared to rates effective October 1, 2019. The increase in the residential bill is due to the increase in the Energy Cost Recovery factor, (+\$8.05) and a decrease in purchased Power Clause (-\$1.22).

Hawai'i Electric Light's fuel composite cost of generation increased 6.14 cents per million BTU to 1,278.09 cents per million BTU. The composite cost of distributed generation increased 0.41 cents per kWh to 15.720 cents per kWh. The composite cost of purchased energy increased 1.99 cents per kWh to 14.480 cents per kWh.

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

Sincerely,

Attachments

cc: Division of Consumer Advocacy

## HAWAII ELECTRIC LIGHT COMPANY, INC.

ENERGY COST RECOVERY FACTOR

	<u>EFFECTIVE DATES</u>		
	<u>10/01/19</u>	<u>11/01/19</u>	<u>Change</u>
<u>Composite Cost</u>			
Generation, ¢/mmbtu	1,271.95	1,278.09	6.14
Dispersed Generation Energy, ¢/kWh	15.313	15.720	0.41
Purchased Energy, ¢/kWh	12.487	14.480	1.99
<u>Residential Schedule "R"</u>			
Energy Cost Recovery - ¢/kWh	14.692	16.302	1.61
<u>Others - "G,J,P,F"</u>			
Energy Cost Recovery - ¢/kWh	14.692	16.302	1.61
Residential Customer with:			
500 KWH Consumption - \$/Bill	\$174.93	\$181.76	\$6.83
600 KWH Consumption - \$/Bill	\$209.40	\$217.59	\$8.19

HAWAII ELECTRIC LIGHT COMPANY, INC.  
ENERGY COST RECOVERY (ECR) FILING

ENERGY COST RECOVERY (ECR) FILING - November 1, 2019 (Page 1 of 2)

<u>Line</u>		
1	Effective Date	November 1, 2019
2	Supercedes Factors of	October 1, 2019

**GENERATION COMPONENT**

<b><u>CENTRAL STATION WITH WIND/HYDRO COMPONENT</u></b>						
FUEL PRICES, ¢/mmbtu						
3						
4	Hill Industrial		946.15			
5	Puna Industrial		973.12			
6	Keahole Diesel		1,596.84			
6a	Keahole ULSD		1,697.43			
7	Waimea ULSD Diesel		1,676.34			
8	Hilo Diesel		1,561.82			
8a	Hilo (Kanoelehua) ULSD Diesel <sup>1</sup>		1,650.30			
9	Puna Diesel		1,566.92			
10	Wind		0.00			
11	Hydro		0.00			
BTU MIX, %						
12						
13	Hill Industrial		34.764			
14	Puna Industrial		6.577			
15	Keahole Diesel		46.147			
15a	Keahole ULSD		0.349			
16	Waimea ULSD Diesel		0.438			
17	Hilo Diesel		3.216			
17a	Hilo (Kanoelehua) ULSD Diesel <sup>1</sup>		0.306			
18	Puna Diesel		5.088			
19	Wind		0.000			
20	Hydro		3.115			
			100.000			
21	COMPOSITE COST OF GENERATION, CENTRAL STATION + WIND/HYDRO ¢/mmbtu		1,278.09			
22	% Input to System kWh Mix		55.447			
EFFICIENCY FACTOR, mmbtu/kWh						
	(A)	(B)	(C)	(D)		
		Eff Factor	Percent of	Weighted		
	<u>Fuel Type</u>	<u>mmbtu/kwh</u>	<u>Centrl Stn + Wind/Hydro</u>	<u>Eff Factor</u>		
23	Industrial	0.014569	41.341	0.006023		
24	Diesel	0.010480	55.544	0.005821		
25	Other	0.012395	3.115	0.000386		
	(Lines 23, 2		100.0000			
26	Weighted Efficiency Factor, mmbtu/kWh [Lines 23(D) + 24(D) + 25(D)]			0.0122300		
27	WEIGHTED COMPOSITE CENTRAL STATION + WIND/HYDRO GENERATION COST, ¢/kWh (Lines (21 x 22 x 26))			8.66694		
28	BASE CENTRAL STATION + WIND/HYDRO GENERATION COST, ¢/mmbtu			0.00		
29	Base % Input to Sys kWh Mix			0.00		
30	Efficiency Factor, mmbtu/kwh			0.000000		
31	WEIGHTED BASE CENTRAL STATION + WIND/HYDRO GENERATION COST ¢/kWh (Lines (28 x 29 x 30))			0.00000		
32	COST LESS BASE (Line 27 - 31)			8.66694		
33	Revenue Tax Req Multiplier			1.0975		
34	CENTRAL STATION + WIND/HYDRO GENERATION FACTOR, ¢/kWh (Line (32 x 33))			9.51197		
				<b><u>DG ENERGY COMPONENT</u></b>		
				35	COMPOSITE COST OF DG ENERGY, ¢/kWh	15.720
				36	% Input to System kWh Mix	0.124
				37	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 35 x 36)	0.01949
				38	BASE DG ENERGY COMPOSITE COS	0.000
				39	Base % Input to System kWh Mix	0.00
				40	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 38 x 39)	0.00000
				41	Cost Less Base (Line 37 - 40)	0.01949
				42	Loss Factor	1.072
				43	Revenue Tax Req Multiplier	1.0975
				44	DG FACTOR, ¢/kWh (Line 41 x 42 x 43)	0.02293
				SUMMARY OF		
				TOTAL GENERATION FACTOR, ¢/kWh		
				45	Cntrl Stn+Wind/Hydro (line 34)	9.51197
				46	DG (line 44)	0.02293
				47	TOTAL GENERATION FACTOR, ¢/kWh (lines 45 + 46)	9.53490

<sup>1</sup> Hilo ULSD same location as Kanoelehua ULSD



**Hawaii Electric Light Company, Inc.**  
FUEL OIL INVENTORY PRICES FOR November 1, 2019

**INDUSTRIAL FUEL COSTS:**

	<u>HILO</u>	<u>PUNA</u>
Average Industrial Fuel Cost - \$/BBL	59.6077	59.6077
Land Transportation Cost - \$/BBL	--	1.6989
Industrial Costs For Filing - \$/BBL	59.6077	61.3066
Conversion Factors - mmbtu/BBL	6.30	6.30
Industrial Costs For Filing - ¢/mmbtu	946.15	973.12

**DIESEL FUEL COSTS:**

	<u>KEAHOLE</u>	<u>PUNA CT-3</u>	<u>HILO</u>
Average Diesel Fuel Cost - \$/BBL	90.4610	90.4610	90.4610
Land Transportation Cost - \$/BBL	3.1137	1.3604	1.0617
Diesel Costs For Filing - \$/BBL	93.5748	91.8215	91.5228
Conversion Factors - mmbtu/BBL	5.86	5.86	5.86
Diesel Costs For Filing - ¢/mmbtu	1,596.84	1,566.92	1,561.82

**ULSD FUEL COSTS:**

	<u>KEAHOLE</u>	<u>WAIMEA</u>	<u>HILO</u>	<u>DISPERSED GENERATION</u>
Average ULSD Fuel Cost - \$/BBL	93.2995	93.2995	93.2995	93.2995
Land Transportation Cost - \$/BBL	3.9632	2.7548	1.2625	-
ULSD Costs For Filing - \$/BBL	97.2627	96.0543	94.5620	93.2995
Conversion Factors - mmbtu/BBL	5.73	5.73	5.73	5.73
ULSD Costs For Filing - ¢/mmbtu	1,697.43	1,676.34	1,650.30	1,628.26

**Dispersed Generation, cents per kWh**

	<u>COMPOSITE COST OF DISP. GEN.</u>
BBIs Fuel:	196.7127
\$/BBI Inv Cost:	93.2995
Fuel \$ (Prod Sim Consumption x Unit Cost)	18,353.19
Net kWh (from Prod Sim)	116,750
cents/kWh:	15.720

HAWAII ELECTRIC LIGHT CO., INC.  
Estimated Weighted Average  
October 2019

	SHIPMAN INDUSTRIAL		HILL INDUSTRIAL		COST PER BARREL		
	BBL	COST	BBL	COST	EXCL LT	LT Total	
Balance at 09/30/2019	0	0.00	40,546	2,446,393.35			
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	(26,338)	(1,562,069.40)			
Actual	0	0.00	23,811	1,431,723.79			
Consumed: Estimate	0	0.00	23,280	1,449,896.59			
Actual	0	0.00	(19,847)	(1,318,762.35)			
Balance Per G/L 09/30/2019	0	0.00	41,452	2,447,181.98			
Purchases	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfer out	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfer in	0	0.00	20,086	1,189,249.10			
Consumed	0	0.00	(22,298)	(1,321,365.08)	106.5901	0.0000	106.5901
Balance @ 10/31/2019	0	0.00	39,240	2,315,066.01			
Inv From Offsite/Transfers	0	0.00	0	0.00			
Est'd Inventory Addition	0	0.00	0	0.00			
Fuel Balance @ 10/31/2019	0	0.00	39,240	2,315,066.01			
Reverse Fuel Balance	xxxxxx	0.00	xxxxxx	(2,315,066.01)			
Fuel Bal @ Avg Price	xxxxxx	0.00	xxxxxx	2,339,007.34			
Total @ 11/01/2019 Avg Price	0	0.00	39,240	2,339,007.34			

Weighted Avg Cost/BBL by Location #DIV/0! 58.9976

Weighted Avg Cost/BBL @ Avg Cost #DIV/0! 59.6077

HAWAII ELECTRIC LIGHT CO., INC.  
Estimated Weighted Average  
October 2019

PUNA INDUSTRIAL

	BBL	COST	LAND TRANSP	COST PER BARREL		TOTAL
				EXCLUDE LT	LT	
Balance at 09/30/2019	10,444	609,535.99	14,231.23			
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	(15,773)	(933,024.06)	(20,746.38)			
Actual	15,242	929,862.04	20,926.58			
Consumed: Estimate	13,849	862,526.54	18,607.02			
Actual	<u>(15,055)</u>	<u>(954,869.50)</u>	<u>(18,847.52)</u>			
Balance Per G/L 09/30/2019	<u>8,707</u>	<u>514,031.01</u>	<u>14,170.93</u>			
Purchases	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer out	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer in	8,605	528,400	11,318.24			
Consumed	(11,663)	<u>(691,141.85)</u>	(15,892.27)	59.2594	1.3626	60.6220
Balance @ 10/31/2019	<u>5,649</u>	<u>351,288.99</u>	<u>9,596.90</u>			
Inventory From Offsite/Transfers	0	0.00	0.00			
Est'd Inventory Addition	0	0.00	0.00			
Fuel Bal @ Avg Price	<u>5,649</u>	<u>351,288.99</u>	<u>9,596.90</u>		<u>1.6989</u>	
Reverse Fuel Balance	XXXXXXXXXXXX	(351,288.99)	XXXXXXXXXXXX			
Fuel Balance @ Avg Price	XXXXXXXXXXXX	336,724.07	XXXXXXXXXXXX			
Total @ 11/01/2019 Avg Price	<u>5,649</u>	<u>336,724.07</u>	<u>9,596.90</u>			

Weighted Avg Cost/BBL by Location

62.1860

1.6989

Weighted Avg Cost/BBL @ Avg Cost

59.6077

1.6989

HAWAII ELECTRIC LIGHT CO., INC.  
Estimated Weighted Average  
October 2019

KEAHOLE CT

HS Diesel	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER EXCLUD LT	BARREL LT	TOTAL
Balance at 09/30/2019	48,254.9	2,026,705.0	4,378,861.4	145,663.5			
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	(41,024.7)	(1,723,036.0)	(3,762,940.1)	(116,649.5)			
Actual	38,458.6	1,615,263.0	3,576,823.9	110,398.18			
Consumed: Estimate	40,050.3	1,682,114.0	3,654,223.8	117,784.94			
Actual	(41,266.1)	(1,733,178.0)	(3,885,764.4)	(112,206.1)	94.1635		
Balance Per G/L 09/30/2019	44,473.0	1,867,868	3,961,204.68	144,990.92	89.0698		
Purchases	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Transfer out	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Transfer in	37,859.1	1,590,084.0	3,385,107.6	107,648.7	89.4132		
Consumed	(39,127.9)	(1,643,370.0)	(3,480,407.7)	(118,112.38)	88.9496	3.0186	91.9682
Balance @ 10/31/2019	43,204.3	1,814,582	3,865,904.57	134,527.23	89.4796		
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	43,204.3	1,814,582	3,865,904.57	134,527.23	89.4796		
Reverse Fuel Balance	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	(3,865,904.6)	XXXXXXXXXXXXXXXXXX			
Fuel Balance @ Avg Price	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	3,908,308.5	XXXXXXXXXXXXXXXXXX			
Total @ 11/01/2019 Avg Price	43,204.3	1,814,582	3,908,308.52	134,527.23	90.4610		

Weighted Avg Cost/BBL by Location

89.4796 3.1137

Weighted Avg Cost/BBL @ Avg Cost

90.4610 3.1137



HAWAII ELECTRIC LIGHT CO., INC.  
Estimated Weighted Average  
October 2019

PUNA CT-3

HS Diesel	BBL	GALLONS	COST EXCLUD LT	LAND TRANSP	COST PER EXCL LT	BARREL LT	TOTAL
Balance at 09/30/2019	5,193.0	218,104.0	470,303.0	5,412.3			
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	(8,337.3)	(350,167.0)	(734,837.3)	(9,244.4)			
Actual	7,593.9	318,943.0	675,239.7	8,346.2			
Consumed: Estimate	7,740.1	325,086.0	706,216.7	9,966.2			
Actual	(7,666.4)	(321,989.0)	(714,036.1)	(9,151.4)			
Balance Per G/L 09/30/2019	4,523.3	189,977	402,885.96	5,328.82			
Purchases		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX			
Transfer out		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX			
Transfer in	5,841.3	245,333.0	532,435.1	6,476.8	91.1507		
Consumed	(7,211.2)	(302,870)	(641,432.59)	(7,515.75)	88.9496	1.0422	89.9918
Balance @ 10/31/2019	3,153.3	132,440	293,888.44	4,289.86	93.1993		
Inven From Offsite/Transfers	0.0	0	0.00	0.00			
Est'd Inventory Addition	0.0	0	0.00	0.00			
Fuel Balance @ 10/31/2019	3,153.3	132,440	293,888.44	4,289.86	93.1993		
Reverse Fuel Balance		XXXXXXXXXXXXXXXXXXXX	(293,888.44)	XXXXXXXXXXXXXXXXXXXX			
Fuel Balance @ Avg Price		XXXXXXXXXXXXXXXXXXXX	285,253.78	XXXXXXXXXXXXXXXXXXXX			
Total @ 11/01/2019 Avg Price	3,153.3	132,440	285,253.78	4,289.86	90.4610		

Weighted Avg Cost/BBL by Location

93.1993 1.3604

Weighted Avg Cost/BBL @ Avg Cost

90.4610 1.3604

HAWAII ELECTRIC LIGHT CO., INC.  
Estimated Weighted Average  
October 2019

TOTAL HILO HS-DIESEL

HS Diesel	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER EXCL LT	BARREL LT	TOTAL
Balance at 09/30/2019	1668.3	70,067	151,849	1,867			
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	52.2	2193.0	4764.1	57.4			
Actual	-180.5	-7581.0	-19447.6	-181.7			
Balance Per G/L 09/30/2019	1540.0	64,679	137,165.35	1,742.86	89.0698		
Purchases		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer out		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfer in	752.9	31620.0	69414.2	736.7	#DIV/0!		
Consumed	-787.0	-33053.0	-70001.2	-880.8	88.9496	1.1192	90.0688
Balance @ 10/31/2019	1,505.9	63,246	136,578.28	1,598.81	90.6980		
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	1,505.9	63,246	136,578.28	1,598.81	90.6980		
Reverse Fuel Balance		XXXXXXXXXXXX	XXXXXXXXXXXX -136,578.28	XXXXXXXXXXXX			
Fuel Balance @ Avg Price		XXXXXXXXXXXX	XXXXXXXXXXXX 136,221.39	XXXXXXXXXXXX			
Total @ 11/01/2019 Avg Price	1,505.9	63,246	136,221.39	1,598.81	90.4610		

Weighted Avg Cost/BBL by Location

90.6980 1.0617

Weighted Avg Cost/BBL @ Avg Cost

90.4610 1.0617

HAWAII ELECTRIC LIGHT CO., INC.  
Estimated Weighted Average  
October 2019

KEAHOLE DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL EXCLUD LT	LT	TOTAL
Balance at 09/30/2019	2,008.6	84,362	179,302.45	6,014.49			
Less: Est'd Inventory Addition	0.0						
Purchases: Estimate	(1,319.6)	(55,424)	(120,258.23)	(3,752.20)			
Actual	1,316.1	55,277	119,939.25	0.00			
Transfers out: Estimate		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Actual		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers in: Estimate		17,948	42,510.01	1,215.08			
Actual		1,147	0.00	3,742.25			
Consumed: Estimate	203.3	8,537	19,412.20	624.73			
Actual	(663.8)	(27,878)	(58,963.80)	135.61	88.8328		
Balance Per G/L 09/30/2019	1,999.3	83,969	181,941.88	7,979.95	91.0045		
Purchases	188.4	7,912	17,694.52	535.64	0.0000		
Estimated Purchases	0.0	0	0.00	0.00			
Transfer in	6.8	286	0.00	19.36	0.00		
Consumed	(167.2)	(7,023)	(15,196.56)	(500.70)	90.8808	2.9943	93.8751
Balance @ 10/31/2019	2,027.2	85,144	184,439.83	8,034.26	90.9808		
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	2,027.2	85,144	184,439.83	8,034.26	90.9808		
Reverse Fuel Balance	XXXXXXXXXXXX	XXXXXXXXXXXX	(184,439.83)	XXXXXXXXXXXX			
Fuel Balance @ Avg Price	XXXXXXXXXXXX	XXXXXXXXXXXX	189,140.32	XXXXXXXXXXXX			
Total @ 11/01/2019 Avg Price	2,027.2	85,144	189,140.32	8,034.26	93.2995		
Weighted Avg Cost/BBL by Location			90.9808	3.9632			
Weighted Avg Cost/BBL @ Avg Cost			93.2995	3.9632			

HAWAII ELECTRIC LIGHT CO., INC.  
Estimated Weighted Average  
October 2019

WAIMEA DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL	LT	TOTAL
Balance at 09/30/2019	1,479.9	62,155.0	129,383.9	4,163.40			
Less: Est'd Inven Addition	0.0	0.0	0.00	0.00			
Purchases: Estimate		(15,882)	(28,430.91)	(895.74)			
Actual		15,811.0	34,306.5	0.00			
Transfers out: Estimate		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Actual		XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
Transfers in: Estimate	0.1	6	0.00	0.00			
Actual	(0.2)	(10)	0.00	891.74			
Consumed: Estimate	103.5	4,347	9,884.60	292.08			
Actual	(180.1)	(7,564)	(17,779.74)	(508.23)			
Balance Per G/L 09/30/2019	1,401.5	58,863	127,364.34	3,943.24	90.8772		
ULSD Purchases	188.5	7,918	17,707.95	446.58	93.9295		
Estimated Purchases	-	0	0.00	0.00			
Transfer in	XXXXXXXXXXXX	7	0.00	0.00	#DIV/0!		
Consumed	(157.1)	(6,600)	(14,281.26)	(442.09)	90.8808	2.8133	93.6941
Balance @ 10/31/2019	1,433.0	60,188	130,791.03	3,947.73	91.2677		
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	1,433.0	60,188	130,791.03	3,947.73	91.2677		
Reverse Fuel Balance	XXXXXXXXXXXX	XXXXXXXXXXXX	(130,791.03)	XXXXXXXXXXXX			
Fuel Balance @ Avg Price	XXXXXXXXXXXX	XXXXXXXXXXXX	133,702.64	XXXXXXXXXXXX			
Total @ 11/01/2019 Avg Price	1,433.0	60,188	133,702.64	3,947.73	93.2995		

Weighted Avg Cost/BBL by Location

91.2677 2.7548

Weighted Avg Cost/BBL @ Avg Cost

93.2995 2.7548

HAWAII ELECTRIC LIGHT CO., INC.  
Estimated Weighted Average  
October 2019

KANOELEHUA DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP		
Balance at 09/30/2019	967.1	40,619.0	96,109.6	1,206.9		
Less: Est'd Inventory Addition	0.0	0	0.00	0.00		
Purchases: Estimate	0.0	0	0.00	0.00		
Actual	0.0	0	0.00	0.00		
Transfers out: Estimate		x	x	x		
Actual		x	x	x		
Transfers in: Estimate		0	0.00	0.00		
Actual		0	0.00	0.00		
Consumed: Estimate	90.1	3,786	967.04	26.58		
Actual	(100.6)	(4,225)	(10,137.44)	(150.76)		
Balance Per G/L 09/30/2019	956.7	40,180	86,939.15	1,082.70		
ULSD Purchases	0	0	0.00	0.00	#DIV/0!	
Estimated Purchases	0	-	-	-		
Transfer in	0	0	0.00	0.00		
Consumed	(120.1)	(5,046)	(967.04)	(26.58)	90.88077712	1.2479
Balance @ 10/31/2019	836.5	35,134	85,972.11	1,056.12		
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	836.5	35,134	85,972.11	1,056.12		
Reverse Fuel Balance	x	x	(85,972.11)	x		
Fuel Balance @ Avg Price	x	x	78,047.26	x		
Total @ 11/01/2019 Avg Price	836.5	35,134	78,047.26	1,056.12		

Weighted Avg Cost/BBL by Location

102.7731 1.2625

Weighted Avg Cost/BBL @ Avg Cost

93.2995 1.2625

**HAWAII ELECTRIC LIGHT CO., INC.**  
Estimated Weighted Average  
October 2019

DISPERSED GENERATION

	BBL	GALLONS	COST	COST/BBL
Balance at 09/30/2019	143.7	6,037	13,197.24	
Less: Est'd Inven Addition	0.0	XXXXXXXXXXXXXXXXXXXX		
Purchases: Estimate	0.0	0	0.00	
Actual	0.0	0	0.00	
Consumed: Estimate	0.0	0	0.00	
Actual	(5.1)	(214)	(597.77)	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Balance Per G/L 09/30/2019	138.64	5,823	12,599.47	90.8772
Purchases	0.0	0	0.00	0.0000
Transfer out	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Transfer in	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Consumed	(9.5)	(401)	(867.70)	90.8808
Balance @ 10/31/2019	129.1	5,422	11,731.77	90.8769
Est'd Inventory Addition	0.0	0	0.00	
Fuel Balance @ 10/31/2019	129.1	5,422	11,731.77	
Reverse Fuel Balance	XXXXXXXXXX	XXXXXXXXXX	(11,731.77)	xxxx
Fuel Balance @ Avg Price	XXXXXXXXXX	XXXXXXXXXX	12,044.52	xxxx
Total @ 11/01/2019 Avg Price	129.1	5,422	12,044.52	93.2995

**HAWAII ELECTRIC LIGHT COMPANY, INC.**  
**CONTRACT PRICES EFFECTIVE October 1, 2019**

TYPE OF OIL BURNED

<b>INDUSTRIAL *</b>	<u>Hill Industrial</u>		<u>Puna Industrial</u>	
	<u>¢/MBTU</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>	<u>\$/BBL</u>
Tax <sup>1</sup>	103.21	6.5024	52.71	3.3206
Ocean Transportation	8.35	0.0000	20.88	1.3153
Storage	6.59	0.4000	6.35	0.4000
Wharfage	0.00	0.0000	0.00	0.0000
Fees <sup>2</sup>	0.00	0.0000	0.00	0.0000
	<u>Hilo Diesel</u>		<u>Waimea Diesel</u>	
<b>DIESEL *</b>	<u>¢/MBTU</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>	<u>\$/BBL</u>
Tax <sup>1</sup>	141.90	8.3148	141.90	8.3148
Ocean Transportation	33.72	2.3688	40.42	2.3688
Storage	6.83	0.4000	6.83	0.4000
Wharfage	0.00	0.0000	0.00	0.0000
Fees <sup>2</sup>	0.00	0.0000	0.00	0.0000
	<u>Kona Diesel</u>		<u>CT3 Diesel</u>	
	<u>¢/MBTU</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>	<u>\$/BBL</u>
Tax <sup>1</sup>	141.90	8.3148	141.90	8.3148
Ocean Transportation	48.52	2.8434	18.92	1.1088
Storage	6.83	0.4000	6.83	0.4000
Wharfage	0.00	0.0000	0.00	0.0000
Fees <sup>2</sup>	0.00	0.0000	0.00	0.0000
	<u>ULSD</u>			
<b>ULSD **</b>	<u>¢/MBTU</u>	<u>\$/BBL</u>		
Tax <sup>1</sup>	94.56	5.4188		
Ocean Transportation	36.01	2.0636		
Storage	0.00	0.0000		
Wharfage	0.00	0.0000		
Fees <sup>2</sup>	0.00	0.0000		

<sup>1</sup> Tax includes HGET, Hawaii Use Tax, Liquid Fuel Tax, LUST Tax and Environmental Response Tax.

<sup>2</sup> With the change in supplier to PAR some fees have been taken off the pricing sheet.

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, 2019

		November 1, 2019 <u>(¢/kWh)</u>	Floor Rates <u>(¢/kWh)</u>
PGV (25 MW)	- on peak	15.543	6.560
PGV (22 MW)	- off peak	14.200	5.430
WAILUKU HYDRO	- on peak	15.543	7.240
	off peak	14.200	5.970
Other: (<100 KW)	Sch Q Rate	14.630	

		November 1, 2019 <u>(¢/kWh)</u>	Floor Rates <u>(¢/kWh)</u>
HEP		15.012	
PGV Addtl 5 MW	- on peak	13.0500	0.0000
	- off peak	13.0500	0.0000
PGV Addtl 8 MW	- on peak	9.9500	0.0000
	- off peak	6.6400	0.0000



**Hawaii Electric Light Company, Inc.**  
**Energy Cost Reconciliation Adjustment**  
November 1, 2019

<u>Line No.</u>	<u>Description</u>	<u>Amount</u>
1	Amount to be (returned) or collected	(\$1,927,900)
2	Monthly Amount ( $\frac{1}{3}$ x Line 1)	(\$642,633)
3	Revenue Tax Divisor	0.91115
4	Total (Line 2 / Line 3)	(\$705,299)
5	Estimated MWh Sales (November 1, 2019)	87,779 mwh
6	Adjustment (Line 4 / Line 5)	(0.803) ¢/kwh

HAWAII ELECTRIC LIGHT COMPANY, INC.  
2019 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY  
(Thousand \$)

LINE	DESCRIPTION	Info Only September 2019 YTD Total No Deadband	collectn by company*	Basis for Recon September 2019 YTD Total Deadband	Collection or Refund by Company
ACTUAL COSTS:					
1	Generation	\$62,200.3		\$62,200.3	
2	Distributed Generation	\$9.0		\$9.0	
3	Purch Power	\$54,405.4		\$54,405.4	
4	TOTAL	<u>\$116,614.7</u>		<u>\$116,614.7</u>	
FUEL FILING COST					
5	Generation	\$59,766.2		\$60,638.6	
6	Distributed Generation	\$9.0		\$9.0	
7	Purch Power	\$54,405.4		\$54,405.4	
8	TOTAL	<u>\$114,180.6</u>		<u>\$115,053.1</u>	
BASE FUEL COST					
9	Generation	\$3,791.0		\$3,791.0	
10	Distributed Generation	\$0.3		\$0.3	
11	Purch Power	\$4,516.2		\$4,516.2	
12	TOTAL	<u>\$8,307.6</u>		<u>\$8,307.6</u>	
13	FUEL-BASE COST (Line 8-12)	\$105,873.1		\$106,745.5	
14	ACTUAL FOA LESS TAX	\$106,783.5		\$106,783.5	
15	Less: FOA reconciliation adj for prior year	-\$2,904.6		-\$2,904.6	
15A	Less: Non-Adjustable Component Revenues Less Tax	\$5.4		\$5.4	
16	ADJUSTED FOA LESS TAX	<u>\$109,682.7</u>		<u>\$109,682.7</u>	
17	FOA-(FUEL-BASE) (Line 16-13)	\$3,809.6	over	\$2,937.1	over
ADJUSTMENTS:					
18	Current year FOA accrual reversal	\$3,764.6		\$3,764.6	
19	Other prior year FOA	\$0.0		\$0.0	
20	Other	\$0.0		\$0.0	
21	QUARTERLY FOA RECONCILIATION (Line 17+18+19+20)	<u>\$7,574.2</u>	over	<u>\$6,701.7</u>	over
22	Second Quarter FOA reconciliation			4,773.8	over
23	FOA Reconciliation to be Returned or Collected			1,927.9	over

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

**Hawai'i Electric Light Company  
DEADBAND CALCULATION  
For Period: January 1, 2019 to September 30, 2019**

	Notes	YTD
<b><u>Industrial</u></b>		
Industrial Efficiency Factor (per D&O), BTU/kWh*	f	14,569
Industrial Deadband Definition, +/- BTU/kWh	d	100
Industrial Portion of Recorded Sales, kWh	a	138,691,016
Industrial Consumption (Recorded), MMBTU	b	2,080,757
Industrial Efficiency Factor (Recorded), BTU/kWh	c=(b/a) x 1000	15,003
Lower limit of Industrial Deadband, BTU/kWh	e= f-d	14,469
Higher limit of Industrial Deadband, BTU/kWh	g=f+d	14,669
Industrial Efficiency Factor for cost-recovery, BTU/kWh	h=c, e, or g	<b>14,669</b>
<b><u>Diesel</u></b>		
Diesel Efficiency Factor (per D&O), BTU/kWh*	f	10,480
Diesel Deadband Definition, +/- BTU/kWh	d	<b>200</b>
Diesel Portion of Recorded Sales, MWh	a	221,960,669
Diesel Consumption (Recorded), MMBTU	b	2,430,515
Diesel Efficiency Factor (Recorded), BTU/kWh	c=(b/a) x 1000	10,950
Lower limit of Diesel Deadband, BTU/kWh	e= f-d	10,280
Higher limit of Diesel Deadband, BTU/kWh	g=f+d	10,680
Diesel Efficiency Factor for cost-recovery, BTU/kWh	h=c, e, or g	<b>10,680</b>
<b><u>Biodiesel</u></b>		
Biodiesel Efficiency Factor (per D&O), BTU/kWh*	f	0
Biodiesel Deadband Definition, +/- BTU/kWh	d	<b>100</b>
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	<b>0</b>
<b><u>Hydro</u></b>		
Hydro Efficiency Factor (per D&O), BTU/kWh*	f	12,395
Hydro Deadband Definition, +/- BTU/kWh	d	<b>100</b>
Hydro Portion of Recorded Sales, MWh	a	7,277,959
Hydro Consumption (Recorded), MMBTU	b	112,884
Hydro Efficiency Factor (Recorded), BTU/kWh	c=(b/a) x 1000	112,884
Lower limit of Hydro Deadband, BTU/kWh	e= f-d	12,295
Higher limit of Hydro Deadband, BTU/kWh	g=f+d	12,495
Hydro Efficiency Factor for cost-recovery, BTU/kWh	h=c, e, or g	<b>12,495</b>

\* 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**  
**2019**

	<b>Without Deadband</b>	<b>With Deadband</b>
	<u>Jan 1 -Sep 30</u>	<u>Jan 1 -Sep 30</u>
<b><u>INDUSTRIAL FUEL FILING COST</u></b>		
Industrial Portion of Recorded Sales , kWh	138,691,016	138,691,016
Industrial Efficiency Factor (mmbtu/kwh)	0.014569	0.014669
Mmbtu adjusted for Sales Efficiency Factor	2,020,589	2,034,459
\$/mmbtu	<u>\$10.8577</u>	<u>\$10.8577</u>
<b>TOTAL INDUSTRIAL \$000s TO BE RECOVERED</b>	<b>\$21,938.887</b>	<b>\$22,089.473</b>
<b><u>DIESEL FUEL FILING COST</u></b>		
Diesel Portion of Recorded Sales, kWh	221,960,669	221,960,669
Diesel Efficiency Factor (mmbtu/kwh)	0.010480	0.010680
Mmbtu adjusted for Sales Efficiency Factor	2,326,148	2,370,540
\$/mmbtu	<u>\$16.2618</u>	<u>\$16.2618</u>
<b>TOTAL DIESEL \$000s TO BE RECOVERED</b>	<b>\$37,827.277</b>	<b>\$38,549.171</b>
<b><u>HYDRO FUEL FILING COST</u></b>		
Hydro Portion of Recorded Sales , kWh	7,277,959	7,277,959
Hydro Efficiency Factor (mmbtu/kwh)	0.012395	0.012495
Mmbtu adjusted for Sales Efficiency Factor	90,210	90,938
\$/mmbtu	<u>\$0.0000</u>	<u>\$0.0000</u>
<b>TOTAL HYDRO \$000s TO BE RECOVERED</b>	<b>\$0.000</b>	<b>\$0.000</b>
<b>TOTAL GENERATION FUEL FILING COST, \$000s</b>	<b>\$59,766.2</b>	<b>\$60,638.6</b>
<b><u>CALCULATION OF GENERATION BASE FUEL COST</u></b>		
<b>TOTAL GENERATION BASE FUEL COST, \$000s</b>	<b>\$3,791.0</b>	<b>\$3,791.0</b>
<b>TOTAL GENERATION FUEL FILING COST, \$000s YTD</b>	<b>\$59,766.2</b>	<b>\$60,638.6</b>
<b>TOTAL GENERATION BASE FUEL COST YTD</b>	<b>\$3,791.0</b>	<b>\$3,791.0</b>

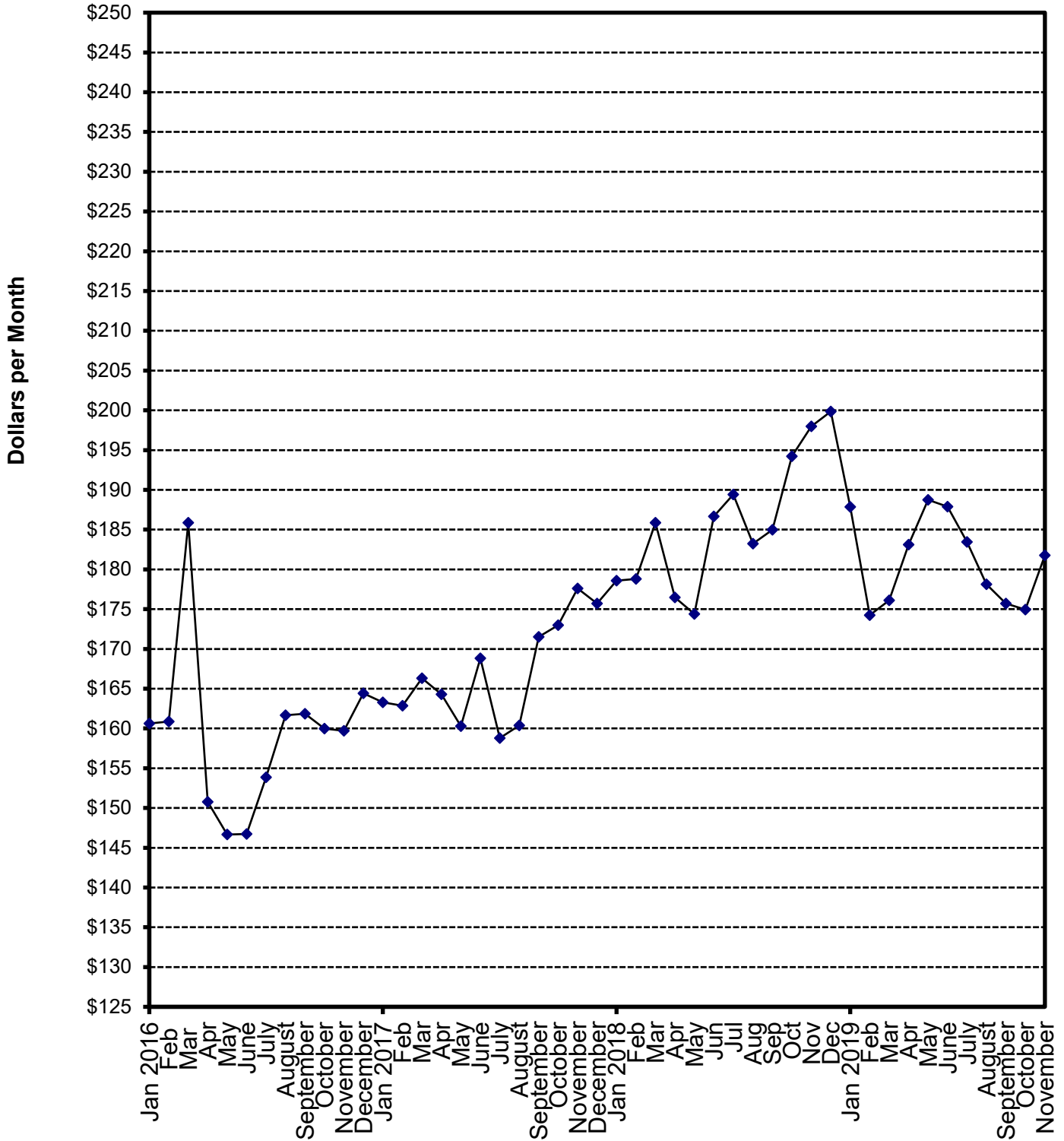
**HAWAII ELECTRIC LIGHT COMPANY, INC.**  
2019 Cumulative Reconciliation Balance

<u>Month</u>	(1) <u>YTD FOA Reconciliation</u>	<u>Qtr</u>	(2) <u>FOA Rec Adjust Variance</u>	(3) <u>FOA Rec Less Variance</u>	(4) <u>Try to Collect</u>	(5) <u>Actual Collect</u>	(6) <u>Month-end Cumulative Balance</u>
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)	(241,346)	(5,210)
November	917,000	[3]	(32,568)	949,568	(305,667)	(309,251)	635,107
December 18					(305,667)	(302,091)	333,016
January 19					(305,667)	(300,243)	32,773
February	2,598,900	[4]	(8,054)	2,606,954	(866,300)	(800,636)	1,839,091
March					(866,300)	(825,091)	1,014,000
April					(866,300)	(829,484)	184,516
May	1,745,900	(1)	112,297	1,633,603	(581,967)	(565,304)	1,252,815
June					(581,967)	(585,631)	667,184
July					(581,967)	(586,240)	80,944
August	3,027,900	[2]	49,815	2,978,085	(1,009,300)	(1,025,775)	2,033,254
September					(1,009,300)	(1,026,151)	1,007,103
October					(1,009,300)		
November	1,927,900	[3]	(37,599)	1,965,499	(642,633)		

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 &amp; 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	
December 1, 2018	9.292	199.86	239.29	
January 1, 2019	6.867	187.86	224.86	
February 1, 2019	14.631	174.25	208.53	
March 1, 2019	14.976	176.1	210.75	
April 1, 2019	16.469	183.12	219.17	
May 1, 2019	17.396	188.74	225.93	
June 1, 2019	17.318	187.89	224.90	
July 1, 2019	16.450	183.46	219.63	
August 1, 2019	15.331	178.14	213.25	
September 1, 2019	14.845	175.70	210.32	
October 1, 2019	14.692	174.93	209.40	
November 1, 2019	16.302	181.76	217.59	

**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
<b>10/1/2018</b>	<b>INTERIM RATE INCREASE 2016</b>	<b>0.0000 PERCENT ON BASE</b>
<b>10/1/2018</b>	<b>FINAL RATE INCREASE (TY 2016) 0.53% EFFECTIVE 10/01/18, DOCKET NO. 2015-0170</b>	
11/1/2018-11/30/18	PURCHASED POWER ADJUSTMENT CLAUSE	2.0617 CENTS/KWH
12/1/2018-12/31/18	PURCHASED POWER ADJUSTMENT CLAUSE	2.0577 CENTS/KWH
1/1/2019-1/31/19	PURCHASED POWER ADJUSTMENT CLAUSE	2.0548 CENTS/KWH
1/1/2019- 06/30/19	GREEN INFRASTRUCTURE FEE	1.3500 DOLLARS/MONTH
2/1/2019-2/28/19	PURCHASED POWER ADJUSTMENT CLAUSE	1.8113 CENTS/KWH
3/1/2019-3/31/19	PURCHASED POWER ADJUSTMENT CLAUSE	1.8372 CENTS/KWH
04/1/2019-4/30/19	PURCHASED POWER ADJUSTMENT CLAUSE	1.8247 CENTS/KWH
04/1/19-04/30/19	SOLARSAVER ADJUSTMENT	-0.0768 CENTS/KWH
05/01/2019-5/31/19	PURCHASED POWER ADJUSTMENT CLAUSE	1.9460 CENTS/KWH
<b>05/01/2019</b>	<b>SOLARSAVER ADJUSTMENT</b>	<b>0.0000 CENTS/KWH</b>
06/01/2019-6/30/19	PURCHASED POWER ADJUSTMENT CLAUSE	1.9474 CENTS/KWH
<b>6/1/2019</b>	<b>RBA RATE ADJUSTMENT</b>	<b>0.9069 CENTS/KWH</b>
7/01/2019-7/31/19	PURCHASED POWER ADJUSTMENT CLAUSE	1.9539 CENTS/KWH
<b>7/1/2019</b>	<b>GREEN INFRASTRUCTURE FEE</b>	<b>1.1700 DOLLARS/MONTH</b>
<b>7/1/2019</b>	<b>RESIDENTIAL PBF SURCHARGE ADJUSTMENT</b>	<b>0.4775 CENTS/KWH</b>
8/1/2019-8/31/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.0075 CENTS/KWH
9/1/2019-9/30/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.0060 CENTS/KWH
10/1/2019-10/31/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.0069 CENTS/KWH
<b>11/1/2019-11/30/2019</b>	<b>PURCHASED POWER ADJUSTMENT CLAUSE</b>	<b>1.7616 CENTS/KWH</b>

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



Calculations of the Average Residential Customer Bill

	Rate		Charge (\$) at 500 Kwh		
	10/01/19	11/01/19	10/01/19	11/01/19	Difference
<b>Base Rates</b>					
effective date:	2/1/2019	2/1/2019			
Base Fuel Energy Charge ¢/kwh	-	-	\$0.00	\$0.00	\$0.00
Non-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
<b>Total Base Charges</b>			\$83.35	\$83.35	\$0.00
<b>Interim Rate Increase 2016 TY</b>					
% on base	0.0000%	0.0000%	\$0.00	\$0.00	\$0.00
<b>RBA Rate Adjustment</b> ¢/kwh	0.9069	0.9069	\$4.53	\$4.53	\$0.00
<b>Purchased Power Adj. Clause</b> ¢/kwh	2.0069	1.7616	\$10.03	\$8.81	-\$1.22
<b>PBF Surcharge</b> ¢/kwh	0.4775	0.4775	\$2.39	\$2.39	\$0.00
<b>DSM Adjustment</b> ¢/kwh	0.0000	0.0000	\$0.00	\$0.00	\$0.00
<b>SolarSaver Adjustment</b> ¢/kwh	0.0000	0.0000	\$0.00	\$0.00	\$0.00
<b>Energy Cost Recovery</b> ¢/kwh	14.6920	16.3020	\$73.46	\$81.51	\$8.05
<b>Green Infrastructure Fee</b> \$	1.1700	1.1700	\$1.17	\$1.17	\$0.00
<b>Avg Residential Bill at 500 kwh</b>			\$174.93	\$181.76	

Increase (Decrease -)	\$6.83
% Change	3.90%

	Rate		Charge (\$) at 600 Kwh		
	10/01/19	11/01/19	10/01/19	11/01/19	Difference
<b>Base Rates</b>					
effective date:	2/1/2019	2/1/2019			
Base Fuel/Energy Charge ¢/kwh	-	-	\$0.00	\$0.00	\$0.00
Non-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
<b>Total Base Charges</b>			\$99.73	\$99.73	\$0.00
<b>Interim Rate Increase 2016 TY</b>					
% on base	0.0000%	0.0000%	\$0.00	\$0.00	\$0.00
<b>RBA Rate Adjustment</b> ¢/kwh	0.9069	0.9069	\$5.44	\$5.44	\$0.00
<b>Purchased Power Adj. Clause</b> ¢/kwh	2.0069	1.7616	\$12.04	\$10.57	-\$1.47
<b>PBF Surcharge</b> ¢/kwh	0.4775	0.4775	\$2.87	\$2.87	\$0.00
<b>DSM Adjustment</b> ¢/kwh	0.0000	0.0000	\$0.00	\$0.00	\$0.00
<b>SolarSaver Adjustment</b> ¢/kwh	0.0000	0.0000	\$0.00	\$0.00	\$0.00
<b>Energy Cost Recovery</b> ¢/kwh	14.6920	16.3020	\$88.15	\$97.81	\$9.66
<b>Green Infrastructure Fee</b> \$	1.1700	1.1700	\$1.17	\$1.17	\$0.00
<b>Avg Residential Bill at 600 kwh</b>			\$209.40	\$217.59	

Increase (Decrease -)	\$8.19
% Change	3.91%