Lakefront Utilities Inc.

2022 Cost of Service Application

EB-2021-0039

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EXHIBIT 7 – COST ALLOCATION

EB-2021-0039

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2.7.1 COST ALLOCATION STUDY REQUIREMENTS

LUI has prepared and is filing a cost allocation informational filing consistent with its understanding of the Directions and Policies in the Board's reports of November 28, 2007 Application of Cost Allocation for Electricity Distributors, and March 31, 2011 Review of Electricity Distribution Cost Allocation Policy (EB-2010-0219) (the Cost Allocation Reports) and all subsequent updates.

In accordance with the filing requirements, this section details the following:

1. Cost Allocation Study
2. Load Profiles
3. Demand Data
4. Weighting Factors
5. Sheets I-6, I-8, O-1 and O-2

COST ALLOCATION STUDY

As part of its 2017 Cost of Service Rate Application, LUI updated the cost allocation revenue to cost ratios with 2017 base revenue requirement information. The revenue to cost ratios from the 2017 application are presented below.

Table 7.0: Previously Approved Ratios (2017 COS)

Customer Class Name	2017 Approved Revenue to Cost Ratio
Residential	93.01%
General Service <50 kW	103.02%
General Service 50-2999 kW	104.00%
General Service 3000-4999 kW	108.93%
Street Lighting	293.75%
Sentinel Lights	114.96%
Unmetered Scattered Load	119.83%

Note that the ratio for the Street Lighting was phased in over 2018 and 2019 as follows:

- 2017 – 293.75%
- 2018 – 206.75%
- 2019 – 119.75%

The Cost Allocation Study for 2022 allocates the 2022 test year costs (i.e., the 2022 forecast revenue requirement) to the various customer classes using allocators that are based on the forecast class loads (kW and kWh) by class, customer counts, etc.

LUI has used the most up to date OEB Cost Allocation Model (version 3.6, issued May 14, 2020) and followed the instructions and guidelines issued by the OEB to enter the 2022 data into this model.

LUI populated the information on Sheet I3 Trial Balance Data with the 2022 forecasted data, Target Net Income, PILs, deemed interest on long term debt, and the targeted Revenue Requirement and Rate Base.

On I4, Break-out of Assets, LUI updated the allocation of the accounts based on 2022 values.

In Sheet I5.1, Miscellaneous Data, LUI updated the deemed equity component of rate base, kilometer of roads in the service area, working capital allowance, the proportion of pole rental revenue from secondary poles, and the monthly service charges.

In Sheet I6.1 Revenue has been populated with the 2022 Test Year forecast data as well as existing rates.

Sheet I6.2 has been updated with the required Bad Debt and Late Payment revenue data as well as customer/connection number information devices.

LUI updated the capital cost meter information on Sheet I7.1 and the meter reading information on I7.2 to reflect its recently completed deployment of smart meters. LUI used similar costs as proposed in LUI's 2017 Cost of Service (EB-2016-0089).

The data entered on Sheet I8 reflects the findings of the 2004 hour by hour data being scaled to be consistent with the 2022 load forecast and the inspection of the scaled data to identify the system peaks and class specific peaks. The scaling factor used by rate class is illustrated in Table 7.2.

LOAD PROFILES

In a letter dated June 12, 2015, the OEB stated that it expected distributors to be mindful of material changes to load profiles and to propose updates in their respective cost of service applications when warranted. The OEB also stated that it did not plan to lead a generic update of distributor load profiles, and the Filing Requirements note that the OEB has recently required that load profiles for all classes be updated at the same time, not just selective updating.

In considering its ability to update load profiles for the 2022 cost allocation study, LUI determined that it does not have hourly data for the majority of its customers since only 10 of 37 customers are interval metered as LUI is in the early stages of MIST meter installation. LUI anticipates having multiple years of accurate hourly load profile data available at the time of its next cost of service application and confirms that it will put plans in place to update its load profiles at that time.

For the 2022 cost allocation study, the following table summarizes that calculation of the scaling factor used to adjustment the 2004 load profile values for consistency with the 2022 load forecast.

Table 7.1: Calculation of 2007 to 2020 Scaling Factor

Rate Class	2022 Forecast (kWh)	2005 Actual (kWh)	Scaling Factor
Residential	74,590,807	81,423,304	0.9161
GS <50 kW	32,535,249	32,374,514	1.0050
GS 50-2999 kW	103,964,876	101,900,559	1.0203
GS 3000-4999 kW	18,909,096	18,956,591	0.9975
Street Lighting	1,059,150	1,077,264	0.9832
Sentinel Lights	43,344	45,386	0.9550
Unmetered Scattered Load	599,285	615,642	0.9734

DEMAND DATA

LUI's demand data from sheet I8 in LUI's 2022 Cost Allocation model has been provided in Appendix A.

WEIGHTING FACTORS

As instructed by the Board, in Sheet I5.2, Weighting Factors, LUI has used LDC specific factors rather than continuing to use OEB approved default factors. The utility has applied service and billing and collecting weightings for each customer classification. These weightings are based on a review of time and costs incurred in servicing its customer classes; they are discussed further below.

Table 7.2: Weighting Factors

	Residential	General Service < 50 kW	General Service 50-2999 kW	General Service 3000-4999 kW	Street Lighting	Sentinel Lights	Unmetered Scattered Load
Insert Weighting Factor for Services Account 1855	1.0	2.0	10.0	10.0	0.0	0.0	1.0
Insert Weighting Factor for Billing and Collecting	1.0	0.9	0.9	0.9	0.9	0.9	0.9

Proposed Services Weighting Factors

Residential: The Services weighting factor was set to "1", per Cost Allocation instruction sheet.

General Service less than 50 kW: the proposed Services weighting factor of 2.0 reflects that these customers require greater capacity than residential customers as well as increased levels of engineering and planning. Furthermore, this class typically is more complex than Residential servicing as it may include the creation of a unique work order and may require after hour attendance to mitigate against interruptions during normal business hours.

General Service 50-2999 kW, and General Service 3000-4999 kW: The proposed Services weighting factor of 10.0 reflects that these customers require greater capacity than residential customers as well as increased levels of engineering and planning. Both classes require more work than Residential and GS less than 50 kW both from a design and construction perspective.

Street Lighting, Sentinel Load, and Unmetered Scattered Load: A services weighting factor of 0 is proposed for these customer classes as the costs incurred to provide services for these customer classes are the responsibility of the Town of Cobourg, excluding unmetered scattered load.

Proposed Billing and Collecting Weighting Factors

The proposed billing and collecting weighting factors were calculated as summarized in Table 7.3.

Table 7.3: Summary of Billing and Collecting Weighting Factors

2020									
Accounts 5305 - 5340	2022								
5305-Supervision	$0								
5310-Meter Reading Expense	$202,868								
5315-Customer Billing	$257,637								
5320-Collecting	$28,029								
5325-Collecting- Cash Over and Short	$0								
5330-Collection Charges	$10,225								
5340-Miscellaneous Customer Accounts Expenses	$55,773								
	Residential	**GS < 50 ***	**GS 50-2999**	**GS 3000-4999**	**Street Lighting**	**Sentinel Lighting**	**USL**	**Total Annual Cost**	**Acct**
2022 Projected # of Customer/Connections (load forecast)	9,611	1,148	105	1	3,159	49	80	**14,153**	
# bills	115332	13776	1260	12	12	588	960	**131940**	
5310 - Meter Reading - Labor									
5310 - Meter Reading expenses (Utilismart, Sensus)									
5315 - Customer Billing - Labor & overheads	225,206.84	26,900.16	2,460.38	23.43	23.43	1,148.18	1,874.58	*257,637.00*	*5315*
5315 - Customer Billing expenses (ERTH Holdings, Canada Post, IT services & Supplies)	-	-	-	-	-	-	-		*5315*
5315 - Customer Billing expenses (Utilismart - Meter reads)			-	-					*5315*
5315 - Customer Billing expenses (Utilismart - Settlements)	-	-	-	-	-	-	-		*5315*
5320 - Collecting - Labour	27,364.43	664.57						*28,029.00*	*5320*
5320 - Collecting - Services provided by other parties	-	-						-	*5320*
5330 - Credit bureau collection fees	9,982.57	242.43						10,225.00	5330
5340 - Misc. Cust Account Exp. - fees to ERTH for printing bills)	48,752.55	5,823.32	532.62	5.07	5.07	248.56	405.81	55,773.00	*5340*
5315 - Customer Billing	311,306.39	33,630.48	2,993.00	28.50	28.50	1,396.73	2,280.38	351,664.00	
Total	2.70	2.44	2.38	2.38	2.38	2.38	2.38		
Cost Per Connection	1.00	0.90	0.88	0.88	0.88	0.88	0.88		

As indicated above, Lakefront has excluded metering reading expenses from the calculations as the expenses as factored into the cost allocation model outside of the billing and collecting weighting factors. Tables 7.4 to 7.7 detail the rationale for the allocation of accounts 5315, 5320, 5330, and 5340.

Table 7.4: Account 5315 Allocation

Customer Class	Allocator	Annual Bills	Allocation of Expenses
Residential	# of bills	115,332	$225,206.84
GS < 50	# of bills	13,776	$26,900.16
GS 50-2999	# of bills	1,260	$2,460.38
GS 3000-4999	# of bills	12	$23.43
Street Lighting	# of bills	12	$23.43
Sentinel Lighting	# of bills	588	$1,148.18
USL	# of bills	960	$1,874.58
		131,940	**$257,637.00**

Account 5315 consists of staff wages related to billing customers. Consequently, there is a greater amount of costs attributed to residential customers considering the amount of bills produced. Further, there is more staff time allocated to residential customers for inputting time of use rates, bill testing, etc. Conversely, it is reasonable to have minimal costs allocated to GS 3000-4999 because there is only one customer and therefore there are only 12 bills produced in a month and less staff time.

Table 7.5: Account 5320 Allocation

Customer Class	Allocator	Total Bad Debts	Allocation of Wages
Residential	Bad Debts	$22,851	$27,364.43
GS < 50	Bad Debts	$555	$664.57
GS 50-2999	Bad Debts		$0.00
GS 3000-4999	Bad Debts		$0.00
Street Lighting	Bad Debts		$0.00
Sentinel Lighting	Bad Debts		$0.00
USL	Bad Debts		$0.00
		$23,406	**$28,029.00**

Account 5320 consists of wages related to collection of accounts. Therefore, the total dollar amount of bad debts was used as an allocator. As the majority of bad debts are residential customers, the calculation is reasonable. Further, the monthly bills related to street lighting, sentinel lights, and unmetered scattered load are minimal and therefore unlikely to be become bad debts.

Table 7.6: Account 5330 Allocation

Customer Class	Allocator	Total Bad Debts	Allocation of Expenses
Residential	Bad Debts	$22,851	$9,982.57
GS < 50	Bad Debts	$555	$242.43
GS 50-2999	Bad Debts		$0.00
GS 3000-4999	Bad Debts		$0.00
Street Lighting	Bad Debts		$0.00
Sentinel Lighting	Bad Debts		$0.00
USL	Bad Debts		$0.00
		$23,406	**$10,225.00**

Account 5330 consists of costs related to collecting accounts and was therefore allocated in the same manner as account 5320 (total of bad debts).

Table 7.7: Account 5340 Allocation

Customer Class	Allocator	Annual Bills	Allocation of Expenses
Residential	# of bills	115,332	$48,752.55
GS < 50 *	# of bills	13,776	$5,823.32
GS 50-2999	# of bills	1,260	$532.62
GS 3000-4999	# of bills	12	$5.07
Street Lighting	# of bills	12	$5.07
Sentinel Lighting	# of bills	588	$248.56
USL	# of bills	960	$405.81
		131,940	**$55,773.00**

Account 5340 consists of fees paid to ERTH for printing bills. Therefore, total annual bills was used as justification for allocating expenses. There is likely some impact if customers are on electronic billing however that would typically impact residential customers. Further, if customers GS >50, GS 3000-4999, street lighting, sentinel lights, and unmetered scattered load are receiving an electronic bill, then it would likely be an insignificant impact to the allocation.

SHEETS I-6, I-8, O-1, AND O-2

In accordance with the Filing Requirements, distributors using the OEB-issued model must file a hard copy of input sheets I6 and I8, and output sheets O1 and O2.

The required information is included as Appendix A to this Exhibit and a live Microsoft Excel cost allocation model has been filed with the OEB.

2.7.1.1 SPECIFIC CUSTOMER CLASS(ES)

In accordance with the filing requirements, this section details the following:

1. Host Distributor
2. Unmetered Loads
3. microFIT
4. Standby Rates

HOST DISTRIBUTOR

Lakefront Utilities Inc. is not a host to any distributor.

UNMETERED LOADS

LUI communicates with unmetered load customers and street lighting customers to assist them in understanding the regulatory requirements in which LUI operates. Since LUI's largest customer in the above categories is the Town of Cobourg, LUI confirms load and rate impact whenever increases are completed. LUI also communicated the rate increase forecasted for this rate application and the impacts to its customers as documented in Exhibit #1.

LUI acknowledges the OEB's change in cost allocation policy for the Street Lighting rate class and confirms that the street lighting adjustment factor has been appropriately calculated by the OEB cost allocation model and reflected in other aspects of its 2022 cost allocation study, such as determining the appropriate factor for direct allocation of a portion of LUI's service areas costs to the Street Lighting rate class.

MICROFIT

Lakefront does not believe that is has a unique circumstance which would justify a certain rate for microFIT. Lakefront applied the generic rate of $5.40 per month and has not included microFIT in the cost allocation model.

STANDBY RATES

Lakefront confirms that it has requested approval for a standby rate. The customers affected are:

- GS 50-2999 kW
- GS 3000-4999 kW

Lakefront confirms that customers it knew were considering a potential load displacement generation project were made aware of the proposal for a standby charge. Further, Lakefront issued a letter to all affected customers noted above, informing them about Lakefront's proposal.

This classification refers to an account that has Load Displacement Generation and requires Lakefront to provide back-up service. Standby chares are to be applied to behind-the-meter generators that are not IESO market participants, FIT program participants, net-metered generators or retail generators, which have their own metering and settlement conventions as per regulation and legislation. Lakefront intends to update the Conditions of Service if the standby rate is approved in this application.

The Standby Charge will be based on applicable monthly volumetric charges for the above customers affected. In the case where utility grade metering is not installed on the generators, distribution charges on the generator host facility's load account will be determined by multiplying the peak hourly delivered load as measured by the load account meter in kW by applicable variable charges for the rate class. Standby charges are determined by multiplying the nameplate capacity of the behind the meter generator in kW by applicable standby power charges in each month.

Further details are included in Exhibit 1 – Customer Engagement and Appendix I and Appendix J in Exhibit 1. Lakefront also engaged with other customer groups that, although unlikely to implement a distributed generation project, would be impacted by the absence of a standby charge. The feedback obtained via a survey is included in Exhibit 1 - Appendix H.

2.7.1.2 NEW CUSTOMER CLASS(ES)

Lakefront is not proposing to include a new customer class from the previous Cost of Service.

Lakefront is not seeking approval for a separate customer class for the proposed standby charge which would require additional effort and costs, including incremental administrative costs, IT costs (bill print format changes, billing system set-up), and customer service costs to establish and maintain. Customers with load displacement generation would continue to belong to the standard rate class that provides them with distribution service in the absence of their generation. Standby charge customers would pay proposed distribution rates (including the monthly service charge) and all non-competitive charges for the applicable rate class for their metered load demand and only the volumetric rate for the metered generated demand.

2.7.1.3 ELIMINATED CUSTOMER CLASS(ES)

Lakefront is not proposing to eliminate any customer class from the previous Cost of Service.

2.7.2 CLASS REVENUE REQUIREMENTS

To support a proposal to rebalance rates, the distributor must provide information on the revenue by class that would apply if all rates were changed by a uniform percentage. Ratios must be compared with the ratios that will result from the rates being proposed by the distributor.

Table 7.8 shows the results of the 2022 cost allocation study.

Table 7.8: Results of the Cost Allocation Study

Customer Class Name	REVENUE ALLOCATION (sheet O1)							CUSTOMER UNIT COST PER MONTH (sheet O2)			
	Service Rev Req (row40)		Misc. Revenue (mi) (row19)		Base Rev Req (row80)		Rev2Cost Expenses %	Avoided Costs (Minimum Charge)	Directly Related	Minimum System with PLCC * adjustment	Maximum Charge
Residential	3,194,288	61.16%	304,788	71.00%	2,889,501	60.28%	98.49%	$5.41	$8.81	$23.78	$23.78
General Service < 50 kW	732,907	14.03%	47,737	11.12%	685,170	14.29%	96.62%	$8.69	$12.97	$25.50	$25.50
General Service 50-2999 kW	1,048,564	20.08%	53,075	12.36%	995,489	20.77%	102.76%	$71.98	$120.06	$89.62	$120.06
General Service 3000-4999 kW	118,032	2.26%	7,531	1.75%	110,501	2.31%	140.39%	$47.94	$96.14	$6,174.88	$6,174.88
Street Lighting	101,347	1.94%	12,768	2.97%	88,579	1.85%	86.24%	$0.56	$1.01	$1.59	$1.59
Sentinel Lights	7,974	0.15%	1,222	0.28%	6,752	0.14%	76.13%	$4.01	$6.34	$5.27	$6.34
Unmetered Scattered Load	19,329	0.37%	2,152	0.50%	17,177	0.36%	163.54%	$4.15	$6.54	$15.37	$15.37
TOTAL	**5,222,441**	**100.00%**	**429,272**	**100.00%**	**4,793,168**	**100.00%**					

Table 7.9 shows the allocation percentage and the base revenue requirement allocation resulting from:

a) The results of the 2022 cost allocation study
b) Distribution revenue at Existing Rates (i.e. row 23 of Sheet O1)
c) LUI's proposed 2022 allocation resulting from the adjustment of revenue-to-cost ratios, as further described in 2.7.3

Table 7.9: Base Revenue Requirement Under 3 Scenarios

Customer Class Name	Proposed Base Revenue Requirement %					
	Cost Allocation Results		Existing Rates		Proposed Allocation	
Residential	60.28%	2,889,501	59.28%	2,841,193	60.49%	2,899,195
General Service < 50 kW	14.29%	685,170	13.78%	660,375	14.30%	685,459
General Service 50-2999 kW	20.77%	995,489	21.37%	1,024,481	20.69%	991,780
General Service 3000-4999 kW	2.31%	110,501	3.30%	158,178	2.30%	110,471
Street Lighting	1.85%	88,579	1.56%	74,634	1.64%	78,444
Sentinel Lights	0.14%	6,752	0.10%	4,848	0.14%	6,766
Unmetered Scattered Load	0.36%	17,177	0.61%	29,459	0.44%	21,053
TOTAL	**100.00%**	**4,793,168**	**100.00%**	**4,793,168**	**100.00%**	**4,793,168**

Table 7.10 below shows the revenue offset allocation which resulted from Cost Allocation Study (Sheet O1).

Table 7.10: Revenue Offset Allocation as per Cost Allocation Study

Customer Class Name	Revenue Offsets	
	%	$
Residential	71.00%	304,788
General Service < 50 kW	11.12%	47,737
General Service 50-2999 kW	12.36%	53,075
General Service 3000-4999 kW	1.75%	7,531
Street Lighting	2.97%	12,768
Sentinel Lights	0.28%	1,222
Unmetered Scattered Load	0.50%	2,152
TOTAL	**100.00%**	**429,272**

Table 7.11 shows the allocation of the service revenue requirement under the same three scenarios as Table 7.9.

Table 7.11: Service Revenue Requirement Under 3 Scenarios

Customer Class Name	Service Revenue Requirement $		
	Existing Rates	Cost Allocation	Rate Application
Residential	3,145,981	3,194,288	3,203,982
General Service < 50 kW	708,112	732,907	733,196
General Service 50-2999 kW	1,077,556	1,048,564	1,044,855
General Service 3000-4999 kW	165,709	118,032	118,002
Street Lighting	87,402	101,347	91,213
Sentinel Lights	6,070	7,974	7,988
Unmetered Scattered Load	31,610	19,329	23,205
TOTAL	**5,222,441**	**5,222,441**	**5,222,441**

2.7.3 REVENUE-TO-COST RATIOS

If R:C ratios outside dead band based on model - distributors must include cost allocation proposal to bring them within the OEB-approved ranges. In making any such adjustments, distributors should address potential mitigation measures if the impact of the adjustments on the rates of any particular class or classes is significant.

Lakefront confirms that it is not using the Cost Allocation Model other than OEB model and has excluded charges such as low voltage and deferral and variance accounts.

Table 7.12: RRWF Sheet 11

A) Allocated Costs

	Name of Customer Class [3] From Sheet 10. Load Forecast	Costs Allocated from Previous Study [1]	%	Allocated Class Revenue Requirement [1] (7A)	%
1	Residential	$ 2,840,059	60.69%	$ 3,194,288	61.16%
2	General Service < 50 kW	$ 613,692	13.11%	$ 732,907	14.03%
3	General Service 50-2999 kW	$ 1,006,480	21.51%	$ 1,048,564	20.08%
4	General Service 3000-4999 kW	$ 121,592	2.60%	$ 118,032	2.26%
5	Street Lighting	$ 62,559	1.34%	$ 101,347	1.94%
6	Sentinel Lights	$ 4,837	0.10%	$ 7,974	0.15%
7	Unmetered Scattered Load	$ 30,477	0.65%	$ 19,329	0.37%
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
	Total	$ 4,679,696	100.00%	**$ 5,222,441**	100.00%
			Service Revenue Requirement (from Sheet 9)	**$ 5,222,440.60**	

B) Calculated Class Revenues

	Name of Customer Class	Load Forecast (LF) X current approved rates (7B)	LF X current approved rates X (1+d) (7C)	LF X Proposed Rates (7D)	Miscellaneous Revenues (7E)
1	Residential	$ 2,742,564	$ 2,841,193	$ 2,899,195	$ 304,788
2	General Service < 50 kW	$ 637,451	$ 660,375	$ 685,459	$ 47,737
3	General Service 50-2999 kW	$ 988,918	$ 1,024,481	$ 991,780	$ 53,075
4	General Service 3000-4999 kW	$ 152,687	$ 158,178	$ 110,471	$ 7,531
5	Street Lighting	$ 72,043	$ 74,634	$ 78,444	$ 12,768
6	Sentinel Lights	$ 4,680	$ 4,848	$ 6,766	$ 1,222
7	Unmetered Scattered Load	$ 28,436	$ 29,459	$ 21,053	$ 2,152
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
	Total	$ 4,626,779	$ 4,793,168	$ 4,793,168	$ 429,272

C) Rebalancing Revenue-to-Cost Ratios

	Name of Customer Class	Previously Approved Ratios Most Recent Year: 2017 %	Status Quo Ratios (7C + 7E) / (7A) %	Proposed Ratios (7D + 7E) / (7A) %	Policy Range %
1	Residential	92.85%	98.49%	100.30%	85 - 115
2	General Service < 50 kW	103.03%	96.62%	100.04%	80 - 120
3	General Service 50-2999 kW	104.44%	102.76%	99.65%	80 - 120
4	General Service 3000-4999 kW	109.72%	140.39%	99.97%	80 - 120
5	Street Lighting	294.25%	86.24%	90.00%	80 - 120
6	Sentinel Lights	115.49%	76.13%	100.18%	80 - 120
7	Unmetered Scattered Load	118.61%	163.54%	120.05%	80 - 120
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

(D) Proposed Revenue-to-Cost Ratios (11)

	Name of Customer Class	Proposed Revenue-to-Cost Ratio			Policy Range
		Test Year	Price Cap IR Period		
		2022	2023	2024	
1	Residential	100.30%	100.30%	100.30%	85 - 115
2	General Service < 50 kW	100.04%	100.04%	100.04%	80 - 120
3	General Service 50-2999 kW	99.65%	99.65%	99.65%	80 - 120
4	General Service 3000-4999 kW	99.97%	99.97%	99.97%	80 - 120
5	Street Lighting	90.00%	90.00%	90.00%	80 - 120
6	Sentinel Lights	100.18%	100.18%	100.18%	80 - 120
7	Unmetered Scattered Load	120.05%	120.05%	120.05%	80 - 120
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Table 7.13 compares the calculated revenue to cost ratio to the proposed revenue to cost ratio. The proposed Revenue to Cost ratio is adjusted by changing the allocation percentage for each class. The utility reviews and assesses the bill impacts for each class before adjusting the Revenue to Cost ratios.

Table 7.13: Revenue Reallocation to Achieve Proposed R/C Ratios

Customer Class Name	Calculated R/C Ratio	Proposed R/C Ratio	Variance
Residential	98%	100%	(0.02)
General Service < 50 kW	97%	100%	(0.03)
General Service 50-2999 kW	103%	100%	0.03
General Service 3000-4999 kW	140%	100%	0.40
Street Lighting	86%	90%	(0.04)
Sentinel Lights	76%	100%	(0.24)
Unmetered Scattered Load	164%	120%	0.43

In reviewing the calculated revenue to cost results from the Cost Allocation study, three customer classes that are outside of the Board's floor/ceiling parameters. For General Service 3000-4999 kW, LUI initially adjusted the revenue-to-cost ratio to 120% to meet the ceiling limit set by the Board and then further adjusted it down to 100% help keep the other classes move within the board ranges or prevent them from either moving away from 100% or simply to minimize cross subsidization.

The Unmetered Scattered Load was adjusted to move from outside the range (164%) to the ceiling of 120% as is Board policy.

For Street Lighting, based on the output of the 2021 Cost Allocation model, the revenue to cost ratio is 86%. This indicates that this rate class has not been paying its equitable share of revenue to cover the utility's costs related to this class. Therefore, LUI proposes to adjust the revenue to cost ratio to 90% to ensure that this particular rate class pays its "fair share" moving forward. LUI notes that it moved the revenue to cost ratio from 86% to 90% as a form of rate mitigation. (The bill impact implications are discussed in detail in Exhibit 8).

The Residential, General Service <50 and General Service 50-2999kW were slightly adjusted towards 100% also to keep the other classes move within the board ranges or prevent them from either moving away from 100% or simply to minimize cross subsidization.

The Sentinel Class was also adjusted to 100% to fully recover its costs.

LUI notes that in following the general rules and policies surrounding the revenue to cost ratio adjustments, the resulting ratios being proposed ensure that the majority of the classes recover their full costs.

LUI is proposing to adjust the revenue to cost ratios over the period of the 2021 Test Year and recommends that these ratios are held constant over the years of 2022 and 2023, as illustrated in 7.12 (d)

Also, LUI notes that in determining the proposed cost-to-revenue ratio adjustments, the LDC has considered the bill impact for each rate class. The only class that fell outside of the 10% impact threshold is the Street Lighting class. For further details about the class specific bill impacts and the proposed rate mitigation for this particular class, please refer to Exhibit 8.

APPENDIX

Appendix A	Cost Allocation Model – Sheets I6, I8, O1, and O2

APPENDIX A – COST ALLOCATION MODEL – I6, I8, O1, AND O2

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Sheet I6.1 Revenue Worksheet -

Total kWhs from Load Forecast	231,701,807
Total kWs from Load Forecast	325,649
Deficiency/sufficiency (RRWF 8. cell F51)	- 166,389
Miscellaneous Revenue (RRWF 5. cell F48)	429,272

			1	2	3	5	7	8	9
	ID	**Total**	**Residential**	**GS <50**	**GS 50-2999 kW**	**GS 3000-4999 kW**	**Street Light**	**Sentinel**	**Unmetered Scattered Load**
Billing Data									
Forecast kWh	**CEN**	231,701,807	74,590,807	32,535,249	103,964,876	18,909,096	1,059,150	43,344	599,285
Forecast kW	**CDEM**	325,649			274,141	48,547	2,831	130	-
Forecast kW, included in CDEM, of customers receiving line transformer allowance		229,480			180,933	48,547			
Optional - Forecast kWh, included in CEN, from customers that receive a line transformation allowance on a kWh basis. In most cases this will not be applicable and will be left blank.		-							
KWh excluding KWh from Wholesale Market Participants	**CEN EWMP**	231,701,807	74,590,807	32,535,249	103,964,876	18,909,096	1,059,150	43,344	599,285
Existing Monthly Charge			$23.78	$25.50	$89.62	$6,174.88	$1.59	$5.27	$15.37
Existing Distribution kWh Rate				$0.0088					$0.0229
Existing Distribution kW Rate					$3.5909	$2.2188	$4.1584	$12.0041	
Existing TOA Rate					$0.60	$0.60			
Additional Charges									
Distribution Revenue from Rates		$4,764,467	$2,742,564	$637,451	$1,097,477	$181,815	$72,043	$4,680	$28,436
Transformer Ownership Allowance		$137,688	$0	$0	$108,560	$29,128	$0	$0	$0
Net Class Revenue	**CREV**	$4,626,779	$2,742,564	$637,451	$988,918	$152,687	$72,043	$4,680	$28,436

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Sheet I6.2 Customer Data Worksheet -

			1	2	3	5	7	8	9
	ID	Total	Residential	GS <50	GS 50-2999 kW	GS 3000-4999 kW	Street Light	Sentinel	Unmetered Scattered Load
Billing Data									
Bad Debt 3 Year Historical Average	BDHA	$28,391	$25,552	$1,420	$1,420	$0	$0	$0	$0
Late Payment 3 Year Historical Average	LPHA	$2,700	$2,360	$282	$26	$0	$0	$12	$20
Number of Bills	CNB	131,948	115,331	13,770.24	1,261.61	12	24.00	592.28	957.21
Number of Devices	CDEV						3,159	49	80
Number of Connections (Unmetered)	CCON	3,288					3,159	49	80
Total Number of Customers	CCA	10,996	9,611	1,148	105	1	2	49	80
Bulk Customer Base	CCB	-							
Primary Customer Base	CCP	11,122	9,611	1,148	105	1	129	49	80
Line Transformer Customer Base	CCLT	11,079	9,611	1,148	63	-	129	49	80
Secondary Customer Base	CCS	10,953	9,611	1,148	63	-	2	49	80
Weighted - Services	CWCS	12,617	9,611	2,295	631	-	-	-	80
Weighted Meter -Capital	CWMC	2,276,887	1,593,270	479,022	182,400	1,074	308	7,556	13,256
Weighted Meter Reading	CWMR	200,886	115,331	20,655	63,100	600	1,200	-	-
Weighted Bills	CWNB	130,229	115,331	12,393	1,110	11	21	521	842

Bad Debt Data

Historic Year:	2017	90,859	81,773	4,543	4,543				
Historic Year:	2018	- 4,007	- 3,606	- 200	- 200				
Historic Year:	2019	- 1,680	- 1,512	- 84	- 84				
Three-year average		**28,391**	**25,552**	**1,420**	**1,420**	**-**	**-**	**-**	**-**

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Sheet I8 Demand Data Worksheet -

This is an input sheet for demand allocators.

CP TEST RESULTS	12 CP
NCP TEST RESULTS	4 NCP

Co-incident Peak	Indicator
1 CP	CP 1
4 CP	CP 4
12 CP	CP 12

Non-co-incident Peak	Indicator
1 NCP	NCP 1
4 NCP	NCP 4
12 NCP	NCP 12

Customer Classes		Total	1 Residential	2 GS <50	3 GS 50-2999 kW	5 GS 3000-4999 kW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
		CP Sanity Check	Check 4 CP	Pass	Pass	Check 4CP and 12CP	Pass	Pass	Pass
CO-INCIDENT PEAK									
1 CP									
Transformation CP	TCP1	38,299	12,249	6,154	17,272	2,540			85
Bulk Delivery CP	BCP1	38,299	12,249	6,154	17,272	2,540			85
Total Sytem CP	DCP1	38,299	12,249	6,154	17,272	2,540			85
4 CP									
Transformation CP	TCP4	154,168	49,848	23,397	68,841	11,778			305
Bulk Delivery CP	BCP4	154,168	49,848	23,397	68,841	11,778			305
Total Sytem CP	DCP4	154,168	49,848	23,397	68,841	11,778			305
12 CP									
Transformation CP	TCP12	405,472	123,038	60,346	188,797	32,498			794
Bulk Delivery CP	BCP12	405,472	123,038	60,346	188,797	32,498			794
Total Sytem CP	DCP12	405,472	123,038	60,346	188,797	32,498			794
NON CO_INCIDENT PEAK									
		NCP Sanity Check	Pass	Pass	Check 4 NCP	Check 4 NCP and 12 NCP	Check 4 NCP and 12 NCP	Check 4 NCP and 12 NCP	Pass
1 NCP									
Classification NCP from Load Data Provider	DNCP1	44,896	18,422	6,154	17,445	2,540	237	10	89
Primary NCP	PNCP1	44,896	18,422	6,154	17,445	2,540	237	10	89
Line Transformer NCP	LTNCP1	44,896	18,422	6,154	17,445	2,540	237	10	89
Secondary NCP	SNCP1	44,896	18,422	6,154	17,445	2,540	237	10	89
4 NCP									
Classification NCP from Load Data Provider	DNCP4	178,660	72,011	23,397	70,150	11,778	964	39	321
Primary NCP	PNCP4	178,660	72,011	23,397	70,150	11,778	964	39	321
Line Transformer NCP	LTNCP4	120,584	72,011	23,397	23,851		964	39	321
Secondary NCP	SNCP4	120,584	72,011	23,397	23,851		964	39	321
12 NCP									
Classification NCP from Load Data Provider	DNCP12	474,200	178,326	60,346	199,202	32,498	2,867	117	844
Primary NCP	PNCP12	474,200	178,326	60,346	199,202	32,498	2,867	117	844
Line Transformer NCP	LTNCP12	310,228	178,326	60,346	67,729		2,867	117	844
Secondary NCP	SNCP12	310,228	178,326	60,346	67,729		2,867	117	844

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Sheet O1 Revenue to Cost Summary Worksheet -

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

Rate Base Assets		Total	1 Residential	2 GS <50	3 GS 50-2999 kW	5 GS 3000-4999 kW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
crev	Distribution Revenue at Existing Rates	$4,626,779	$2,742,564	$637,451	$988,918	$152,687	$72,043	$4,680	$28,436
mi	Miscellaneous Revenue (mi)	$429,272	$304,788	$47,737	$53,075	$7,531	$12,768	$1,222	$2,152
		Miscellaneous Revenue Input equals Output							
	Total Revenue at Existing Rates	$5,056,051	$3,047,352	$685,188	$1,041,993	$160,218	$84,811	$5,902	$30,588
	Factor required to recover deficiency (1 + D)	1.0360							
	Distribution Revenue at Status Quo Rates	$4,793,168	$2,841,193	$660,375	$1,024,481	$158,178	$74,634	$4,848	$29,459
	Miscellaneous Revenue (mi)	$429,272	$304,788	$47,737	$53,075	$7,531	$12,768	$1,222	$2,152
	Total Revenue at Status Quo Rates	$5,222,441	$3,145,981	$708,112	$1,077,556	$165,709	$87,402	$6,070	$31,610
	Expenses								
di	Distribution Costs (di)	$873,178	$504,089	$129,224	$196,093	$25,313	$14,401	$885	$3,172
cu	Customer Related Costs (cu)	$727,039	$551,883	$74,673	$73,124	$667	$21,670	$1,910	$3,112
ad	General and Administration (ad)	$1,283,547	$836,581	$165,637	$223,425	$22,339	$28,397	$2,187	$4,983
dep	Depreciation and Amortization (dep)	$1,001,950	$574,236	$160,108	$221,066	$26,364	$14,991	$1,511	$3,673
INPUT	PILs (INPUT)	$153,420	$83,497	$23,329	$38,432	$4,975	$2,512	$170	$504
INT	Interest	$411,620	$224,020	$62,592	$103,113	$13,348	$6,740	$456	$1,351
	Total Expenses	$4,450,754	$2,774,306	$615,563	$855,253	$93,007	$88,711	$7,119	$16,796
	Direct Allocation	$0	$0	$0	$0	$0	$0	$0	$0
NI	Allocated Net Income (NI)	$771,686	$419,982	$117,344	$193,311	$25,025	$12,636	$855	$2,533
	Revenue Requirement (includes NI)	$5,222,441	$3,194,288	$732,907	$1,048,564	$118,032	$101,347	$7,974	$19,329
		Revenue Requirement Input equals Output							
	Rate Base Calculation								
	Net Assets								
dp	Distribution Plant - Gross	$38,110,837	$21,008,046	$5,797,438	$9,301,396	$1,157,999	$673,884	$46,701	$125,372
gp	General Plant - Gross	$4,071,639	$2,214,968	$602,542	$1,029,492	$137,371	$69,092	$4,810	$13,364
accum dep	Accumulated Depreciation	($17,522,273)	($9,807,884)	($2,750,637)	($4,095,687)	($463,372)	($324,518)	($22,380)	($57,795)
co	Capital Contribution	($4,239,197)	($2,301,776)	($553,612)	($1,114,185)	($166,706)	($82,675)	($6,342)	($13,901)
	Total Net Plant	$20,421,005	$11,113,354	$3,095,731	$5,121,016	$665,292	$335,783	$22,789	$67,041
	Directly Allocated Net Fixed Assets	$0	$0	$0	$0	$0	$0	$0	$0
COP	Cost of Power (COP)	$33,263,943	$10,766,802	$4,667,434	$14,879,808	$2,706,334	$151,589	$6,204	$85,772
	OM&A Expenses	$2,883,765	$1,892,554	$369,534	$492,642	$48,319	$64,467	$4,982	$11,267
	Directly Allocated Expenses	$0	$0	$0	$0	$0	$0	$0	$0
	Subtotal	***$36,147,708***	***$12,659,356***	***$5,036,968***	***$15,372,450***	***$2,754,653***	***$216,057***	***$11,186***	***$97,039***
	Working Capital	$2,711,078	$949,452	$377,773	$1,152,934	$206,599	$16,204	$839	$7,278
	Total Rate Base	$23,132,083	$12,062,805	$3,473,503	$6,273,950	$871,891	$351,987	$23,628	$74,319
		Rate Base Input equals Output							
	Equity Component of Rate Base	$9,252,833	$4,825,122	$1,389,401	$2,509,580	$348,756	$140,795	$9,451	$29,727
	Net Income on Allocated Assets	$771,686	$371,675	$92,549	$222,304	$72,702	($1,309)	($1,049)	$14,815
	Net Income on Direct Allocation Assets	$0	$0	$0	$0	$0	$0	$0	$0
	Net Income	$771,686	$371,675	$92,549	$222,304	$72,702	($1,309)	($1,049)	$14,815
	RATIOS ANALYSIS								
	REVENUE TO EXPENSES STATUS QUO%	100.00%	98.49%	96.62%	102.76%	140.39%	86.24%	76.13%	163.54%
	EXISTING REVENUE MINUS ALLOCATED COSTS	($166,389)	($146,936)	($47,719)	($6,571)	$42,186	($16,536)	($2,072)	$11,259

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Sheet O1 Revenue to Cost Summary Worksheet -

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

Rate Base Assets	Total	1 Residential	2 GS <50	3 GS 50-2999 kW	5 GS 3000-4999 kW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
	Deficiency Input equals Output							
STATUS QUO REVENUE MINUS ALLOCATED COSTS	$0	($48,307)	($24,794)	$28,993	$47,677	($13,945)	($1,904)	$12,281
RETURN ON EQUITY COMPONENT OF RATE BASE	8.34%	7.70%	6.66%	8.86%	20.85%	-0.93%	-11.10%	49.84%

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Sheet O2 Monthly Fixed Charge Min. & Max. Worksheet -

Output sheet showing minimum and maximum level for Monthly Fixed Charge

Summary

	1	2	3	5	7	8	9
	Residential	GS <50	GS 50-2999 kW	GS 3000-4999 kW	Street Light	Sentinel	Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	$5.41	$8.69	$71.98	$47.94	$0.56	$4.01	$4.15
Customer Unit Cost per month - Directly Related	$8.81	$12.97	$120.06	$96.14	$1.01	$6.34	$6.54
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$17.33	$24.30	$144.37	$99.82	$2.37	$13.08	$14.53
Existing Approved Fixed Charge	$23.78	$25.50	$89.62	$6,174.88	$1.59	$5.27	$15.37