



## EXHIBIT 7 – COST ALLOCATION

2020 Cost of Service

Hydro 2000 Inc.  
EB-2019-0041

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## 7.2 COST ALLOCATION STUDY REQUIREMENTS

### 7.2.1 OVERVIEW OF COST ALLOCATION

Hydro 2000 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.

The main objectives of the original informational filing in 2006 were to provide information on any apparent cross-subsidization among a distributor's rate classifications and to support future rate applications. This information is updated to reflect new parameters and inputs and then used to adjust any cross-subsidization in the proposed rates.

#### **Previously Approved Cost Allocation Study (BA)**

The Previously Board Approved ratios are presented as a point of reference to the proposed 2020 ratios. As part of its last Cost of Service Rate Application, Hydro 2000 updated the cost allocation revenue to cost ratios with 2012 base revenue requirement information. The revenue to cost ratios from the 2012 application are presented below. Hydro 2000 notes that there have been no changes in its class composition since 2012.<sup>1</sup>

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<sup>1</sup> MFR - New customer class or eliminated customer class - rationale and restatement of revenue requirement from previous CoS

**Table 1 - Previously Approved Ratios (2012 COS)**

Customer Class	2008 Approved Ratios	Current Ratios	Proposed Ratios for Test Year	Board Target Range	2013	2014
Residential	104.20%	79.55%	85.00%	85% - 115%	90.00%	95.00%
GS < 50 kW	100.00%	189.11%	160.00%	80% - 120%	140.00%	120.00%
GS > 50 to 4,999 kW	100.00%	192.12%	180.00%	80% - 120%	160.00%	120.00%
Street Lighting	71.80%	101.21%	110.00%	70% - 120%	110.00%	110.00%
Unmetered Scattered Load	27.90%	103.11%	103.00%	80% - 120%	103.00%	103.00%

**Proposed Cost Allocation Study (2020)**

The Cost Allocation Study for 2020 allocates the 2020 test year costs (i.e., the 2020 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.

Hydro 2000 has used the most up to date 2019 OEB-approved Cost Allocation Model and followed the instructions and guidelines issued by the OEB to enter the 2020 data into this model.<sup>2</sup>

Hydro 2000 populated the information on Sheet I3, Trial Balance Data with the 2020 forecasted data, Target Net Income, PILs, interest on long term debt, and the targeted Revenue Requirement and Rate Base.

On Sheet I4, Break-out of Assets, Hydro 2000 updated the allocation of the accounts based on 2020 values.

In Sheet I5.1, Miscellaneous data, Hydro 2000 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.

As instructed by the Board, in Sheet I5.2, Weighting Factors, Hydro 2000 has used LDC specific factors rather than continue to use OEB approved default factors. The utility has applied service and billing & 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:

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<sup>2</sup> MFR - If Cost Allocation Model other than OEB model used - exclude LV, exclude DVA such as smart meters

**Table 2 – OEB Weighting Factors**

	1	2	3	7	9
	Residential	GS <50	GS>50-Regular	Street Light	Unmetered Scattered Load
Insert Weighting Factor for Services Account 1855	1.0	0.0	0.0	0.0	1.8
Insert Weighting Factor for Billing and Collecting	1.0	0.9	0.2	0.9	0.9

The weighting calculations for Services are shown below. In 2018, the services were only attributable to the Residential Class (3) and the USL (1). Hydro 2000 notes that it did not record any costs related to 1855 services for the GS class in 2015 nor 2016.

<b>2018</b>							
<b>Accounts 18550000 - 18550400</b>							
	Residential	GS < 50	GS > 50	Street Lighting	USL	Total Annual Cost	Acct
# Connection	3	0	0	0	1	4	
<i>Sproule Powerline</i>	820.00				500.00	1,320.00	1855
Total	820.00				500.00	1,320.00	
Cost Per Bill	273.33				500.00		
Weighting (Using # bills)	1.00				1.83		

**Proposed Billing and Collecting Weighting Factors<sup>3</sup>**

A derivation of the billing and collecting weighting factors are shown in the table below.

**Table 3 – Breakdown of Weighting Factors**

	Residential	GS < 50	GS > 50	Street Lighting	USL	Total Annual Cost	Acct
<i># Bills</i>	13177	1728	158	12	48	15123	
						14905	
<i>Ottawa River Power</i>	11,959.58	1,568.35	143.40	10.89	43.57	13,725.79	5310
<i>Interval -Meter Reading - Spec Rds</i>			-1,163.76			-1,163.76	5310
<i>ITM</i>	1,537.39	179.99	30.00			1,747.38	5315
<i>Chabo Communications &amp; Design Admin</i>	1,269.66	166.50				1,436.16	5315
<i>Util-Assist</i>	9,539.97	1,251.05	114.39	8.69	34.75	10,948.85	5315
<i>Harris</i>	2,342.40	307.18	28.09	2.13	8.53	2,688.33	5315

<sup>3</sup> MFR - Description of weighting factors, and rationale for use of default values (if applicable)

<i>Ottawa River Power</i>	49,178.22	6,449.11	589.68	44.79	179.14	56,440.94	5315
<i>Collecting</i>	2,511.97	112.23				2,624.20	5320
<i>Stewart Electric</i>	380.00					380.00	5330
<i>Sproule Powerline</i>	1,257.50	165.00				1,422.50	5330
<i>Bad Debt Expense</i>						8,177.24	5335
<i>5315 - Customer Billing Salaries</i>	56,741.49	7,440.94	680.36	51.67	206.69	65,121.16	5315
<b>Total</b>	<b>136,718.19</b>	<b>17,640.35</b>	<b>422.16</b>	<b>118.17</b>	<b>472.68</b>	<b>163,548.79</b>	
<i>Cost Per Bill</i>	10.38	10.21	2.67	9.85	9.85		
<i>Weighting (Using # bills)</i>	1.00	0.98	0.26	0.95	0.95		

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

Hydro 2000 updated the capital cost per meter information on Sheet I7.1 and the meter reading information on I7.2 to reflect its completed deployment of smart meters.

It is Hydro 2000's understanding that in normal circumstances, a utility should update its demand data (and sheet I8) to reflect the findings of the 2004 hour by hour load data being scaled to be consistent with the 2020 load forecast and the inspection of the scaled data to identify the system peaks and class specific peaks.

To update the demand data, the utility used the original demand data study calculated and provided by HONI by the OEB in 2004 in advance of the 2006 EDR process.<sup>4</sup>

The 2012 and proposed demand data is presented at the next page.

Hydro 2000 has completed its cost allocation study using the OEB's methodology. A live Excel version of 2020 cost allocation model has been filed along with this application. Hydro 2000 confirms that it has also populated sheets 11 and 12 of the Revenue Requirement Work Form. Hydro 2000 confirms that the inputs to the model are consistent with the test year load forecast, changes to customer classes and load profiles.<sup>5</sup>

<sup>4</sup> MFR - Explanation provided if a distributor is unable to update its load profiles and confirm that it intends to put plans in place to update its load profiles the next time a cost allocation model is filed

<sup>5</sup> MFR – Completed cost allocation study using the OEB-approved methodology or a comparable model must be filed reflecting future loads and costs and be supported by appropriate explanations and live Excel spreadsheets. Sheets 11 and 12 of the RRWF

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**Table 4 – OEB Load Profiles from 2012 CoS**

<u>Customer Classes</u>			1	2	3	7	9	
			Total	Residential	GS <50	GS>50- Regular	Street Light	Unmetered Scattered Load
CO-INCIDENT PEAK								
1 CP								
Transformation CP	TCP1		6,263	3,987	1,213	1,061	-	2
Bulk Delivery CP	BCP1		6,263	3,987	1,213	1,061	-	2
Total Sytem CP	DCP1		6,263	3,987	1,213	1,061	-	2
4 CP								
Transformation CP	TCP4		22,735	15,130	3,731	3,627	239	8
Bulk Delivery CP	BCP4		22,735	15,130	3,731	3,627	239	8
Total Sytem CP	DCP4		22,735	15,130	3,731	3,627	239	8
12 CP								
Transformation CP	TCP12		49,209	32,148	8,168	8,318	550	25
Bulk Delivery CP	BCP12		49,209	32,148	8,168	8,318	550	25
Total Sytem CP	DCP12		49,209	32,148	8,168	8,318	550	25
NON CO_INCIDENT PEAK								
1 NCP								
Classification NCP from Load Data Provider	DNCP1	6,845		4,473	1,213	1,077	80	2
Primary NCP	PNCP1	6,845		4,473	1,213	1,077	80	2
Line Transformer NCP	LTNCP1	6,845		4,473	1,213	1,077	80	2
Secondary NCP	SNCP1	6,845		4,473	1,213	1,077	80	2
4 NCP								
Classification NCP from Load Data Provider	DNCP4			25,431	16,486	4,431	4,186	319
Primary NCP	PNCP4		25,431	16,486	4,431	4,186	319	9
Line Transformer NCP	LTNCP4		25,431	16,486	4,431	4,186	319	9
Secondary NCP	SNCP4	25,431	16,486	4,431	4,186	319	9	
12 NCP								

must also be completed. Live Excel version of 2017 cost allocation model will be filed (updated load profiles or scaled version of HONI CAIF). Model must be consistent with test year load forecast, changes to customer classes and load profiles.

Classification NCP from Load Data Provider	DNCP12	54,290	34,298	9,397	9,613	957	25
Primary NCP	PNCP12	54,290	34,298	9,397	9,613	957	25
Line Transformer NCP	LTNCP12	54,290	34,298	9,397	9,613	957	25
Secondary NCP	SNCP12	54,290	34,298	9,397	9,613	957	25

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**Table 5 – OEB Demand Data for 2020 Test Year (adjusted for 2020 Load Forecast)**

<u>Customer Classes</u>			1	2	3	7	9		
			Total	Residential	GS <50	GS>50- Regular	Street Light	Unmetered Scattered Load	
			CP Sanity Check	Pass	Pass	Pass	Check 4CP and 12CP	Check 4CP and 12CP	
CO-INCIDENT PEAK									
1 CP									
Transformation CP	TCP1	5,137		3,275.03	973.98	885.81	-	1.94	
Bulk Delivery CP	BCP1	5,137		3,275.03	973.98	885.81	-	1.94	
Total System CP	DCP1	5,137		3,275.03	973.98	885.81	-	1.94	
4 CP									
Transformation CP	TCP4	18,565		12,428.30	2,994.95	3,026.97	106.45	7.88	
Bulk Delivery CP	BCP4	18,565		12,428.30	2,994.95	3,026.97	106.45	7.88	
Total System CP	DCP4	18,565		12,428.30	2,994.95	3,026.97	106.45	7.88	
12 CP									
Transformation CP	TCP12	40,175		26,407.90	6,556.60	6,942.02	244.83	23.62	
Bulk Delivery CP	BCP12	40,175		26,407.90	6,556.60	6,942.02	244.83	23.62	
Total System CP	DCP12	40,175		26,407.90	6,556.60	6,942.02	244.83	23.62	
NON CO_INCIDENT PEAK									
1 NCP Classification NCP from Load Data Provider			NCP Sanity Check	Pass	Pass	Pass	Pass	Check 4 NCP and 12 NCP	
	DNCP1	5,584	3,674.49	973.98	898.45	35.49	1.94		
Primary NCP	PNCP1	5,584	3,674.49	973.98	898.45	35.49	1.94		
Line Transformer NCP	LTNCP1	5,584	3,674.49	973.98	898.45	35.49	1.94		
Secondary NCP	SNCP1	5,584	3,674.49	973.98	898.45	35.49	1.94		
4 NCP Classification NCP from Load Data Provider									
	DNCP4	20,742		13,542.42	3,556.28	3,493.26	141.95	8.07	
Primary NCP	PNCP4	20,742		13,542.42	3,556.28	3,493.26	141.95	8.07	
Line Transformer NCP	LTNCP4	20,742	13,542.42	3,556.28	3,493.26	141.95	8.07		

Secondary NCP	SNCP4	20,742	13,542.42	3,556.28	3,493.26	141.95	8.07
<b>12 NCP</b>							
Classification NCP from Load Data Provider	DNCP12	44,189	28,174.08	7,543.09	8,022.64	425.86	23.62
Primary NCP	PNCP12	44,189	28,174.08	7,543.09	8,022.64	425.86	23.62
Line Transformer NCP	LTNCP12	44,189	28,174.08	7,543.09	8,022.64	425.86	23.62
Secondary NCP	SNCP12	44,189	28,174.08	7,543.09	8,022.64	425.86	23.62

- No Direct Allocations were entered on Sheet I9.
- The revenue to cost ratios calculated on Sheet O1 of the Cost Allocation model updated for the 2020 Test Year are provided at the next page.

**Table 6 – OEB Sheet I6-2 of the Cost Allocation Model<sup>6</sup>**

		1	2	3	7	9
ID	Total	Residential	GS <50	GS>50- Regular	Street Light	Unmetered Scattered Load
<b>Billing Data</b>						
Bad Debt 3 Year Historical Average	BDHA	\$16,360	\$16,360	\$0	\$0	\$0
Late Payment 3 Year Historical Average	LPHA	\$752	\$577	\$141	\$33	\$0
Number of Bills	CNB	15,223	13,351	1,692	156.24	12.00
Number of Devices	CDEV				370	4
Number of Connections (Unmetered)	CCON	374			370	4
Total Number of Customers	CCA	1,269	1,113	141	13	1
Bulk Customer Base	CCB	-				
Primary Customer Base	CCP	1,279	1,113	141	13	11
Line Transformer Customer Base	CCLT	1,279	1,113	141	13	11
Secondary Customer Base	CCS	1,269	1,113	141	13	1
Weighted - Services	CWCS	1,120	1,113	-	-	-
Weighted Meter -Capital	CWMC	163,844	128,536	25,524	9,785	-
Weighted Meter Reading	CWMR	1,641	1,113	141	13	370
Weighted Bills	CWNB	14,983	13,351	1,574	37	11

**Bad Debt Data**

Historic Year:

2016	19,967	19,967				
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<sup>6</sup> MFR - Hard copy of sheets I-6, I-8, O-1 and O-2 (first page)

<b>Historic Year:</b>	2017	20,937	20,937				
<b>Historic Year:</b>	2018	8,177	8,177				
<b>Three-year average</b>		16,360	16,360	-	-	-	-

**Street Lighting Adjustment Factors**

<b>NCP Test Results</b>	4 NCP
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Class	Primary Asset Data		Line Transformer Asset Data	
	Customers/ Devices	4 NCP	Customers/ Devices	4 NCP
<b>Residential</b>	1,113	13,986	1,113	13,986
<b>Street Light</b>	370	142	370	142

Street Lighting Adjustment Factors	
Primary	32.7677
Line Transformer	32.7677

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**Table 7 – OEB Sheet I6-1 of the Cost Allocation Model<sup>7</sup>**

<b>Total kWhs from Load Forecast</b>	20,383,683
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<b>Total kW from Load Forecast</b>	11,092
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<b>Deficiency/sufficiency ( RRWF 8. cell F51)</b>	42,711
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<b>Miscellaneous Revenue (RRWF 5. cell F48)</b>	28,356
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Billing Data			1	2	3	7	9
	ID	Total	Residential	GS <50	GS>50- Regular	Streetlight	Unmetered Scattered Load
Forecast kWh	CEN	20,383,683	12,367,886	3,861,286	3,984,230	153,000	17,280
Forecast kW	CDEM	11,092			10,671	421	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		-					
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	-					
Existing Monthly Charge			\$25.92	\$22.77	\$84.54	\$1.25	\$15.68
Existing Distribution kWh Rate			\$0.0062	\$0.0099			\$0.0443
Existing Distribution kW Rate					\$1.4631	\$7.2916	
Existing TOA Rate							

<sup>7</sup> MFR - Hard copy of sheets I-6, I-8, O-1 and O-2 (first page)

Additional Charges							
Distribution Revenue from Rates		\$538,441	\$422,728	\$76,754	\$28,821	\$8,620	\$1,518
Transformer Ownership Allowance		\$0	\$0	\$0	\$0	\$0	\$0
Net Class Revenue	<b>CREV</b>	\$538,441	\$422,728	\$76,754	\$28,821	\$8,620	\$1,518

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**Table 8 – OEB Sheet O-1 of the Cost Allocation Model<sup>8</sup>**

		1	2	3	7	9
	Total	Residential	GS <50	GS>50- Regular	Street Light	Unmeter ed Scattered Load
Distribution Revenue at Existing Rates	\$538,441	\$422,728	\$76,754	\$28,821	\$8,620	\$1,518
Miscellaneous Revenue (mi)	\$28,355	\$23,881	\$2,993	\$468	\$987	\$26
	Miscellaneous Revenue Input equals Output					
<b>Total Revenue at Existing Rates</b>	<b>\$566,796</b>	<b>\$446,609</b>	<b>\$79,746</b>	<b>\$29,289</b>	<b>\$9,607</b>	<b>\$1,544</b>
Factor required to recover deficiency (1 + D)	1.0793					
Distribution Revenue at Status Quo Rates	\$581,157	\$456,264	\$82,843	\$31,108	\$9,304	\$1,639
Miscellaneous Revenue (mi)	\$28,355	\$23,881	\$2,993	\$468	\$987	\$26
<b>Total Revenue at Status Quo Rates</b>	<b>\$609,512</b>	<b>\$480,145</b>	<b>\$85,836</b>	<b>\$31,576</b>	<b>\$10,291</b>	<b>\$1,665</b>
<b>Expenses</b>						
Distribution Costs (di)	\$29,183	\$19,824	\$4,118	\$3,630	\$1,578	\$33
Customer Related Costs (cu)	\$182,194	\$161,091	\$19,199	\$1,688	\$108	\$108
General and Administration (ad)	\$296,322	\$252,731	\$32,866	\$7,963	\$2,561	\$201
Depreciation and Amortization (dep)	\$47,219	\$34,151	\$6,691	\$4,773	\$1,557	\$48
PILs (INPUT)	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$19,592	\$13,651	\$2,774	\$2,289	\$855	\$23
<b>Total Expenses</b>	<b>\$574,510</b>	<b>\$481,449</b>	<b>\$65,646</b>	<b>\$20,343</b>	<b>\$6,659</b>	<b>\$413</b>
<b>Direct Allocation</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Allocated Net Income (NI)	\$35,002	\$24,389	\$4,955	\$4,090	\$1,528	\$41
<b>Revenue Requirement (includes NI)</b>	<b>\$609,512</b>	<b>\$505,837</b>	<b>\$70,602</b>	<b>\$24,432</b>	<b>\$8,187</b>	<b>\$454</b>
	Revenue Requirement Input Equals Output					
<b>Rate Base Calculation</b>						
<b>Net Assets</b>						
Distribution Plant - Gross	\$1,140,622	\$804,954	\$161,507	\$126,533	\$46,381	\$1,247
General Plant - Gross	\$120,099	\$84,212	\$17,002	\$13,679	\$5,071	\$136
Accumulated Depreciation	(\$317,426)	(\$227,119)	(\$44,973)	(\$33,186)	(\$11,826)	(\$322)
Capital Contribution	(\$186,120)	(\$134,342)	(\$26,343)	(\$18,640)	(\$6,615)	(\$181)
<b>Total Net Plant</b>	<b>\$757,174</b>	<b>\$527,705</b>	<b>\$107,193</b>	<b>\$88,386</b>	<b>\$33,011</b>	<b>\$879</b>
<b>Directly Allocated Net Fixed Assets</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

<sup>8</sup> MFR - Hard copy of sheets I-6, I-8, O-1 and O-2 (first page)

Cost of Power (COP)	\$3,090,751	\$1,877,714	\$584,828	\$602,462	\$23,135	\$2,613
OM&A Expenses	\$507,699	\$433,646	\$56,182	\$13,281	\$4,247	\$343
Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>	<b>\$3,598,450</b>	<b>\$2,311,360</b>	<b>\$641,010</b>	<b>\$615,743</b>	<b>\$27,383</b>	<b>\$2,956</b>
<b>Working Capital</b>	<b>\$269,884</b>	<b>\$173,352</b>	<b>\$48,076</b>	<b>\$46,181</b>	<b>\$2,054</b>	<b>\$222</b>
<b>Total Rate Base</b>	<b>\$1,027,058</b>	<b>\$701,057</b>	<b>\$155,269</b>	<b>\$134,567</b>	<b>\$35,064</b>	<b>\$1,101</b>
	<b>Rate Base Input Equals Output</b>					
<b>Equity Component of Rate Base</b>	<b>\$410,823</b>	<b>\$280,423</b>	<b>\$62,108</b>	<b>\$53,827</b>	<b>\$14,026</b>	<b>\$440</b>
<b>Net Income on Allocated Assets</b>	<b>\$35,002</b>	<b>(\$1,303)</b>	<b>\$20,189</b>	<b>\$11,233</b>	<b>\$3,632</b>	<b>\$1,252</b>
<b>Net Income on Direct Allocation Assets</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Net Income</b>	<b>\$35,002</b>	<b>(\$1,303)</b>	<b>\$20,189</b>	<b>\$11,233</b>	<b>\$3,632</b>	<b>\$1,252</b>
<b>RATIOS ANALYSIS</b>						
<b>REVENUE TO EXPENSES STATUS QUO%</b>	<b>100.00%</b>	<b>94.92%</b>	<b>121.58%</b>	<b>129.24%</b>	<b>125.70%</b>	<b>366.89%</b>
EXISTING REVENUE MINUS ALLOCATED COSTS	(\$42,716)	(\$59,228)	\$9,145	\$4,857	\$1,420	\$1,090
	<b>Deficiency Input Does Not Equal Output</b>					
STATUS QUO REVENUE MINUS ALLOCATED COSTS	\$0	(\$25,692)	\$15,234	\$7,143	\$2,104	\$1,211
RETURN ON EQUITY COMPONENT OF RATE BASE	8.52%	-0.46%	32.51%	20.87%	25.89%	284.27%

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**Table 9 - Sheet O-2 of the Cost Allocation Model<sup>9</sup>**

	1	2	3	7	9
<b><u>Summary</u></b>	<b>Residential</b>	<b>GS &lt;50</b>	<b>GS&gt;50- Regular</b>	<b>Streetlight</b>	<b>Unmetered Scattered Load</b>
Customer Unit Cost per month - Avoided Cost	\$11.99	\$12.52	\$15.98	\$0.02	\$2.21
Customer Unit Cost per month - Directly Related	\$27.84	\$28.56	\$32.38	\$0.06	\$5.42
Customer Unit Cost per month - Minimum System with PLCC Adjustment	\$32.14	\$30.32	\$34.16	\$1.80	\$8.32
Existing Approved Fixed Charge	\$25.92	\$22.77	\$84.54	\$1.25	\$15.68

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<sup>9</sup> MFR - Hard copy of sheets I-6, I-8, O-1 and O-2 (first page)

## 7.3 CLASS REVENUE REQUIREMENTS

### 7.3.1 CLASS REVENUE ANALYSIS

Table 10 below shows the results of the cost allocation updated 2020 study. These results are used to compare and analyze the distribution costs under each option and help the utility determine its 2020 proposed ratios.

**Table 10 - Results of the Cost Allocation Study**

<u>Cost Allocation Results</u>		REVENUE ALLOCATION (sheet O1)						CUSTOMER UNIT COST PER MONTH (sheet O2)			
Customer Class Name	Service Rev Req (row40)		Misc. Revenue (mi) (row19)		Base Rev Req		Rev2Cost Expenses %	Avoided Costs (Minimum Charge)	Directly Related	Minimum System with PLCC * adjustment	Maximum Charge or Existing Rate
Residential	505,837	82.99%	23,881	84.22%	481,956	82.93%	94.92%	\$11.99	\$27.84	\$32.14	\$32.14
General Service < 50 kW	70,602	11.58%	2,993	10.56%	67,609	11.63%	121.58%	\$12.52	\$28.56	\$30.32	\$30.32
General Service > 50 to 4999 kW	24,432	4.01%	468	1.65%	23,965	4.12%	129.24%	\$15.98	\$32.38	\$34.16	\$84.54
Street Lighting	8,187	1.34%	987	3.48%	7,200	1.24%	125.70%	\$0.02	\$0.06	\$1.80	\$1.80
Unmetered Scattered Load	454	0.07%	26	0.09%	428	0.07%	366.89%	\$2.21	\$5.42	\$8.32	\$15.68
	<b>609,512</b>	<b>100.00%</b>	<b>28,355</b>	<b>100.00%</b>	<b>581,157</b>	<b>100.00%</b>					

Table 11 below shows the allocation percentage and base revenue requirement allocation under existing rates, cost allocation results and proposed 2020 proposed allocation.

**Table 11- Base Revenue Requirement Under 3 Scenarios**

<b>Customer Class Name</b>	Proposed Base Revenue Requirement %					
	<b>Cost Allocation Results</b>		<b>Existing Rates</b>		<b>Proposed Allocation</b>	
<i>Residential</i>	82.93%	481,955	78.51%	456,261	79.45%	461,726
<i>General Service &lt; 50 kW</i>	11.63%	67,609	14.25%	82,842	14.00%	81,358
<i>General Service &gt; 50 to 4999 kW</i>	4.12%	23,964	5.35%	31,108	4.95%	28,777
<i>Street Lighting</i>	1.24%	7,200	1.60%	9,307	1.51%	8,795
<i>Unmetered Scattered Load</i>	0.07%	428	0.28%	1,639	0.09%	500
<b>TOTAL</b>	<b>100.00%</b>	<b>581,156</b>	<b>100.00%</b>	<b>581,156</b>	<b>100.00%</b>	<b>581,156</b>

Table 12 below shows the revenue offset allocation which resulted from Cost Allocation Study (Sheet O1).

**Table 12 - Revenue Offset Allocation as per Cost Allocation Study**

<b>Customer Class Name</b>	Revenue Offsets	
	<b>%</b>	<b>\$</b>
<i>Residential</i>	84.22%	23,881
<i>General Service &lt; 50 kW</i>	10.56%	2,993
<i>General Service &gt; 50 to 4999 kW</i>	1.65%	468
<i>Street Lighting</i>	3.48%	987
<i>Unmetered Scattered Load</i>	0.09%	26
<b>TOTAL</b>	<b>100.00%</b>	<b>28,355</b>

Table 13 shows the allocation of the service revenue requirement under the same three scenarios.

**Table 13 - Service Revenue Requirement Under 3 Scenarios**

<b>Customer Class Name</b>	Service Revenue Requirement \$		
	<b>Existing Rates</b>	<b>Cost Allocation</b>	<b>Rate Application</b>
<i>Residential</i>	480,142	505,836	485,607
<i>General Service &lt; 50 kW</i>	85,835	70,602	84,351
<i>General Service &gt; 50 to 4999 kW</i>	31,576	24,432	29,245
<i>Street Lighting</i>	10,294	8,187	9,782
<i>Unmetered Scattered Load</i>	1,665	454	526
<b>TOTAL</b>	<b>609,511</b>	<b>609,511</b>	<b>609,511</b>

## 7.4 REVENUE-TO-COST RATIOS

### 7.4.1 COST ALLOCATION RESULTS AND ANALYSIS

Table 16 at the next page shows Appendix 2-P of the Board Appendices while Table 13 below shows the utility's proposed ratios. The Appendix provides information on previously approved ratios and proposed ratios. The section following Appendix 2-P addresses the method and logic used to update the ratios from the Cost Allocation study to the proposed ratios.

**Table 14 – Proposed Revenue Allocation**

<i>Customer Class Name</i>	<b>Calculated R/C Ratio</b>	<b>Proposed R/C Ratio</b>	<b>Variance</b>	<b>Target Range</b>	
				<b>Floor</b>	<b>Ceiling</b>
<i>Residential</i>	0.9492	0.9590	-0.01	0.85	1.15
<i>General Service &lt; 50 kW</i>	1.2158	1.2000	0.02	0.80	1.20
<i>General Service &gt; 50 to 4999 kW</i>	1.2924	1.2000	0.09	0.80	1.20
<i>Street Lighting</i>	1.2570	1.2000	0.06	0.80	1.20
<i>Unmetered Scattered Load</i>	3.6689	1.2000	2.47	0.80	1.20

The filing requirements dictate that the utility must show the revenue by class that would apply if all rates were changed by a uniform percentage between classes that are eligible to move ratios. Hydro 2000 notes that only the Residential Class which yields a revenue of 461,220 and the USL which yields revenues of \$518 are eligible to move towards the ceiling of the revenue to cost range. Therefore, the exercise of allocating the shortfall equally across both classes cannot be performed.

**Table 15b – Proposed Revenue Allocation at equal % (Res and Sentinel)**

<i>Customer Class Name</i>	R/C at (equal split)	Proposed R/C Ratio	R/C Variance	Shortfall Allocation at (equal split)	Shortfall Allocation at at Proposed R/C Ratio	Variance
<i>Residential</i>	0.9575	0.9575	0.00			
<i>General Service &lt; 50 kW</i>	1.2000	1.2000	0.00			
<i>General Service &gt; 50 to 4999 kW</i>	1.2000	1.2000	0.00			
<i>Street Lighting</i>	1.2000	1.2000	0.00			
<i>Unmetered Scattered Load</i>	1.2000	1.2000	0.00			

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**Table 16 - OEB Appendix 2-P**

**A) Allocated Costs**

Classes	Costs Allocated from Previous Study	%	Costs Allocated in Test Year Study (Column 7A)	%
Residential	\$352,207.00	68.35%	\$505,837	82.99%
General Service < 50 kW	\$107,443.00	20.85%	\$70,602	11.58%
General Service > 50 to 4999 kW	\$42,118.00	8.17%	\$24,432	4.01%
Street Lights	\$11,697.00	2.27%	\$8,187	1.34%
USL	\$1,823.00	0.35%	\$454	0.07%
<b>Total</b>	<b>\$515,288.00</b>	<b>100.00%</b>	<b>\$609,511.83</b>	<b>100.00%</b>

**B) Calculated Class Revenues**

(from CA - O1 row 18)

Classes (same as previous table)		Column 7B	Column 7C	Column 7D	Column 7E
		Load Forecast (LF) X current approved rates	L.F. X current approved rates X (1 + d)	LF X proposed rates	Miscellaneous Revenue
Residential		\$422,728.12	\$456,261	\$461,220	\$23,881
General Service < 50 kW		\$76,753.58	\$82,842	\$81,729	\$2,993
General Service > 50 to 4999 kW		\$28,821.32	\$31,108	\$28,851	\$468
Street Lights		\$8,619.76	\$9,307	\$8,837	\$987
USL		\$1,518.14	\$1,639	\$518	\$26
<b>Total</b>		<b>\$538,440.92</b>	<b>\$581,155.83</b>	<b>\$581,155.83</b>	<b>\$28,355.00</b>

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

Class		Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
		Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
		<b>2014</b>			
		%	%	%	%
Residential		95.00	94.92	95.90	85 - 115

General Service < 50 kW	120.00	121.58	120.00	80 - 120
General Service > 50 to 4999 kW	120.00	129.24	120.00	80 - 120
Street Lights	103.00	125.74	120.00	80 - 120
USL	110.00	366.88	120.00	

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

Class		Proposed Revenue-to-Cost Ratios			Policy Range
		2020	2021	2022	
		%	%	%	%
Residential		95.90			85 - 115
General Service < 50 kW		120.00			80 - 120
General Service > 50 to 4999 kW		120.00			80 - 120
Street Lights		120.00			80 - 120
USL		120.00			

Table 17 below shows the utility's proposed Revenue to Cost reallocation based on an analysis of the proposed results from the Cost Allocation Study vs. the Board imposed floor and ceiling ranges.

**Table 17 – 2020 Allocation**

<b>Customer Class Name</b>	<b>Target Range</b>				
	<b>Calculated R/C Ratio</b>	<b>Proposed R/C Ratio</b>	<b>Variance</b>	<b>Floor</b>	<b>Ceiling</b>
<i>Residential</i>	0.9492	0.9590	-0.01	0.85	1.15
<i>General Service &lt; 50 kW</i>	1.2158	1.2000	0.02	0.80	1.20
<i>General Service &gt; 50 to 4999 kW</i>	1.2924	1.2000	0.09	0.80	1.20
<i>Street Lighting</i>	1.2570	1.2000	0.06	0.80	1.20
<i>Unmetered Scattered Load</i>	3.6689	1.2000	2.47	0.80	1.20

\* Ratios highlighted in pink fell outside of the floor to ceiling range.

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.<sup>10</sup>

Both General Service classes and the Streetlights classes fell slightly outside the range therefore Hydro 2000 brought them back down to the ceiling of 120% by slightly adjusting the Residential Class and the USL class.

Hydro 2000 proposes to decrease the ratio for the USL class from 370% to 120% as the revenue collected from this class is minimal and the adjustment can easily be absorbed by the larger revenue generating classes.<sup>11</sup> The proposed cost re-allocation results in the shortfall allocation shown in the table below.

<sup>10</sup> MFR - 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.

<sup>11</sup> MFR - Confirmation of communication with unmetered load customers when proposing changes to the level of the rates and charges or the introduction of new rates and charges

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**Table 18 Table of Shortfall reallocation**

<b>Customer Class Name</b>	<b>Shortfall Reconciliation</b>
<i>Residential</i>	-4,956.8
<i>General Service &lt; 50 kW</i>	1,113.6
<i>General Service &gt; 50 to 4999 kW</i>	2,256.8
<i>Street Lighting</i>	466.4
<i>Unmetered Scattered Load</i>	1,120.1

- 2 For further details about the class specific bill impacts, please refer to Exhibit 8. Hydro 2000  
3 confirms that it has communicated its proposed rates and bill impacts to its Street Lighting and  
4 USL customers and that it did not receive any comments and feedback on the issue. <sup>1213</sup>
- 5 Hydro 2000 is not a Host Distributor therefore evidence of consultation with embedded  
6 distributors is not applicable. The utility does not have unique circumstances which justify  
7 specific MicroFit rates and the utility is not seeking Standby Rates in this application. <sup>14 15 16</sup>

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<sup>12</sup> MFR - If R:C ratios outside deadband 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.

<sup>13</sup> MFR - Unmetered Loads (including Street Lighting) - Confirmation of communication with unmetered load customers when proposing changes to the level of the rates and charges or the introduction of new rates and charges

<sup>14</sup> MFR - Host Distributor - evidence of consultation with embedded Dx

<sup>15</sup> MFR - microFIT - if the applicant believes that it has unique circumstances which would justify a certain rate, appropriate documentation must be provided

<sup>16</sup> MFR - Standby Rates - if seeking approval on final basis, provide evidence that affected customers have been advised. If seeking changes to standby charges, provide rationale and evidence that affected customer have been advised.