# **EXHIBIT 7 – COST ALLOCATION**

## EB-2016-0089

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1 Cost Allocation Study Requirements

## 2

## 3 Ex.7/Tab 1/Sch.1 – Overview of Cost Allocation

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5 LUI has prepared and is filing a cost allocation informational filing consistent with its understanding of the

- 6 Directions and Policies in the Board's reports of November 28, 2007 Application of Cost Allocation for
- 7 Electricity Distributors, and March 31, 2011 Review of Electricity Distribution Cost Allocation Policy (EB-
- 8 2010-0219) (the "Cost Allocation Reports") and all subsequent updates.
- 9 The main objectives of the original informational filing in 2006 were to provide information on any apparent
- 10 cross-subsidization among a distributor's rate classifications and to support future rate applications. As part
- of its 2012 Cost of Service Rate Application, LUI updated the cost allocation revenue to cost ratios with
- 12 2012 base revenue requirement information. The revenue to cost ratios from the 2012 application are
- presented below. Note that the ratio for the General Service 3000-4999 was phased in over several years.

#### 2012 Approved **Customer Class Name Revenue to Cost Ratio** Residential 94.80% General Service <50 kW 99.60% General Service 50-2999 kW 120.00% General Service 3000-4999 kW 57.50% Street Lighting 111.70% Sentinel Lights 117.20% Unmetered Scattered Load 94.80%

# 14 Table 7.0: Previously Approved Ratios (2012 COS)

- 16 The Cost Allocation Study for 2017 allocates the 2017 test year costs (i.e., the 2017 forecast revenue
- 17 requirement) to the various customer classes using allocators that are based on the forecast class loads
- 18 (kW and kWh) by class, customer counts, etc.
- 19 LUI has used the updated OEB-approved Cost Allocation Model and followed the instructions and
- 20 guidelines issued by the OEB to enter the 2017 data into this model. All references to sheet I3, I4, I6, I7,
- 21 O1, and O2 are found in LUI's 2017 Cost Allocation Model.
- LUI populated the information on Sheet I3 Trial Balance Data with the 2017 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 2017 values.

- 1 In Sheet I5.1, Miscellaneous Data, LUI updated the deemed equity component of rate base, kilometer of
- 2 roads in the service area, working capital allowance, the proportion of pole rental revenue from secondary
- 3 poles, and the monthly service charges.
- 4 As instructed by the Board, in Sheet I5.2, Weighting Factors, LUI has used LDC specific factors rather than
- 5 continuing to use OEB approved default factors. The utility has applied service and billing and collecting
- 6 weightings for each customer classification.
- 7 These weightings are based on a review of time and costs incurred in servicing its customer classes; they
- 8 are discussed further below.

# 9 Table 7.1: Weighting Factors

		General Service <	General Service 50-2999	General Service 3000-	Street	Sentinel	Unmetered Scattered
	Residential	50 kW	kW	4999 kW	Lighting	Lights	Load
Insert Weighting Factor for Services Account 1855	1.0	2.0	10.0	10.0	1.0	1.0	1.0
Insert Weighting Factor for Billing and Collecting	1.0	2.0	7.0	7.0	1.0	0.1	5.0

# 11 Proposed Services Weighting Factors

12 **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
   1 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.
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- 1 Proposed Billing and Collecting Weighting Factors
- 2 **Residential:** the Billing weighting factor is set at "1", as per the Cost Allocation instruction sheet.
- General Service less than 50 kW: The proposed Billing and Collecting weighting factor is 2.
   Compared to the residential customer class, the utility receives more phone calls from smaller
   businesses that are managing costs.
- General Service 50-2999 kW, and General Service 3000-4999 kW: The weighting factor of 7
   reflects the increased customer service time that is spent with the larger customers. Furthermore,
   these customers are periodically monitored to assess their kVA demand and assess whether the
   customer should be moved to another General Service rate class.
- Street Lighting, Sentinel Lights, and Unmetered Scattered Load: This customer class does not
   give rise to collecting activity and therefore collecting costs have not been allocated. The weighting
   factor reflects the extremely low volume of bills issued.
- In Sheet I6.1 Revenue has been populated with the 2017 Test Year forecast data as well as
   existing rates.
- 15 Sheet I6.2 has been updated with the required Bad Debt and Late Payment revenue data as well 16 as customer/connection number information devices.
- 17 LUI updated the capital cost meter information on Sheet I7.1 and the meter reading information on
- 18 I7.2 to reflect its recently completed deployment of smart meters. LUI used similar costs as
   proposed in LUI's 2012 Cost of Service (EB-2011-0250).
- The data entered on Sheet I8 reflects the findings of the 2004 hour by hour data being scaled to be consistent with the 2017 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.
- LUI's demand data from sheet I8 in LUI's 2012 Cost Allocation model has been provided inAppendix A.

# 25 Table 7.3: Scaling Factors

Rate Class	2017 Forecast (kWh)	2005 Actual (kWh)	Scaling Factor
Residential	79,373,076	72,247,325	1.0986
GS <50 kW	32,807,440	33,461,965	0.9804
GS 50-2999 kW	115,252,929	125,603,976	0.9176
GS 3000-4999 kW	14,887,925	61,881,063	0.2406
Street Lighting	1,434,543	2,001,724	0.7167
Sentinel Lights	43,654	54,199	0.8054
Unmetered Scattered Load	599,974	470,547	1.2751

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## 3 Unmetered Scattered Loads

- 4 LUI communicates with unmetered load customers to assist them in understanding the regulatory
- 5 requirements in which LUI operates. Since LUI's largest customer in this category is the Town of Cobourg,
- 6 LUI confirms load and rate impact whenever increases are completed. LUI also communicated the rate
- 7 increase forecasted for this rate application and the impacts to its customers.

# 8 Embedded Distributor Class

- 9 Lakefront Utilities Inc. is not a host to any distributor.
- 10

# 11 Standby Rates

- 12 LUI is not seeking approval on a final basis, or changes to standby charges.
- 13

# 14 New Customer Class

- 15 LUI is not proposing to include a new customer class.
- 16

# 17 Eliminated Customer Class

- 18 LUI is not proposing to eliminate any customer class.
- 19
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Sentinel

43,654

43,654

\$4.95

\$12.2032

\$13.0

\$4,815

\$4,815

\$0

133

Street Light

1,434,543

1,434,543

\$4.08

\$7.00

\$0

\$25.8268

\$231,670

\$231,670

3,853

q

Unmetered

Scattered Load

599,974

599,974

\$14.23

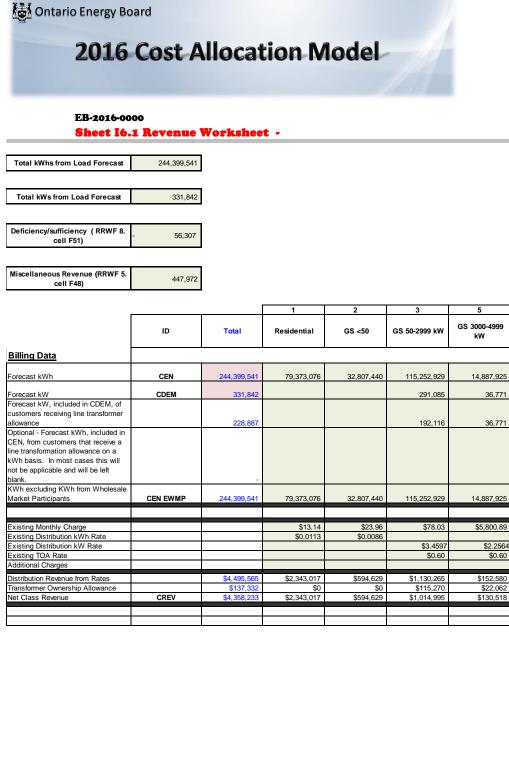
\$0.0371

\$38,589

\$38,589

\$0

**1** Sheet I6.1 of the Cost Allocation Model



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## **1** Sheet I6.2 of the Cost Allocation Model

Ontario Energy Board

# 2016 Cost Allocation Model

#### EB-2016-0000 Sheet I6.2 Customer Data Worksheet -

		ĺ	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	\$60,512	\$54,460	6,051	\$0	\$0	\$0	\$0	\$0
Late Payment 3 Year Historical Average	LPHA	\$68,477	\$59,324	\$7,257	\$878	\$7	\$13	\$359	\$639
Number of Bills	CNB	123,070	106,620	13,041.95	1,578.85	12	24.00	645.36	1,147.54
Number of Devices	CDEV						2,699	54	77
Number of Connections (Unmetered)	CCON	2,830					2,699	54	77
Total Number of Customers	CCA	10,542	9,171	1,087	132	1	2	54	96
Bulk Customer Base	CCB	-							
Primary Customer Base	CCP	10,697	9,171	1,087	132	1	157	54	96
Line Transformer Customer Base	CCLT	10,607	9,171	1,087	42	1	157	54	96
Secondary Customer Base	CCS	10,529	9,171	1,087	119	1	2	54	96
Weighted - Services	CWCS	15,375	9,171	2,174	1,190	10	2,699	54	77
Weighted Meter -Capital	CWMC	3,540,249	2,468,950	649,577	413,772	7,950	-	-	-
Weighted Meter Reading	CWMR	133,343	107,244	12,984	12,527	588	-	-	-
Weighted Bills	CWNB	149,666	106,620	26,084	11,052	84	24	65	5,738

#### Bad Debt Data

Historic Year:	2012	24,834	22,350	2,483					
Historic Year:	2013	131,877	118,690	13,188					
Historic Year:	2014	24,824	22,341	2,482					
Three-year average		60,512	54,460	6,051	-	-	-	-	-

#### Street Lighting Adjustment Factors

NCP Test Results	4 NCP			
	Primary Asse	et Data	Line Transforme	r Asset Data
Class	Customers/ Devices	4 NCP	Customers/ Devices	4 NCP
Residential	9,171	74,815	9,171	74,815
Street Light	2,699	1,280	2,699	1,280
	Street Lighting Adjust	stment Factors		
	Primary	17.2012		
	Line Transformer	17.2012		

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## **1** Sheet I8 of the Cost Allocation Model

Contario Energy Board 2016 Cost Allocation Model EB-2016-0000 Sheet IS 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
Non-co-incident Peak 1 NCP	Indicator NCP 1

			1	2	3	5	7	8	9
Customer Classes		Total	Residential	GS <50	GS 50-2999 kW	GS 3000-4999 kW	Street Light	Sentinel	Unmetered Scattered Load
CO-INCIDENT	PEAK								
1 CP									
Transformation CP	TCP1	39,595	12,726	6,059	18,767	1,960	-	-	83
Bulk Delivery CP	BCP1	39,595	12,726	6,059	18,767	1,960	-	-	83
Total Sytem CP	DCP1	39,595	12,726	6,059	18,767	1,960	-	-	83
4 CP Transformation CP	TCP4	159,013	51,789	23,034	74.802	9.089			299
Bulk Delivery CP	BCP4	159,013	51,789	23,034	74,802	9,089			298
Total Sytem CP	DCP4	159,013	51,789	23,034	74,802	9,089			293
Total Oyteni or	2014	100,010	01,700	20,004	14,002	0,000			200
12 CP									
Transformation CP	TCP12	418,242	127,828	59,410	205,145	25,080	-	-	779
Bulk Delivery CP	BCP12	418,242	127,828	59,410	205,145	25,080	-	-	779
Total Sytem CP	DCP12	418,242	127,828	59,410	205,145	25,080	-	-	779
NON CO_INCIDE	NT PEAK								
1 NCP									
Classification NCP from	DNCP1	10 504	40,400	0.050	40.055	1,960	044	40	07
Load Data Provider Primary NCP	PNCP1	46,524 46,524	19,139 19,139	6,059 6,059	18,955 18,955	1,960	314 314	10 10	87
Line Transformer NCP	LTNCP1	46,524	19,139	6,059	18,955	1,960	314	10	87
Secondary NCP	SNCP1	46,524	19,139	6,059	18,955	1,960	314	10	87
Occondary Nor		40,024	10,100	0,000	10,000	1,000	110	10	01
4 NCP									
Classification NCP from									
Load Data Provider	DNCP4	184,796	74,815	23,034	76,224	9,089	1,280	39	315
Primary NCP	PNCP4	184,796	74,815	23,034	76,224	9,089	1,280	39	315
Line Transformer NCP	LTNCP4	132,904	74,815	23,034	24,332	9,089	1,280	39	
Secondary NCP	SNCP4	177,513	74,815	23,034	68,941	9,089	1,280	39	315
12 NCP									
Classification NCP from									
Load Data Provider	DNCP12	490,959	185,268	59,410	216,451	25,080	3,806	116	
Primary NCP	PNCP12	490,959	185,268	59,410	216,451	25,080	3,806	116	
Line Transformer NCP	LTNCP12	343,604	185,268	59,410	69,096	25,080	3,806	116	
Secondary NCP	SNCP12	470,279	185,268	59,410	195,771	25,080	3,806	116	828

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3 No Direct Allocations were entered on Sheet I9.

- 1 The revenue to cost ratios calculated on Sheet O1 of the Cost Allocation model updated for the 2017 Test
- 2 year are provided at the next page.
- 3 Sheet O-1 of the Cost Allocation Model



EB-2016-0000

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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

			1	2	3	5	7	8	9
Rate Base Assets		Total	Residential	GS <50	GS 50-2999 kW	GS 3000-4999 kW	Street Light	Sentinel	Unmetered Scattered Load
crev	Distribution Revenue at Existing Rates	\$4,358,233	\$2,343,017	\$594,629	\$1,014,995	\$130,518	\$231,670	\$4,815	\$38,589
mi	Miscellaneous Revenue (mi)	\$447,972	\$302,546	\$59,153	\$60,144	\$5,701	\$12,032	\$937	\$7,459
				e Input equals O					
	Total Revenue at Existing Rates	\$4,806,206	\$2,645,563	\$653,782	\$1,075,139	\$136,219	\$243,703	\$5,753	\$46,047
	Factor required to recover deficiency (1 + D)	1.0129							
	Distribution Revenue at Status Quo Rates Miscellaneous Revenue (mi)	\$4,414,540 \$447,972	\$2,373,288 \$302,546	\$602,311 \$59,153	\$1,028,108 \$60,144	\$132,204 \$5,701	\$234,663 \$12,032	\$4,878 \$937	\$39,087 \$7,459
	Total Revenue at Status Quo Rates	\$4,862,512	\$2,675,834	\$661,465	\$1,088,252	\$137,905	\$246,696	\$5,815	\$46,546
	Expenses		+_,,		*:,,				
di	Distribution Costs (di)	\$678,869	\$366,110	\$82,912	\$173,566	\$21,027	\$31,562	\$1,339	\$2,352
cu	Customer Related Costs (cu)	\$608,637	\$461,660	\$84,591	\$50,050	\$1,396	\$45	\$121	\$10,774
ad	General and Administration (ad) Depreciation and Amortization (dep)	\$1,136,733	\$720,999 \$600,845	\$148,322 \$147,552	\$205,800 \$252,540	\$21,496 \$34,088	\$27,921 \$22,297	\$1,314 \$1,393	\$10,880 \$2,723
dep INPUT	PILs (INPUT)	\$1,061,439 \$134,477	\$72,505	\$147,552 \$18,263	\$252,540	\$34,088	\$3,345	\$1,393	\$366
INT	Interest	\$515,652	\$278,020	\$70,029	\$134,431	\$18,246	\$12,825	\$699	\$1,402
	Total Expenses	\$4,135,807	\$2,500,139	\$551,670	\$851,446	\$101,012	\$97,994	\$5,049	\$28,497
	Direct Allocation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
NI	Allocated Net Income (NI)	\$726,705	\$391,811	\$98,692	\$189,453	\$25,715	\$18,074	\$985	\$1,976
	Revenue Requirement (includes NI)	\$4,862,512	\$2,891,950	\$650,362	\$1,040,898	\$126,726	\$116,068	\$6,033	\$30,473
		Revenue Re	quirement Input e	quals Output					
	Rate Base Calculation								
-	Net Assets Distribution Plant - Gross	£00 700 477	\$16,291,446	\$3,994,187	\$7,623,170	\$1,061,196	\$700,500	\$42,296	\$83,382
dp gp	General Plant - Gross	\$29,796,177 \$3,630,624	\$1,963,650	\$480,975	\$954,878	\$1,061,196 \$126,895	\$700,500 \$88,594	\$42,296	\$03,302
	Accumulated Depreciation	(\$13,222,245)	(\$7,327,314)	(\$1,798,518)	(\$3,264,114)	(\$481,913)	(\$296,065)	(\$18,146)	(\$36,174)
со	Capital Contribution	(\$3,003,879)	(\$1,649,556)	(\$349,074)	(\$823,883)	(\$98,623)	(\$66,416)	(\$5,874)	(\$10,455)
	Total Net Plant	\$17,200,676	\$9,278,227	\$2,327,570	\$4,490,051	\$607,555	\$426,613	\$23,566	\$47,094
	Directly Allocated Net Fixed Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
COP	Cost of Power (COP)	\$31,818,751	\$10,333,703	\$4,271,251	\$15,004,955	\$1,938,282	\$186,765	\$5,683	\$78,112
	OM&A Expenses	\$2,424,239	\$1,548,769	\$315,826	\$429,416	\$43,919	\$59,528	\$2,775	\$24,006
	Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal	\$34,242,990	\$11,882,472	\$4,587,077	\$15,434,372	\$1,982,200	\$246,293	\$8,458	\$102,118
	Working Capital	\$2,568,224	\$891,185	\$344,031	\$1,157,578	\$148,665	\$18,472	\$634	\$7,659
	Total Rate Base	\$19,768,900	\$10,169,412	\$2,671,601	\$5,647,629	\$756,220	\$445,085	\$24,200	\$54,753
		Rate E	ase Input equals	Output					
	Equity Component of Rate Base	\$7,907,560	\$4,067,765	\$1,068,640	\$2,259,052	\$302,488	\$178,034	\$9,680	\$21,901
	Net Income on Allocated Assets	\$726,705	\$175,695	\$109,794	\$236,806	\$36,893	\$148,701	\$766	\$18,049
	Net Income on Direct Allocation Assets	\$0	\$0 \$175,695	\$0	\$0 \$236,806	\$0 \$36,893	\$0 \$148,701	\$0	\$0
	RATIOS ANALYSIS	\$726,705	\$175,695	\$109,794	\$230,800	\$30,893	\$140,701	\$766	\$18,049
	REVENUE TO EXPENSES STATUS QUO%	100.00%	92.53%	101.71%	104.55%	108.82%	212.54%	96.38%	152.74%
	EXISTING REVENUE MINUS ALLOCATED COSTS	(\$56,306)	(\$246,387)	\$3,420	\$34,240	\$9,493	\$127,635	(\$281)	\$15,574
	STATUS QUO REVENUE MINUS ALLOCATED COSTS	Deficie \$0	ency Input equals (\$216,116)	Output \$11,102	\$47,353	\$11,179	\$130,628	(\$218)	\$16,073
	RETURN ON EQUITY COMPONENT OF RATE BASE	9.19%	4.32%	10.27%	10.48%	12.20%	83.52%	7.92%	82.41%

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Unmetered

Scattered Load

\$10.57

\$18.63

\$29.60

\$14.23

#### **1** Sheet O-2 of the Cost Allocation Model



Output sheet showing minimum and maximum level for Monthly Fixed Charge 2 3 5 8 GS 3000-4999 Summary Residential GS <50 GS 50-2999 kW Street Light Sentinel kW Customer Unit Cost per month - Avoided Cost \$6.38 \$10.95 \$55.42 \$192.21 \$0.01 \$0.77 Customer Unit Cost per month - Directly Related \$16.73 \$9.94 \$86.76 \$311.98 \$0.01 \$0.91 Customer Unit Cost per month - Minimum System \$18.47 \$27.52 \$110.79 \$338.90 \$3.21 \$9.92 with PLCC Adjustment Existing Approved Fixed Charge \$13.14 \$23.96 \$78.03 \$5,800.89 \$4.08 \$4.95

_		1	2	3	5	7	8	9
nformation to be Used to Allocate PILs, ROD, ROE and A&G	Total	Residential	GS <50	GS 50-2999 kW	GS 3000-4999 kW	Street Light	Sentinel	Unmetered Scattered Load
General Plant - Gross Assets General Plant - Accumulated Depreciation	<b>\$3,630,624</b> (\$1,106,175)	\$1,963,650 (\$598,283)	\$480,975 (\$146,543)	\$954,878 (\$290,932)	\$126,895 (\$38,662)	\$88,594 (\$26,993)	\$5,290 (\$1,612)	\$10,341 ( <mark>\$3,15</mark> 1
General Plant - Net Fixed Assets	\$2,524,448	\$1,365,366	\$334,432	\$663,947	\$88,233	\$61,601	\$3,678	\$7,19
General Plant - Depreciation	\$261,905	\$141,653	\$34,696	\$68,883	\$9,154	\$6,391	\$382	\$74
Total Net Fixed Assets Excluding General Plant	\$14,676,228	\$7,912,860	\$1,993,138	\$3,826,104	\$519,321	\$365,012	\$19,888	\$39,904
Total Administration and General Expense	\$1,136,733	\$720,999	\$148,322	\$205,800	\$21,496	\$27,921	\$1,314	\$10,88
Total O&M	\$1,287,506	\$827.770	\$167.503	\$223.616	\$22,423	\$31.607	\$1,461	\$13,12

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- 1 Class Revenue Requirements
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## 3 Ex.7/Tab 2/Sch.1 – Class Revenue Analysis

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5 Table 7.4 below shows the results of the cost allocation updated 2012 Test Year Study. These results are

- 6 used to compare, and analyze the allocation under each option and to help the utility determine its 2017
- 7 Test Year proposed ratios.

## 8 Table 7.4: Previously Approved Ratios (2012 Cost of Service)

							Revenue-Cost
Customer Class Name	Service Rever	nue Requirement	Miscella	aneous Revenue	Base Rev	enue Requirement	Expenses %
Residential	2,283,006	51.68%	212,698	56.20%	2,070,308	51.25%	94.80%
GS <50 kW	640,458	14.50%	53,016	14.01%	587,442	14.54%	99.60%
GS 50-2999 kW	1,106,793	25.05%	75,443	19.93%	1,031,350	25.53%	120.00%
GS 3000-4999 kW	106,960	2.42%	11,487	3.04%	95,473	2.36%	57.50%
Street Lighting	233,225	5.28%	21,518	5.69%	211,707	5.24%	111.70%
Sentinel Lights	6,070	0.14%	524	0.14%	5,546	0.14%	117.20%
Unmetered Scattered Load	41,456	0.94%	3,775	1.00%	37,681	0.93%	94.80%
Total	4,417,968	100.00%	378,461	100.00%	4,039,507	100.00%	

- 10 The table below shows the allocation percentage and base revenue requirement allocation under existing
- 11 rates, cost allocation results and proposed 2017 allocation.

## 12 Table 7.5: Base Revenue Requirement under 3 scenarios

	Proposed Base Revenue Requirement %							
Customer Class Name								
	Cost Alloca	tion Results	Existin	g Rates	Proposed	Allocation		
Residential	58.66%	2,589,404	53.76%	2,373,288	55.10%	2,432,411		
General Service < 50 kW	13.39%	591,209	13.64%	602,311	13.70%	604,792		
General Service 50-2999 kW	22.22%	980,755	23.29%	1,028,108	23.30%	1,028,588		
General Service 3000-4999 kW	2.74%	121,025	2.99%	132,204	3.00%	132,436		
Street Lighting	2.36%	104,036	5.32%	234,663	4.10%	180,996		
Sentinel Lights	0.12%	5,096	0.11%	4,878	0.11%	4,856		
Unmetered Scattered Load	0.52%	23,014	0.89%	39,087	0.69%	30,460		
TOTAL	100.00%	4,414,540	100.00%	4,414,540	100.00%	4,414,540		

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14 Table 7.6 below shows the revenue offset allocation which resulted from Cost Allocation Study (Sheet O1)

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Customer Class Name	<b>Revenue Offset</b>	%
Residential	(302,546)	67.54%
General Service < 50 kW	(59,153)	13.20%
General Service 50-2999 kW	(60,144)	13.43%
General Service 3000-4999 kW	(5,701)	1.27%
Street Lighting	(12,032)	2.69%
Sentinel Lights	(937)	0.21%
Unmetered Scattered Load	(7,459)	1.67%
Total	(447,972)	100.00%

## 1 Table 7.6: Revenue Offset Allocation as per Cost Allocation Study

3 Table 7.7 shows the allocation of the service revenue requirement under the same 3 scenarios.

## 4 Table 7.7: Service Revenue Requirement under 3 scenarios

	Service Revenue Requirement \$				
Customer Class Name	Existing	Cost	Rate		
	Rates	Allocation	Application		
Residential	2,675,834	2,891,950	2,734,957		
General Service < 50 kW	661,465	650,362	663,945		
General Service 50-2999 kW	1,088,252	1,040,898	1,088,731		
General Service 3000-4999 kW	137,905	126,726	138,137		
Street Lighting	246,695	116,068	193,029		
Sentinel Lights	5,815	6,033	5,793		
Unmetered Scattered Load	46,546	30,473	37,919		
Total	4,862,512	4,862,512	4,862,512		

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## 1 Revenue-to-Cost Ratios

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## 3 Ex.7/Tab 3/Sch.2 – Cost Allocation Results and Analysis

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5 The table on the next page shows Appendix 2-P of the Board Appendices. The appendix provides

6 information on previously approved ratios and proposed ratios. The section following Appendix 2-P

7 addresses the method and logic used to update the ratios from the Cost Allocation study to the proposed

8 ratios.

# 9 Appendix 2-P: Cost Allocation

## A) Allocated Costs

Classes	Costs Allocated from Previous Study		%	i	osts Allocated n Test Year Study Column 7A)	%
Residential	\$	2,409,184	54.53%	\$	2,891,950	59.47%
GS < 50 kW	\$	642,799	14.55%	\$	650,362	13.38%
GS 50-2999 kW	\$	922,322	20.88%	\$	1,040,898	21.41%
GS 3000-4999 kW	\$	186,017	4.21%	\$	126,726	2.61%
Street Lighting	\$	208,734	4.72%	\$	116,068	2.39%
Sentinel Lighting	\$	5,177	0.12%	\$	6,033	0.12%
Unmetered Scattered Load (USL)	\$	43,735	0.99%	\$	30,473	0.63%
Total	\$	4,417,968	100.00%	\$	4,862,512	100.00%

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#### B) Calculated Class Revenues

		Column 7B		Column 7C		Column 7D		Column 7E
Classes (same as previous table)	Lo	oad Forecast	L	F. X current	L	.FX proposed	M	iscellaneous
	(L	.F) X current	ap	oproved rates		rates		Revenue
Residential	\$	2,589,404	\$	2,373,288	\$	2,432,411	\$	302,546
GS < 50 kW	\$	591,209	\$	602,311	\$	604,792	\$	59,153
GS 50-2999 kW	\$	980,755	\$	1,028,108	\$	1,028,588	\$	60,144
GS 3000-4999 kW	\$	121,025	\$	132,204	\$	132,436	\$	5,701
Street Lighting	\$	104,036	\$	234,663	\$	180,996	\$	12,032
Sentinel Lighting	\$	5,096	\$	4,878	\$	4,856	\$	937
Unmetered Scattered Load (USL)	\$	23,014	\$	39,087	\$	30,460	\$	7,459
Total	\$	4,414,540	\$	4,414,540	\$	4,414,540	\$	447,972

#### C) Rebalancing Revenue-to-Cost (R/C) Ratios

Class	Previously Approved Ratios Most Recent Year: 2012	Status Quo Ratios (7C + 7E) / (7A)	Proposed Ratios (7D + 7E) / (7A)	· Policy Range
	%	%	%	%
Residential	94.80%	92.53	94.57	85 - 115
GS < 50 kW	99.60%	101.71	102.09	80 - 120
GS 50-2999 kW	120.00%	104.55	104.60	80 - 120
GS 3000-4999 kW	57.50%	108.82	109.00	80 - 120
Street Lighting	111.70%	212.54	166.31	80 - 120
Sentinel Lighting	117.20%	96.38	96.02	80 - 120
Unmetered Scattered Load (USL)	94.80%	152.74	124.43	80 - 120

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#### D) Proposed Revenue-to-Cost Ratios

Class	Proposed Revenue-to-Cost Ratios			Deliev Denne
	2017	2018	2019	Policy Range
	%	%	%	%
Residential	94.57	94.57	94.57	85 - 115
GS < 50 kW	102.09	102.09	102.09	80 - 120
GS 50-2999 kW	104.60	104.60	104.60	80 - 120
GS 3000-4999 kW	109.00	109.00	109.00	80 - 120
Street Lighting	166.31	166.31	166.31	80 - 120
Sentinel Lighting	96.02	96.02	96.02	80 - 120
Unmetered Scattered Load (USL)	124.43	124.43	124.43	80 - 120

3 Table 7.8 below shows LUI's proposed Revenue to Cost reallocation based on an analysis of the proposed

4 results from the Cost Allocation Study vs. the Board imposed floor and ceiling ranges.

#### 5 Table 7.8: Proposed Allocation

#### Revenue to Cost Ratio Allocation

Customer Class Name	Calculated R/C Ratio	Proposed R/C Ratio	Variance
Residential	93%	95%	(0.02)
General Service < 50 kW	102%	102%	(0.00)
General Service 50-2999 kW	105%	105%	(0.00)
General Service 3000-4999 kW	109%	109%	(0.00)
Street Lighting	213%	166%	0.46
Sentinel Lights	96%	96%	0.00
Unmetered Scattered Load	153%	124%	0.28

Target Range			
Floor	Celiling		
85%	115%		
80%	120%		
80%	120%		
80%	120%		
80%	120%		
80%	120%		
80%	120%		

Revenue to Cost Adjustment				
2017	2018	2019		
95%	95%	95%		
102%	102%	102%		
105%	105%	105%		
109%	109%	109%		
166%	166%	166%		
96%	96%	96%		
124%	124%	124%		

- 7 The proposed Revenue to cost ratio is adjusted by changing the allocation percentage for each class. The
- 8 utility reviews and assesses the bill impacts for each class before adjusting the Revenue to Cost ratios.
- 9 Per the Filing Requirements for Transmission and Distribution Applications dated July 16, 2015, LUI has
- 10 completed OEB Appendix 2-P with the results of the 2016 cost allocation study. The Allocated cost table
- 11 (Table A), calculated class revenues (Table B) and Rebalancing Revenue-to-Cost (Revenue to Cost)
- 12 Ratios (Table C) are summarized above.

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## 1 Attachments

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5		
6	Attachment A	LUI's 2012 Cost Allocation Sheet I8 Demand
7		Data
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## 1 Attachment A - LUI's 2012 Cost Allocation Sheet I8 Demand Data

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2012 COST ALLOCATION Lakefront Utilities Inc. EB-2011-0250 August-26-11 Sheet 18 Demand Data Worksheet - Initial Application

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

		ſ	1	2	3	5	7	8	9
			1	_		-	1	8	9
Customer Classes		Total	Residential	General Service Less Than 50 kW	General Service 50 to 2,999 kW	General Service 3,000 to 4,999 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
CO-INCIDENT	PEAK								
1 CP									
Transformation CP	TCP1	45,179	15,643	6,110	17,843	5,187	272	18	106
Bulk Delivery CP	BCP1	45,179	15,643	6,110	17,843	5,187	272	18	106
Total Sytem CP	DCP1	45,179	15,643	6,110	17,843	5,187	272	18	106
4 CP									
Transformation CP	TCP4	178,773	58,497	22,581	74,099	22,581	616	40	359
Bulk Delivery CP	BCP4	178,773	58,497	22,581	74,099	22,581	616	40	359
Total Sytem CP	DCP4	178,773	58,497	22,581	74,099	22,581	616	40	359
12 CP									
Transformation CP	TCP12	470.039	149,585	57,847	212,058	48,633	893	57	965
Bulk Delivery CP	BCP12	470,039	149,585	57,847	212,058	48,633	893	57	965
Total Sytem CP	DCP12	470,039	149,585	57,847	212,058	48,633	893	57	965
NON CO_INCIDE	NT PEAK								
1 NCP									
Classification NCP from			·			•	•	•	r
Load Data Provider	DNCP1	53,111	18,309	6,836	20,729	6,836	277	18	106
Primary NCP	PNCP1	53,111	18,309	6,836	20,729	6,836	277	18	106
Line Transformer NCP	LTNCP1	32,401	18,309	6,836	6,855	-	277	18	106
Secondary NCP	SNCP1	51,788	18,309	6,836	19,406	6,836	277	18	106
4 NCP		-							
Classification NCP from						•			
Load Data Provider	DNCP4	198,631	70,596	25,285	81,380	19,808	1,107	71	384
Primary NCP	PNCP4	198,631	70,596	25,285	81,380	19,808	1,107	71	384
Line Transformer NCP	LTNCP4	124,356	70,596	25,285	26,913	-	1,107	71	384
Secondary NCP	SNCP4	193,436	70,596	25,285	76,185	19,808	1,107	71	384
12 NCP									
Classification NCP from						*	•	•	•
Load Data Provider	DNCP12	524,274	174,822	65,215	231,093	48,633	3,290	212	1,009
Primary NCP	PNCP12	524,274	174,822	65,215	231,033	48,633	3,290	212	1,003
Line Transformer NCP	LTNCP12	320.973	174,822	65,215	76,424		3,290	212	1,009
Secondary NCP	SNCP12	509,521	174,822	65.215	216,340	48.633	3,290	212	1,009