



January 27, 2023

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

Dear Commissioners:

Subject: Hawai'i Electric Light Energy Cost Recovery Factor for February 2023

Hawai'i Electric Light Company, Inc.'s ("Hawai'i Electric Light" or "Company") Energy Cost Recovery factor for February 2023 is 24.918 cents per kilowatt-hour ("kWh"), an increase of 0.673 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$231.81, an increase of \$3.03 compared to rates effective January 1, 2023. The increase in the residential bill is due to the increase in the Energy Cost Recovery Factor (+\$3.36) and increase in the Residential DSM Adjustment (+0.01), partially offset by the decrease in the Purchased Power Adjustment Clause rate (-\$0.34).

Hawai'i Electric Light's fuel composite cost of generation increased 26.11 cents per million BTU to 1,946.37 cents per million BTU. The composite cost of distributed generation decreased (-0.347) cents per kWh to 27.678 cents per kWh. The composite cost of purchased energy increased 0.277 cents per kWh to 17.812 cents per kWh.

Hawai'i Electric Light has determined that the target sales heat rates will be revised to 0.014683 million BTU per kilowatt-hour for industrial fuel oil and 0.011226 million BTU per kilowatt-hour for diesel fuel for 2023. The Company includes supporting calculations for the target sales heat rate adjustment in Attachment 10. A revised ECRC tariff reflecting the revised target sales heat rates for 2023 is included as Attachment 11. A blackline version of the revised ECRC tariff is included as Attachment 12. The Company files the ECRC tariff sheets in accordance with the Hawai'i Electric Light tariff, which states:

2. The target heat rates for industrial fuel and diesel shall be reestablished each calendar year. The target heat rate for each calendar year shall be equal to the target heat rate in effect for the prior calendar year plus one-half of the difference between the target heat rate and the actual heat rate for the prior calendar year.¹

¹ See Hawai'i Electric Light's ECRC Tariff, Sheet No. 63B.

The Honorable Chair and Members
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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 February 1, 2023.

Very truly yours,

/s/ Dean K. Matsuura

Dean K. Matsuura
Director, Regulatory Rate Proceedings

Attachments

cc: Division of Consumer Advocacy

HAWAII ELECTRIC LIGHT COMPANY, INC.

ENERGY COST RECOVERY FACTOREFFECTIVE DATES

	<u>1/01/23</u>	<u>2/01/23</u>	<u>Change</u>
<u>Composite Cost</u>			
Generation, ¢/mmbtu	1,920.26	1,946.37	26.11
Dispersed Generation Energy, ¢/kWh	28.025	27.678	(0.347)
Purchased Energy, ¢/kWh	17.535	17.812	0.277
<u>Residential Schedule "R"</u>			
Energy Cost Recovery - ¢/kWh	24.245	24.918	0.673
<u>Others - "G,J,P,F"</u>			
Energy Cost Recovery - ¢/kWh	24.245	24.918	0.673
Residential Customer with:			
500 KWH Consumption - \$/Bill	228.78	\$231.81	\$3.03
600 KWH Consumption - \$/Bill	273.99	\$277.63	\$3.64

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

ENERGY COST RECOVERY (ECR) FILING - February 1, 2023 (Page 1 of 2)

<u>Line</u>		
1	Effective Date	February 1, 2023
2	Supercedes Factors of	January 1, 2023

GENERATION COMPONENT

CENTRAL STATION WITH WIND/HYDRO COMPONENT			
FUEL PRICES, ¢/mmbtu			
3			
4	Hill Industrial	1,473.26	
5	Puna Industrial	1,497.82	
6	Keahole Diesel	2,519.54	
6a	Keahole ULSD	2,720.14	
7	Waimea ULSD Diesel	2,713.21	
8	Hilo Diesel	2,470.28	
8a	Hilo (Kanoelehua) ULSD Diesel ¹	2,676.50	
9	Puna Diesel	2,477.13	
10	Wind	0.00	
11	Hydro	0.00	
	BTU MIX, %		
12			
13	Hill Industrial	38.639	
14	Puna Industrial	12.078	
15	Keahole Diesel	41.005	
15a	Keahole ULSD	0.282	
16	Waimea ULSD Diesel	0.279	
17	Hilo Diesel	0.061	
17a	Hilo (Kanoelehua) ULSD Diesel ¹	0.272	
18	Puna Diesel	5.613	
19	Wind	0.000	
20	Hydro	1.771	
		100.0000	
21	COMPOSITE COST OF GENERATION, CENTRAL STATION + WIND/HYDRO ¢/mmbtu	1,946.37	
22	% Input to System kWh Mix	60.504	
	EFFICIENCY FACTOR, mmbtu/kWh		
	(A) (B) (C) (D)		
		Percent of	
		Centri Stn +	
		Wind/Hydro	
	<u>Fuel Type</u>	<u>Eff Factor</u>	<u>Weighted</u>
		<u>mmbtu/kwh</u>	<u>Eff Factor</u>
23	Industrial	0.014683	50.717 0.007447
24	Diesel	0.011226	47.512 0.005334
25	Other	0.012514	1.771 0.000222
	(Lines 23, 24, 25): Col(B) x Col(C) = Col(D)		100.0000
26	Weighted Efficiency Factor, mmbtu/kWh [Lines 23(D) + 24(D) + 25(D)]		0.0130030
27	WEIGHTED COMPOSITE CENTRAL STATION + WIND/HYDRO GENERATION COST, ¢/kWh (Lines (21 x 22 x 26))		15.31275
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)		15.31275
33	Revenue Tax Req Multiplier		1.0975
34	CENTRAL STATION + WIND/HYDRO GENERATION FACTOR, ¢/kWh (Line (32 x 33))		16.80574

DG ENERGY COMPONENT		
35	COMPOSITE COST OF DG ENERGY, ¢/kWh	27.678
36	% Input to System kWh Mix	0.139
37	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 35 x 36)	0.03847
38	BASE DG ENERGY COMPOSITE COST	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)	0.03847
42	Loss Factor	1.062
43	Revenue Tax Req Multiplier	1.0975
44	DG FACTOR, ¢/kWh (Line 41 x 42 x 43)	0.04484

SUMMARY OF		
TOTAL GENERATION FACTOR, ¢/kWh		
45	Cntrl Stn+Wind/Hydro (line 34)	16.80574
46	DG (line 44)	0.04484
47	TOTAL GENERATION FACTOR, ¢/kWh (lines 45 + 46)	16.85058

¹ Hilo ULSD same location as Kanoelehua ULSD

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

ENERGY COST RECOVERY (ECR) FILING - February 1, 2023 (Page 2 of 2)

<u>Line</u> PURCHASED ENERGY COMPONENT			<u>Line</u> Calculation of Monthly Fossil Fuel Cost Risk Sharing Component		
48	PURCHASED ENERGY PRICE, ¢/kWh -- Fossil HEP	22.163	94	Baseline IFO IFO \$, baseline month	\$4,545,615
			95	IFO mmbtu, baseline	331,774
			96	Baseline IFO, ¢/mmbtu	1370.09
49	PURCHASED ENERGY PRICE, ¢/kWh -- Renewable PGV On Peak	20.351		Baseline Diesel Diesel \$, baseline month	\$8,121,253
50	PGV Off Peak	20.721	97	Diesel mmbtu, baseline	314,116
51	PGV - Add'l 5 MW On Peak	13.850	98	Baseline Diesel, ¢/mmbtu	2,585.43
52	PGV - Add'l 5 MW Off Peak	13.850			
53	PGV - Add'l 8 MW On Peak	7.040	100	Month IFO IFO mmbtu, budget	302,290
54	PGV - Add'l 8 MW Off Peak	7.040	101	IFO Cost, ¢/mmbtu	1,479.11
55	Wailuku Hydro On Peak	20.351	102	IFO ECRC Fossil Cost	\$4,471,201
56	Wailuku Hydro Off Peak	20.721	103	IFO Base ECRC Recovery Target	\$4,141,658
57	Hawi Renewable Dev. On Peak	20.351	104	IFO differential	\$329,543
58	Hawi Renewable Dev. Off Peak	20.721			
59	Tawhiri (Pakini Nui) On Peak	16.510			
60	Tawhiri (Pakini Nui) Off Peak	16.100			
61	HEP Biodiesel	22.163			
62	Small Hydro (>100 KW) On Peak	20.351			
63	Small Hydro (>100 KW) Off Peak	20.721	105	Month Diesel Diesel mmbtu, budget	283,186
63a	CBRE	15.000	106	Diesel Cost, ¢/mmbtu	2,517.70
64	Sch Q Hydro (<100 KW)	20.080	107	Diesel ECRC Fossil Cost	\$7,129,755
65	FIT	23.800	108	Diesel Base ECRC Recovery Target	\$7,321,571
			109	Diesel differential	-\$191,816
			110	Total Fossil	\$137,727
66	PURCHASED ENERGY KWH MIX, %, HEP, Fossil	4.710	111	2% of above	\$2,755
			112	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	\$0
67	PURCHASED ENERGY KWH MIX, %, Renewable PGV On Peak	28.058	113	Maximum Annual Cap (bi-directional)	\$600,000
68	PGV Off Peak	17.637	114	Number of Days in year from implementation	365
69	PGV - Addt'l On Peak	5.612	115	Fossil Risk % Proration (based on 365 day year)	100.00%
70	PGV - Addt'l Off Peak	0.000	116	Maximum Annual Cap (bi-directional) prorated	\$600,000
71	PGV - Add'l 8 MW On Peak	3.283	117	Applicable Monthly Fossil Fuel Cost Risk Sharing	\$2,755
72	PGV - Add'l 8 MW Off Peak	8.679	118	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	\$2,755
73	Wailuku Hydro On Peak	2.470			
74	Wailuku Hydro Off Peak	1.877	119	Fossil Cost Risk Sharing before taxes	\$2,755
75	Hawi Renewable Dev. On Peak	3.820	120	Revenue Tax Adjustment	1.097514
76	Hawi Renewable Dev. Off Peak	1.829	121	Fossil Cost Risk Sharing w/revenue tax	\$3,023
77	Tawhiri (Pakini Nui) On Peak	11.339	122	Forecasted Month MWh Sales	79,434
78	Tawhiri (Pakini Nui) Off Peak	8.214	123	Fossil Fuel Cost Risk Sharing Component, ¢/kWh	-0.0038
79	HEP Biodiesel	1.178			
80	Small Hydro (>100 KW) On Peak	0.000	Derivation of Non-Adjustable Component:		
81	Small Hydro (>100 KW) Off Peak	0.000	93A	Ocean Cargo Insurance Exp, \$000 HELCO-603, page 1, line 4	\$13.1
81a	CBRE	0.281	93B	Revenue Tax Adjustment	1.097514
82	Sch Q Hydro (<100 KW)	0.065	93C	Non-Adj Revenues, \$000	\$14.4
83	FIT	0.948	93D	2019 TY Sales, MWh HELCO-301	1,061,718
	100.000		93E	Non-Adj Revenues, ¢/kWh	0.00135
83a	Comp. Cost Purchased Energy Fossil, ¢/kWh	22.1630			
83b	Comp. Cost Purchased Energy Renewable, ¢/kWh	17.5973			
84	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh	17.812			
85	% Input to System kWh Mix	39.357			
86	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (Lines (84 x 85))	7.01027			
87	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh	0.000			
88	Base % Input to Sys kWh Mix	0.00			
89	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (Lines (87 x 88))	0.00000			
90	COST LESS BASE (Lines (86 - 89))	7.01027			
91	Loss Factor	1.062			
92	Revenue Tax *	1.0975			
93	PURCHASED ENERGY FACTOR, ¢/kWh (Lines (90 x 91 x 92))	8.17079			
			<u>Line</u>	<u>SYSTEM COMPOSITE</u>	
			124	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (Lines (47 + 93))	25.02137
			125	Fossil Fuel Cost Risk Sharing Component (Line 123)	(0.004)
			126	Non-Adjustable Component (Line 93E)	0.00135
			127	ECA Reconciliation Adjustment	(0.101)
			128	ECA FACTOR, ¢/kWh (Lines (124 + 125 + 126 + 127))	24.918

Hawaii Electric Light Company, Inc.
FUEL OIL INVENTORY PRICES FOR February 1, 2023

INDUSTRIAL FUEL COSTS:

	<u>HILO</u>	<u>PUNA</u>
Average Industrial Fuel Cost - \$/BBL	92.8154	92.8154
Land Transportation Cost - \$/BBL	--	1.5473
Industrial Costs For Filing - \$/BBL	92.8154	94.3627
Conversion Factors - mmbtu/BBL	6.30	6.30
Industrial Costs For Filing - ¢/mmbtu	<u>1,473.26</u>	<u>1,497.82</u>

DIESEL FUEL COSTS:

	<u>KEAHOLE</u>	<u>PUNA CT-3</u>	<u>HILO</u>
Average Diesel Fuel Cost - \$/BBL	143.2658	143.2658	143.2658
Land Transportation Cost - \$/BBL	4.3791	1.8943	1.4928
Diesel Costs For Filing - \$/BBL	147.6449	145.1600	144.7586
Conversion Factors - mmbtu/BBL	5.86	5.86	5.86
Diesel Costs For Filing - ¢/mmbtu	<u>2,519.54</u>	<u>2,477.13</u>	<u>2,470.28</u>

ULSD FUEL COSTS:

	<u>KEAHOLE</u>	<u>WAIMEA</u>	<u>HILO</u>	<u>DISPERSED GENERATION</u>
Average ULSD Fuel Cost - \$/BBL	151.8207	151.8207	151.8207	151.8207
Land Transportation Cost - \$/BBL	4.0434	3.6462	1.5431	-
ULSD Costs For Filing - \$/BBL	155.8640	155.4669	153.3637	151.8207
Conversion Factors - mmbtu/BBL	5.73	5.73	5.73	5.73
ULSD Costs For Filing - ¢/mmbtu	<u>2,720.14</u>	<u>2,713.21</u>	<u>2,676.50</u>	<u>2,649.58</u>

Dispersed Generation, cents per kWh

	<u>COMPOSITE COST OF DISP. GEN.</u>
BBIs Fuel:	214.6693
\$/BBI Inv Cost:	151.8207
Fuel \$ (Prod Sim Consumption x Unit Cost)	32,591.23
Net kWh (from Prod Sim)	117,750
cents/kWh:	27.678

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
February 2023

	SHIPMAN INDUSTRIAL		HILL INDUSTRIAL		COST PER BARREL		
	BBL	COST	BBL	COST	EXCL LT	LT Total	
Balance at 12/31/2022	0	0.00	16,969	1,452,756.85			
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	(28,663)	(2,385,791.60)			
Actual	0	0.00	34,748	2,989,830.70			
Consumed: Estimate	0	0.00	37,654	3,243,907.16			
Actual	0	0.00	(35,041)	(3,018,795.52)			
Balance Per G/L 12/31/2022	0	0.00	25,667	2,281,907.59			
Purchases	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfer out	xxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx			
Transfer in	0	0.00	47,689	4,357,219.21			
Consumed	0	0.00	(28,630)	(2,460,656.43)	106.5901	0.0000	106.5901
Balance @ 01/31/2023	0	0.00	#####	4,178,470.36			
Inv From Offsite/Transfers	0	0.00	(1,887)	(165,040.30)			
Est'd Inventory Addition	0	0.00	0	0.00			
Fuel Balance @ 01/31/2023	0	0.00	42,839	4,013,430.06			
Reverse Fuel Balance	xxxxxx	0.00	xxxxxx	(4,013,430.06)			
Fuel Bal @ Avg Price	xxxxxx	0.00	xxxxxx	3,976,117.06			
Total @ 02/01/2023 Avg Price	0	0.00	42,839	3,976,117.06			

Weighted Avg Cost/BBL by Location #DIV/0! 93.6864

Weighted Avg Cost/BBL @ Avg Cost #DIV/0! 92.8154

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
February 2023

PUNA INDUSTRIAL

	BBL	COST	LAND TRANSP	COST PER BARREL		TOTAL
				EXCLUDE LT	LT	
Balance at 12/31/2022	9,822	874,321.60	15,197.79			
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	0	0.00	0.00			
Actual	0	0.00	0.00			
Consumed: Estimate	0	0.00	0.00			
Actual	0	0.00	0.00			
Balance Per G/L 12/31/2022	9,822	874,321.60	15,197.79			
Purchases	xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx			
Transfer out	xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx			
Transfer in	0	0	0.00			
Consumed	0	0.00	0.00	85.9468	1.5473	87.4941
Balance @ 01/31/2023	9,822	874,321.60	15,197.79			
Inventory From Offsite/Transfers	0	0.00	0.00			
Est'd Inventory Addition	0	0.00	0.00			
Fuel Bal @ Avg Price	9,822	874,321.60	15,197.79		1.5473	
Reverse Fuel Balance	xxxxxxxxxxxx	(874,321.60)	xxxxxxxxxxxx			
Fuel Balance @ Avg Price	xxxxxxxxxxxx	911,632.43	xxxxxxxxxxxx			
Total @ 02/01/2023 Avg Price	9,822	911,632.43	15,197.79			

Weighted Avg Cost/BBL by Location

89.0167

1.5473

Weighted Avg Cost/BBL @ Avg Cost

92.8154

1.5473

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
February 2023

KEAHOLE DIESEL

HS Diesel	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER EXCLUD LT	BARREL LT	TOTAL
Balance at 12/31/2022	58,813.0	2,470,148.0	8,865,094.4	213,398.1			
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		xxxxxxxxxxxxxx	xxxxxxxxxxxxxx	xxxxxxxxxxxxxx			
Actual		xxxxxxxxxxxxxx	xxxxxxxxxxxxxx	xxxxxxxxxxxxxx			
Transfers in: Estimate	(41,541.0)	(1,744,721.0)	(6,190,400.0)	(151,425.2)			
Actual	38,589.4	1,620,753.0	5,671,849.3	139,641.11			
Consumed: Estimate	32,368.2	1,359,464.0	4,988,579.0	114,305.03			
Actual	(34,128.2)	(1,433,385.0)	(5,291,748.9)	(104,937.7)	155.0550		
Balance Per G/L 12/31/2022	54,101.4	2,272,259	8,043,373.70	210,981.39	148.6722		
Purchases	xxxxxxxxxx	xxxxxxxxxxxxxx	xxxxxxxxxxxxxx	xxxxxxxxxxxxxx			
Transfer out	xxxxxxxxxx	xxxxxxxxxxxxxx	xxxxxxxxxxxxxx	xxxxxxxxxxxxxx			
Transfer in	36,337.0	1,526,153.0	5,260,991.6	162,557.1	144.7834		
Consumed	(29,975.7)	(1,258,978.0)	(4,436,181.1)	(108,764.13)	147.9927	3.6284	151.6212
Balance @ 01/31/2023	60,462.7	2,539,434	8,868,184.23	264,774.36156	146.6720		
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	60,462.7	2,539,434	8,868,184.23	264,774.36	146.6720		
Reverse Fuel Balance	xxxxxxxxxx	xxxxxxxxxxxxxx	(8,868,184.2)	xxxxxxxxxxxxxx			
Fuel Balance @ Avg Price	xxxxxxxxxx	xxxxxxxxxxxxxx	8,662,237.6	xxxxxxxxxxxxxx			
Total @ 02/01/2023 Avg Price	60,462.7	2,539,434	8,662,237.64	264,774.36	143.2658		

Weighted Avg Cost/BBL by Location 146.6720 4.3791

Weighted Avg Cost/BBL @ Avg Cost 143.2658 4.3791

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
February 2023

PUNA CT-3

HS Diesel	BBL	GALLONS	COST EXCLUD LT	LAND TRANSP	COST PER EXCL LT	BARREL LT	TOTAL
Balance at 12/31/2022	6,385.4	268,187.0	924,473.0	9,056.4			
Less: Est'd Inven Addition	0.0	0.0	0.0	0.0			
Purchases: Estimate		XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Actual		XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Transfers out: Estimate		XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Actual		XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Transfers in: Estimate	(9,310.7)	(391,048.0)	(1,374,343.3)	(13,205.3)			
Actual	9,372.1	393,629.0	1,351,890.1	13,106.7			
Consumed: Estimate	6,711.0	281,863.0	1,034,301.6	9,518.2			
Actual	(8,870.9)	(372,576.0)	(1,298,960.4)	(12,395.7)			
Balance Per G/L 12/31/2022	4,287.0	180,055	637,361.17	6,080.29			
Purchases		XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Transfer out		XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX			
Transfer in	6,671.8	280,214.0	946,716.6	11,613.5	141.8990		
Consumed	(6,439.6)	(270,463)	(953,013.4)	(9,133.28)	147.9927	1.4183	149.4110
Balance @ 01/31/2023	4,519.2	189,806	#####	8,560.54	139.6410		
Inven From Offsite/Transfers	0.0	0	0.00	0.00			
Est'd Inventory Addition	0.0	0	0.00	0.00			
Fuel Balance @ 01/31/2023	4,519.2	189,806	631,064.46	8,560.54	139.6410		
Reverse Fuel Balance		XXXXXXXXXXXXXXXXXX	(631,064.46)	XXXXXXXXXXXXXXXXXX			
Fuel Balance @ Avg Price		XXXXXXXXXXXXXXXXXX	647,445.33	XXXXXXXXXXXXXXXXXX			
Total @ 02/01/2023 Avg Price	4,519.2	189,806	647,445.33	8,560.54	143.2658		

Weighted Avg Cost/BBL by Location

139.6410 1.8943

Weighted Avg Cost/BBL @ Avg Cost

143.2658 1.8943

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
February 2023

TOTAL HILO HS-DIESEL

HS Diesel	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL EXCL LT	LT	TOTAL
Balance at 12/31/2022	2877.5	120,857	425,449	3,626			
Less: Est'd Inven Addition	0.0	0	0	0			
Purchases: Estimate		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX			
Actual		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX			
Transfers out: Estimate		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX			
Actual		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX			
Transfers in: Estimate	-3213.2	-134955.0	-477015.9	-4022.9			
Actual	1696.9	71269.0	248346.6	1889.7			
Consumed: Estimate	983.2	41296.0	151536.5	1242.7			
Actual	-1261.6	-52988.0	-187329.0	-1301.4			
Balance Per G/L 12/31/2022	1082.8	45,479	160,987.20	1,434.46	148.6722		
Purchases		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX			
Transfer out		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX			
Transfer in	945.2	39699.0	135331.5	1452.4	0.0000		
Consumed	-604.8	-25400.0	-89500.4	-762.1	147.9927	1.2602	149.2530
Balance @ 01/31/2023	1,423.3	59,778	206,818.33	2,124.72923	145.3105		
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	1,423.3	59,778	206,818.33	2,124.73	145.3105		
Reverse Fuel Balance		XXXXXXXXXX	XXXXXXXXXX -206,818.33	XXXXXXXXXX			
Fuel Balance @ Avg Price		XXXXXXXXXX	XXXXXXXXXX 203,908.13	XXXXXXXXXX			
Total @ 02/01/2023 Avg Price	1,423.3	59,778	203,908.13	2,124.73	143.2658		

Weighted Avg Cost/BBL by Location

145.3105 1.4928

Weighted Avg Cost/BBL @ Avg Cost

143.2658 1.4928

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
February 2023

KEAHOLE ULSD

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL EXCLUD LT	LT	TOTAL
Balance at 12/31/2022	2,239.0	94,037	346,567.22	7,993.67			
Less: Est'd Inventory Addition	0.0						
Purchases: Estimate	(378.8)	(15,910)	(55,547.13)	(1,380.84)			
Actual	377.8	15,866	55,393.53	0.00			
Transfers out: Estimate		xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx			
Actual		xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx			
Transfers in: Estimate		731	0.00	63.44			
Actual		(731)	0.00	1,377.02			
Consumed: Estimate	355.3	14,922	54,514.68	1,252.84			
Actual	(392.5)	(16,483)	(60,217.50)	(723.74)	153.4390		
Balance Per G/L 12/31/2022	2,200.8	92,432	340,710.81	8,582.40	154.8149		
Purchases	188.6	7,922	26,462.08	843.81	0.0000		
Estimated Purchases	190.0	7,980	26,655.82	849.98			
Transfer in	(1.8)	(76)	0.00	(8.10)	0.00		
Consumed	(325.5)	(13,669)	(50,030.02)	(1,161.94)	153.7246	3.5702	157.2948
Balance @ 01/31/2023	2,252.1	94,589	343,798.68	9106.15045	152.6556		
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	2,252.1	94,589	343,798.68	9,106.15	152.6556		
Reverse Fuel Balance	xxxxxxxxxxxx	xxxxxxxxxxxx	(343,798.68)	xxxxxxxxxxxx			
Fuel Balance @ Avg Price	xxxxxxxxxxxx	xxxxxxxxxxxx	341,918.20	xxxxxxxxxxxx			
Total @ 02/01/2023 Avg Price	2,252.1	94,589	341,918.20	9,106.15	151.8207		

Weighted Avg Cost/BBL by Location

152.6556 4.0434

Weighted Avg Cost/BBL @ Avg Cost

151.8207 4.0434

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
February 2023

WAIMEA DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP	COST PER BARREL	LT	TOTAL
Balance at 12/31/2022	883.7	37,115.0	133,339.4	2,662.78			
Less: Est'd Inven Addition	0.0	0.0	0.00	0.00			
Purchases: Estimate		(15,920)	(55,582.07)	(1,150.53)			
Actual		15,865.0	55,390.1	0.00			
Transfers out: Estimate		xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx			
Actual		xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx			
Transfers in: Estimate	(4.3)	(181)	0.00	0.00			
Actual	(2.2)	(91)	0.00	1,146.55			
Consumed: Estimate	252.3	10,595	38,706.81	788.24			
Actual	(358.1)	(15,039)	(54,942.12)	(770.30)			
Balance Per G/L 12/31/2022	770.1	32,344	116,912.11	2,676.74	151.8151		
ULSD Purchases	188.5	7,918	26,448.71	702.25	140.2937		
Estimated Purchases	-	0	0.00	0.00			
Transfer in	xxxxxxxxxxxx	252	0.00	0.00	#DIV/0!		
Consumed	(218.3)	(9,170)	(33,563.19)	(657.89)	153.7246	3.0132	156.7378
Balance @ 01/31/2023	746.3	31,344	109,797.63	2721.10348	147.1255		
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	746.3	31,344	109,797.63	2,721.10	147.1255		
Reverse Fuel Balance	xxxxxxxxxxxx	xxxxxxxxxxxx	(109,797.63)	xxxxxxxxxxxx			
Fuel Balance @ Avg Price	xxxxxxxxxxxx	xxxxxxxxxxxx	113,301.59	xxxxxxxxxxxx			
Total @ 02/01/2023 Avg Price	746.3	31,344	113,301.59	2,721.10	151.8207		

Weighted Avg Cost/BBL by Location

147.1255 3.6462

Weighted Avg Cost/BBL @ Avg Cost

151.8207 3.6462

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
February 2023

KANOELEHUA DIESEL

ULSD	BBL	GALLONS	COST EXCLUDE LT	LAND TRANSP
Balance at 12/31/2022	1,141.2	47,929.0	175,405.4	1484.0
Less: Est'd Inventory Addition	0.0	0	0.00	0.00
Purchases: Estimate	(188.8)	(7,930)	(27,686.28)	(236.39)
Actual	377.6	15,861	55,376.07	0.00
Transfers out: Estimate		x	x	x
Actual		x	x	x
Transfers in: Estimate		0	0.00	0.00
Actual		(91)	0.00	708.54
Consumed: Estimate	260.7	10,951	40,007.39	337.55
Actual	(234.1)	(9,833)	(35,922.99)	(240.47)
Balance Per G/L 12/31/2022	1,354.5	56,887	207,179.64	2,053.21
ULSD Purchases	0	0	0.00	0.00
Estimated Purchases	0	-	-	-
Transfer in	0	0	0.00	0.00
Consumed	(151.7)	(6,371)	(23,318.55)	(197.26)
Balance @ 01/31/2023	1,202.8	50,516	183,861.09	1,855.95
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	1,202.8	50,516	183,861.09	1,855.95
Reverse Fuel Balance	x	x	(183,861.09)	x
Fuel Balance @ Avg Price	x	x	182,604.11	x
Total @ 02/01/2023 Avg Price	1,202.8	50,516	182,604.11	1,855.95

Weighted Avg Cost/BBL by Location

152.8657 1.5431

Weighted Avg Cost/BBL @ Avg Cost

151.8207 1.5431

HAWAII ELECTRIC LIGHT CO., INC.
Estimated Weighted Average
February 2023

DISPERSED GENERATION

	BBL	GALLONS	COST	COST/BBL
Balance at 12/31/2022	117.8	4,946	18,246.67	
Less: Est'd Inven Addition	0.0	XXXXXXXXXX	XXXXXXXXXX	
Purchases: Estimate	0.0	0	0.00	
Actual	0.0	0	0.00	
Consumed: Estimate	17.5	737	2,692.49	
Actual	(15.7)	(660)	(2,411.20)	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Balance Per G/L 12/31/2022	119.60	5,023	18,527.96	154.9222
Purchases	0.0	0	0.00	0.0000
Transfer out	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Transfer in	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Consumed	(2.3)	(98)	(358.69)	153.7246
Balance @ 01/31/2023	117.3	4,925	18,169.27	154.9461
Est'd Inventory Addition	0.0	0	0.00	
Fuel Balance @ 01/31/2023	117.3	4,925	18,169.27	
Reverse Fuel Balance	XXXXXXXXXX	XXXXXXXXXX	(18,169.27)	xxxx
Fuel Balance @ Avg Price	XXXXXXXXXX	XXXXXXXXXX	17,802.78	xxxx
Total @ 02/01/2023 Avg Price	117.3	4,925	17,802.78	151.8207

Hawaii Electric Light Company, Inc.
PURCHASED POWER PRICES FOR February 1, 2023

		<u>February 1, 2023</u> <u>(¢/kWh)</u>	<u>Floor Rates</u> <u>(¢/kWh)</u>
PGV (25 MW)	- on peak	20.351	6.560
PGV (22 MW)	- off peak	20.721	5.430
WAILUKU HYDRO	- on peak	20.351	7.240
	off peak	20.721	5.970
Other: (<100 KW)	Sch Q Rate	20.080	

		<u>February 1, 2023</u> <u>(¢/kWh)</u>	<u>Floor Rates</u> <u>(¢/kWh)</u>
HEP		22.163	
PGV Addtl 5 MW	- on peak	13.850	0.0000
	- off peak	13.850	0.0000
PGV Addtl 8 MW	- on peak	7.040	0.0000
	- off peak	7.040	0.0000

Hawaii Electric Light Company, Inc.
Energy Cost Reconciliation Adjustment
February 1, 2023

<u>Line No.</u>	<u>Description</u>	<u>Amount</u>
1	Amount to be (returned) or collected	(\$219,500)
2	Monthly Amount ($\frac{1}{3}$ x Line 1)	(\$73,167)
3	Revenue Tax Divisor	0.91115
	Total (Line 2 / Line 3)	(\$80,301)
5	Estimated MWh Sales (February 1, 2023)	79,434 mwh
6	Adjustment (Line 4 / Line 5)	(0.101) ¢/kwh

HAWAII ELECTRIC LIGHT COMPANY, INC.
2022 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY
(Thousand \$)

LINE	DESCRIPTION	Info Only	collectn by company*	Basis for Recon
		December 2022 YTD Total No Deadband		December 2022 YTD Total Deadband
ACTUAL COSTS:				
1	Generation	\$133,198.5		\$133,198.5
2	Distributed Generation	\$39.8		\$39.8
3	Purch Power	\$123,558.3		\$123,558.3
4	TOTAL	\$256,796.6		\$256,796.6
FUEL FILING COST				
5	Generation	\$128,341.0		\$129,743.1
6	Distributed Generation	\$39.8		\$39.8
7	Purch Power	\$123,558.3		\$123,558.3
8	TOTAL	\$251,939.0		\$253,341.1
BASE FUEL COST				
9	Generation	\$0.0		\$0.0
10	Distributed Generation	\$0.0		\$0.0
11	Purch Power	\$0.0		\$0.0
12	TOTAL	\$0.0		\$0.0
13	FUEL-BASE COST (Line 8-12)	\$251,939.0		\$253,341.1
14	ACTUAL FOA LESS TAX	\$254,257.7		\$254,257.7
15	Less: FOA reconciliation adj for prior year	\$1,114.8		\$1,114.8
15A	Less: Non-Adjustable Component Revenues Less Tax	\$13.0		\$13.0
16	ADJUSTED FOA LESS TAX	\$253,129.9		\$253,129.9
17	FOA-(FUEL-BASE) (Line 16-13)	\$1,190.9	over	-\$211.2 under
ADJUSTMENTS:				
18	Current year FOA accrual reversal	-\$3,105.0		-\$3,105.0
19	Other prior year FOA	\$0.0		\$0.0
20	Other	\$0.0		\$0.0
21	QUARTERLY FOA RECONCILIATION (Line 17+18+19+20)	-\$1,914.1	under	-\$3,316.2 under
21A	YTD Fossil Fuel Cost Risk Sharing Adjustment	\$594.9		\$594.9
21B	QUARTERLY FOA RECON w/Fossil Risk Adj (L21+L21A)	-\$1,319.2		-\$2,721.3 under
22	Third Quarter Reconciliation			-2,940.7
23	FOA Reconciliation to be returned or Collected			219.5 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, 2022 to December 31, 2022**

	<u>Notes</u>	YTD
<u>Industrial</u>		
Industrial Efficiency Factor (per D&O), BTU/kWh*	u	14,970
Industrial Deadband Definition, +/- BTU/kWh	d	100
Industrial Portion of Recorded Sales, kWh	a	159,213,910
Industrial Consumption (Recorded), MMBTU	b	2,292,047
Industrial Efficiency Factor (Recorded), BTU/kWh	c=(b/a) x 1000	14,396
Lower limit of Industrial Deadband, BTU/kWh	e= f-d	14,870
Higher limit of Industrial Deadband, BTU/kWh	g=f+d	15,070
Industrial Efficiency Factor for cost-recovery, BTU/kWh	h=c, e, or g	14,870
<u>Diesel</u>		
Diesel Efficiency Factor (per D&O), BTU/kWh*	f	10,915
Diesel Deadband Definition, +/- BTU/kWh	d	200
Diesel Portion of Recorded Sales, MWh	a	330,102,065
Diesel Consumption (Recorded), MMBTU	b	3,808,586
Diesel Efficiency Factor (Recorded), BTU/kWh	c=(b/a) x 1000	11,538
Lower limit of Diesel Deadband, BTU/kWh	e= f-d	10,715
Higher limit of Diesel Deadband, BTU/kWh	g=f+d	11,115
Diesel Efficiency Factor for cost-recovery, BTU/kWh	h=c, e, or g	11,115
<u>Hydro</u>		
Hydro Efficiency Factor (per D&O), BTU/kWh*	f	12,426
Hydro Deadband Definition, +/- BTU/kWh	d	100
Hydro Portion of Recorded Sales, MWh	a	5,721,377
Hydro Consumption (Recorded), MMBTU	b	69,837
Hydro Efficiency Factor (Recorded), BTU/kWh	c=(b/a) x 1000	12,206
Lower limit of Hydro Deadband, BTU/kWh	e= f-d	12,326
Higher limit of Hydro Deadband, BTU/kWh	g=f+d	12,526
Hydro Efficiency Factor for cost-recovery, BTU/kWh	h=c, e, or g	12,326

* 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
January 1 - December 31, 2022

	Without Deadband	With Deadband
	Jan 1 - Dec 31	As Filed
	<u>Jan 1 - Dec 31</u>	<u>Jan 1 - Dec 31</u>
<u>INDUSTRIAL FUEL FILING COST</u>		
Industrial Portion of Recorded Sales , kWh	159,213,910	159,213,910
Industrial Efficiency Factor (mmbtu/kwh)	0.014970	0.014870
Mmbtu adjusted for Sales Efficiency Factor	2,383,432	2,367,511
\$/mmbtu	<u>\$15.9342</u>	<u>\$15.9342</u>
TOTAL INDUSTRIAL \$000s TO BE RECOVERED	\$37,978.028	\$37,724.334
<u>DIESEL FUEL FILING COST</u>		
Diesel Portion of Recorded Sales, kWh	330,102,065	330,102,065
Diesel Efficiency Factor (mmbtu/kwh)	0.010915	0.011115
Mmbtu adjusted for Sales Efficiency Factor	3,603,064	3,669,084
\$/mmbtu	<u>\$25.0795</u>	<u>\$25.0795</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$90,362.984	\$92,018.741
<u>HYDRO FUEL FILING COST</u>		
Hydro Portion of Recorded Sales , kWh	5,721,377	5,721,377
Hydro Efficiency Factor (mmbtu/kwh)	0.012426	0.012326
Mmbtu adjusted for Sales Efficiency Factor	71,094	70,522
\$/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	\$128,341.0	\$129,743.1
<u>CALCULATION OF GENERATION BASE FUEL COST</u>		
TOTAL GENERATION BASE FUEL COST, \$000s	\$0.0	\$0.0
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$128,341.0	\$129,743.1
TOTAL GENERATION BASE FUEL COST YTD	\$0.0	\$0.0

Fossil Fuel Cost Risk Sharing Mechanism and Non-Adjustable Component,			
LSFO/IFO Fossil Fuel Cost Risk Sharing			
	Baseline	YTD Subject to Fossil Risk	
A	MMBtu	208,648	2,292,047
B	\$ cost, actuals	\$2,858,536	36,519,853
C = B / A (Baseline Column)	Baseline \$/mmbtu	13.700275	13.700275
D	IFO Gen kWh		170,026,490
E	Total kWh, Gen, Purch Pwr, DG		1,124,901,033
F	Sales kWh		1,053,833,202
G = (D / E) x F	IFO kWh-sales		159,284,733
H	Target Heat Rate		14,970
I1	Calculated Heat Rate (YTD subject to fossil risk, before deadband)		14,396
I	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		14,870
J = B / A ytd	Actual Cost \$/MMbtu		15.9332899
K = C x H x G / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$32,668,203
L = I x J x G / 1,000,000	Fuel Filing Cost Recovery		\$37,739,016
M = 0.02 x (L-K)	IFO Cost Risk Sharing		\$101,416
Diesel with target heat rate Fossil Fuel Cost Risk Sharing			
AA	MMBtu	329,377	3,808,586
BB	\$ cost, actuals	6,258,505	96,678,679
CC = BB / AA (Baseline Column)	Baseline \$/mmbtu	19.0010470	19.0010470
DD	Diesel Gen kWh		352,354,515
EE	Total kWh, Gen, Purch Pwr, DG		1,124,901,033
FF	Sales kWh		1,053,833,202
GG = (DD / EE) x FF	Diesel kWh-sales		330,093,827
HH	Target Heat Rate		10,915
I11	Calculated Heat Rate (YTD subject to fossil risk, before deadband)		11,538
II	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		11,115
JJ = BB/AA (YTD Column)	Actual Cost \$/MMbtu		25.3844017
KK = CC x HH x GG / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$68,460,281
LL = II x JJ x GG / 1,000,000	Fuel Filing Cost Recovery		\$93,135,189
MM = 0.02 x (LL-KK)	Diesel Cost Risk Sharing (with target heat rate)		\$493,498
FFF	Annual Cap (non-prorated)		600,000
GGG	# Days		365
HHH	Annual Cap (pro-rated, if applicable)		\$600,000
III = M + MM + E, up to cap	Total Fossil Fuel Cost Risk Sharing Adjustment, subject to cap		\$594,914
Non-Adjustable Component			
AAAA = F	YTD kWh under ECRC		1,053,833,202
BBBB	Non-Adjustable Component, cents/kWh		0.00135
CCCC	Non-Adjustable Component Revenues w/tax		\$14,227
DDDD	Non-Adjustable Component Revenues less tax		\$12,963

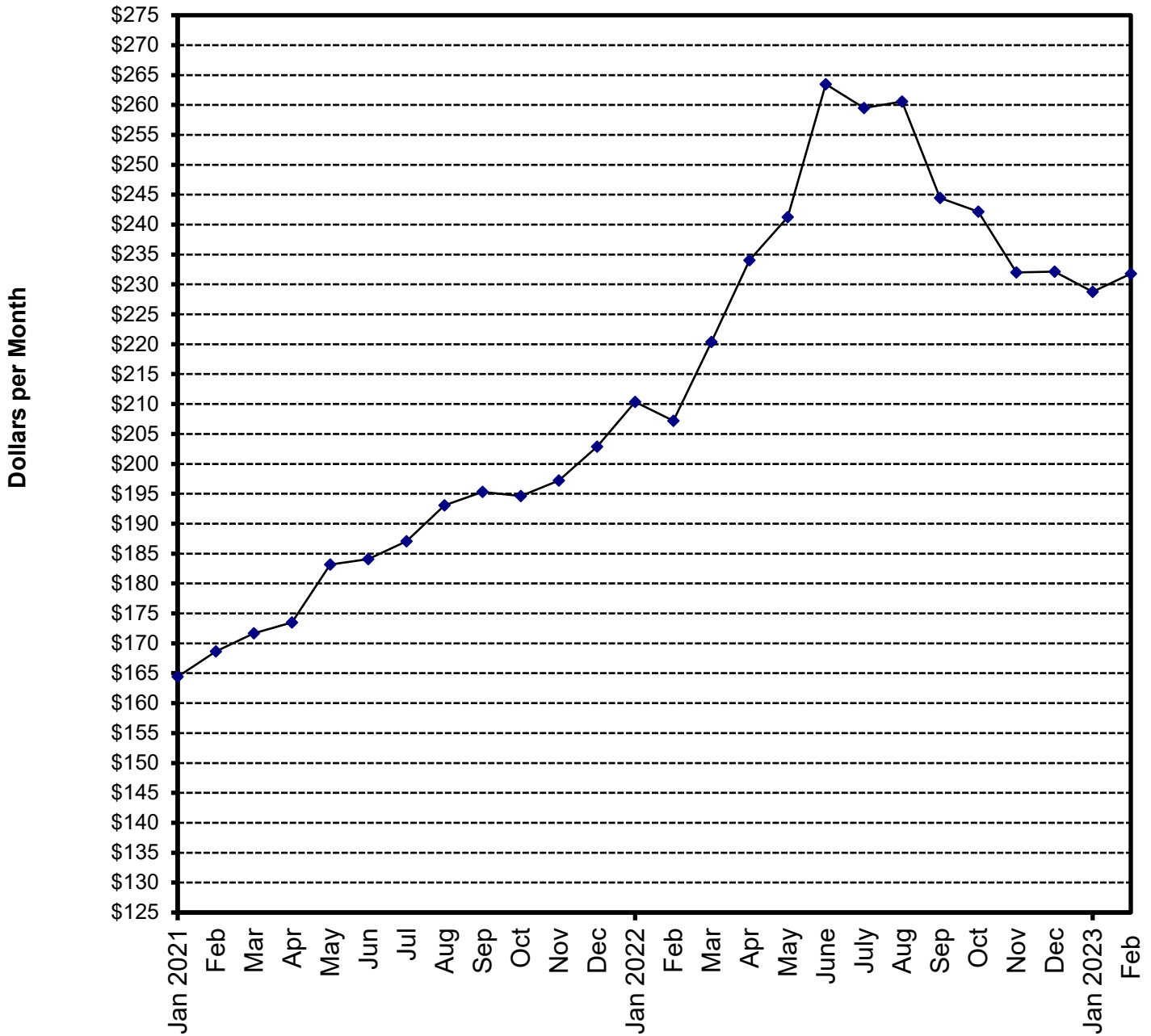
HAWAII ELECTRIC LIGHT COMPANY, INC.
2022 Cumulative Reconciliation Balance

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
January 21					(261,333)	(275,071)	12,258
February 21	374,300	[4]	(9,409)	383,709	(124,767)	(125,584)	270,383
March					(124,767)	(134,386)	135,997
April					(124,767)	(131,121)	4,876
May	(707,400)	(1)	(24,174)	(683,226)	235,800	261,182	(417,168)
June					235,800	262,654	(154,514)
July					235,800	253,310	98,796
August	(80,900)	[2]	45,882	(126,782)	26,967	29,218	1,232
September					26,967	28,336	29,568
October					26,967	27,747	57,315
November	(794,600)	[3]	21,130	(815,730)	264,867	280,992	(477,423)
December					264,867	292,531	(184,892)
January 22					264,867	270,827	85,935
February 22	(849,900)	[4]	44,569	(894,469)	283,300	291,654	(516,880)
March					283,300	304,924	(211,956)
April					283,300	310,129	98,173
May	(2,364,200)	[1]	35,938	(2,400,138)	788,067	865,010	(1,436,955)
June					788,067	818,932	(618,023)
July					788,067	790,896	172,873
August	(1,068,900)	[2]	134,637	(1,203,537)	356,300	361,221	(669,443)
September					356,300	365,659	(303,784)
October					356,300	370,642	66,858
November	492,400	[3]	17,109	475,291	(164,133)	(159,923)	382,226
December					(164,133)	(166,766)	215,460
January 23					(164,133)		
February	219,500	[4]	15,919	203,581	(73,167)		

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, 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
December 1, 2019	16.288	181.82	217.67
January 1, 2020	16.768	185.37	221.88
February 1, 2020	17.547	189.22	226.49
March 1, 2020	17.424	188.72	225.90
April 1, 2020	15.644	179.61	214.96
May 1, 2020	11.215	157.94	188.96
June 1, 2020	10.575	151.51	181.25
July 1, 2020	11.359	154.68	185.07
August 1, 2020	14.389	170.16	203.65
September 1, 2020	14.569	171.01	204.67
October 1, 2020	14.274	169.56	202.93
November 1, 2020	13.426	163.74	195.96
December 1, 2020	13.032	161.87	193.70
January 1, 2021	13.543	164.41	196.74
February 1, 2021	14.523	168.63	201.81
March 1, 2021	15.091	171.67	205.45
April 1, 2021	15.486	173.51	207.68
May 1, 2021	16.982	183.19	219.28
June 1, 2021	16.726	184.08	220.35
July 1, 2021	17.040	187.04	223.92
August 1, 2021	18.134	193.08	231.16
September 1, 2021	18.588	195.30	233.83
October 1, 2021	18.447	194.63	233.01
November 1, 2021	19.470	197.22	236.14
December 1, 2021	20.549	202.87	242.91
January 1, 2022	20.942	210.36	251.90
February 1, 2022	20.361	207.20	248.09
March 1, 2022	22.943	220.40	263.93
April 1, 2022	25.717	234.05	280.30
May 1, 2022	27.068	241.26	288.97
June 1, 2022	31.165	263.48	315.62
July 1, 2022	30.355	259.50	310.86
August 1, 2022	30.507	260.56	312.13
September 1, 2022	27.322	244.46	292.81
October 1, 2022	26.850	242.17	290.06
November 1, 2022	24.879	231.99	277.85
December 1, 2022	24.880	232.14	278.03
January 1, 2023	24.245	228.78	273.99
February 1, 2023	24.918	231.81	277.63

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

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
1/1/2020-10/31/2020	INTERIM RATE ADJUSTMENT 2019	4.0900 PERCENT ON BASE
1/1/2020-6/30/2020	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.7437 CENTS/KWH
2/1/2020- 2/29/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.7631 CENTS/KWH
3/1/2020- 3/31/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.7883 CENTS/KWH
4/1/2020- 4/30/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.7717 CENTS/KWH
4/1/2020- 4/30/2020	SOLARSAVER ADJUSTMENT	-0.0267 CENTS/KWH
05/01/2020-5/31/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.8396 CENTS/KWH
5/1/2020 -3/31/2021	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/2020-6/30/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.8413 CENTS/KWH
6/1/2020-5/31/2021	RBA RATE ADJUSTMENT	-0.4623 CENTS/KWH
07/01/2020-7/31/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.8592 CENTS/KWH
7/1/2020- 6/30/2021	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.5882 CENTS/KWH
7/1/2020	GREEN INFRASTRUCTURE FEE	1.19 DOLLARS/MONTH
8/1/2020-8/31/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.9261 CENTS/KWH
9/1/2020-9/30/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.9161 CENTS/KWH
10/1/2020-10/31/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.9222 CENTS/KWH
11/1/2020-11/30/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.9106 CENTS/KWH
11/1/2020	Final Rates (TY2019), Docket No. 2018-0368, Order No. 37395	
12/1/2020-12/31/2020	PURCHASED POWER ADJUSTMENT CLAUSE	1.9291 CENTS/KWH
1/1/2021-1/31/2021	PURCHASED POWER ADJUSTMENT CLAUSE	1.9133 CENTS/KWH
1/1/2021-6/30/2021	GREEN INFRASTRUCTURE FEE	1.25 DOLLARS/MONTH
2/1/2021-2/28/2021	PURCHASED POWER ADJUSTMENT CLAUSE	1.7782 CENTS/KWH
3/1/2021-3/31/2021	PURCHASED POWER ADJUSTMENT CLAUSE	1.8172 CENTS/KWH
4/1/2021-4/30/2021	PURCHASED POWER ADJUSTMENT CLAUSE	1.7966 CENTS/KWH
4/1/2021-4/30/2021	SOLARSAVER ADJUSTMENT	-0.0033 CENTS/KWH
5/1/2021-5/31/2021	PURCHASED POWER ADJUSTMENT CLAUSE	2.2319 CENTS/KWH
5/1/2021-3/31/2022	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
6/1/2021-6/30/2021	PURCHASED POWER ADJUSTMENT CLAUSE	2.2333 CENTS/KWH
6/1/2021-12/31/2021	RBA RATE ADJUSTMENT	-0.0299 CENTS/KWH
7/1/2021-12/31/2021	GREEN INFRASTRUCTURE FEE	1.19 DOLLARS/MONTH
7/1/2021-7/31/2021	PURCHASED POWER ADJUSTMENT CLAUSE	2.4649 CENTS/KWH
7/1/2021-06/30/2022	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.6478 CENTS/KWH
8/1/2021-8/31/2021	PURCHASED POWER ADJUSTMENT CLAUSE	2.4876 CENTS/KWH
8/1/2021-10/31/2021	RESIDENTIAL DSM ADJUSTMENT	0.0893 CENTS/KWH
9/1/2021-9/30/2021	PURCHASED POWER ADJUSTMENT CLAUSE	2.4776 CENTS/KWH
10/1/2021-10/31/2021	PURCHASED POWER ADJUSTMENT CLAUSE	2.4838 CENTS/KWH
11/1/2021-11/30/2021	PURCHASED POWER ADJUSTMENT CLAUSE	2.0761 CENTS/KWH
11/1/2021	RESIDENTIAL DSM ADJUSTMENT	-0.0051 CENTS/KWH
12/1/2021-12/31/2021	PURCHASED POWER ADJUSTMENT CLAUSE	2.1263 CENTS/KWH
1/1/2022-06/30/2022	GREEN INFRASTRUCTURE FEE	1.25 DOLLARS/MONTH
1/1/2022-5/31/2022	RBA RATE ADJUSTMENT	1.0380 CENTS/KWH
1/1/2022-1/31/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.1529 CENTS/KWH
2/1/2022-2/28/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.0987 CENTS/KWH
2/1/2022- 4/30/2022	RESIDENTIAL DSM ADJUSTMENT	-0.0043 CENTS/KWH
3/1/2022-3/31/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.1564 CENTS/KWH
4/1/2022-4/30/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.1141 CENTS/KWH
4/1/2022-4/30/2022	SOLARSAVER ADJUSTMENT	-0.0011 CENTS/KWH
5/1/2022-5/31/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.2917 CENTS/KWH
5/1/2022	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
5/1/2022-7/31/2022	RESIDENTIAL DSM ADJUSTMENT	-0.0912 CENTS/KWH
6/1/2022-6/30/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.3052 CENTS/KWH
6/1/2022-12/31/2022	RBA RATE ADJUSTMENT	1.3708 CENTS/KWH
7/1/2022-7/31/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.3333 CENTS/KWH
7/1/2022-12/31/2022	GREEN INFRASTRUCTURE FEE	1.18 DOLLARS/MONTH
7/1/2022	RESIDENTIAL PBF SURCHARGE ADJUSTMENT	0.6488 CENTS/KWH
8/1/2022-8/31/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.2981 CENTS/KWH
8/1/2022-10/31/2022	RESIDENTIAL DSM ADJUSTMENT	0.0035 CENTS/KWH
9/1/2022-9/30/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.2638 CENTS/KWH
10/1/2022-10/31/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.2771 CENTS/KWH
11/1/2022-11/30/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.2180 CENTS/KWH
11/1/2022	RESIDENTIAL DSM ADJUSTMENT	-0.0017 CENTS/KWH
12/1/2022-12/31/2022	PURCHASED POWER ADJUSTMENT CLAUSE	2.2472 CENTS/KWH
1/1/2023-1/31/2023	PURCHASED POWER ADJUSTMENT CLAUSE	2.2701 CENTS/KWH
1/1/2023-06/30/2023	GREEN INFRASTRUCTURE FEE	1.23 DOLLARS/MONTH
1/1/2023	RBA RATE ADJUSTMENT	1.3006 CENTS/KWH
2/1/2023-2/28/2023	PURCHASED POWER ADJUSTMENT CLAUSE	2.2018 CENTS/KWH
2/1/2023	RESIDENTIAL DSM ADJUSTMENT	0.0008 CENTS/KWH

**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			
	1/01/23	2/01/23	1/01/23	2/01/23	Difference	
Base Rates	effective date:	11/01/2020	11/01/2020			
Base Fuel Energy Charge	¢/kwh	-	-	\$0.00	\$0.00	\$0.00
Non-Fuel Energy Charge	¢/kwh			\$73.74	\$73.74	\$0.00
First 300 kWh per month	¢/kwh	13.4059	13.4059	\$40.22	\$40.22	\$0.00
Next 700 kWh per month	¢/kwh	16.7577	16.7577	\$33.52	\$33.52	\$0.00
Customer Charge	\$	11.50	11.50	\$11.50	\$11.50	\$0.00
Total Base Charges				\$85.24	\$85.24	\$0.00
Interim Rate Adjustment 2019 TY	% on base	0.0000%	0.0000%	\$0.00	\$0.00	\$0.00
RBA Rate Adjustment	¢/kwh	1.3006	1.3006	\$6.50	\$6.50	\$0.00
Purchased Power Adj. Clause	¢/kwh	2.2701	2.2018	\$11.35	\$11.01	-\$0.34
PBF Surcharge	¢/kwh	0.6488	0.6488	\$3.24	\$3.24	\$0.00
DSM Adjustment	¢/kwh	(0.0017)	0.0008	-\$0.01	\$0.00	\$0.01
SolarSaver Adjustment	¢/kwh	0.0000	0.0000	\$0.00	\$0.00	\$0.00
Energy Cost Recovery	¢/kwh	24.2450	24.9180	\$121.23	\$124.59	\$3.36
Green Infrastructure Fee	\$	1.23	1.23	\$1.23	\$1.23	\$0.00
Avg Residential Bill at 500 kwh				\$228.78	\$231.81	
				Increase (Decrease -)	\$3.03	
				% Change	1.32%	

	Rate		Charge (\$) at 600 Kwh			
	1/01/23	2/01/23	1/01/23	2/01/23	Difference	
Base Rates	effective date:	11/01/2020	11/01/2020			
Base Fuel/Energy Charge	¢/kwh	-	-	\$0.00	\$0.00	\$0.00
Non-Fuel Energy Charge	¢/kwh			\$90.49	\$90.49	\$0.00
First 300 kWh per month	¢/kwh	13.4059	13.4059	\$40.22	\$40.22	\$0.00
Next 700 kWh per month	¢/kwh	16.7577	16.7577	\$50.27	\$50.27	\$0.00
Customer Charge	\$	11.50	11.50	\$11.50	\$11.50	\$0.00
Total Base Charges				\$101.99	\$101.99	\$0.00
Interim Rate Adjustment 2019 TY	% on base	0.0000%	0.0000%	\$0.00	\$0.00	\$0.00
RBA Rate Adjustment	¢/kwh	1.3006	1.3006	\$7.80	\$7.80	\$0.00
Purchased Power Adj. Clause	¢/kwh	2.2701	2.2018	\$13.62	\$13.21	-\$0.41
PBF Surcharge	¢/kwh	0.6488	0.6488	\$3.89	\$3.89	\$0.00
DSM Adjustment	¢/kwh	(0.0017)	0.0008	-\$0.01	\$0.00	\$0.01
SolarSaver Adjustment	¢/kwh	0.0000	0.0000	\$0.00	\$0.00	\$0.00
Energy Cost Recovery	¢/kwh	24.2450	24.9180	\$145.47	\$149.51	\$4.04
Green Infrastructure Fee	\$	1.23	1.23	\$1.23	\$1.23	\$0.00
Avg Residential Bill at 600 kwh				\$273.99	\$277.63	
				Increase (Decrease -)	\$3.64	
				% Change	1.33%	

HELCO Annual ECRC Adjustment, Based on Recorded Statistics for : 2022

	Industrial A	Diesel B	Notes
1 Target Heat Rate, 2022	0.014970	0.010915	MBTU/kWh Sales
2			
3 Fuel consumed during 2022	2,292,047	3,808,586	MBTU
4 Allocated Sales during 2022	159,213,910	330,102,065	kWh
5 2022 Sales Heat Rate, Recorded	0.014396	0.011538	MBTU/kWh Sales
6			
7 Difference: 2022 Recorded less Start of Year	(0.000574)	0.000623	MBTU/kWh Sales
8 Adjustment: One-half the difference	(0.000287)	0.000311	MBTU/kWh Sales
9			
10 Target Heat Rate prior to Adjustment, Start of 2022	0.014970	0.010915	MBTU/kWh Sales
11			
12 Target Heat Rate, Start of 2023	0.014683	0.011226	MBTU/kWh Sales

Derivation of "Other" Efficiency Factor, to be used in the ECRC Tariff

	<u>Industrial</u> A	<u>Diesel</u> B	<u>Other</u> C	<u>Total</u> D	
1 Fixed Efficiency Factor	0.014683	0.011226	0.012514		MBTU/kWh
2 Gen MWh %	36.16	60.87	2.97	100.00	%
3 Weighted Efficiency Factor (line 1 x line 2)	0.005309	0.006833	0.000372	0.012514	MBTU/kWh
Goal seek (make this value equal zero by changing cell Line 1, Col C):				0.0	

ENERGY COST RECOVERY CLAUSE

Applicable To

Schedule "R"	- Residential Service
Schedule "G"	- General Service - Non Demand
Schedule "J"	- General Service Demand
Schedule "P"	- Large Power Service
Schedule "F"	- Street Light Service
Schedule "U"	- Time-of-Use Service
Schedule "TOU-R"	- Residential Time-of-Use Service
Schedule "TOU-G"	- Small Commercial Time-of-Use Service
Schedule "TOU-J"	- Commercial Time-of-Use Service
Schedule "TOU-P"	- Large Power Time-of-Use Service
Schedule "SS"	- Standby Service
Schedule "TOU EV"	- Residential Time-of-Use Service with Electric Vehicle Pilot
Schedule "TOU-RI"	- Residential Interim Time-of-Use Service
Schedule "EV-F"	- Commercial Public Electric Vehicle Charging Facility Service Pilot
Schedule "E-BUS-J"	- Commercial Electric Bus Charging Facility Service Pilot
Schedule "E-BUS-P"	-Commercial Electric Bus Charging Facility Service Pilot

All terms and provisions of the above listed rate Schedules are applicable, except that the Monthly Energy Cost Recovery Factor described below will be multiplied by the billed kWh and added to the customer bill.

All base rate schedule discounts, surcharges, and all other adjustments will not apply to the Energy Cost Recovery Clause.

The Energy Cost Recovery Clause shall be consistent with the terms of fuel contracts, distributed generation contracts, and purchased energy contracts. Changes to the Energy Cost Recovery Clause may be proposed by application to the Commission.

Monthly Energy Cost Recovery Factor:

The Monthly Energy Cost Recovery Factor shall be the sum of the Company-Owned Generation Factor, the Purchased Energy Factor, the DG Energy Generation Factor, the Non-Adjustable Component, and the Monthly Fossil Fuel Cost Risk Sharing Component.

The Monthly Energy Cost Recovery Factor shall normally be effective on the 1st day of the month. When a customer's billing period includes more than one applicable Monthly Energy Cost Recovery Factor, each Monthly Energy Cost Recovery Factor will be prorated to the customer bill for the number of days each factor was in effect.

HAWAII ELECTRIC LIGHT COMPANY, INC.

Energy Cost Recovery Clause - (Continued)

COMPANY-OWNED GENERATION FACTOR - The Company-Owned Generation Factor shall be determined by the current Weighted Composite Central Station + Wind/Hydro Generation Cost, adjusted for additional revenue taxes. The current Weighted Composite Central Station + Wind/Hydro Generation Cost shall be determined by the current Composite Cost of Generation in cents per million BTU weighted by the proportion of current company-owned central station + wind/hydro generation to total system net energy, multiplied by the 2023 efficiency factors of 0.014683 million Btu per kWh for industrial fuel, 0.011226 million Btu per kWh for diesel fuel, and 0.012514 million Btu per kWh for other company generation sources, weighted by the current proportion of generation produced by each generation source to the total company-owned generation.

PURCHASED ENERGY FACTOR - The Purchased Energy Factor shall be the current Composite Cost of Purchased Energy, in cents per kWh, weighted by the proportion of current purchased energy to total system net energy, adjusted to the sales delivery level and adjusted for revenue taxes. The Company shall also show the composite cost of fossil fuel purchased energy and the composite cost of renewable purchased energy that comprise the composite cost of purchased energy.

DG ENERGY GENERATION FACTOR - The DG Energy Generation Factor shall be the current Composite Cost of Distributed Generation Energy, in cents per kWh, weighted by the proportion of current DG energy to total system net energy, adjusted to the sales delivery level and adjusted for revenue taxes.

NON-ADJUSTABLE COMPONENT - The Non-Adjustable Component is the ocean cargo insurance expense per kWh established in the Company's rate case, adjusted for revenue taxes. The Non-Adjustable Component is excluded from the Reconciliation Adjustment described below.

MONTHLY FOSSIL FUEL COST RISK SHARING COMPONENT - The Monthly Fossil Fuel Cost Risk Sharing Component shall equal 2% of the difference of the Monthly Fossil Cost for all fossil fuel types less the Monthly Base Fossil Recovery Target for all fossil fuel types, divided by the forecast sales for the month, multiplied by negative one (-1), and adjusted for revenue taxes. The year-to-date sum of the Monthly Fossil Fuel Cost Risk Sharing Components shall be subject to a calendar year maximum of ±\$600,000, provided that if this provision first becomes effective on a date other than January 1, the above maximum shall be pro-rated for the remainder of the initial calendar year based on the number of days remaining in the calendar year from the date this section becomes effective.

The Monthly Fossil Cost for each fossil fuel type shall equal the forecasted million Btu for that fossil fuel type for the month multiplied by the forecasted cost per million Btu for that fossil type.

HAWAII ELECTRIC LIGHT COMPANY, INC.

Superseding Revised Sheet No. 63B
Effective February 1, 2022

REVISED SHEET No. 63B
Effective February 1, 2023

Energy Cost Recovery Clause - (Continued)

The Monthly Base Fossil Recovery Target for each fossil fuel type shall equal the forecasted million Btu for that fossil fuel type for the month multiplied by the Fossil Fuel Baseline Cost for that fossil fuel type.

The Fossil Fuel Baseline Cost for each fossil fuel type for the year shall equal the actual fossil fuel costs for the fossil fuel type in the first applicable month of the year divided by the actual million Btu for the fossil fuel type in the first applicable month of the year, provided that if actual fuel costs are not yet known, forecasted fossil fuel costs may be used in the above calculation, and provided that if actual million Btu in the first applicable month are not yet known, forecasted million Btu may be used in the above calculation. The first applicable month of the year shall be January of each year, provided that when this provision first becomes effective, the month this provision becomes effective shall be used as the first applicable month for the calculation of the Fossil Fuel Baseline Cost for the initial calendar year.

Revenue taxes shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utility Commission Fee.

TARGET HEAT RATES AND DEADBANDS

Target Heat Rates:

1. The target heat rates shall be the 2023 efficiency factors of 0.014683 million BTU per kWh for industrial fuel, 0.011226 million BTU per kWh for diesel fuel, and 0.012514 million BTU per kWh for other company generation sources. The overall target heat rate shall be the weighted average efficiency factor of all sources.
2. The target heat rates for industrial fuel and diesel shall be reestablished each calendar year. The target heat rate for each calendar year shall be equal to the target heat rate in effect for the prior calendar year plus one-half of the difference between the target heat rate and the actual heat rate for the prior calendar year.

Deadbands:

3. Application of the Deadbands
 - a. The deadband shall be applied around its respective target heat rate for each fuel type. The deadband shall be ± 100 Btu/kWh-sales for industrial fuel. The deadband shall be ± 200 Btu/kWh-sales for diesel fuel.

HAWAII ELECTRIC LIGHT COMPANY, INC.

Transmittal Letter Dated January 27, 2023.

Superseding Revised Sheet No. 63C
Effective February 1, 2019

REVISED SHEET No. 63C
Effective January 1, 2021

Energy Cost Recovery Clause - (Continued)

- b. If target heat rates are modified, the deadband levels described in Sections 3.a above shall apply around the modified target heat rate.

Modifications to Target Heat Rates and Deadbands:

4. Modifications to target heat rates and/or deadbands may be determined in a rate case.
5. Modifications to target heat rates and/or deadbands may be made outside of a rate case proceeding by application by the Company or the Consumer Advocate, or by an investigation by the Commission on its own motion.
 - a. An applicant must make a separate request to the Commission, and provide appropriate justification and support.
 1. Sufficient basis for justification of a change in target heat rate and/or deadband may include but not be limited to the following:
 - a. Addition or retirement of non-utility firm or non-utility non-firm renewable resources (such as wind or photovoltaics) from which the utility will purchase capacity and/or energy under a Power Purchase Agreement that exceed 5 MW;
 - b. Addition or retirement of utility firm and non-firm renewable resources (such as wind or photovoltaics) that exceed 5 MW. Modifications to the target heat rate and/or deadband may be determined as part of the application for approval to expend funds (in accordance with General Order No. 7) for the resource that would cause the change;
 - c. Additions, retirements or modifications to the generating systems, or modifications to the generating system operating procedures, that are expected to increase or decrease the target heat rates by more than the deadband amount; or
 - d. The recorded heat rate is outside of the deadband around the target heat rate and is expected to remain outside of the deadband.
 - b. Any proposed modifications to target heat rates and/or deadbands under this provision shall not take effect until approved by the Commission.

HAWAII ELECTRIC LIGHT COMPANY, INC.

Superseding Revised Sheet No. 63D
Effective February 1, 2019

REVISED SHEET No. 63D
Effective January 1, 2021

Energy Cost Recovery Clause - (Continued)

YEAR-TO DATE FOSSIL FUEL COST RISK SHARING ADJUSTMENT

The Year-To-Date Fossil Fuel Cost Risk Sharing Adjustment shall be subject to an annual maximum of ±\$600,000 across all company-generation fossil fuel types subject to fossil fuel cost risk sharing. This section shall take effect as of January 1, 2021, and the Year-To-Date Fossil Fuel Cost Risk Sharing Adjustment shall be included in the Reconciliation Adjustment, beginning with the First Quarter of 2021. The annual maximum sharing for the initial calendar year shall be pro-rated based on the number days remaining in the calendar year from the date this section becomes effective in the initial calendar year.

The Year-To-Date Fossil Fuel Cost Risk Sharing Adjustment shall be excluded from the determination of Earnings Sharing Revenue Credits provided for in the Rate Adjustment Mechanism Provision.

The Year-To-Date Fossil Fuel Cost Risk Sharing Adjustment shall equal 2% of the difference between the sum of the Year-To-Date Fuel Filing Cost Recovery Amount across all fossil fuel types and the sum of the Year-To-Date Base Cost Recovery Target across all fossil fuel types.

The Year-To-Date Fuel Filing Cost Recovery Amount for a fossil fuel type shall be the sum of the Eligible Revenue for fuel for that fossil type for all months, as determined in the Reconciliation Adjustment section below.

The Year-To-Date Base Cost Recovery Target for a fossil fuel type shall equal the applicable target heat rate, multiplied by the sales kWh for that fossil fuel type, multiplied by the Reconciliation Fossil Fuel Baseline Cost for that fossil fuel type.

The Reconciliation Fossil Fuel Baseline Cost for each fossil fuel type for the year shall equal the actual fossil fuel costs for the fossil fuel type in the first applicable month of the year divided by the actual million Btu for the fossil fuel type in the first applicable month of the year. The first applicable month of the year for the initial calendar year shall be the month in which this provision takes effect.

RECONCILIATION ADJUSTMENT:

In order to reconcile any differences that may occur between recorded revenue and eligible revenue from the Energy Cost Recovery Clause, the year-to-date recorded revenue from the Energy Cost Recovery Clause will be compared with the year-to-date eligible revenue from the Energy Cost Recovery Clause on a quarterly basis. If there is a variance between the year-to-date recorded revenue from the Energy Cost Recovery Clause and the year-to-date eligible revenue from the Energy Cost Recovery Clause, a reconciliation adjustment shall be added to the rate calculated under the Energy Cost Recovery Clause to reconcile the revenue variance.

HAWAII ELECTRIC LIGHT COMPANY, INC.

Docket No. 2018-0368; Order No. 37237, Filed on July 28, 2020.
Transmittal Letter Dated August 27, 2020.

Superseding Revised Sheet No. 63E
Effective February 1, 2019

REVISED SHEET No. 63E
Effective January 1, 2021

Energy Cost Recovery Clause - (Continued)

This reconciliation adjustment shall be applied at the beginning of the second month after the end of the quarter, and shall be set to recover the revenue variance over the estimated sales for the subsequent three months.

The Non-Adjustable Component revenue will be excluded from the Energy Cost Recovery Clause revenue for the purposes of this reconciliation. The Non-Adjustable Component revenue is the Non-Adjustable Component multiplied by the year-to-date sales kWh.

The eligible revenue from the Energy Cost Recovery Clause shall be equal to the eligible revenue for fuel, DG, and purchased energy expense, adjusted by the Year-To-Date Fossil Fuel Cost Risk Sharing Adjustment.

The eligible revenue for fuel is calculated for each fuel type each month as:

The sales kWh for that fuel type
multiplied by the adjusted target heat rate for that fuel type
multiplied by the average fuel cost per million BTU
and then summed across all fuel types.

The adjusted target heat rate for each fuel type is established by comparing the applicable target heat rate, adjusted by a plus or minus sales heat rate deadband identified above versus the year-to-date actual heat rate. The year-to-date actual heat rate is derived by dividing the fuel type's year-to-date million Btu usage by the fuel type's share of year-to-date recorded sales kWh. If the year-to-date actual heat rate is greater than the applicable target heat rate plus the amount of the deadband in Btu/kWh, then the adjusted target heat rate is the applicable target heat rate plus the amount of the deadband in Btu/kWh. If the year-to-date actual heat rate is less than the applicable target heat rate less the amount of the deadband in Btu/kWh, then the adjusted target heat rate is the applicable target heat rate less the amount of the deadband in Btu/kWh. If the year-to-date actual heat rate falls between the applicable target heat rate adjusted by a plus or minus amount of the deadband in Btu/kWh, then the adjusted target heat rate is the year-to-date actual heat rate.

The eligible revenue for DG and purchased energy expenses is equal to the amount of their respective expenses.

Revenue from the Energy Cost Recovery Clause excludes revenue taxes on that amount for the purpose of this reconciliation.

HAWAII ELECTRIC LIGHT COMPANY, INC.

Docket No. 2018-0368; Order No. 37237, Filed on July 28, 2020.
Transmittal Letter Dated August 27, 2020.

Superseding Revised Sheet No. 63
Effective February 1, 2019

REVISED SHEET No. 63
Effective January 1, 2021

ENERGY COST RECOVERY CLAUSE

Applicable To

Schedule "R"	- Residential Service
Schedule "G"	- General Service - Non Demand
Schedule "J"	- General Service Demand
Schedule "P"	- Large Power Service
Schedule "F"	- Street Light Service
Schedule "U"	- Time-of-Use Service
Schedule "TOU-R"	- Residential Time-of-Use Service
Schedule "TOU-G"	- Small Commercial Time-of-Use Service
Schedule "TOU-J"	- Commercial Time-of-Use Service
Schedule "TOU-P"	- Large Power Time-of-Use Service
Schedule "SS"	- Standby Service
Schedule "TOU EV"	- Residential Time-of-Use Service with Electric Vehicle Pilot
Schedule "TOU-RI"	- Residential Interim Time-of-Use Service
Schedule "EV-F"	- Commercial Public Electric Vehicle Charging Facility Service Pilot
Schedule "E-BUS-J"	- Commercial Electric Bus Charging Facility Service Pilot
Schedule "E-BUS-P"	-Commercial Electric Bus Charging Facility Service Pilot

All terms and provisions of the above listed rate Schedules are applicable, except that the Monthly Energy Cost Recovery Factor described below will be multiplied by the billed kWh and added to the customer bill.

All base rate schedule discounts, surcharges, and all other adjustments will not apply to the Energy Cost Recovery Clause.

The Energy Cost Recovery Clause shall be consistent with the terms of fuel contracts, distributed generation contracts, and purchased energy contracts. Changes to the Energy Cost Recovery Clause may be proposed by application to the Commission.

Monthly Energy Cost Recovery Factor:

The Monthly Energy Cost Recovery Factor shall be the sum of the Company-Owned Generation Factor, the Purchased Energy Factor, the DG Energy Generation Factor, the Non-Adjustable Component, and the Monthly Fossil Fuel Cost Risk Sharing Component.

The Monthly Energy Cost Recovery Factor shall normally be effective on the 1st day of the month. When a customer's billing period includes more than one applicable Monthly Energy Cost Recovery Factor, each Monthly Energy Cost Recovery Factor will be prorated to the customer bill for the number of days each factor was in effect.

HAWAII ELECTRIC LIGHT COMPANY, INC.

Docket No. 2018-0368; Order No. 37237, Filed on July 28, 2020.
Transmittal Letter Dated August 27, 2020.

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Effective February 1, ~~2022~~ Effective February 1, ~~2023~~

Energy Cost Recovery Clause - (Continued)

COMPANY-OWNED GENERATION FACTOR - The Company-Owned Generation Factor shall be determined by the current Weighted Composite Central Station + Wind/Hydro Generation Cost, adjusted for additional revenue taxes. The current Weighted Composite Central Station + Wind/Hydro Generation Cost shall be determined by the current Composite Cost of Generation in cents per million BTU weighted by the proportion of current company-owned central station + wind/hydro generation to total system net energy, multiplied by the ~~2023 efficiency factors of 0.014683 million Btu per kWh for industrial fuel, 0.011226 million Btu per kWh for diesel fuel, and 0.012514 million Btu per kWh for other company generation sources, weighted by the current proportion of generation produced by each generation source to the total company-owned generation.~~

PURCHASED ENERGY FACTOR - The Purchased Energy Factor shall be the current Composite Cost of Purchased Energy, in cents per kWh, weighted by the proportion of current purchased energy to total system net energy, adjusted to the sales delivery level and adjusted for revenue taxes. The Company shall also show the composite cost of fossil fuel purchased energy and the composite cost of renewable purchased energy that comprise the composite cost of purchased energy.

DG ENERGY GENERATION FACTOR - The DG Energy Generation Factor shall be the current Composite Cost of Distributed Generation Energy, in cents per kWh, weighted by the proportion of current DG energy to total system net energy, adjusted to the sales delivery level and adjusted for revenue taxes.

NON-ADJUSTABLE COMPONENT - The Non-Adjustable Component is the ocean cargo insurance expense per kWh established in the Company's rate case, adjusted for revenue taxes. The Non-Adjustable Component is excluded from the Reconciliation Adjustment described below.

MONTHLY FOSSIL FUEL COST RISK SHARING COMPONENT - The Monthly Fossil Fuel Cost Risk Sharing Component shall equal 2% of the difference of the Monthly Fossil Cost for all fossil fuel types less the Monthly Base Fossil Recovery Target for all fossil fuel types, divided by the forecast sales for the month, multiplied by negative one (-1), and adjusted for revenue taxes. The year-to-date sum of the Monthly Fossil Fuel Cost Risk Sharing Components shall be subject to a calendar year maximum of ±\$600,000, provided that if this provision first becomes effective on a date other than January 1, the above maximum shall be pro-rated for the remainder of the initial calendar year based on the number of days remaining in the calendar year from the date this section becomes effective.

The Monthly Fossil Cost for each fossil fuel type shall equal the forecasted million Btu for that fossil fuel type for the month multiplied by the forecasted cost per million Btu for that fossil type.

HAWAII ELECTRIC LIGHT COMPANY, INC.

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Energy Cost Recovery Clause - (Continued)

The Monthly Base Fossil Recovery Target for each fossil fuel type shall equal the forecasted million Btu for that fossil fuel type for the month multiplied by the Fossil Fuel Baseline Cost for that fossil fuel type.

The Fossil Fuel Baseline Cost for each fossil fuel type for the year shall equal the actual fossil fuel costs for the fossil fuel type in the first applicable month of the year divided by the actual million Btu for the fossil fuel type in the first applicable month of the year, provided that if actual fuel costs are not yet known, forecasted fossil fuel costs may be used in the above calculation, and provided that if actual million Btu in the first applicable month are not yet known, forecasted million Btu may be used in the above calculation. The first applicable month of the year shall be January of each year, provided that when this provision first becomes effective, the month this provision becomes effective shall be used as the first applicable month for the calculation of the Fossil Fuel Baseline Cost for the initial calendar year.

Revenue taxes shall be calculated using current rates of the Franchise Tax, Public Service Company Tax, and Public Utility Commission Fee.

TARGET HEAT RATES AND DEADBANDS

Target Heat Rates:

1. The target heat rates shall be the 2023 efficiency factors of 0.014683 million BTU per kWh for industrial fuel, 0.011226 million BTU per kWh for diesel fuel, and 0.012514 million BTU per kWh for other company generation sources. The overall target heat rate shall be the weighted average efficiency factor of all sources.
2. The target heat rates for industrial fuel and diesel shall be reestablished each calendar year. The target heat rate for each calendar year shall be equal to the target heat rate in effect for the prior calendar year plus one-half of the difference between the target heat rate and the actual heat rate for the prior calendar year.

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Deadbands:

3. Application of the Deadbands
 - a. The deadband shall be applied around its respective target heat rate for each fuel type. The deadband shall be ± 100 Btu/kWh-sales for industrial fuel. The deadband shall be ± 200 Btu/kWh-sales for diesel fuel.

HAWAII ELECTRIC LIGHT COMPANY, INC.

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Energy Cost Recovery Clause - (Continued)

- b. If target heat rates are modified, the deadband levels described in Sections 3.a above shall apply around the modified target heat rate.

Modifications to Target Heat Rates and Deadbands:

- 4. Modifications to target heat rates and/or deadbands may be determined in a rate case.
- 5. Modifications to target heat rates and/or deadbands may be made outside of a rate case proceeding by application by the Company or the Consumer Advocate, or by an investigation by the Commission on its own motion.
 - a. An applicant must make a separate request to the Commission, and provide appropriate justification and support.
 - 1. Sufficient basis for justification of a change in target heat rate and/or deadband may include but not be limited to the following:
 - a. Addition or retirement of non-utility firm or non-utility non-firm renewable resources (such as wind or photovoltaics) from which the utility will purchase capacity and/or energy under a Power Purchase Agreement that exceed 5 MW;
 - b. Addition or retirement of utility firm and non-firm renewable resources (such as wind or photovoltaics) that exceed 5 MW. Modifications to the target heat rate and/or deadband may be determined as part of the application for approval to expend funds (in accordance with General Order No. 7) for the resource that would cause the change;
 - c. Additions, retirements or modifications to the generating systems, or modifications to the generating system operating procedures, that are expected to increase or decrease the target heat rates by more than the deadband amount; or
 - d. The recorded heat rate is outside of the deadband around the target heat rate and is expected to remain outside of the deadband.
 - b. Any proposed modifications to target heat rates and/or deadbands under this provision shall not take effect until approved by the Commission.

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Energy Cost Recovery Clause - (Continued)

YEAR-TO DATE FOSSIL FUEL COST RISK SHARING ADJUSTMENT

The Year-To-Date Fossil Fuel Cost Risk Sharing Adjustment shall be subject to an annual maximum of ±\$600,000 across all company-generation fossil fuel types subject to fossil fuel cost risk sharing. This section shall take effect as of January 1, 2021, and the Year-To-Date Fossil Fuel Cost Risk Sharing Adjustment shall be included in the Reconciliation Adjustment, beginning with the First Quarter of 2021. The annual maximum sharing for the initial calendar year shall be pro-rated based on the number days remaining in the calendar year from the date this section becomes effective in the initial calendar year.

The Year-To-Date Fossil Fuel Cost Risk Sharing Adjustment shall be excluded from the determination of Earnings Sharing Revenue Credits provided for in the Rate Adjustment Mechanism Provision.

The Year-To-Date Fossil Fuel Cost Risk Sharing Adjustment shall equal 2% of the difference between the sum of the Year-To-Date Fuel Filing Cost Recovery Amount across all fossil fuel types and the sum of the Year-To-Date Base Cost Recovery Target across all fossil fuel types.

The Year-To-Date Fuel Filing Cost Recovery Amount for a fossil fuel type shall be the sum of the Eligible Revenue for fuel for that fossil type for all months, as determined in the Reconciliation Adjustment section below.

The Year-To-Date Base Cost Recovery Target for a fossil fuel type shall equal the applicable target heat rate, multiplied by the sales kWh for that fossil fuel type, multiplied by the Reconciliation Fossil Fuel Baseline Cost for that fossil fuel type.

The Reconciliation Fossil Fuel Baseline Cost for each fossil fuel type for the year shall equal the actual fossil fuel costs for the fossil fuel type in the first applicable month of the year divided by the actual million Btu for the fossil fuel type in the first applicable month of the year. The first applicable month of the year for the initial calendar year shall be the month in which this provision takes effect.

RECONCILIATION ADJUSTMENT:

In order to reconcile any differences that may occur between recorded revenue and eligible revenue from the Energy Cost Recovery Clause, the year-to-date recorded revenue from the Energy Cost Recovery Clause will be compared with the year-to-date eligible revenue from the Energy Cost Recovery Clause on a quarterly basis. If there is a variance between the year-to-date recorded revenue from the Energy Cost Recovery Clause and the year-to-date eligible revenue from the Energy Cost Recovery Clause, a reconciliation adjustment shall be added to the rate calculated under the Energy Cost Recovery Clause to reconcile the revenue variance.

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Docket No. 2018-0368; Order No. 37237, Filed on July 28, 2020.
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Effective February 1, 2019

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Energy Cost Recovery Clause - (Continued)

This reconciliation adjustment shall be applied at the beginning of the second month after the end of the quarter, and shall be set to recover the revenue variance over the estimated sales for the subsequent three months.

The Non-Adjustable Component revenue will be excluded from the Energy Cost Recovery Clause revenue for the purposes of this reconciliation. The Non-Adjustable Component revenue is the Non-Adjustable Component multiplied by the year-to-date sales kWh.

The eligible revenue from the Energy Cost Recovery Clause shall be equal to the eligible revenue for fuel, DG, and purchased energy expense, adjusted by the Year-To-Date Fossil Fuel Cost Risk Sharing Adjustment.

The eligible revenue for fuel is calculated for each fuel type each month as:

The sales kWh for that fuel type
multiplied by the adjusted target heat rate for that fuel type
multiplied by the average fuel cost per million BTU
and then summed across all fuel types.

The adjusted target heat rate for each fuel type is established by comparing the applicable target heat rate, adjusted by a plus or minus sales heat rate deadband identified above versus the year-to-date actual heat rate. The year-to-date actual heat rate is derived by dividing the fuel type's year-to-date million Btu usage by the fuel type's share of year-to-date recorded sales kWh. If the year-to-date actual heat rate is greater than the applicable target heat rate plus the amount of the deadband in Btu/kWh, then the adjusted target heat rate is the applicable target heat rate plus the amount of the deadband in Btu/kWh. If the year-to-date actual heat rate is less than the applicable target heat rate less the amount of the deadband in Btu/kWh, then the adjusted target heat rate is the applicable target heat rate less the amount of the deadband in Btu/kWh. If the year-to-date actual heat rate falls between the applicable target heat rate adjusted by a plus or minus amount of the deadband in Btu/kWh, then the adjusted target heat rate is the year-to-date actual heat rate.

The eligible revenue for DG and purchased energy expenses is equal to the amount of their respective expenses.

Revenue from the Energy Cost Recovery Clause excludes revenue taxes on that amount for the purpose of this reconciliation.

HAWAII ELECTRIC LIGHT COMPANY, INC.

Docket No. 2018-0368; Order No. 37237, Filed on July 28, 2020.
Transmittal Letter Dated August 27, 2020.

From: puc@hawaii.gov
To: [Mounthongdy, Christine](#)
Subject: Hawaii PUC eFiling Confirmation of Filing
Date: Friday, January 27, 2023 11:50:25 AM

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