

EXHIBIT 7 – COST ALLOCATION

2024 Cost of Service

Orangeville Hydro Limited
EB-2023-0045

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7.0 COST ALLOCATION

7.1 COST ALLOCATION STUDY REQUIREMENTS

The OEB outlined its cost allocation policies in its 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”).

In this application, Orangeville Hydro Limited (“OHL”) has used the 2024 version of the Cost Allocation Model (“CAM”) released by the OEB on June 23, 2023 to conduct a 2024 test year cost allocation study consistent with the OEB’s cost allocation policies. The model has been loaded with 2024 test year costs, customer numbers and demand values relevant to OHL. The 2024 demand values were determined based on the description provided under section 7.2 Load Profiles and Demand Allocators of this Exhibit. The various weighting factors used in the 2024 study are also explained below.

In its March 31, 2011, Cost Allocation 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. OHL has developed its own weighting factors as outlined below.

7.1.0.1 SERVICES (ACCOUNT 1855)

The analysis for the Services weighting factor included a review of OHL’s internal policy regarding the installation and cost recovery for services. Typically, OHL charges customers other than residential customers for the cost of their service. In some circumstances (typically conversions), OHL will complete underground / overhead Triplex and Quadriplex for both residential and GS<50kW. As per the suggested methodology in the Cost Allocation instruction sheet, the residential class was given a weighting factor of 1.0. As General Service <50kW customers often require attendance outside of normal operating hours avoiding business disruptions, a higher factor of 1.5 was used. Additional time may also be required to ensure demand data is programmed and monitored appropriately. General Service >50kW involves significantly more work than Residential and GS <50kW servicing both from a design and construction perspective. Due to the ownership rules for these services, OHL does not own the

1 assets that would be charged against the services account therefore, these customer categories
2 have been assigned a weighting factor of 0.0. Sentinel lights and Unmetered Scattered Load
3 were given a factor of 0.0 as these service connections are infrequent and less complex in
4 nature. Street Lighting assets do not fall under OHL ownership, however, the streetlights are
5 connected to OHL's secondary and as such costs are captured outside of Account 1855. A
6 weighting factor of 0.0 has been set for this class.

7 **Table 7-1 - Weighting Factors for Services**

Rate Class	Weighting Factors for Services
Residential	1.0
General Service <50kW	1.5
General Service >50kW	0.0
Street Lighting	0.0
Sentinel Lighting	0.0
Unmetered Scattered Load	0.0

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9
10 **7.1.0.2 BILLING AND COLLECTING (ACCOUNTS 5315 – 5340, EXCEPT 5335)**
11 **(SHEET I5.2)**

12 In determining the weighting factors for Billing and Collecting, OHL conducted an analysis of
13 producing customer bills for different rate classes. Work processes and efforts were reviewed
14 with billing staff and the amount of time to produce one bill per customer class was calculated.
15 OHL also completed a detailed analysis of costs being booked to 5315 – 5340, except 5335.

16
17 Additional factors considered included:

- 18 • The amount of administrative tracking required in the managing of the connections
19 related to Unmetered Scattered Load, Streetlights and Sentinel Lights, such as additions
20 and deletions;
- 21 • The amount of time required to bill an interval customer relative to a non-interval;
- 22 • Monitoring kVa demand to ensure proper classification of GS>50kW customers.

23
24 Through this analysis, OHL was able to closely assign a total cost per class from which
25 weighting factors were then determined relative to the Residential factor of 1.

Table 7-2 - Weighting Factors for Billing and Collection

Meter Type	Weighting Factors for Billing and Collection
Smart Meter - Residential	1.0
General Service <50kW	1.2
General Service >50kW	17.4
Street Lighting	18.0
Sentinel Lighting	2.0
Unmetered Scattered Load	2.1

7.1.0.3 METER CAPITAL (SHEET I7.1)

The installation cost for smart meters is consistent with the installation cost outlined in the Smart Meter Recovery Application approved by the Board.

OHL completed the upgrading of meters in 2021 (which included MIST meters), and for the purposes of cost allocation has determined the average capital cost per meter, based on historical cost. OHL has updated Sheet I7.1 to reflect the cost and the # of meters installed as of the 2024 Test Year by class.

Table 7-3 - Meter Capital Installation Costs

Meter Type	Installation Cost per Meter
Demand with IT and Interval Capability - Secondary	\$ 4,100
Demand with IT and Interval Capability - Primary	\$ 2,560
Residential meter	\$ 135
GS<50	\$ 345

7.1.0.4 METER READING (SHEET I7.2)

OHL completed an analysis of the costs included in meter reading and assessed that all metered classes should be assigned the same weighting of 1.00, given that all customers now have smart meters. Given that physical meter reading is no longer required, there is little to no discernable difference amongst customers in meter reading costs.

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Table 7-4 - Weighting Factors for Meter Reading

Meter Type	Weighting Factors for Meter Reading
Smart Meter - Res	1.00
Smart Meter - GS < 50	1.00
GS > 50 Meter	1.00

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7.1.1 LOAD PROFILES AND DEMAND ALLOCATORS

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5 In a letter dated June 12, 2015, the OEB stated that it expected distributors to be mindful of
6 material changes to load profiles and to propose updates in their respective Cost of Service
7 (“CoS”) applications when warranted. The OEB also stated that it did not plan to lead a generic
8 update of distributor load profiles. The Filing Requirements note that the OEB has recently
9 required that load profiles for all classes be updated at the same time, not just selective
10 updating.

11

12 In preparing this Application, OHL assessed available methodologies to prepare updated load
13 profiles for its rate classes based on more recent data. OHL is of the view that the most
14 appropriate methodology is the Historical Average approach using weather-actual data outlined
15 in section 2.7.1.1 of the Filing Requirements. To prepare updated load profiles utilizing this
16 method, a minimum of three years of hourly data is required, with five years of hourly data being
17 optimal. On assessment, OHL discovered it does not have the meter data required at this time.

18

19 OHL determined that the most appropriate course of action was to leverage the same method
20 used in the 2014 CoS application to determine the demand data for the 2024 Model. This
21 method involves scaling the 2004 weather normalized volumes supporting the 2004 load
22 profiles to determine an estimate of the 2024 weather normalized load profiles. To accomplish
23 this, the hourly 2006 demand provided by Hydro One is pro-rated so the total annual
24 consumption matches OHL’s 2024 test year load forecast consumption by rate class. OHL has
25 provided an Excel spreadsheet in Appendix 7-B: 2024 Load Profile Data for Cost Allocation to
26 show how the 2024 demand data is determined.

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Table 7-5 - Load Profile Scaling Factors

Rate Class	2004 Weather Normal Values used Information Filing (kWh)	2024 Weather Normal Values (kWh)	Scaling Factor
Residential	80,716,881	93,562,278	115.9%
General Service <50kW	32,831,915	34,272,791	104.4%
General Service >50kW	127,285,544	133,456,842	104.8%
Street Lighting	1,653,645	883,782	53.4%
Sentinel Lighting	139,298	99,920	71.7%
Unmetered Scattered Load	782,354	370,613	47.4%
Total	243,409,637	262,646,227	107.9%

For its next CoS application, OHL commits to the development of updated load profiles based on available methodologies at that time. OHL expects this will include its preferred Historical Average approach. OHL confirms that the required data is currently being collected, and will continue to be collected, to inform updated load profiles utilizing this methodology.

Multivariate regression was used for the load forecast, and more information on this can be found in Exhibit 3, Section 3.1.1 Multivariate Regression Model.

7.1.2 SPECIFIC CUSTOMER CLASS(ES)

7.1.2.1 GENERAL SERVICE 50KW TO 4999KW

OHL is aware of the treatment of the Transformer Ownership Allowance in the current version of the cost allocation model. OHL confirms the treatment is the same as used in its 2014 application.

7.1.2.2 EMBEDDED DISTRIBUTOR CLASS

OHL does not have an embedded distributor class.

7.1.2.3 UNMETERED LOADS (INCLUDING STREET LIGHTING)

OHL is aware of the new “street lighting adjustment factor” 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.

7.1.2.4 MICROFIT CLASS

OHL did not include the MicroFIT class in the cost allocation model.

7.1.2.5 STANDBY RATES

OHL is not proposing standby rates.

7.1.3 NEW CUSTOMER CLASS

OHL is not proposing to include a new customer class.

7.1.4 ELIMINATED CUSTOMER CLASS

OHL is not proposing to eliminate a rate class.

7.2 CLASS REVENUE REQUIREMENTS

The data used in the updated Cost Allocation Study is consistent with OHL's cost data that supports the proposed OHL revenue requirement outlined in this application. The breakout of assets, capital contributions, depreciation, accumulated depreciation, customer data and load data by primary, line transformer and secondary categories were developed from the best data available to OHL, its engineering records, and its customer and financial information systems. An Excel version of the updated cost allocation study has been included with the filed application material. In addition, Appendix 7-A: 2024 OEB Cost Allocation Model 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 OHL continuity statement shown in Exhibit 2. The rate class customer data used in the updated cost allocation study is consistent with the OHL customer forecast outlined in Exhibit 3.

The following table provides the allocated costs by rate class from the approved 2014 Cost Allocation Study and the updated 2024 study. These are consistent with RRWF, Tab 11 Cost Allocation, Allocated Costs.

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Table 7-6 - Allocated Costs by Class

Rate Class	2014 Board Approved Cost Allocation Study	%	Cost Allocated in the 2024 Study	%
Residential	\$3,333,639	63.8%	\$4,692,202	64.1%
General Service < 50 kW	\$727,864	13.9%	\$921,091	12.6%
General Service 50 to 4,999 kW	\$1,022,069	19.6%	\$1,536,812	21.0%
Sentinel Lighting	\$14,417	0.3%	\$23,912	0.3%
Street Lighting	\$116,926	2.2%	\$128,958	1.8%
Unmetered Scattered Load	\$9,987	0.2%	\$18,230	0.2%
Total	\$5,224,903	100.0%	\$7,321,205	100.0%

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7.3 REVENUE-TO-COST RATIOS

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The results of a Cost Allocation Study are typically presented in the form of revenue to cost ratios.

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The ratio is shown by rate classification and is the percentage of distribution revenue collected by

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rate classification compared to the costs allocated to the classification. The percentage identifies

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the rate classifications that are being subsidized and those that are over-contributing. A

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percentage of less than 100% means the rate classification is under-contributing and is being

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subsidized by other classes of customers. A percentage greater than 100% indicates the rate

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classification is over-contributing and is subsidizing other classes of customers.

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In the March 31, 2011 Board Report, the Board established what it considered to be appropriate

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ranges of revenue to cost ratios which are summarized in Table 7-7 below. In addition, Table 7-7

13

provides OHL's approved revenue to cost ratios from the approved 2014 CoS application, the

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updated 2024 cost allocation study and the proposed 2024 to 2028 ratios. This is consistent with

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RRWF, tab 11 Cost Allocation, Proposed & Rebalancing Revenue to Cost Ratios.

Table 7-7 - Revenue to Cost Ratios

Rate Class	2014 Board Approved	2024 Updated Cost Allocation Study	2024 Proposed Ratios	2024 to 2028 Proposed Ratios	Board Targets Min to Max	
Residential	101.7%	105.1%	105.1%	105.1%	85.0%	115.0%
General Service < 50 kW	116.0%	116.3%	110.5%	110.5%	80.0%	120.0%
General Service 50 to 4,999 kW	84.9%	76.9%	80.0%	80.0%	80.0%	120.0%
Sentinel Lighting	80.0%	58.5%	80.0%	80.0%	80.0%	120.0%
Street Lighting	86.6%	82.9%	82.9%	82.9%	80.0%	120.0%
Unmetered Scattered Load	116.8%	81.7%	81.7%	81.7%	80.0%	120.0%

The OHL cost allocation study indicates the revenue to cost ratio for the GS 50 to 4,999kW and Sentinel Lighting classes was outside the OEB’s identified range. In order to bring these rate classes within acceptable revenue to cost ratio ranges, the GS 50 to 4,999kW and Sentinel Lighting classes were moved upward to a common revenue to cost ratio of 80.0%. Subsequently, the GS <50kW class was adjusted to a ratio of 110.5% to maintain revenue neutrality. OHL does not propose to continue rebalancing rates after the CoS test year.

The following Table 7-8 provides information on the calculated class revenue. The resulting OHL proposed base revenue will be the amount used in Exhibit 8 to design the proposed distribution charges in this application. OHL submits that this is a fair and reasonable approach to define the revenue requirement by rate class. Table 7-8 - Calculated Class Revenue is consistent with RRWF, Tab 11 Cost Allocation, Calculated Class Revenues.

Table 7-8 - Calculated Class Revenue

Rate Class	2024 Base Revenue at Existing Rates	2024 Proposed Base Revenue Allocated at Existing Rates Proportion	2024 Proposed Base Revenue	Miscellaneous Revenue
Residential	\$4,102,637	\$4,661,811	\$4,661,811	\$270,932
General Service < 50 kW	\$901,259	\$1,024,097	\$971,361	\$46,787
General Service 50 to 4,999 kW	\$979,900	\$1,113,457	\$1,161,051	\$68,391
Sentinel Lighting	\$10,868	\$12,349	\$17,490	\$1,639
Street Lighting	\$82,711	\$93,985	\$93,985	\$12,862
Unmetered Scattered Load	\$11,723	\$13,321	\$13,321	\$1,574
Total	\$6,089,098	\$6,919,019	\$6,919,019	\$402,186

APPENDIX 7-A: 2024 OEB COST ALLOCATION MODEL

OHL has filed the 2024 OEB Cost Allocation Model separately in excel.

APPENDIX 7-B: 2024 LOAD PROFILE DATA FOR COST ALLOCATION

OHL has filed the 2024 Load Profile Data for Cost Allocation separately in excel.