EXHIBIT 7 – COST ALLOCATION

2021 Cost of Service

Halton Hills Hydro Inc.
EB-2020-0026

7.1 TABLE OF CONTENT

Table of Figures

7.2 COST ALLOCATION STUDY REQUIREMENTS

7.2.1 INTRODUCTION

The OEB outlined its cost allocation policies in its reports of November 28, 2007 Application of Cost Allocation for Electricity Distributors (the "Cost Allocation Report"), and March 31, 2011, the Review of Electricity Distribution Cost Allocation Policy EB-2010-0219 ("March Board Report"). These are referred to here as the "Cost Allocation Reports". On August 5, 2011, the Board released the new Cost Allocation Model and instructed 2012 COS filers to use the revised Model in their Applications. This model has been subsequently updated by the Board with some minor revision on an annual basis.

In this application, HHHI has used the 2021 version of the cost allocation model released by the OEB on May 20, 2020 to conduct a 2021 Test Year Cost Allocation study consistent with the OEB's cost allocation policies.[1] The model has been completed with 2021 test year costs, customer numbers and demand values for HHHI. The 2021 demand values were determined based on the description provided under the Load Profiles section of this Exhibit. The various weighting factors used in the 2021 study have also been explained below.

7.2.2 LOAD PROFILES

In a letter dated June 12, 2015, the OEB requested distributors to be mindful of material changes to load profiles and propose updates, as appropriate, in COS rate applications. HHHI proposes to use the same method as was used in the 2016 COS Application (EB-2015-0074) to determine the demand data for the 2021 Model. This method involves applying a scaling factor to the 2004 weather normalized volumes supporting the 2004 load profiles to determine an estimate of the 2021 weather normalized load profiles. Then the same method applied by Hydro One to the 2004 load profiles to determine the demand data for the original cost allocation study, is applied to the

[1] MFR - If Cost Allocation Model other than OEB model used - exclude LV, exclude DVA such as smart meters

2021 load profiles to determine the 2021 demand data. For example, the 2016 Residential rate class forecasted consumption was 205,578,737 kWh and the 2021 test year forecast is 207,178,634 kWh. Therefore, the ratio of 2021 to 2016 consumption is 1.0078. This scaling factor is applied to all Residential customer class hourly data from the 2016 load profile model, which is a scaled-up version of the original 2004 profile. This process is repeated for all rate classes.

HHHI has provided an Excel spreadsheet named "Load profile model 2004 Hydro One data scaled to 2021" as Attachment 7-2 to show how the 2021 demand data is determined.

HHHI is a member of Utilities Standards Forum ("USF"). Currently, a USF member is bringing forth a USF load profiling model in their 2021 COS application. HHHI expects the OEB will thoroughly vet the USF model during the COS process. HHHI intends to utilize the USF load profile model, with any necessary revisions that arise from the COS process, at its next COS.

7.2.3 COST ALLOCATION MODEL INPUTS/WEIGHTING FACTORS

In Section 2.6.4 of the March Board Report, the OEB stated that "default weighting factors should now be utilized only in exceptional circumstances". Distributors are expected to develop their own weighting factors as part of their cost allocation study. In 2016, HHHI developed weighting factors for its 2016 Cost Allocation model (EB-2015-0074) based on discussions with Borden, Ladner, Gervais LLP; experts in this subject area. HHHI is applying the same weighting factors in this application as there are no material changes. The factors are outlined below.

7.2.3.1 WEIGHTING FACTOR FOR SERVICES (ACCOUNT 1855) (SHEET I5.2)

A weighting factor was determined by assigning the Residential customer class a factor of 1.0, as required, and determining the relative weights of the rest of the classes. As per Table 7-1, HHHI applied a weighting factor of 1.0 for Residential. For General Service less than 50 kW, General Service 50 to 999 kW and General Service 1,000 to 4,999 kW have a factor of 0.0 since any costs are recovered fully through capital contributions received from those customers.

Table 1 – Weighting Factor for Services

Rate Class	Weighting Factors for Services
Residential	1.00
General Service less than 50 kW	0.00
General Service 50 to 999 kW	0.00
General Service 1,000 to 4,999 kW	0.00
Sentinel Lights	0.00
Street Lighting	0.00
Unmetered Scattered Load	0.00

7.2.3.2 BILLING AND COLLECTION (ACCOUNTS 5315 – 5340, EXCEPT 5335) (SHEET I5.2)

The billing and collection weighting factors used in the 2021 Test Year cost allocation model are provided in the following table.

Table 2 – Billing and Collection Weighting Factors

Rate Class	Weighting Factors for Billing and Collection
Residential	1.00
General Service less than 50 kW	0.90
General Service 50 to 999 kW	6.39
General Service 1,000 to 4,999 kW	6.28
Sentinel Lights	1.32
Street Lighting	6.28
Unmetered Scattered Load	1.95

Information in the 2016 Cost of Service application (EB-2015-0074) was used to determine the billing and collecting weighting factor in this Application. The factors for the Residential, General Service less than 50 kW, General Service 50 to 999 kW, General Service 1,000 to 4,999 kW, Street Lighting and Unmetered Scattered Load rate classes are consistent with the factors used the 2016 Cost of Service Application. HHHI reviewed these factors and determined that there is no material change in the billing and collection process to warrant a change.

At the time of writing this application, HHHI is unable to determine the impact of COVID-19 on the Weighting Factor for collection activities and in particular, COVID-19's effect on the General Service less than 50 kW class.

7.2.4 METER CAPITAL (SHEET I7.1)

HHHI used costs of installing meters from the 2016 Cost of Service Application (EB-2015-0074) is this Application. The installation costs are presented in Table 3 – Meter Capital Installation Costs below.

Table 3 – Meter Capital Installation Costs

Meter Type	**Installation Cost per Meter ($)**
Smart Meters (Residential)	$173
Smart Meters (GS<50 kW)	$260
Demand meter with instrument transformers	$2,100
Demand meter with instrument transformers and Interval Capability - Primary	$10,000

7.2.5 METER READING (SHEET I7.2)

HHHI has converted all of its Residential and General Service less than 50 kW customers to smart meters. Meter reading costs for smart meters have been assigned a weighting factor of 1.0 and smart meter with demand 2.0. Meters for General Service 50 to 999 kW and General Service 1,000 to 4,999 kW, based on internal records, indicates the meter reading cost for such a meter is approximately fifty (50) times that of a smart meter and thus the weighting factor of 50.0.

Table 4 – Meter Reading Weighting Factor

Meter Type	Weighting Factors for Meter Reading
Smart Meters	1.0
Smart Meters with Demand	2.0
Interval Meters	50.0

7.2.6 EMBEDDED DISTRIBUTOR CLASSES

HHHI is not proposing to include a new Embedded Distributor class.

HHHI proposes to continue to bill the embedded distributor (i.e. Hydro One Networks Inc. ("HONI")) as a General Service 1,000 to 4,999 kW customer. The cost and revenue for HONI have been included in the General Service 1,000 to 4,999 kW for cost allocation and Board Appendix 2-Q.

HHHI is bounded by four LDC's, one of which is HONI on the north and east boundaries of HHHI's service territory. North of Halton-Erin Road (also known as 32 Side Road) HONI's distribution system is embedded to HHHI and is metered using a primary metering unit. The upstream supply point originates from HHHI's 44kV feeder (42M23) supplied from HONI's transformer station Pleasant TS DESN1 located in Brampton. The 42M23 feeder enters HHHI's service territory along Bovaird Drive, crosses rural territory (fields) through Norval, along 10 Side Road, Trafalgar Road, 27 Side Road, then 8th Line, at which point the 44kV is stepped down to 8.32kV at our municipal substation MS-1 near Halton-Erin Road. From municipal substation MS-1, the feeder 1-F1 extends north on 8th Line to 32 Side Road and then east of 32 Side Road one (1) pole span to the primary meter unit. The metering unit is the point at which connection is made to HONI's distribution system (demarcation point) and where HHHI's 1-F1 feeder terminates. At this same point, HHHI's assets end and any assets beyond the metering unit are HONI's.

For the purposes of completing Board Appendix 2-Q, HHHI estimated costs specifically related to HONI for the connection. In preparing its rate application, HHHI advised HONI that it is HHHI's intent to continue to bill HONI as a General Service 1,000 to 4,999 kW customer.

It is HHHI's view that the embedded HONI connection does not have any distinguishing factors that should result in the HONI account being treated any differently than other HHHI General Service 1,000 to 4,999 kW customers that are similarly connected at the end of the line.

7.2.7 UNMETERED LOADS

On June 12, 2015, the OEB released their *Report of the Board on Review of the Board's Cost Allocation Policy for Unmetered Loads*, which amended section 2.4.6 of the DSC (Distribution System Code). The amendment outlined a new cost allocation policy for the Street Lighting rate class. A new "street lighting adjustment factor" is used to allocate costs to the Street Lighting rate class for primary and line transformer assets. The "street lighting adjustment factor" replaces the "number of connections" allocator. The Model has been updated to reflect the street lighting adjustment factor. HHHI implemented these changes in its 2016 COS Application (EB-2015-0074) and has continued to follow this policy in this 2021 COS Application.

HHHI has not communicated with Unmetered Scattered Load customers, including Street Lighting customers, as there is no material change to the level of rates and charges nor the introduction of new rates.

7.2.8 MICROFIT CLASS

HHHI is not proposing to include MicroFit as a separate class in the cost allocation model in 2021 and has adopted the generic rate provided by the OEB. On February 24, 2020, the OEB issued the Review of Fixed Monthly Charge for MicroFit Generator Service Classification (EB-2009-0326 and EB-2010-0219) which updated the $5.40 monthly fixed charge to $4.55.

7.2.9 STANDBY RATES

HHHI is not proposing to include any standby rate charges in the Cost Allocation Model.

HHHI is proposing a Standby/Capacity Reserve Charge as described in Exhibit 8.1.2 - Standby/Capacity Reserve Charge.

7.2.10 NEW CUSTOMER CLASS

HHHI is not proposing to introduce any new customer classes.

7.2.11 ELIMINATED CUSTOMER CLASS

HHHI is not proposing to eliminate any rate classes. [2]

[2] MFR - New customer class or eliminated customer class - rationale and restatement of revenue requirement from previous CoS

7.3 CLASS REVENUE REQUIREMENTS

7.3.1 CLASS REVENUE REQUIREMENTS

The data used in the updated cost allocation study is consistent with HHHI's cost data that supports the proposed 2021 revenue requirement outlined in this application. HHHI's assets were broken out into primary and secondary distribution functions using breakout percentages used in the 2016 cost of service rate application (EB-2015-0074). An Excel version of the updated cost allocation study has been included with the filed application material. In addition, Appendix 7-1 outlines Input Sheets I-6 & I-8 and Output Sheets O-1 & O-2 (first page only).

Capital contributions, depreciation, and accumulated depreciation by USoA are consistent with the information provided in the fixed asset continuity statement shown in Exhibit 2. The rate class customer data used in the updated cost allocation study is consistent with the 2021 customer forecast outlined in Exhibit 3.

The allocated cost by rate class for the 2016 COS filing and 2021 Test Year updated Model are provided in the following Table 5 – Allocated Cost which is consistent with RRWF Sheet 11. Cost Allocation.

Table 5 – Allocated Cost

(Consistent with RRWF, Tab 11 Cost Allocation, Allocated Costs)

Rate Class	**Costs Allocated from 2016 Cost Allocation Study (EB-2015-0074)**	**%**	**Costs Allocated in 2021 Test Year**	**%**
Residential	$ 7,137,223	65.4%	$ 10,644,454	62.4%
General Service less than 50 kW	1,161,735	10.6%	1,684,188	9.9%
General Service 50 to 999 kW	1,657,050	15.2%	3,246,944	19.0%
General Service 1,000 to 4,999 kW	759,279	7.0%	1,169,371	6.9%
Sentinel Lights	46,867	0.4%	55,226	0.3%
Street Lighting	130,547	1.2%	170,312	1.0%
Unmetered Scattered Load	20,436	0.2%	75,371	0.4%
Total	**$ 10,913,136**	**100.0%**	**$ 17,045,865**	**100.0%**

7.4 REVENUE-TO-COST RATIOS

7.4.1 REVENUE TO COST RATIOS

The results of a cost allocation study are typically presented in the form of revenue to cost ratios. The ratio is shown by rate classification and is the percentage of distribution revenue collected by rate classification compared to the costs allocated to the classification. The percentage identifies the rate classifications that are being subsidized and those that are over-contributing. A percentage of less than 100% means the rate classification is under-contributing and is being subsidized by other classes of customers. A percentage of greater than 100% indicates the rate classification is over-contributing and is subsidizing other classes of customers.

In the March Board Report, the Board established what it considered to be the appropriate ranges of revenue to cost ratios which are summarized in Table 6 – Revenue to Cost Ratios (Board Target %) below. In addition, Table 6 – Revenue to Cost Ratios provides the approved revenue to cost ratios from the 2016 COS Application (EB-2015-0074), the updated 2021 Test Year cost allocation study and the proposed revenue to cost ratios.

Table 6 – Revenue to Cost Ratios

(Consistent with RRWF, Tab 11 Cost Allocation, Proposed Revenue to Cost Ratios)

Rate Class	2016 Board Approved Cost Allocation Study (EB-2015-0074)	2021 Test Year Updated Cost Allocation Study	2021 Test Year Proposed Ratios	Board Target %
Residential	95.09%	105.67%	95.41%	85 -115
General Service less than 50 kW	120.00%	111.54%	120.00%	80 - 120
General Service 50 to 999 kW	96.60%	83.36%	96.60%	80 - 120
General Service 1,000 to 4,999 kW	120.00%	71.35%	120.00%	80 - 120
Sentinel Lights	95.09%	135.15%	95.41%	80 - 120
Street Lighting	120.00%	153.21%	120.00%	80 - 120
Unmetered Scattered Load	95.09%	56.02%	95.41%	80 - 120

HHHI reviews and assesses the bill impacts for each class before adjusting the Revenue to Cost ratios. For 2021 Test Year and onward, HHHI proposes to maintain the revenue to cost ratios similar to what was approved in HHHI's 2016 COS (EB-2015-0074). This methodology will move

the customer classes that are currently outside of the range back within the Board's Target Range. In addition, this adjustment helps to mitigate any large rate increases. Specifically, moving the Residential class from 95.09% to 105.67% would cause a significant rate increase for that class.

The following Table 7 – Calculated Class Revenue provides information on the calculated class revenue. The resulting proposed base revenue is used in Exhibit 8 to design the proposed distribution charges in this application. HHHI submits that this is a fair and reasonable approach to define the revenue requirement by rate class and is consistent with the approach in HHHI's last cost of service (EB-2015-0074).

Table 7 – Calculated Class Revenue

(Consistent with RRWF, Tab 11 Cost Allocation, Calculated Class Revenues)

Rate Class	**2021 Test Year Base Revenue at Existing Rates**	**2021 Test Year Proposed Based Revenue Allocated at Existing Rate Proportion**	**2021 Test Year Proposed Base Revenue**	**2021 Test Year Miscellaneous Revenue**		**Revenue at Exist Rate Proportion**
Residential	$6,810,124	$10,384,837	$9,292,387	$863,681		65.93%
General Service less than 50 kW	$1,152,171	$1,756,958	$1,899,419	$121,606		11.15%
General Service 50 to 999 kW	$1,653,966	$2,522,152	$2,952,052	$184,495		16.01%
General Service 1,000 to 4,999 kW	$501,463	$764,687	$1,333,596	$69,649		4.85%
Sentinel Lights	$45,848	$69,914	$47,966	$4,727		0.44%
Street Lighting	$143,020	$218,093	$161,526	$42,848		1.38%
Unmetered Scattered Load	$23,504	$35,842	$65,536	$6,377		0.23%
Total	**$10,330,095**	**$15,752,482**	**$15,752,482**	**$1,293,383**		100.00%

7.5 REVENUE-TO-COST RATIOS

7.5.1 COST ALLOCATION RESULTS AND ANALYSIS

Table 6 – Revenue to Cost Ratios shows HHHIs proposed revenue to cost ratios. The table has been restated below and 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 8 – Revenue to Cost Ratios

(Consistent with RRWF, Tab 11 Cost Allocation, Proposed Revenue to Cost Ratios)

Rate Class	2016 Board Approved Cost Allocation Study (EB-2015-0074)	2021 Test Year Updated Cost Allocation Study	2021 Test Year Proposed Ratios	Board Target %
Residential	95.09%	105.67%	95.41%	85 -115
General Service less than 50 kW	120.00%	111.54%	120.00%	80 - 120
General Service 50 to 999 kW	96.60%	83.36%	96.60%	80 - 120
General Service 1,000 to 4,999 kW	120.00%	71.35%	120.00%	80 - 120
Sentinel Lights	95.09%	135.15%	95.41%	80 - 120
Street Lighting	120.00%	153.21%	120.00%	80 - 120
Unmetered Scattered Load	95.09%	56.02%	95.41%	80 - 120

As discussed earlier in the Exhibit, HHHI reviews and assesses the bill impacts for each class before adjusting the Revenue to Cost ratios. For 2021 Test Year and onward, HHHI proposes to maintain the revenue to cost ratios similar to what was approved in HHHI's 2016 COS (EB-2015-0074). This methodology will move the customer classes that are currently outside of the range back within the Board's Target Range. In addition, this adjustment helps to mitigate any large rate increases. Specifically, moving the Residential class from 95.09% to 105.67% would cause a significant rate increase for that class.

APPENDICES

APPENDIX 7-1 : COST ALLOCATION MODEL – INPUT SHEETS I-6 & I-8[3]

: COST ALLOCATION MODEL – OUTPUT SHEETS O-1 & O-2 (FIRST PAGE ONLY).

APPENDIX 7-2: LOAD PROFILE MODEL: APPPENDIX 2-I: LOAD PROFILE MODEL, 2004 HYDRO ONE DATA SCALED TO 2021

[3] MFR - Hard copy of sheets I-6, I-8, O-1 and O-2 (first page)

APPENDIX 7-1

COST ALLOCATION MODEL – INPUT SHEETS I-6 & I-8[4]

COST ALLOCATION MODEL – OUTPUT SHEETS O-1 & O-2 (FIRST PAGE ONLY).

[4] MFR - Hard copy of sheets I-6, I-8, O-1 and O-2 (first page)

1

COST ALLOCATION MODEL – INPUT SHEETS I-6[5]

Total kWhs from Load Forecast	459,373,031

Total kWs from Load Forecast	543,241

Deficiency/sufficiency (RRWF 8. cell F51)	- 5,422,387

Miscellaneous Revenue (RRWF 5. cell F48)	1,293,382

			1	2	3	4	7	8	9
	ID	**Total**	**Residential**	**GS <50**	**GS 50-999 kW**	**GS 1000-4999 kW**	**Street Light**	**Sentinel**	**Unmetered Scattered Load**
Billing Data									
Forecast kWh	**CEN**	459,373,031	207,178,634	46,722,885	132,955,988	70,322,012	979,604	251,879	962,029
Forecast kW	**CDEM**	543,241	-	-	371,084	168,373	3,105	680	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		314,520			107,413	207,107			
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**	459,373,031	207,178,634	46,722,885	132,955,988	70,322,012	979,604	251,879	962,029
Existing Monthly Charge			$27.34	$29.38	$89.89	$192.10	$2.38	$9.80	$8.25
Existing Distribution kWh Rate				$0.0106					$0.0056
Existing Distribution kW Rate					$3.9942	$3.5931	$1.6071	$37.1725	
Existing TOA Rate					$0.60	$0.60			
Additional Charges									
Distribution Revenue from Rates		$10,518,807	$6,810,124	$1,152,171	$1,718,414	$625,727	$143,020	$45,848	$23,504
Transformer Ownership Allowance		$188,712	$0	$0	$64,448	$124,264	$0	$0	$0
Net Class Revenue	**CREV**	$10,330,095	$6,810,124	$1,152,171	$1,653,966	$501,463	$143,020	$45,848	$23,504

[5] MFR - Hard copy of sheets I-6, I-8, O-1 and O-2 (first page)

COST ALLOCATION MODEL – INPUT SHEETS I-6[6]

			1	2	3	4	7	8	9
	ID	Total	Residential	GS <50	GS 50-999 kW	GS 1000-4999 kW	Street Light	Sentinel	Unmetered Scattered Load
Billing Data									
Bad Debt 3 Year Historical Average	BDHA	$74,167	$65,883	$8,284	$0	$0	$0	$0	$0
Late Payment 3 Year Historical Average	LPHA	$74,167	65,883	8,284	-				
Number of Bills	CNB	776,673	249,090	22,359.02	2,628	108	12	2,100	2,196
Number of Devices	CDEV						4,833	175	183
Number of Connections (Unmetered)	CCON	5,191					4,833	175	183
Total Number of Customers	CCA	23,208	20,758	1,863	219	9	1	175	183
Bulk Customer Base	CCB	-							
Primary Customer Base	CCP	23,319	20,758	1,863	219	9	112	175	183
Line Transformer Customer Base	CCLT	23,292	20,758	1,863	200	1	112	175	183
Secondary Customer Base	CCS	23,207	20,758	1,863	219	9		175	183
Weighted - Services	CWCS	20,758	20,758	-	-	-	-	-	-
Weighted Meter -Capital	CWMC	4,593,795	3,591,049	484,445	467,800	50,500	-	-	-
Weighted Meter Reading	CWMR	35,884	20,758	3,727	10,950	450	-	-	-
Weighted Bills	CWNB	293,590	249,090	19,900	16,793	678	75	2,772	4,282
Bad Debt Data									
Historic Year:	2017	82,500	73,939	8,561					
Historic Year:	2018	70,000	60,375	9,625					
Historic Year:	2019	70,000	63,335	6,665					
Three-year average		**74,167**	**65,883**	**8,284**	**-**	**-**	**-**	**-**	**-**

Street Lighting Adjustment Factors

NCP Test Results	4 NCP

	Primary Asset Data		Line Transformer Asset Data	
Class	**Customers/ Devices**	**4 NCP**	**Customers/ Devices**	**4 NCP**
Residential	20,758	179,518	20,758	179,518
Street Light	4,833	968	4,833	968

Street Lighting Adjustment Factors	
Primary	43.1595
Line Transformer	43.1595

[6] MFR - Hard copy of sheets I-6, I-8, O-1 and O-2 (first page)

COST ALLOCATION MODEL – INTPUT SHEETS I-8

Customer Classes		Total	1 Residential	2 GS <50	3 GS 50-999 kW	4 GS 1000-4999 kW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
		CP Sanity Check	Check 4 CP and 12 CP	Pass	Pass	Pass	Check 4CP and 12CP	Check 4CP and 12CP	Check 4CP and 12CP
CO-INCIDENT PEAK									
1 CP									
Transformation CP	TCP1	87,900	30,739	11,569	33,591	11,897	-	-	105
Bulk Delivery CP	BCP1	87,900	30,739	11,569	33,591	11,897	-	-	105
Total Sytem CP	DCP1	87,900	30,739	11,569	33,591	11,897	-	-	105
4 CP									
Transformation CP	TCP4	319,649	143,339	35,545	102,013	37,772	453	86	441
Bulk Delivery CP	BCP4	319,649	143,339	35,545	102,013	37,772	453	86	441
Total Sytem CP	DCP4	319,649	143,339	35,545	102,013	37,772	453	86	441
12 CP									
Transformation CP	TCP12	880,269	422,460	95,335	247,072	111,532	2,038	516	1,316
Bulk Delivery CP	BCP12	880,269	422,460	95,335	247,072	111,532	2,038	516	1,316
Total Sytem CP	DCP12	880,269	422,460	95,335	247,072	111,532	2,038	516	1,316
NON CO_INCIDENT PEAK									
		NCP Sanity Check	Pass	Pass	Pass	Pass	Pass	Pass	Pass
1 NCP Classification NCP from Load Data Provider	DNCP1	112,431	49,988	12,667	36,721	12,562	243	117	134
Primary NCP	PNCP1	112,431	49,988	12,667	36,721	12,562	243	117	134
Line Transformer NCP	LTNCP1	98,079	49,988	12,667	33,535	1,396	243	117	134
Secondary NCP	SNCP1	112,431	49,987.50	12,666.63	36,720.64	12,561.72	243	117	134
4 NCP Classification NCP from Load Data Provider	DNCP4	392,392	179,518	44,651	116,524	49,940	968	315	475
Primary NCP	PNCP4	392,392	179,518	44,651	116,524	49,940	968	315	475
Line Transformer NCP	LTNCP4	337,891	179,518.22	44,651.33	106,414.23	5,548.93	968	315	475
Secondary NCP	SNCP4	392,392	179,518.22	44,651.33	116,523.58	49,940.40	968	315	475
12 NCP Classification NCP from Load Data Provider	DNCP12	1,001,295	458,932	107,809	292,903	136,821	2,796	719	1,316
Primary NCP	PNCP12	1,001,295	458,932	107,809	292,903	136,821	2,796	719	1,316
Line Transformer NCP	LTNCP12	854,265	458,932	107,809	267,491	15,202	2,796	719	1,316
Secondary NCP	SNCP12	1,001,295	458,932	107,809	292,903	136,821	2,796	719	1,316

1

COST ALLOCATION MODEL – OUTPUT SHEETS O-1

Rate Base Assets		Total	1 Residential	2 GS <50	3 GS 50-999 kW	4 GS 1000-4999 kW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
crev	Distribution Revenue at Existing Rates	$10,330,095	$6,810,124	$1,152,171	$1,653,966	$501,463	$143,020	$45,848	$23,504
mi	Miscellaneous Revenue (mi)	$1,293,383	$863,681	$121,606	$184,495	$69,649	$42,848	$4,727	$6,377
		Miscellaneous Revenue Input equals Output							
	Total Revenue at Existing Rates	$11,623,478	$7,673,805	$1,273,777	$1,838,462	$571,111	$185,868	$50,574	$29,882
	Factor required to recover deficiency (1 + D)	1.5249							
	Distribution Revenue at Status Quo Rates	$15,752,482	$10,384,836	$1,756,958	$2,522,152	$764,687	$218,093	$69,914	$35,842
	Miscellaneous Revenue (mi)	$1,293,383	$863,681	$121,606	$184,495	$69,649	$42,848	$4,727	$6,377
	Total Revenue at Status Quo Rates	$17,045,865	$11,248,518	$1,878,564	$2,706,648	$834,335	$260,941	$74,640	$42,219
	Expenses								
di	Distribution Costs (di)	$1,766,694	$977,925	$184,123	$398,974	$165,516	$31,272	$4,076	$4,808
cu	Customer Related Costs (cu)	$1,309,966	$1,098,870	$97,712	$82,809	$4,259	$278	$10,232	$15,807
ad	General and Administration (ad)	$4,661,148	$3,123,742	$429,969	$744,553	$262,973	$48,531	$21,094	$30,286
dep	Depreciation and Amortization (dep)	$3,611,342	$2,157,064	$377,082	$766,679	$279,041	$14,295	$7,666	$9,515
INPUT	PILs (INPUT)	$0	$0	$0	$0	$0	$0	$0	$0
INT	Interest	$2,143,902	$1,236,974	$224,036	$471,904	$172,207	$28,577	$4,575	$5,629
	Total Expenses	$13,493,052	$8,594,575	$1,312,922	$2,464,918	$883,995	$122,954	$47,644	$66,043
	Direct Allocation	$0	$0	$0	$0	$0	$0	$0	$0
NI	Allocated Net Income (NI)	$3,552,813	$2,049,878	$371,266	$782,025	$285,376	$47,358	$7,582	$9,328
	Revenue Requirement (includes NI)	$17,045,865	$10,644,454	$1,684,188	$3,246,944	$1,169,371	$170,312	$55,226	$75,371
		Revenue Requirement Input equals Output							
	Rate Base Calculation								
	Net Assets								
dp	Distribution Plant - Gross	$114,815,286	$66,892,635	$11,975,430	$24,856,090	$8,957,740	$1,576,139	$251,082	$306,171
gp	General Plant - Gross	$10,351,381	$5,996,956	$1,080,623	$2,263,028	$820,491	$140,395	$22,439	$27,448
accum dep	Accumulated Depreciation	($18,582,131)	($11,075,154)	($1,932,178)	($3,859,115)	($1,359,446)	($264,433)	($41,536)	($50,268)
co	Capital Contribution	($7,419,856)	($4,585,579)	($761,855)	($1,440,951)	($459,530)	($128,940)	($20,158)	($22,842)
	Total Net Plant	$99,164,680	$57,228,857	$10,362,019	$21,819,051	$7,959,255	$1,323,162	$211,828	$260,508
	Directly Allocated Net Fixed Assets	$0	$0	$0	$0	$0	$0	$0	$0
COP	Cost of Power (COP)	$57,796,943	$26,136,954	$5,875,618	$16,684,486	$8,824,624	$122,929	$31,608	$120,724
	OM&A Expenses	$7,737,808	$5,200,537	$711,804	$1,226,336	$432,748	$80,082	$35,402	$50,900
	Directly Allocated Expenses	$0	$0	$0	$0	$0	$0	$0	$0
	Subtotal	*$65,534,751*	*$31,337,491*	*$6,587,422*	*$17,910,823*	*$9,257,372*	*$203,011*	*$67,010*	*$171,624*
	Working Capital	$4,915,106	$2,350,312	$494,057	$1,343,312	$694,303	$15,226	$5,026	$12,872
	Total Rate Base	$104,079,787	$59,579,169	$10,856,076	$23,162,363	$8,653,558	$1,338,387	$216,853	$273,380
		Rate Base Input equals Output							
	Equity Component of Rate Base	$41,631,915	$23,831,668	$4,342,430	$9,264,945	$3,461,423	$535,355	$86,741	$109,352
	Net Income on Allocated Assets	$3,552,813	$2,653,942	$565,642	$241,729	($49,660)	$137,987	$26,996	($23,824)
	Net Income on Direct Allocation Assets	$0	$0	$0	$0	$0	$0	$0	$0
	Net Income	$3,552,813	$2,653,942	$565,642	$241,729	($49,660)	$137,987	$26,996	($23,824)
	RATIOS ANALYSIS								
	REVENUE TO EXPENSES STATUS QUO%	100.00%	105.67%	111.54%	83.36%	71.35%	153.21%	135.15%	56.02%
	EXISTING REVENUE MINUS ALLOCATED COSTS	($5,422,387)	($2,970,649)	($410,411)	($1,408,482)	($598,259)	$15,556	($4,652)	($45,490)
		Deficiency Input equals Output							
	STATUS QUO REVENUE MINUS ALLOCATED COSTS	($0)	$604,064	$194,377	($540,296)	($335,036)	$90,629	$19,414	($33,152)
	RETURN ON EQUITY COMPONENT OF RATE BASE	8.53%	11.14%	13.03%	2.61%	-1.43%	25.77%	31.12%	-21.79%

2

COST ALLOCATION MODEL – OUTPUT SHEETS O-1

Summary	1 Residential	2 GS <50	3 GS 50-999 kW	4 GS 1000-4999 kW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	$4.64	$5.10	$46.53	$80.18	$0.00	$4.18	$6.18
Customer Unit Cost per month - Directly Related	$10.23	$10.68	$91.29	$139.10	$0.01	$10.38	$15.31
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$24.08	$24.59	$127.63	$376.58	$2.58	$23.18	$28.98
Existing Approved Fixed Charge	$27.34	$29.38	$89.89	$192.10	$2.38	$9.80	$8.25

Information to be Used to Allocate PILs, ROD, ROE and A&G	Total	1 Residential	2 GS <50	3 GS 50-999 kW	4 GS 1000-4999 kW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
General Plant - Gross Assets	$10,351,381	$5,996,956	$1,080,623	$2,263,028	$820,491	$140,395	$22,439	$27,448
General Plant - Accumulated Depreciation	($4,649,426)	($2,693,593)	($485,373)	($1,016,462)	($368,532)	($63,060)	($10,079)	($12,329)
General Plant - Net Fixed Assets	$5,701,955	$3,303,363	$595,251	$1,246,566	$451,959	$77,335	$12,361	$15,120
General Plant - Depreciation	$416,451	$241,266	$43,475	$91,045	$33,010	$5,648	$903	$1,104
Total Net Fixed Assets Excluding General Plant	$93,462,726	$53,925,494	$9,766,769	$20,572,485	$7,507,296	$1,245,826	$199,467	$245,389
Total Administration and General Expense	$4,661,148	$3,123,742	$429,969	$744,553	$262,973	$48,531	$21,094	$30,286
Total O&M	$3,076,660	$2,076,795	$281,835	$481,783	$169,775	$31,550	$14,308	$20,614

APPENDIX 7-2: APPENDIX 2-N

Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

Load Forecast Summary

This spreadsheet provides a summary of the customer and load forecast on which the test year revenue requirement is derived. The amounts serve as the denominators for deriving the rates to recover the test year revenue requirement for purposes of this RRWF.

The information to be input is inclusive of any adjustments to kWh and kW to reflect the impacts of CDM programs up to and including CDM programs planned to be executed in the test year. i.e., the load forecast adjustments determined in **Appendix 2-I** should be incorporated into the entries. The inputs should correspond with the summary of the Load Forecast for the Test Year in **Appendix 2-IB** and in Exhibit 3 of the application.

Appendix 2-IB is still required to be filled out, as it also provides a year-over-year variance analysis of demand growth andf trends from historical actuals to the Bridge and Test Year forecasts.

Stage in Process: Initial Application

	Customer Class	Initial Application						Per Board Decision		
	Input the name of each customer class.	Customer / Connections Test Year average or mid-year	kWh Annual	kW/kVA [1] Annual	Customer / Connections Test Year average or mid-year	kWh Annual	kW/kVA [1] Annual	Customer / Connections Test Year average or mid-year	kWh Annual	kW/kVA [1] Annual
1	Residential	20,758	207,178,634							
2	GS < 50 kW	1,863	46,722,885							
3	GS >50 to 999 kW	219	132,955,988	371,084						
4	GS >1000 to 4999 kW	9	70,322,012	168,373						
5	Sentinels	175	251,879	680						
6	Street Lighting	4,833	979,604	3,105						
7	Unmetered and Scattered	183	962,029							
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
	Total		**459,373,031**	**543,241**		**-**	**-**		**-**	**-**

Notes:

[1] Input kW or kVA for those customer classes for which billing is based on demand (kW or kVA) versus energy consumption (kWh)

Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

Cost Allocation and Rate Design

This spreadsheet replaces **Appendix 2-P** and provides a summary of the results from the Cost Allocation spreadsheet, and is used in the determination of the class revenue requirement and, hence, ultimately, the determination of rates from customers in all classes to recover the revenue requirement.

Stage in Application Process: ***Initial Application***

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	$ 7,154,916	65.56%	$ 10,644,454	62.45%
2	GS < 50 kW	$ 1,161,172	10.64%	$ 1,684,188	9.88%
3	GS >50 to 999 kW	$ 1,646,916	15.09%	$ 3,246,944	19.05%
4	GS >1000 to 4999 kW	$ 750,536	6.88%	$ 1,169,371	6.86%
5	Sentinels	$ 47,084	0.43%	$ 55,226	0.32%
6	Street Lighting	$ 131,959	1.21%	$ 170,312	1.00%
7	Unmetered and Scattered	$ 20,552	0.19%	$ 75,371	0.44%
8					
9					
10					
11					
12					
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18					
19					
20					
	Total	$ 10,913,135	100.00%	**$ 17,045,865**	100.00%
			Service Revenue Requirement (from Sheet 9)	**$ 17,045,864.96**	

(1) Class Allocated Revenue Requirement, from Sheet O-1, Revenue to Cost || RR, row 40, from the Cost Allocation Study in this application. This excludes costs in deferral and variance accounts. For Embedded Distributors, Account 4750 - Low Voltage (LV) Costs are also excluded.

(2) Host Distributors - Provide information on any embedded distributor(s) as a separate class, if applicable. If embedded distributors are billed in a General Service class, include the allocated costs and revenues of the embedded distributor(s) in the applicable class, and also complete Appendix 2-Q.

(3) Customer Classes - If these differ from those in place in the previous cost allocation study, modify the customer classes to match the proposal in the current application as closely as possible.

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	$ 6,810,124	$ -	$ 9,292,387	$ 863,681
2	GS < 50 kW	$ 656,908	$ 495,263	$ 1,899,419	$ 121,606
3	GS >50 to 999 kW	$ 236,231	$ 1,417,735	$ 2,952,052	$ 184,495
4	GS >1000 to 4999 kW	$ 20,747	$ 480,716	$ 1,333,596	$ 69,649
5	Sentinels	$ 20,580	$ 25,268	$ 47,966	$ 4,727
6	Street Lighting	$ 138,030	$ 4,990	$ 161,526	$ 42,848
7	Unmetered and Scattered	$ 18,117	$ 5,387	$ 65,536	$ 6,377
8					
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18					
19					
20					
	Total	$ 7,900,737	$ 2,429,359	$ 15,752,482	$ 1,293,383

(4) In columns 7B to 7D, LF means Load Forecast of Annual Billing Quantities (i.e., customers or connections, as applicable X 12 months, and kWh, kW or kVA as applicable. Revenue quantities should be net of the Transformer Ownership Allowance for applicable customer classes. Exclude revenues from rate adders and rate riders.

(5) Columns 7C and 7D - Column Total should equal the Base Revenue Requirement for each.

(6) Column 7C - The OEB-issued cost allocation model calculates "1+d" on worksheet O-1, cell C22. "d" is defined as Revenue Deficiency/Revenue at Current Rates.

(7) Column 7E - If using the OEB-issued cost allocation model, enter Miscellaneous Revenues as it appears on worksheet O-1, row 19,

C) Rebalancing Revenue-to-Cost Ratios

	Name of Customer Class	Previously Approved Ratios Most Recent Year: 2016 %	Status Quo Ratios (7C + 7E) / (7A) %	Proposed Ratios (7D + 7E) / (7A) %	Policy Range %
1	Residential	95.09%	8.11%	95.41%	85 - 115
2	GS < 50 kW	120.00%	36.63%	120.00%	80 - 120
3	GS >50 to 999 kW	96.60%	49.35%	96.60%	80 - 120
4	GS >1000 to 4999 kW	120.00%	47.07%	120.00%	80 - 120
5	Sentinels	95.09%	54.31%	95.41%	80 - 120
6	Street Lighting	120.00%	28.09%	120.00%	80 - 120
7	Unmetered and Scattered	95.09%	15.61%	95.41%	80 - 120
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(8) Previously Approved Revenue-to-Cost (R/C) Ratios - For most applicants, the most recent year would be the third year (at the latest) of the Price Cap IR period. For example, if the applicant, rebased in 2012 with further adjustments to move within the range over two years, the Most Recent Year would be 2015. However, the ratios in 2015 would be equal to those after the adjustment in 2014.

(9) Status Quo Ratios - The OEB-issued cost allocation model provides the Status Quo Ratios on Worksheet O-1. The Status Quo means "Before Rebalancing".

(10) Ratios shown in red are outside of the allowed range. Applies to both Tables C and D.

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

	Name of Customer Class	Proposed Revenue-to-Cost Ratio			Policy Range
		Test Year	Price Cap IR Period		
		2021	2022	2023	
1	Residential	95.41%	95.41%	95.41%	85 - 115
2	GS < 50 kW	120.00%	120.00%	120.00%	80 - 120
3	GS >50 to 999 kW	96.60%	96.60%	96.60%	80 - 120
4	GS >1000 to 4999 kW	120.00%	120.00%	120.00%	80 - 120
5	Sentinels	95.41%	95.41%	95.41%	80 - 120
6	Street Lighting	120.00%	120.00%	120.00%	80 - 120
7	Unmetered and Scattered	95.41%	95.41%	95.41%	80 - 120
8					
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(11) The applicant should complete Table D if it is applying for approval of a revenue-to-cost ratio in 2021 that is outside of the OEB's policy range for any customer class. Table D will show that the distributor is likely to enter into the 2022 and 2023 Price Cap IR models, as necessary. For 2022 and 2023, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2019 (in the current Revenue/Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment, column d), and enter TBD for class(es) that will be entered as 'Rebalance'.

LOAD PROFILE MODEL, 2004 HYDRO ONE DATA SCALED TO 2021

		TOTAL LDC sales	Residential	General Service 50 to 999 kW	Street Lighting	General Service less than 50 kW	Unmetered Scattered Load	General Service 1,000 to 4,999 kW	Sentinel Lights	TOTAL LDC sales
			207,178,634	132,955,988	979,604	46,722,885	962,029	70,322,012	251,879	459,373,031
			49,988	20,542	226	6,681	108	10,198	53	75,498
			41,397	22,360	231	10,023	125	9,911	46	76,042
			34,924	22,537	241	9,999	104	10,696	60	70,226
			34,842	21,845	242	6,368	107	11,388	62	66,943
			32,755	20,990	242	7,318	105	12,332	58	62,094
			33,079	29,952	242	9,545	108	12,555	76	77,735
			32,929	36,721	224	12,667	105	12,491	60	87,900
			36,207	25,072	243	11,963	104	12,562	55	73,382
			38,237	20,582	226	9,608	134	12,213	52	69,416
			36,440	24,778	226	8,432	107	11,817	39	68,369
			40,866	23,687	226	7,899	105	11,481	117	74,690
			47,268	23,836	226	7,307	103	9,177	41	77,973
			49,988	36,721	243	12,667	134	12,562	117	62,443
			179,518	116,524	968	44,651	475	49,940	315	212,874
			458,932	292,903	2,796	107,809	1,316	136,821	719	542,363
			47,145	15,481	218	4,294	108	8,201	51	75,498
			40,519	18,247	226	7,686	125	9,194	46	76,042
			31,780	19,950	223	9,999	104	8,115	55	70,226
			33,854	16,707	241	5,320	107	10,652	62	66,943
			30,007	15,090	223	6,333	105	10,283	54	62,094
			27,551	29,843	0	9,363	108	10,869	0	77,735
			30,739	33,591	0	11,569	105	11,897	0	87,900
			34,293	21,731	0	10,760	104	6,494	0	73,382
			35,920	15,494	226	7,781	134	9,808	52	69,416
			29,942	19,991	226	7,873	107	10,192	39	68,369
			36,179	20,617	226	7,430	105	10,016	117	74,690
			44,531	20,332	226	6,927	103	5,812	41	77,973
			30,739	33,591	0	11,569	105	11,897	0	87,900
			143,339	102,013	453	35,545	441	37,772	86	319,649
			422,460	247,072	2,038	95,335	1,316	111,532	516	880,269
2004 Hydro One Hourly Load Shape	2004		204,663,794	80,509,486	2,558,657	57,905,967	951,100	123,666,357	362,210	470,617,571
2004 Hydro One Hourly Load Shape scaled for 2021	2021		207,178,634	132,955,988	979,604	46,722,885	962,029	70,322,012	251,879	459,373,031
			101%	165%	38%	81%	101%	57%	70%	98%