

REVENUE REQUIREMENT AND SUFFICIENCY / DEFICIENCY

Toronto Hydro earns the majority of its revenue through distribution rates and also earns other revenues through the provision of non-distribution related activities. These other revenues offset the revenue requirement Toronto Hydro collects from its distribution service customers.

The recovery of Deferral and Variance Accounts (“DVAs”) is not included in the revenue requirement. DVAs are recovered through separate rate riders as described in Exhibit 9, Tab 1, Schedule 1. Table 1, below, summarizes Toronto Hydro’s 2020 revenue requirement.

Table 1: 2020 Forecast Revenue Requirement (\$ Millions)

	2020 Test Year
OM&A Expenses (incl. property taxes)	277.5
Amortization/Depreciation	268.7
Income Taxes (Grossed up)	34.7
Deemed Interest Expense	100.8
Return on Deemed Equity	162.8
Service Revenue Requirement	844.5
Revenue Offsets	47.7
Base Revenue Requirement	796.8

Full details on the calculation of revenue requirement, including the Determination of Net Utility Income, Statement of Rate Base, Actual Utility Return on Rate Base, Indicated Rate of Return, Requested Rate of Return and the Deficiency in Revenue, are found in the Revenue Requirement Workforms (“RRWF”), filed as Exhibit 6, Tab 1, Schedule 2-6.

1 While Toronto Hydro files the RRWF for all years, including 2021-2024 during which
2 rates are proposed to be set based on the Custom Price Cap Index and not on a revenue
3 requirement basis, Toronto Hydro submits that the calculations shown in the RRWF,
4 particularly the tabs related to Cost Allocation and Rate Design, are not directly relevant
5 for the OEB to determine final distribution rates.

6
7 In order to meet the specific requirements of Toronto Hydro, some minor adjustments
8 to the Rates-related tabs of the OEB's RRWF were required. Appendix A fully
9 documents these adjustments.

10 11 **1. SERVICE REVENUE REQUIREMENT**

12 Service revenue requirement is comprised of operating expenses, cost of capital and
13 PILs.

14
15 Operating Expenses, including administrative and general, depreciation and
16 amortization, and property taxes, are explained in further detail in Exhibits 4A and 4B.
17 Exhibit 4A, Tab 1, Schedule 1 contains a summary of distribution expenses.

18
19 Cost of capital is calculated based on a weighted average of interest expense and return
20 on equity. Toronto Hydro's capital structure for ratemaking purposes is determined in
21 accordance with the OEB's Cost of Capital guidelines. The cost of capital based on the
22 OEB's deemed capital structure is discussed in Exhibit 5, Tab 1.

23
24 Income taxes and PILs are explained in detail in Exhibit 4B, Tab 2, Schedule 1.

2. REVENUE OFFSETS

Toronto Hydro earns revenue from its distribution tariff as well as other revenues from non-distribution related services, rentals and short term investment income. These other revenues offset the revenue requirement to be collected through the distribution tariff.

Revenue offsets are detailed in Exhibit 3, Tab 2, Schedule 1.

3. BASE REVENUE REQUIREMENT

Base revenue requirement is derived as service revenue requirement less revenue offsets. The base revenue requirement is allocated to and collected from the various customer classes through distribution rates.

4. OVERALL REVENUE DEFICIENCY

For 2020, revenue deficiency is the difference between the 2020 forecast year revenue requirement and the 2020 forecast year revenues calculated at current rates.

The 2020 test year revenue is determined using the 2020 forecast of billing units at expected 2019 base distribution rates.¹ The deficiency is net of electricity price differentials captured in RSVA accounts and any costs associated with LV charges or DVA balances.

Toronto Hydro's revenue deficiency for the 2020 test year is summarized in Table 2.

¹ Toronto Hydro will file for 2019 Distribution Rates as part of the final year of the EB-2014-0116 OEB approved 2015-2019 rate application in the summer of 2018, based on the OEB issued Inflation value.

1 **Table 2: Revenue Deficiency (\$ Millions)**

	2020 Forecast
Service Revenue at expected 2019 Rates	819.1
Service Revenue Requirement	844.5
Gross Revenue Deficiency	(25.4)

2

3 Full details of the calculation of revenue deficiency are shown in Tab 8 of the RRWF,
4 filed in Exhibit 6, Tab 1, Schedule 2.

5

6 **5. CAUSES OF REVENUE DEFICIENCY**

7 The drivers of Toronto Hydro's revenue deficiency are summarized in Table 3.

1 **Table 3: Revenue Deficiency Drivers (\$ Millions)**

	2015 OEB Approved	2020 Forecast	Difference	
Rate Base	3,232.0	4,615.3		Higher net fixed assets offset by lower working capital allowance
ROE	9.30%	8.82%		Lower forecast ROE rate
Debt Rate	4.09%	3.64%		Lower forecast embedded debt rates
DRIVERS OF DEFICIENCY				
OM&A	243.9	277.5	33.6	Higher OM&A expenses
Depreciation	206.0	268.7	62.7	Higher rate base plus de-recognition expense
Deemed Interest Expense	79.3	100.8	21.5	Higher rate base offset by lower forecast debt rates
Return on Equity	120.2	162.8	42.6	Higher rate base offset by lower forecast ROE rate
PILS	25.0	34.7	9.8	Higher net income
TOTAL SERVICE REVENUE REQUIREMENT	674.5	844.5	170.0	
Distribution Revenue at 2015/19 Rates	633.1	771.4	138.3	Increase in OEB approved rates 2015-19 and customer growth
Revenue Offsets	41.3	47.7	6.4	Higher Other Revenues
TOTAL OPERATING REVENUE	674.5	819.1	144.7	
TOTAL DEFICIENCY		25.4	25.4	

2
3 Rate base increases are primarily due to fixed asset additions over the 2015-2020
4 period, as described in Exhibit 2B. Partially offsetting the increase in net fixed assets is
5 a decrease in Working Capital Allowance based on the updated Lead-Lag Study (Exhibit
6 2A, Tab 3, Schedule 2).

1 Debt and ROE rates are expected to be lower in 2020 (Exhibit 5, Tab 1, Schedule 1),
2 reducing the cost of capital, and partially offsetting the increase in revenue requirement
3 from higher rate base.

4

5 The revenue deficiency arising from the 2020 OM&A costs is due to the forecast level of
6 OM&A, as detailed in Exhibit 4A.

7

8 Higher depreciation amounts are primarily due to the additional capital included in rate
9 base (Exhibit 2A, Tab 1, Schedule 1), as well as the requirements related to de-
10 recognition of assets (Exhibit 4B, Tab 1, Schedule 2).

11

12 The revenue deficiency is partially offset by higher revenue due to OEB approved rate
13 increases and customer growth over the 2015-2019 period (Exhibit 3, Tab 1, Schedule
14 1), as well as higher forecasted revenue offsets (Exhibit 3, Tab 2, Schedule 1).

APPENDIX A - MODIFICATIONS TO THE OEB's 2018 REVENUE

REQUIREMENT WORK FORM

The following information details the changes that have been incorporated into the Ontario Energy Board's Revenue Requirement Workform for 2018 Filers V7.02.

1. WORKSHEET 12.1 CSMUR RATE DESIGN

This additional worksheet is needed to demonstrate the impact of the New Rate Design Policy on the Competitive Sector Multi-Unit Customers rate class. The logic of this worksheet mirrors the same test for the Residential rate class in worksheet 12. Res_Rate_Design.

2. WORKSHEET 13. RATE DESIGN

In all rate classes, the sum of revenue from the Fixed and Variable components adds to 100% of revenue for the class. Toronto Hydro's Unmetered Scattered Load rate class has an approved three parts rate. Therefore the total class revenue in Cell O35 has been reallocated for a three part rate (cells Q35, Q36 and S35). These changes are captured as follows:

- Fixed/Variable split inputs (cells U35, U36 and W35)
- Monthly Service Charge Calculations (cells AA35 and AA36)

Toronto Hydro's approved Monthly Service Charge and kVA Volumetric Rates are based on 30 days of service. Both the Monthly Service Charge and kVA Volumetric Rates calculation in columns AA and AE have been changed to reflect this requirement.

25 In addition, Toronto Hydro's Volumetric Rate is based on either kWh or kVA with the
26 respective 5 and 4 number of decimals. Changes in column AI capture the applicable
27 number of decimals.

28

29 In the **Revenue Reconciliation** section, Total Distribution Revenue needs to be
30 converted back to 365 days of revenue, and therefore reflects the "days of service"
31 adjustment factor of 365/360, or 1.013888889 (shown in cell AK25).



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers



Version 8.00

Utility Name	Toronto Hydro-Electric System Limited
Service Territory	
Assigned EB Number	EB-2018-0165
Name and Title	
Phone Number	
Email Address	
Test Year	
Bridge Year	
Last Rebasing Year	2015

The RRWF has been enhanced commencing with 2017 rate applications to provide estimated base distribution rates. The enhanced RRWF is not intended to replace a utility's formal rate generator model which should continue to be the source of the proposed rates as well as the final ones at the conclusion of the proceeding. The load forecasting addition made to this model is intended to be demonstrative only and does not replace the information filed in the utility's application. In an effort to minimize the incremental work required from utilities, the cost allocation and rate design additions to this model do in fact replace former appendices that were required to be filed as part of the cost of service (Chapter 2) filing requirements.

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

[1. Info](#)[2. Table of Contents](#)[3. Data Input Sheet](#)[4. Rate Base](#)[5. Utility Income](#)[6. Taxes PILs](#)[7. Cost of Capital](#)[8. Rev Def Suff](#)[9. Rev Req](#)[10. Load Forecast](#)[11. Cost Allocation](#)[12. Residential Rate Design](#)[13. Rate Design and Revenue Reconciliation](#)[14. Tracking Sheet](#)**Notes:**

- (1) Pale green cells represent inputs
- (2) Pale green boxes at the bottom of each page are for additional notes
- (3) Pale yellow cells represent drop-down lists
- (4) **Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.**
- (5) **Completed versions of the Revenue Requirement Work Form are required to be filed in working Microsoft Excel format.**



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Data Input ⁽¹⁾

	Initial Application	(2)	(5)	Per Board Decision
1 Rate Base				
Gross Fixed Assets (average)	\$5,616,709,673		#####	\$5,616,709,673
Accumulated Depreciation (average)	(\$1,236,603,102)	(5)	#####	(\$1,236,603,102)
Allowance for Working Capital:				
Controllable Expenses	\$277,497,844		\$ 277,497,844	\$277,497,844
Cost of Power	\$3,384,043,227		#####	\$3,384,043,227
Working Capital Rate (%)	6.42%	(9)		(9)
2 Utility Income				
Operating Revenues:				
Distribution Revenue at Current Rates	\$771,399,203			
Distribution Revenue at Proposed Rates	\$796,824,614			
Other Revenue:				
Specific Service Charges	\$6,581,270			
Late Payment Charges	\$3,751,641			
Other Distribution Revenue	\$35,898,269			
Other Income and Deductions	\$1,455,901			
Total Revenue Offsets	\$47,687,081	(7)		
Operating Expenses:				
OM+A Expenses	\$271,962,868		\$ 271,962,868	\$271,962,868
Depreciation/Amortization	\$268,664,188		\$ 268,664,188	\$268,664,188
Property taxes	\$5,534,976		\$ 5,534,976	\$5,534,976
Other expenses				
3 Taxes/PILs				
Taxable Income:				
Adjustments required to arrive at taxable income	(\$61,393,745)	(3)		
Utility Income Taxes and Rates:				
Income taxes (not grossed up)	\$25,522,176	(10)		
Income taxes (grossed up)	\$34,724,049			
Federal tax (%)	15.00%			
Provincial tax (%)	11.50%			
Income Tax Credits	(\$2,736,000)			
4 Capitalization/Cost of Capital				
Capital Structure:				
Long-term debt Capitalization Ratio (%)	56.0%			
Short-term debt Capitalization Ratio (%)	4.0%	(8)	(8)	(8)
Common Equity Capitalization Ratio (%)	40.0%			
Preferred Shares Capitalization Ratio (%)				
	100.0%			
Cost of Capital				
Long-term debt Cost Rate (%)	3.71%			
Short-term debt Cost Rate (%)	2.61%			
Common Equity Cost Rate (%)	8.82%			
Preferred Shares Cost Rate (%)				

Notes:

General

Data inputs are required on Sheets 3. Data from Sheet 3 will automatically complete calculations on sheets 4 through 9 (Rate Base through Revenue Requirement). Sheets 4 through 9 do not require any inputs except for notes that the Applicant may wish to enter to support the results. Pale green cells are available on sheets 4 through 9 to enter both footnotes beside key cells and the related text for the notes at the bottom of each sheet.

(1) All inputs are in dollars (\$) except where inputs are individually identified as percentages (%)

(2) Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use column M and Adjustments in column I

(3) Net of addbacks and deductions to arrive at taxable income.

(4) Average of Gross Fixed Assets at beginning and end of the Test Year

(5) Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount.

(6) Select option from drop-down list by clicking on cell M10. This column allows for the application update reflecting the end of discovery or Argument-in-Chief. Also, the outcome of any Settlement Process can be reflected.

(7) Input total revenue offsets for deriving the base revenue requirement from the service revenue requirement

(8) 4.0% unless an Applicant has proposed or been approved for another amount.

(9) The default Working Capital Allowance factor is 7.5% (of Cost of Power plus controllable expenses), per the letter issued by the Board on June 3, 2015. Alternatively, a WCA factor based on lead-lag study, with supporting rationale could be provided.

(10) This value is adjusted from PILS model to reflect inclusion of tax credits in OM&A. See Exhibit 4B, Tab 2, Schedule 1



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Revenue Requirement Workform (RRWF) for 2020 Filers

Rate Base and Working Capital

Rate Base									
Line No.	Particulars		Initial Application						Per Board Decision
1	Gross Fixed Assets (average)	(2)	\$5,616,709,673		\$ -		\$5,616,709,673		\$5,616,709,673
2	Accumulated Depreciation (average)	(2)	(\$1,236,603,102)		\$ -		(\$1,236,603,102)		(\$1,236,603,102)
3	Net Fixed Assets (average)	(2)	\$4,380,106,571		\$ -		\$4,380,106,571		\$4,380,106,571
4	Allowance for Working Capital	(1)	\$235,187,789	#####			\$ -	\$ -	\$ -
5	Total Rate Base		\$4,615,294,360	#####			\$4,380,106,571	\$ -	\$4,380,106,571

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$277,497,844	\$ -	\$277,497,844	\$ -	\$277,497,844
7	Cost of Power	\$3,384,043,227	\$ -	\$3,384,043,227	\$ -	\$3,384,043,227
8	Working Capital Base	\$3,661,541,071	\$ -	\$3,661,541,071	\$ -	\$3,661,541,071
9	Working Capital Rate % ⁽¹⁾	6.42%	-6.42%	0.00%	0.00%	0.00%
10	Working Capital Allowance	\$235,187,789	#####	\$ -	\$ -	\$ -

Notes

(1) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2018 cost of service applications is 7.5%, per the letter issued by the Board on June 3, 2015.

(2) Average of opening and closing balances for the year.



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Revenue Requirement Workform (RRWF) for 2020 Filers

Utility Income

Line No.	Particulars	Initial Application						Per Board Decision
Operating Revenues:								
1	Distribution Revenue (at Proposed Rates)	\$796,824,614		(\$796,824,614)		\$ -		\$ -
2	Other Revenue ⁽¹⁾	\$47,687,081		(\$47,687,081)		\$ -		\$ -
3	Total Operating Revenues	\$844,511,695		(\$844,511,695)		\$ -		\$ -
Operating Expenses:								
4	OM+A Expenses	\$271,962,868		\$ -		\$271,962,868		\$271,962,868
5	Depreciation/Amortization	\$268,664,188		\$ -		\$268,664,188		\$268,664,188
6	Property taxes	\$5,534,976		\$ -		\$5,534,976		\$5,534,976
7	Capital taxes	\$ -		\$ -		\$ -		\$ -
8	Other expense	\$ -		\$ -		\$ -		\$ -
9	Subtotal (lines 4 to 8)	\$546,162,032		\$ -		\$546,162,032		\$546,162,032
10	Deemed Interest Expense	\$100,798,029		(\$100,798,029)		\$ -		\$ -
11	Total Expenses (lines 9 to 10)	\$646,960,061		(\$100,798,029)		\$546,162,032		\$546,162,032
12	Utility income before income taxes	\$197,551,634		(\$743,713,666)		(\$546,162,032)		(\$546,162,032)
13	Income taxes (grossed-up)	\$34,724,049		\$ -		\$34,724,049		\$34,724,049
14	Utility net income	\$162,827,585		(\$743,713,666)		(\$580,886,081)		(\$580,886,081)

Notes

Other Revenues / Revenue Offsets

(1)	Specific Service Charges	\$6,581,270		\$ -		\$ -
	Late Payment Charges	\$3,751,641		\$ -		\$ -
	Other Distribution Revenue	\$35,898,269		\$ -		\$ -
	Other Income and Deductions	\$1,455,901		\$ -		\$ -
	Total Revenue Offsets	\$47,687,081		\$ -		\$ -



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Taxes/PILs

Line No.	Particulars	Application				Per Board Decision	
<u>Determination of Taxable Income</u>							
1	Utility net income before taxes	\$162,827,585		\$ -		\$ -	
2	Adjustments required to arrive at taxable utility income	(\$61,393,745)		\$ -		\$ -	
3	Taxable income	<u>\$101,433,840</u>		<u>\$ -</u>		<u>\$ -</u>	
<u>Calculation of Utility income Taxes</u>							
4	Income taxes	<u>\$25,522,176</u>		<u>\$25,522,176</u>		<u>\$25,522,176</u>	
6	Total taxes	<u>\$25,522,176</u>		<u>\$25,522,176</u>		<u>\$25,522,176</u>	
7	Gross-up of Income Taxes	<u>\$9,201,873</u>		<u>\$9,201,873</u>		<u>\$9,201,873</u>	
8	Grossed-up Income Taxes	<u>\$34,724,049</u>		<u>\$34,724,049</u>		<u>\$34,724,049</u>	
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$34,724,049</u>		<u>\$34,724,049</u>		<u>\$34,724,049</u>	
10	Other tax Credits	(\$2,736,000)		(\$2,736,000)		(\$2,736,000)	
<u>Tax Rates</u>							
11	Federal tax (%)	15.00%		15.00%		15.00%	
12	Provincial tax (%)	11.50%		11.50%		11.50%	
13	Total tax rate (%)	<u>26.50%</u>		<u>26.50%</u>		<u>26.50%</u>	

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Capitalization/Cost of Capital

Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
		Initial Application			
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	56.00%	\$2,584,564,841	3.71%	\$95,979,661
2	Short-term Debt	4.00%	\$184,611,774	2.61%	\$4,818,367
3	Total Debt	60.00%	\$2,769,176,616	3.64%	\$100,798,029
	Equity				
4	Common Equity	40.00%	\$1,846,117,744	8.82%	\$162,827,585
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$1,846,117,744	8.82%	\$162,827,585
7	Total	100.00%	\$4,615,294,360	5.71%	\$263,625,614
		Per Board Decision			
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	0.00%	\$ -	0.00%	\$ -
2	Short-term Debt	0.00%	\$ -	0.00%	\$ -
3	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
4	Common Equity	0.00%	\$ -	0.00%	\$ -
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	0.00%	\$ -	0.00%	\$ -
7	Total	0.00%	\$4,380,106,571	0.00%	\$ -
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	0.00%	\$ -	3.71%	\$ -
9	Short-term Debt	0.00%	\$ -	2.61%	\$ -
10	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
11	Common Equity	0.00%	\$ -	8.82%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	0.00%	\$ -	0.00%	\$ -
14	Total	0.00%	\$4,380,106,571	0.00%	\$ -

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Deficiency/Sufficiency

Line No.	Particulars	Initial Application				Per Board Decision	
		At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates
1	Revenue Deficiency from Below		\$23,550,297		(\$251,094,780)		\$743,077,595
2	Distribution Revenue	\$771,399,203	\$773,274,317	\$771,399,203	\$1,047,919,394	\$ -	(\$743,077,595)
3	Other Operating Revenue Offsets - net	\$47,687,081	\$47,687,081	\$ -	\$ -	\$ -	\$ -
4	Total Revenue	\$819,086,284	\$844,511,695	\$771,399,203	\$796,824,614	\$ -	\$ -
5	Operating Expenses	\$546,162,032	\$546,162,032	\$546,162,032	\$546,162,032	\$546,162,032	\$546,162,032
6	Deemed Interest Expense	\$100,798,029	\$100,798,029	\$ -	\$ -	\$ -	\$ -
8	Total Cost and Expenses	\$646,960,061	\$646,960,061	\$546,162,032	\$546,162,032	\$546,162,032	\$546,162,032
9	Utility Income Before Income Taxes	\$172,126,224	\$197,551,634	\$225,237,171	\$250,662,582	(\$546,162,032)	(\$546,162,032)
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$61,393,745)	(\$61,393,745)	(\$61,393,745)	(\$61,393,745)	\$ -	\$ -
11	Taxable Income	\$110,732,479	\$136,157,889	\$163,843,426	\$189,268,837	(\$546,162,032)	(\$546,162,032)
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%	26.50%	26.50%
13	Income Tax on Taxable Income	\$29,344,107	\$36,081,841	\$43,418,508	\$50,156,242	\$ -	\$ -
14	Income Tax Credits	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)	\$ -	\$ -
15	Utility Net Income	\$145,518,117	\$162,827,585	\$184,554,663	(\$580,886,081)	(\$546,162,032)	(\$580,886,081)
16	Utility Rate Base	\$4,615,294,360	\$4,615,294,360	\$4,380,106,571	\$4,380,106,571	\$4,380,106,571	\$4,380,106,571
17	Deemed Equity Portion of Rate Base	\$1,846,117,744	\$1,846,117,744	\$ -	\$ -	\$ -	\$ -
18	Income/(Equity Portion of Rate Base)	7.88%	8.82%	0.00%	0.00%	0.00%	0.00%
19	Target Return - Equity on Rate Base	8.82%	8.82%	0.00%	0.00%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-0.94%	0.00%	0.00%	0.00%	0.00%	0.00%
21	Indicated Rate of Return	5.34%	5.71%	4.21%	0.00%	-12.47%	0.00%
22	Requested Rate of Return on Rate Base	5.71%	5.71%	0.00%	0.00%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-0.38%	0.00%	4.21%	0.00%	-12.47%	0.00%
24	Target Return on Equity	\$162,827,585	\$162,827,585	\$ -	\$ -	\$ -	\$ -
25	Revenue Deficiency/(Sufficiency)	\$17,309,468	\$0	(\$184,554,663)	\$ -	\$546,162,032	\$ -
26	Gross Revenue Deficiency/(Sufficiency)	\$23,550,297 ⁽¹⁾		(\$251,094,780) ⁽¹⁾		\$743,077,595 ⁽¹⁾	

Notes:

(1) Revenue Deficiency/Sufficiency divided by (1 - Tax Rate)



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Requirement

Line No.	Particulars	Application		Per Board Decision	
1	OM&A Expenses	\$271,962,868		\$271,962,868	
2	Amortization/Depreciation	\$268,664,188		\$268,664,188	
3	Property Taxes	\$5,534,976		\$5,534,976	
5	Income Taxes (Grossed up)	\$34,724,049		\$34,724,049	
6	Other Expenses	\$ -		\$ -	
7	Return				
	Deemed Interest Expense	\$100,798,029	\$ -	\$ -	
	Return on Deemed Equity	\$162,827,585	\$ -	\$ -	
8	Service Revenue Requirement (before Revenues)	<u>\$844,511,695</u>	<u>\$580,886,081</u>	<u>\$580,886,081</u>	
9	Revenue Offsets	\$47,687,081	\$ -	\$ -	
10	Base Revenue Requirement (excluding Transformer Ownership Allowance credit adjustment)	<u>\$796,824,614</u>	<u>\$580,886,081</u>	<u>\$580,886,081</u>	
11	Distribution revenue	\$796,824,614	\$ -	\$ -	
12	Other revenue	\$47,687,081	\$ -	\$ -	
13	Total revenue	<u>\$844,511,695</u>	<u>\$ -</u>	<u>\$ -</u>	
14	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>\$0</u>	⁽¹⁾ <u>(\$580,886,081)</u>	⁽¹⁾ <u>(\$580,886,081)</u>	⁽¹⁾

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application		Δ% ⁽²⁾	Per Board Decision	Δ% ⁽²⁾
Service Revenue Requirement	\$844,511,695	\$580,886,081	(\$0)	\$580,886,081	(\$1)
Grossed-Up Revenue					
Deficiency/(Sufficiency)	\$23,550,297	(\$251,094,780)	(\$12)	\$743,077,595	(\$1)
Base Revenue Requirement (to be recovered from Distribution Rates)	\$796,824,614	\$580,886,081	(\$0)	\$580,886,081	(\$1)
Revenue Deficiency/(Sufficiency)					
Associated with Base Revenue Requirement	\$25,425,411	\$ -	(\$1)	\$ -	(\$1)

Notes

⁽¹⁾ Line 11 - Line 8

⁽²⁾ Percentage Change Relative to Initial Application



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 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 and 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	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	615,965	4,510,636,914				
2	Competitive Sector Multi-Unit Residential	85,161	277,127,203				
3	GS <50	71,499	2,267,638,936				
4	GS - 50 to 999	10,374	9,587,728,582	24,899,249			
5	GS - 1000 to 4999	430	4,561,528,177	10,392,864			
6	Large Use >5MW	44	2,009,923,443	4,789,334			
7	Street Light	165,348	115,390,403	326,622			
8	Unmetered Scattered Load	857	41,313,479				
9	Unmetered Scattered Load (Connections)	12,196					
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Total			#####	40,408,069		-	-

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 2020 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⁾	Costs Allocated from Previous Study ⁽¹⁾	%	Allocated Class Revenue Requirement ⁽¹⁾	%
From Sheet 10, Load Forecast			(7A)	
1 Residential	\$ 287,079,871	42.26%	\$ 324,653,418	38.4%
2 Competitive Sector Multi-Unit Residential	\$ 19,267,312	2.84%	\$ 36,290,421	4.3%
3 GS <50	\$ 99,019,246	14.58%	\$ 131,607,020	15.6%
4 GS - 50 to 999	\$ 157,700,127	23.21%	\$ 210,166,261	24.9%
5 GS - 1000 to 4999	\$ 55,701,964	8.20%	\$ 74,249,773	8.8%
6 Large Use >5MW	\$ 31,087,389	4.58%	\$ 40,433,897	4.8%
7 Street Light	\$ 25,331,820	3.73%	\$ 22,560,059	2.7%
8 Unmetered Scattered Load	\$ 4,173,832	0.61%	\$ 4,550,846	0.5%
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 679,361,561	100.00%	\$ 844,511,695	100.0%
Service Revenue Requirement (from Sheet 9)			\$ 844,511,695	

- (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	\$ 305,630,924	\$ 315,784,637	\$ 315,784,637	\$ 19,230,275
2 Competitive Sector Multi-Unit Residential	\$ 34,001,178	\$ 35,130,770	\$ 34,611,162	\$ 1,679,259
3 GS <50	\$ 106,186,653	\$ 109,714,401	\$ 110,012,229	\$ 8,162,022
4 GS - 50 to 999	\$ 210,952,231	\$ 213,888,036	\$ 213,888,036	\$ 7,333,311
5 GS - 1000 to 4999	\$ 72,282,491	\$ 69,063,008	\$ 69,145,224	\$ 1,396,409
6 Large Use >5MW	\$ 35,514,268	\$ 33,653,821	\$ 33,788,485	\$ 571,724
7 Street Light	\$ 15,072,589	\$ 15,573,332	\$ 15,573,332	\$ 9,005,777
8 Unmetered Scattered Load	\$ 3,887,458	\$ 4,016,607	\$ 4,021,508	\$ 308,303
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 783,527,792	\$ 796,824,614	\$ 796,824,614	\$ 47,687,081

- (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.

Cost Allocation and Rate Design**C) Rebalancing Revenue-to-Cost Ratios**

Name of Customer Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	2015	%	%	
1 Residential	94.3%	103.2%	103.2%	85 - 115
2 Competitive Sector Multi-Unit Residential	100.0%	101.4%	100.0%	
3 GS <50	91.5%	89.6%	89.8%	80 - 120
4 GS - 50 to 999	119.0%	105.3%	105.3%	80 - 120
5 GS - 1000 to 4999	101.9%	94.9%	95.0%	80 - 120
6 Large Use >5MW	95.3%	84.6%	85.0%	85 - 115
7 Street Light	82.7%	108.9%	108.9%	80 - 120
8 Unmetered Scattered Load	90.5%	95.0%	95.1%	80 - 120
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
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20				

(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		
	2020	2021	2022	
1 Residential	103.2%			85 - 115
2 Competitive Sector Multi-Unit Residential	100.0%			
3 GS <50	89.8%			80 - 120
4 GS - 50 to 999	105.3%			80 - 120
5 GS - 1000 to 4999	95.0%			80 - 120
6 Large Use >5MW	85.0%			85 - 115
7 Street Light	108.9%			80 - 120
8 Unmetered Scattered Load	95.1%			80 - 120
9 Unmetered Scattered Load (Connection)				
10				
11				
12				
13				
14				
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(11) The applicant should complete Table D if it is applying for approval of a revenue-to-cost ratio in 2019 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 2020 and 2021 Price Cap IR models, as necessary. For 2020 and 2021, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2018 (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'.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

New Rate Design Policy For Residential Customers

Please complete the following tables.

A Data Inputs (from Sheet 10. Load Forecast)

Test Year Billing Determinants for Residential Class	
Customers	615,965
kWh	4,510,636,914
Proposed Residential Class Specific Revenue Requirement ¹	
	\$ 315,784,637.29
Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 37.98
Distribution Volumetric Rate (\$/kWh)	\$ 0.00552

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	37.98	615,965	\$ 280,732,208.40	91.85%
Variable	0.00552	4,510,636,914	\$ 24,898,715.77	8.15%
TOTAL	-	-	\$ 305,630,924.17	-

C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years ²	1
--	---

	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 290,058,732.92	39.24	\$ 290,045,599.20
Variable	\$ 25,725,904.37	0.0057	\$ 25,710,630.41
TOTAL	\$ 315,784,637.29	-	\$ 315,756,229.61

	New F/V Split	Revenue @ new F/V Split	Final Adjusted Base Rates	Revenue Reconciliation @ Adjusted Rates
Fixed	100.00%	\$ 315,784,637.29	\$ 42.72	\$ 315,768,297.60
Variable	0.00%	\$ -	\$ -	\$ -
TOTAL	-	\$ 315,784,637.29	-	\$ 315,768,297.60

Checks ³	
Change in Fixed Rate	\$ 3.48
Difference Between Revenues @ Proposed Rates and Class Specific Revenue Requirement	(\$16,339.69)
	-0.01%

Notes:

- ¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- ² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. A distributor transitioning to fully fixed rates over a four year period and began the transition in 2016 would input the number "3" into cell D40. A distributor transitioning over a five-year period would input the number "4". Where the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, a distributor may propose an additional transition year.
- ³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

New Rate Design Policy For Competitive Sector Multi-Unit Customers (CSMUR)

Please complete the following tables.

A Data Inputs (from Sheet 10. Load Forecast)

Test Year Billing Determinants for CSMUR	
Customers	85,161
kWh	277,127,203

Proposed CSMUR Class Specific Revenue Requirement ¹	\$ 34,812,874.82
--	------------------

CSMUR Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 30.98
Distribution Volumetric Rate (\$/kWh)	\$ 0.00845

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	30.98	85,161	\$ 31,659,453.36	93.11%
Variable	0.00845	277,127,203	\$ 2,341,724.87	6.89%
TOTAL	-	-	\$ 34,001,178.23	-

C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years ²	1
--	---

	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 32,415,246.89	31.72	\$ 32,415,683.04
Variable	\$ 2,397,627.93	0.0087	\$ 2,411,006.67
TOTAL	\$ 34,812,874.82	-	\$ 34,826,689.71

	New F/V Split	Revenue @ new F/V Split	Final Adjusted Base Rates	Revenue Reconciliation @ Adjusted Rates
Fixed	100.00%	\$ 34,812,874.82	\$ 34.07	\$ 34,817,223.24
Variable	0.00%	\$ -	-	-
TOTAL	-	\$ 34,812,874.82	-	\$ 34,817,223.24

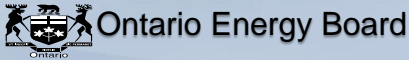
Checks ³	
Change in Fixed Rate	\$ 2.35
Difference Between Revenues @ Proposed Rates and Class Specific Revenue Requirement	\$4,348.42
	0.01%

Notes:

¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).

² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. A distributor transitioning to fully fixed rates over a four year period and began the transition in 2016 would input the number "3" into cell D40. A distributor transitioning over a five-year period would input the number "4". Where the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, a distributor may propose an additional transition year.

³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)



Revenue Requirement Workform (RRWF) for 2020 Filers

Rate Design and Revenue Reconciliation

This sheet replaces Appendix 2-V, and provides a simplified model for calculating the standard monthly and volumetric rates based on the allocated class revenues and fixed/variable split resulting from the cost allocation study and rate design and as proposed by the applicant. However, the RRWF does not replace the rate generator model that an applicant distributor may use in support of its application. The RRWF provides a demonstrative check on the derivation of the revenue requirement and on the proposed base distribution rates to recover the revenue requirement, based on summary information from a more detailed rate generator model and other models that applicants use for cost allocation, load forecasting, taxes/PILs, etc.

Stage in Process:					Initial Application		
Customer and Load Forecast					Class Allocated Revenues		
Customer Class					From Sheet 11. Cost Allocation and Sheet 12. Residential Rate Design		
Volumetric Charge Determinant					Fixed / Variable Splits ²		
Customers / Connections					Percentage to be entered as a fraction between 0 and 1		
kWh					Transformer Ownership Allowance ¹ (\$)		
kW or kVA					Monthly Service Charge		
Total Class Revenue Requirement					Volumetric Rate		
Monthly Service Charge					Rate		
Rate					No. of decimals		
No. of decimals					MSC Revenues		
Rate					Volumetric revenues		
No. of decimals					Distribution Revenues less Transformer Ownership Allowance		
Rate					1.01388889		
No. of decimals					315,807,309		
Rate					-		
No. of decimals					34,606,592		
Rate					-		
No. of decimals					32,247,360		
Rate					77,757,339		
No. of decimals					-		
Rate					110,004,698.93		
No. of decimals					213,888,920.78		
Rate					69,144,860.61		
No. of decimals					33,788,549.74		
Rate					15,571,145.72		
No. of decimals					3,907,948.94		
Rate					114,256.19		
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Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2019 Filers

Tracking Form

The first row shown, labelled "Original Application", summarizes key statistics based on the data inputs into the RRWF. After the original application filing, the applicant provides key changes in capital and operating expenses, load forecasts, cost of capital, etc., as revised through the processing of the application. This could be due to revisions or responses to interrogatories. The last row shown is the most current estimate of the cost of service data reflecting the original application and any updates provided by the applicant distributor (for updated evidence, responses to interrogatories, undertakings, etc.)

Please ensure a Reference (Column B) and/or Item Description (Column C) is entered. Please note that unused rows will automatically be hidden and the PRINT AREA set when the PRINT BUTTON on Sheet 1 is activated.

⁽¹⁾ Short reference to evidence material (interrogatory response, undertaking, exhibit number, Board Decision, Code, Guideline, Report of the Board, etc.)

⁽²⁾ Short description of change, issue, etc.

Summary of Proposed Changes

Reference ⁽¹⁾	Item / Description ⁽²⁾	Cost of Capital		Rate Base and Capital Expenditures			Operating Expenses			Revenue Requirement			
		Regulated Return on Capital	Regulated Rate of Return	Rate Base	Working Capital	Working Capital Allowance (\$)	Amortization / Depreciation	Taxes/PILs	OM&A	Service Revenue Requirement	Other Revenues	Base Revenue Requirement	Grossed up Revenue Deficiency / Sufficiency
	Original Application	\$ 263,625,614	5.71%	\$ 4,615,294,360	\$ 3,661,541,071	\$ 235,187,789	\$ 268,664,188	\$ 34,724,049	\$ 271,962,868	\$ 844,511,695	\$ 47,687,081	\$ 796,824,614	\$ 23,550,297
1	Change												
2													



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021



Version 8.00

Utility Name	Filers Toronto Hydro Electric System Limited
Service Territory	
Assigned EB Number	EB-2018-0165
Name and Title	
Phone Number	
Email Address	
Test Year	
Bridge Year	
Last Rebasing Year	2015

The RRWF has been enhanced commencing with 2017 rate applications to provide estimated base distribution rates. The enhanced RRWF is not intended to replace a utility's formal rate generator model which should continue to be the source of the proposed rates as well as the final ones at the conclusion of the proceeding. The load forecasting addition made to this model is intended to be demonstrative only and does not replace the information filed in the utility's application. In an effort to minimize the incremental work required from utilities, the cost allocation and rate design additions to this model do in fact replace former appendices that were required to be filed as part of the cost of service (Chapter 2) filing requirements.

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While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

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[10. Load Forecast](#)

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[12. Residential Rate Design](#)

[13. Rate Design and Revenue Reconciliation](#)

[14. Tracking Sheet](#)

Notes:

- (1) Pale green cells represent inputs
- (2) Pale green boxes at the bottom of each page are for additional notes
- (3) Pale yellow cells represent drop-down lists
- (4) **Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.**
- (5) **Completed versions of the Revenue Requirement Work Form are required to be filed in working Microsoft Excel format.**



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

Data Input ⁽¹⁾

	Initial Application	(2)	(6)	Per Board Decision
1 Rate Base				
Gross Fixed Assets (average)	\$6,073,208,605		\$6,073,208,605	\$6,073,208,605
Accumulated Depreciation (average)	(\$1,483,326,686) ⁽⁵⁾		(\$1,483,326,686)	(\$1,483,326,686)
Allowance for Working Capital:				
Controllable Expenses	\$279,995,324		\$ 279,995,324	\$279,995,324
Cost of Power	\$3,442,278,635		\$3,442,278,635	\$3,442,278,635
Working Capital Rate (%)	6.42% ⁽⁹⁾		⁽⁹⁾	⁽⁹⁾
2 Utility Income				
Operating Revenues:				
Distribution Revenue at Current Rates	\$797,841,742			
Distribution Revenue at Proposed Rates	\$824,227,732			
Other Revenue:				
Specific Service Charges	\$6,640,353			
Late Payment Charges	\$3,785,321			
Other Distribution Revenue	\$37,689,511			
Other Income and Deductions				
Total Revenue Offsets	\$48,115,184 ⁽⁷⁾			
Operating Expenses:				
OM+A Expenses	\$274,410,533		\$ 274,410,533	\$274,410,533
Depreciation/Amortization	\$281,929,611		\$ 281,929,611	\$281,929,611
Property taxes	\$5,584,791		\$ 5,584,791	\$5,584,791
Other expenses				
3 Taxes/PILs				
Taxable Income:				
Adjustments required to arrive at taxable income	(\$63,873,242) ⁽³⁾			
Utility Income Taxes and Rates:				
Income taxes (not grossed up)	\$26,862,812			
Income taxes (grossed up)	\$36,548,043			
Federal tax (%)	15.00%			
Provincial tax (%)	11.50%			
Income Tax Credits	(\$2,736,000)			
4 Capitalization/Cost of Capital				
Capital Structure:				
Long-term debt Capitalization Ratio (%)	56.0%		⁽⁸⁾	⁽⁸⁾
Short-term debt Capitalization Ratio (%)	4.0% ⁽⁸⁾			
Common Equity Capitalization Ratio (%)	40.0%			
Preferred Shares Capitalization Ratio (%)				
	100.0%			
Cost of Capital				
Long-term debt Cost Rate (%)	3.71%			
Short-term debt Cost Rate (%)	2.61%			
Common Equity Cost Rate (%)	8.82%			
Preferred Shares Cost Rate (%)				

Notes:

- General** Data inputs are required on Sheets 3. Data from Sheet 3 will automatically complete calculations on sheets 4 through 9 (Rate Base through Revenue Requirement). Sheets 4 through 9 do not require any inputs except for notes that the Applicant may wish to enter to support the results. Pale green cells are available on sheets 4 through 9 to enter both footnotes beside key cells and the related text for the notes at the bottom of each sheet.
- ⁽¹⁾ All inputs are in dollars (\$) except where inputs are individually identified as percentages (%)
- ⁽²⁾ Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use column M and Adjustments in column I
- ⁽³⁾ Net of addbacks and deductions to arrive at taxable income.
- ⁽⁴⁾ Average of Gross Fixed Assets at beginning and end of the Test Year
- ⁽⁵⁾ Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount.
- ⁽⁶⁾ Select option from drop-down list by clicking on cell M10. This column allows for the application update reflecting the end of discovery or Argument-in-Chief. Also, the outcome of any Settlement Process can be reflected.
- ⁽⁷⁾ Input total revenue offsets for deriving the base revenue requirement from the service revenue requirement
- ⁽⁸⁾ 4.0% unless an Applicant has proposed or been approved for another amount.
- ⁽⁹⁾ The default Working Capital Allowance factor is **7.5%** (of Cost of Power plus controllable expenses), per the letter issued by the Board on June 3, 2015. Alternatively, a WCA factor based on lead-lag study, with supporting rationale could be provided.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

Rate Base and Working Capital

Rate Base										
Line No.	Particulars		Initial Application						Per Board Decision	
1	Gross Fixed Assets (average) ⁽²⁾		\$6,073,208,605		\$ -		\$6,073,208,605		\$ -	\$6,073,208,605
2	Accumulated Depreciation (average) ⁽²⁾		#####		\$ -		(\$1,483,326,686)		\$ -	(\$1,483,326,686)
3	Net Fixed Assets (average) ⁽²⁾		\$4,589,881,919		\$ -		\$4,589,881,919		\$ -	\$4,589,881,919
4	Allowance for Working Capital ⁽¹⁾		\$239,088,778		#####		\$ -		\$ -	\$ -
5	Total Rate Base		\$4,828,970,698		#####		\$4,589,881,919		\$ -	\$4,589,881,919

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$279,995,324	\$ -	\$279,995,324	\$ -	\$279,995,324
7	Cost of Power	\$3,442,278,635	\$ -	\$3,442,278,635	\$ -	\$3,442,278,635
8	Working Capital Base	\$3,722,273,959	\$ -	\$3,722,273,959	\$ -	\$3,722,273,959
9	Working Capital Rate % ⁽¹⁾	6.42%	-6.42%	0.00%	0.00%	0.00%
10	Working Capital Allowance	\$239,088,778	#####	\$ -	\$ -	\$ -

Notes

(1) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2018 cost of service applications is 7.5%, per the letter issued by the Board on June 3, 2015.

(2) Average of opening and closing balances for the year.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

Utility Income

Line No.	Particulars	Initial Application						Per Board Decision
	Operating Revenues:							
1	Distribution Revenue (at Proposed Rates)	\$824,227,732		(\$824,227,732)		\$ -	\$ -	\$ -
2	Other Revenue ⁽¹⁾	\$48,115,184		(\$48,115,184)		\$ -	\$ -	\$ -
3	Total Operating Revenues	\$872,342,916		(\$872,342,916)		\$ -	\$ -	\$ -
	Operating Expenses:							
4	OM+A Expenses	\$274,410,533		\$ -		\$274,410,533	\$ -	\$274,410,533
5	Depreciation/Amortization	\$281,929,611		\$ -		\$281,929,611	\$ -	\$281,929,611
6	Property taxes	\$5,584,791		\$ -		\$5,584,791	\$ -	\$5,584,791
7	Capital taxes	\$ -		\$ -		\$ -	\$ -	\$ -
8	Other expense	\$ -		\$ -		\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$561,924,935		\$ -		\$561,924,935	\$ -	\$561,924,935
10	Deemed Interest Expense	\$105,464,720		(\$105,464,720)		\$ -	\$ -	\$ -
11	Total Expenses (lines 9 to 10)	\$667,389,654		(\$105,464,720)		\$561,924,935	\$ -	\$561,924,935
12	Utility income before income taxes	\$204,953,261		(\$766,878,196)		(\$561,924,935)	\$ -	(\$561,924,935)
13	Income taxes (grossed-up)	\$36,548,043		\$ -		\$36,548,043	\$ -	\$36,548,043
14	Utility net income	\$168,405,218		(\$766,878,196)		(\$598,472,978)	\$ -	(\$598,472,978)

Notes

Other Revenues / Revenue Offsets

(1)	Specific Service Charges	\$6,640,353		\$ -		\$ -
	Late Payment Charges	\$3,785,321		\$ -		\$ -
	Other Distribution Revenue	\$37,689,511		\$ -		\$ -
	Other Income and Deductions	\$ -		\$ -		\$ -
	Total Revenue Offsets	\$48,115,184		\$ -		\$ -



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

Taxes/PILs

Line No.	Particulars	Application		Per Board Decision	
<u>Determination of Taxable Income</u>					
1	Utility net income before taxes	\$170,366,086		\$ -	\$ -
2	Adjustments required to arrive at taxable utility income	(\$63,873,242)		\$ -	\$ -
3	Taxable income	<u>\$106,492,844</u>		<u>\$ -</u>	<u>\$ -</u>
<u>Calculation of Utility income Taxes</u>					
4	Income taxes	<u>\$26,862,812</u>		<u>\$26,862,812</u>	<u>\$26,862,812</u>
6	Total taxes	<u>\$26,862,812</u>		<u>\$26,862,812</u>	<u>\$26,862,812</u>
7	Gross-up of Income Taxes	<u>\$9,685,231</u>		<u>\$9,685,231</u>	<u>\$9,685,231</u>
8	Grossed-up Income Taxes	<u>\$36,548,043</u>		<u>\$36,548,043</u>	<u>\$36,548,043</u>
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$36,548,043</u>		<u>\$36,548,043</u>	<u>\$36,548,043</u>
10	Other tax Credits	(\$2,736,000)		(\$2,736,000)	(\$2,736,000)
<u>Tax Rates</u>					
11	Federal tax (%)	15.00%		15.00%	15.00%
12	Provincial tax (%)	11.50%		11.50%	11.50%
13	Total tax rate (%)	26.50%		26.50%	26.50%

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

Capitalization/Cost of Capital

Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
		Initial Application			
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	56.00%	\$2,704,223,591	3.71%	\$100,423,274
2	Short-term Debt	4.00%	\$193,158,828	2.61%	\$5,041,445
3	Total Debt	60.00%	\$2,897,382,419	3.64%	\$105,464,720
	Equity				
4	Common Equity	40.00%	\$1,931,588,279	8.82%	\$170,366,086
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$1,931,588,279	8.82%	\$170,366,086
7	Total	100.00%	\$4,828,970,698	5.71%	\$275,830,806
		Per Board Decision			
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	0.00%	\$ -	0.00%	\$ -
2	Short-term Debt	0.00%	\$ -	0.00%	\$ -
3	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
4	Common Equity	0.00%	\$ -	0.00%	\$ -
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	0.00%	\$ -	0.00%	\$ -
7	Total	0.00%	\$4,589,881,919	0.00%	\$ -
		Per Board Decision			
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	0.00%	\$ -	3.71%	\$ -
9	Short-term Debt	0.00%	\$ -	2.61%	\$ -
10	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
11	Common Equity	0.00%	\$ -	8.82%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	0.00%	\$ -	0.00%	\$ -
14	Total	0.00%	\$4,589,881,919	0.00%	\$ -

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

Revenue Deficiency/Sufficiency

Line No.	Particulars	Initial Application		Per Board Decision		Per Board Decision	
		At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates
1	Revenue Deficiency from Below		\$26,471,745		(\$262,668,384)		\$764,523,721
2	Distribution Revenue	\$797,841,742	\$797,755,986	\$797,841,742	\$1,086,896,116	\$ -	(\$764,523,721)
3	Other Operating Revenue	\$48,115,184	\$48,115,184	\$ -	\$ -	\$ -	\$ -
4	Offsets - net						
4	Total Revenue	\$845,956,926	\$872,342,916	\$797,841,742	\$824,227,732	\$ -	\$ -
5	Operating Expenses	\$561,924,935	\$561,924,935	\$561,924,935	\$561,924,935	\$561,924,935	\$561,924,935
6	Deemed Interest Expense	\$105,464,720	\$105,464,720	\$ -	\$ -	\$ -	\$ -
8	Total Cost and Expenses	\$667,389,654	\$667,389,654	\$561,924,935	\$561,924,935	\$561,924,935	\$561,924,935
9	Utility Income Before Income Taxes	\$178,567,271	\$204,953,261	\$235,916,807	\$262,302,797	(\$561,924,935)	(\$561,924,935)
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$63,873,242)	(\$63,873,242)	(\$63,873,242)	(\$63,873,242)	\$ -	\$ -
11	Taxable Income	\$114,694,029	\$141,080,019	\$172,043,565	\$198,429,555	(\$561,924,935)	(\$561,924,935)
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%	26.50%	26.50%
13	Income Tax on Taxable Income	\$30,393,918	\$37,386,205	\$45,591,545	\$52,583,832	\$ -	\$ -
14	Income Tax Credits	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)	\$ -	\$ -
15	Utility Net Income	\$150,909,353	\$168,405,218	\$193,061,262	(\$598,472,978)	(\$561,924,935)	(\$598,472,978)
16	Utility Rate Base	\$4,828,970,698	\$4,828,970,698	\$4,589,881,919	\$4,589,881,919	\$4,589,881,919	\$4,589,881,919
17	Deemed Equity Portion of Rate Base	\$1,931,588,279	\$1,931,588,279	\$ -	\$ -	\$ -	\$ -
18	Income/(Equity Portion of Rate Base)	7.81%	8.72%	0.00%	0.00%	0.00%	0.00%
19	Target Return - Equity on Rate Base	8.82%	8.82%	0.00%	0.00%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-1.01%	-0.10%	0.00%	0.00%	0.00%	0.00%
21	Indicated Rate of Return	5.31%	5.67%	4.21%	0.00%	-12.24%	0.00%
22	Requested Rate of Return on Rate Base	5.71%	5.71%	0.00%	0.00%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-0.40%	-0.04%	4.21%	0.00%	-12.24%	0.00%
24	Target Return on Equity	\$170,366,086	\$170,366,086	\$ -	\$ -	\$ -	\$ -
25	Revenue Deficiency/(Sufficiency)	\$19,456,733	(\$1,960,868)	(\$193,061,262)	\$ -	\$561,924,935	\$ -
26	Gross Revenue Deficiency/(Sufficiency)	\$26,471,745 ⁽¹⁾		(\$262,668,384) ⁽¹⁾		\$764,523,721 ⁽¹⁾	

Notes:

⁽¹⁾ Revenue Deficiency/Sufficiency divided by (1 - Tax Rate)



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

Revenue Requirement

Line No.	Particulars	Application		Per Board Decision	
1	OM&A Expenses	\$274,410,533		\$274,410,533	
2	Amortization/Depreciation	\$281,929,611		\$281,929,611	
3	Property Taxes	\$5,584,791		\$5,584,791	
5	Income Taxes (Grossed up)	\$36,548,043		\$36,548,043	
6	Other Expenses	\$ -		\$ -	
7	Return				
	Deemed Interest Expense	\$105,464,720	\$ -	\$ -	
	Return on Deemed Equity	\$170,366,086	\$ -	\$ -	
8	Service Revenue Requirement (before Revenues)	<u>\$874,303,784</u>	<u>\$598,472,978</u>	<u>\$598,472,978</u>	
9	Revenue Offsets	\$48,115,184	\$ -	\$ -	
10	Base Revenue Requirement (excluding Tranformer Ownership Allowance credit adjustment)	<u>\$826,188,600</u>	<u>\$598,472,978</u>	<u>\$598,472,978</u>	
11	Distribution revenue	\$824,227,732	\$ -	\$ -	
12	Other revenue	\$48,115,184	\$ -	\$ -	
13	Total revenue	<u>\$872,342,916</u>	<u>\$ -</u>	<u>\$ -</u>	
14	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>(\$1,960,868)</u>	⁽¹⁾ <u>(\$598,472,978)</u>	⁽¹⁾ <u>(\$598,472,978)</u>	⁽¹⁾

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application		Δ% ⁽²⁾	Per Board Decision	Δ% ⁽²⁾
Service Revenue Requirement	\$874,303,784	\$598,472,978	(\$0)	\$598,472,978	(\$1)
Grossed-Up Revenue					
Deficiency/(Sufficiency)	\$26,471,745	(\$262,668,384)	(\$11)	\$764,523,721	(\$1)
Base Revenue Requirement (to be recovered from Distribution Rates)	\$826,188,600	\$598,472,978	(\$0)	\$598,472,978	(\$1)
Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement	\$26,385,990	\$ -	(\$1)	\$ -	(\$1)

Notes

⁽¹⁾ Line 11 - Line 8

⁽²⁾ Percentage Change Relative to Initial Application



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 and 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	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	617,609	4,458,695,848	-			
2	Competitive Sector Multi-Unit Residential	90,045	286,903,886	-			
3	GS <50	71,596	2,238,780,453	-			
4	GS - 50 to 999	10,363	9,526,101,781	24,849,478			
5	GS - 1000 to 4999	430	4,500,819,338	10,334,297			
6	Large Use >5MW	44	1,991,635,383	4,764,614			
7	Street Light	165,571	115,193,891	327,106			
8	Unmetered Scattered Load	857	41,200,600	-			
9	Unmetered Scattered Load (Connections)	12,272		-			
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Total			23,159,331,182	40,275,495		-	-

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⁾	Costs Allocated from Previous Study ⁽¹⁾	%	Allocated Class Revenue Requirement ⁽¹⁾ (7A)	%
From Sheet 10: Load Forecast				
1 Residential	\$ 287,079,871	42.26%	\$ 336,106,313	38.4%
2 Competitive Sector Multi-Unit Resident	\$ 19,267,312	2.84%	\$ 37,570,649	4.3%
3 GS <50	\$ 99,019,246	14.58%	\$ 136,249,759	15.6%
4 GS - 50 to 999	\$ 157,700,127	23.21%	\$ 217,580,358	24.9%
5 GS - 1000 to 4999	\$ 55,701,964	8.20%	\$ 76,869,104	8.8%
6 Large Use >5MW	\$ 31,087,389	4.58%	\$ 41,860,296	4.8%
7 Street Light	\$ 25,331,820	3.73%	\$ 23,355,917	2.7%
8 Unmetered Scattered Load	\$ 4,173,832	0.61%	\$ 4,711,388	0.5%
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 679,361,561	100.00%	\$ 874,303,784	100.0%
Service Revenue Requirement (from Sheet 9)			\$ 874,303,784	

- (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	\$ 316,685,191	\$ 327,160,072	\$ 326,944,706	\$ 19,402,912
2 Competitive Sector Multi-Unit Resident	\$ 36,587,084	\$ 37,797,262	\$ 37,785,433	\$ 1,694,334
3 GS <50	\$ 109,054,714	\$ 112,661,877	\$ 112,620,337	\$ 8,235,295
4 GS - 50 to 999	\$ 213,465,985	\$ 220,526,721	\$ 220,563,142	\$ 7,399,145
5 GS - 1000 to 4999	\$ 68,782,349	\$ 71,057,437	\$ 71,212,854	\$ 1,408,946
6 Large Use >5MW	\$ 33,625,363	\$ 34,737,577	\$ 34,823,821	\$ 576,857
7 Street Light	\$ 15,587,707	\$ 16,103,296	\$ 16,093,607	\$ 9,086,625
8 Unmetered Scattered Load	\$ 4,010,849	\$ 4,143,515	\$ 4,143,857	\$ 311,071
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 797,799,242	\$ 824,187,757	\$ 824,187,757	\$ 48,115,185

- (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.

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**

C) Rebalancing Revenue-to-Cost Ratios

Name of Customer Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	2015 %	%	%	
1 Residential	94.3%	103.1%	103.0%	85 - 115
2 Competitive Sector Multi-Unit Resident	100.0%	105.1%	105.1%	
3 GS <50	91.5%	88.7%	88.7%	80 - 120
4 GS - 50 to 999	119.0%	104.8%	104.8%	80 - 120
5 GS - 1000 to 4999	101.9%	94.3%	94.5%	80 - 120
6 Large Use >5MW	95.3%	84.4%	84.6%	85 - 115
7 Street Light	82.7%	107.9%	107.8%	80 - 120
8 Unmetered Scattered Load	90.5%	94.5%	94.6%	80 - 120
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

(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	Test Year	Proposed Revenue-to-Cost Ratio		Policy Range
	2020	Price Cap IR Period	Price Cap IR Period	
		2021	2022	
1 Residential	103.0%			85 - 115
2 Competitive Sector Multi-Unit Resident	105.1%			
3 GS <50	88.7%			80 - 120
4 GS - 50 to 999	104.8%			80 - 120
5 GS - 1000 to 4999	94.5%			80 - 120
6 Large Use >5MW	84.6%			85 - 115
7 Street Light	107.8%			80 - 120
8 Unmetered Scattered Load	94.6%			80 - 120
9 Unmetered Scattered Load (Connection)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

(11) The applicant should complete Table D if it is applying for approval of a revenue-to-cost ratio in 2019 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 2020 and 2021 Price Cap IR models, as necessary. For 2020 and 2021, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2018 (in the current Revenue/Cost Ratio Adjustment Worksheet, Worksheet C1.1 'Decision - Cost Revenue Adjustment, column d), and enter TBD for class(es) that will be entered as 'Rebalance'.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2021 Filers

New Rate Design Policy For Residential Customers

Please complete the following tables.

A Data Inputs (from Sheet 10. Load Forecast)

Test Year Billing Determinants for Residential Class	
Customers	617,609
kWh	4,458,695,848

Proposed Residential Class Specific Revenue Requirement ¹	\$ 326,944,705.68
--	-------------------

Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	
Distribution Volumetric Rate (\$/kWh)	

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed		617,609		
Variable		4,458,695,848		
TOTAL	-	-		-

C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years ²	0
--	---

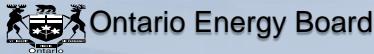
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed			
Variable			
TOTAL		-	

	New F/V Split	Revenue @ new F/V Split	Final Adjusted Base Rates	Revenue Reconciliation @ Adjusted Rates
Fixed				
Variable				
TOTAL	-	\$ -	-	

Checks ³	
Change in Fixed Rate	
Difference Between Revenues @ Proposed Rates and Class Specific Revenue Requirement	

Notes:

- ¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- ² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. A distributor transitioning to fully fixed rates over a four year period and began the transition in 2016 would input the number "3" into cell D40. A distributor transitioning over a five-year period would input the number "4". Where the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, a distributor may propose an additional transition year.
- ³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)

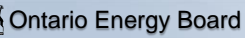


Revenue Requirement Workform (RRWF) for 2021 Filers

Rate Design and Revenue Reconciliation

This sheet replaces Appendix 2-V, and provides a simplified model for calculating the standard monthly and volumetric rates based on the allocated class revenues and fixed/variable split resulting from the cost allocation study and rate design and as proposed by the applicant. However, the RRWF does not replace the rate generator model that an applicant distributor may use in support of its application. The RRWF provides a demonstrative check on the derivation of the revenue requirement and on the proposed base distribution rates to recover the revenue requirement, based on summary information from a more detailed rate generator model and other models that applicants use for cost allocation, load forecasting, taxes/PILs, etc.

Stage in Process:		Initial Application				Class Allocated Revenues			Fixed / Variable Splits ²			Distribution Rates				Revenue Reconciliation			
Customer and Load Forecast					From Sheet 11. Cost Allocation and Sheet 12. Residential Rate Design			Percentage to be entered as a fraction between 0 and 1		Transformer Ownership Allowance ¹ (\$)	Monthly Service Charge		Volumetric Rate		1.01388889	MSC Revenues	Volumetric revenues	Distribution Revenues less Transformer Ownership Allowance	
Customer Class	Volumetric Charge Determinant	Customers / Connections	kWh	kW or kVA	Total Class Revenue Requirement	Monthly Service Charge	Volumetric	Fixed	Variable		Rate	No. of decimals	Rate	No. of decimals					
From sheet 10. Load Forecast																			
1	Residential	kWh	617,609	4,458,695,848	-	\$ 326,944,706	\$ 326,944,706	\$ -	100.00%	0.00%	\$ -	\$43.51	2	\$0.00000	/kWh	5	326,944,706	-	\$ 326,944,705.68
2	Competitive Sector Multi-Unit Residential	kWh	90,045	286,903,886	-	\$ 37,785,433	\$ 37,785,433	\$ -	100.00%	0.00%	\$ -	\$34.49		\$0.00000	/kWh	5	37,785,433	-	\$ 37,785,433.28
3	GS <50	kWh	71,596	2,238,780,453	-	\$ 112,620,337	\$ 33,344,376	\$ 79,275,961	29.61%	70.39%	\$ -	\$38.28		\$0.03541	/kWh	5	33,345,121	79,275,216	\$ 112,620,336.90
4	GS - 50 to 999	kVA	10,363	9,526,101,781	24,849,478	\$ 220,563,142	\$ 6,672,881	\$ 213,890,261	3.03%	96.97%	\$ 3,934,179	\$52.92		\$8.6457	/kVA	4	6,672,321	217,825,040	\$ 220,563,182.28
5	GS - 1000 to 4999	kVA	430	4,500,819,338	10,334,297	\$ 71,212,854	\$ 4,721,559	\$ 66,491,295	6.63%	93.37%	\$ 5,409,797	\$902.50		\$6.8622	/kVA	4	4,721,579	71,900,958	\$ 71,212,739.61
6	Large Use >5MW	kVA	44	1,991,635,383	4,764,614	\$ 34,823,821	\$ 2,105,035	\$ 32,718,786	6.04%	93.96%	\$ 2,927,366	\$3,932.19		\$7.3790	/kVA	4	2,105,032	35,646,392	\$ 34,824,057.44
7	Street Light	kVA	165,571	115,193,891	327,106	\$ 16,093,607	\$ 3,446,247	\$ 12,647,360	21.41%	78.59%	\$ -	\$1.71		\$38.1348	/kVA	4	3,444,708	12,647,374	\$ 16,092,081.70
8	Unmetered Scattered Load	kWh	857	41,200,600	-	\$ 4,143,857	\$ 79,425	\$ 3,948,719	1.92%	95.29%	\$ -	\$7.62		\$0.09584	/kWh	5	79,452	3,948,666	\$ 4,028,118.00
9	Unmetered Scattered Load (Connections)		12,272	-	-		\$ 115,713	\$ -	2.79%		\$ -	\$0.77		\$0.00000			114,968	-	\$ 114,968.19
10			-	-	-												\$ -	\$ -	\$ -
11			-	-	-												\$ -	\$ -	\$ -
12			-	-	-												\$ -	\$ -	\$ -
13			-	-	-												\$ -	\$ -	\$ -
14			-	-	-												\$ -	\$ -	\$ -
15			-	-	-												\$ -	\$ -	\$ -
16			-	-	-												\$ -	\$ -	\$ -
17			-	-	-												\$ -	\$ -	\$ -
18			-	-	-												\$ -	\$ -	\$ -
19			-	-	-												\$ -	\$ -	\$ -
20			-	-	-												\$ -	\$ -	\$ -
Total Transformer Ownership Allowance										\$ 12,271,342	Rates recover revenue requirement				Total Distribution Revenues		\$ 824,185,623.08		
Notes:														Base Revenue Requirement		\$ 826,188,599.67			
														Difference		-\$ 2,002,976.59			
														% Difference		-0.242%			
¹ Transformer Ownership Allowance is entered as a positive amount, and only for those classes to which it applies.																			



Revenue Requirement Workform (RRWF) for 2019 Filers

(2) **Short description of change, issue, etc.**

[illegible]



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 Filers



Version 8.00

Utility Name	Toronto Hydro-Electric System Limited
Service Territory	
Assigned EB Number	EB-2018-0165
Name and Title	
Phone Number	
Email Address	
Test Year	
Bridge Year	
Last Rebasing Year	2015

The RRWF has been enhanced commencing with 2017 rate applications to provide estimated base distribution rates. The enhanced RRWF is not intended to replace a utility's formal rate generator model which should continue to be the source of the proposed rates as well as the final ones at the conclusion of the proceeding. The load forecasting addition made to this model is intended to be demonstrative only and does not replace the information filed in the utility's application. In an effort to minimize the incremental work required from utilities, the cost allocation and rate design additions to this model do in fact replace former appendices that were required to be filed as part of the cost of service (Chapter 2) filing requirements.

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 Filers

[1. Info](#)

[2. Table of Contents](#)

[3. Data Input Sheet](#)

[4. Rate Base](#)

[5. Utility Income](#)

[6. Taxes PILs](#)

[7. Cost of Capital](#)

[8. Rev. Def. Suff](#)

[9. Rev. Req](#)

[10. Load Forecast](#)

[11. Cost Allocation](#)

[12. Residential Rate Design](#)

[13. Rate Design and Revenue Reconciliation](#)

[14. Tracking Sheet](#)

Notes:

- (1) Pale green cells represent inputs
- (2) Pale green boxes at the bottom of each page are for additional notes
- (3) Pale yellow cells represent drop-down lists
- (4) **Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.**
- (5) **Completed versions of the Revenue Requirement Work Form are required to be filed in working Microsoft Excel format.**



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 Filers

Data Input ⁽¹⁾

	Initial Application	(2)	(5)	Per Board Decision
1 Rate Base				
Gross Fixed Assets (average)	\$6,579,674,706		\$ 6,579,674,706	\$6,579,674,706
Accumulated Depreciation (average)	(\$1,741,668,171)	(5)	(\$1,741,668,171)	(\$1,741,668,171)
Allowance for Working Capital:				
Controllable Expenses	\$282,515,282		\$ 282,515,282	\$282,515,282
Cost of Power	\$3,510,397,351		\$ 3,510,397,351	\$3,510,397,351
Working Capital Rate (%)	6.42%	(9)	(9)	(9)
2 Utility Income				
Operating Revenues:				
Distribution Revenue at Current Rates	\$826,212,025			
Distribution Revenue at Proposed Rates	\$846,898,973			
Other Revenue:				
Specific Service Charges	\$6,699,967			
Late Payment Charges	\$3,819,304			
Other Distribution Revenue	\$38,027,870			
Other Income and Deductions				
Total Revenue Offsets	\$48,547,141	(7)		
Operating Expenses:				
OM+A Expenses	\$276,880,228		\$ 276,880,228	\$276,880,228
Depreciation/Amortization	\$293,076,608		\$ 293,076,608	\$293,076,608
Property taxes	\$5,635,054		\$ 5,635,054	\$5,635,054
Other expenses				
3 Taxes/PILs				
Taxable Income:				
	(\$83,502,066)	(3)		
Adjustments required to arrive at taxable income				
Utility Income Taxes and Rates:				
Income taxes (not grossed up)	\$24,023,360			
Income taxes (grossed up)	\$32,684,843			
Federal tax (%)	15.00%			
Provincial tax (%)	11.50%			
Income Tax Credits	(\$2,736,000)			
4 Capitalization/Cost of Capital				
Capital Structure:				
Long-term debt Capitalization Ratio (%)	56.0%			
Short-term debt Capitalization Ratio (%)	4.0%	(8)	(8)	(8)
Common Equity Capitalization Ratio (%)	40.0%			
Preferred Shares Capitalization Ratio (%)				
	100.0%			
Cost of Capital				
Long-term debt Cost Rate (%)	3.71%			
Short-term debt Cost Rate (%)	2.61%			
Common Equity Cost Rate (%)	8.82%			
Preferred Shares Cost Rate (%)				

Notes:

General Data inputs are required on Sheets 3. Data from Sheet 3 will automatically complete calculations on sheets 4 through 9 (Rate Base through Revenue Requirement). Sheets 4 through 9 do not require any inputs except for notes that the Applicant may wish to enter to support the results. Pale green cells are available on sheets 4 through 9 to enter both footnotes beside key cells and the related text for the notes at the bottom of each sheet.

(1) All inputs are in dollars (\$) except where inputs are individually identified as percentages (%)

(2) Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use column M and Adjustments in column I

(3) Net of addbacks and deductions to arrive at taxable income.

(4) Average of Gross Fixed Assets at beginning and end of the Test Year

(5) Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount.

(6) Select option from drop-down list by clicking on cell M10. This column allows for the application update reflecting the end of discovery or Argument-in-Chief. Also, the outcome of any Settlement Process can be reflected.

(7) Input total revenue offsets for deriving the base revenue requirement from the service revenue requirement

(8) 4.0% unless an Applicant has proposed or been approved for another amount.

(9) The default Working Capital Allowance factor is **7.5%** (of Cost of Power plus controllable expenses), per the letter issued by the Board on June 3, 2015. Alternatively, a WCA factor based on lead-lag study, with supporting rationale could be provided.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 Filers

Rate Base and Working Capital

Rate Base										
Line No.	Particulars		Initial Application						Per Board Decision	
1	Gross Fixed Assets (average)	(2)	\$6,579,674,706		\$ -		\$6,579,674,706		\$ -	\$6,579,674,706
2	Accumulated Depreciation (average)	(2)	#####		\$ -		(\$1,741,668,171)		\$ -	(\$1,741,668,171)
3	Net Fixed Assets (average)	(2)	\$4,838,006,535		\$ -		\$4,838,006,535		\$ -	\$4,838,006,535
4	Allowance for Working Capital	(1)	\$243,626,036		#####		\$ -		\$ -	\$ -
5	Total Rate Base		\$5,081,632,571		#####		\$4,838,006,535		\$ -	\$4,838,006,535

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$282,515,282	\$ -	\$282,515,282	\$ -	\$282,515,282
7	Cost of Power	\$3,510,397,351	\$ -	\$3,510,397,351	\$ -	\$3,510,397,351
8	Working Capital Base	\$3,792,912,633	\$ -	\$3,792,912,633	\$ -	\$3,792,912,633
9	Working Capital Rate % ⁽¹⁾	6.42%	-6.42%	0.00%	0.00%	0.00%
10	Working Capital Allowance	\$243,626,036	#####	\$ -	\$ -	\$ -

Notes

(1) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2018 cost of service applications is 7.5%, per the letter issued by the Board on June 3, 2015.

(2) Average of opening and closing balances for the year.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 Filers

Utility Income

Line No.	Particulars	Initial Application						Per Board Decision
Operating Revenues:								
1	Distribution Revenue (at Proposed Rates)	\$846,898,973		(\$846,898,973)		\$ -	\$ -	\$ -
2	Other Revenue ⁽¹⁾	\$48,547,141		(\$48,547,141)		\$ -	\$ -	\$ -
3	Total Operating Revenues	\$895,446,114		(\$895,446,114)		\$ -	\$ -	\$ -
Operating Expenses:								
4	OM+A Expenses	\$276,880,228		\$ -		\$276,880,228	\$ -	\$276,880,228
5	Depreciation/Amortization	\$293,076,608		\$ -		\$293,076,608	\$ -	\$293,076,608
6	Property taxes	\$5,635,054		\$ -		\$5,635,054	\$ -	\$5,635,054
7	Capital taxes	\$ -		\$ -		\$ -	\$ -	\$ -
8	Other expense	\$ -		\$ -		\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$575,591,890		\$ -		\$575,591,890	\$ -	\$575,591,890
10	Deemed Interest Expense	\$110,982,855		(\$110,982,855)		\$ -	\$ -	\$ -
11	Total Expenses (lines 9 to 10)	\$686,574,745		(\$110,982,855)		\$575,591,890	\$ -	\$575,591,890
12	Utility income before income taxes	\$208,871,369		(\$784,463,259)		(\$575,591,890)	\$ -	(\$575,591,890)
13	Income taxes (grossed-up)	\$32,684,843		\$ -		\$32,684,843	\$ -	\$32,684,843
14	Utility net income	\$176,186,526		(\$784,463,259)		(\$608,276,733)	\$ -	(\$608,276,733)

Notes

Other Revenues / Revenue Offsets

(1)	Specific Service Charges	\$6,699,967		\$ -		\$ -	\$ -
	Late Payment Charges	\$3,819,304		\$ -		\$ -	\$ -
	Other Distribution Revenue	\$38,027,870		\$ -		\$ -	\$ -
	Other Income and Deductions	\$ -		\$ -		\$ -	\$ -
	Total Revenue Offsets	\$48,547,141		\$ -		\$ -	\$ -



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 Filers

Taxes/PILs

Line No.	Particulars	Application				Per Board Decision	
<u>Determination of Taxable Income</u>							
1	Utility net income before taxes	\$179,279,997		\$ -		\$ -	
2	Adjustments required to arrive at taxable utility income	(\$83,502,066)		\$ -		\$ -	
3	Taxable income	<u>\$95,777,931</u>		<u>\$ -</u>		<u>\$ -</u>	
<u>Calculation of Utility income Taxes</u>							
4	Income taxes	<u>\$24,023,360</u>		<u>\$24,023,360</u>		<u>\$24,023,360</u>	
6	Total taxes	<u>\$24,023,360</u>		<u>\$24,023,360</u>		<u>\$24,023,360</u>	
7	Gross-up of Income Taxes	<u>\$8,661,483</u>		<u>\$8,661,483</u>		<u>\$8,661,483</u>	
8	Grossed-up Income Taxes	<u>\$32,684,843</u>		<u>\$32,684,843</u>		<u>\$32,684,843</u>	
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$32,684,843</u>		<u>\$32,684,843</u>		<u>\$32,684,843</u>	
10	Other tax Credits	(\$2,736,000)		(\$2,736,000)		(\$2,736,000)	
<u>Tax Rates</u>							
11	Federal tax (%)	15.00%		15.00%		15.00%	
12	Provincial tax (%)	11.50%		11.50%		11.50%	
13	Total tax rate (%)	<u>26.50%</u>		<u>26.50%</u>		<u>26.50%</u>	

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 Filers

Capitalization/Cost of Capital

Line No.	Particulars	Capitalization Ratio		Cost Rate		Return
		Initial Application				
		(%)	(\$)	(%)		(\$)
	Debt					
1	Long-term Debt	56.00%	\$2,845,714,240	3.71%		\$105,677,631
2	Short-term Debt	4.00%	\$203,265,303	2.61%		\$5,305,224
3	Total Debt	60.00%	\$3,048,979,542	3.64%		\$110,982,855
	Equity					
4	Common Equity	40.00%	\$2,032,653,028	8.82%		\$179,279,997
5	Preferred Shares	0.00%	\$ -	0.00%		\$ -
6	Total Equity	40.00%	\$2,032,653,028	8.82%		\$179,279,997
7	Total	100.00%	\$5,081,632,571	5.71%		\$290,262,852
		(%)	(\$)	(%)		(\$)
	Debt					
1	Long-term Debt	0.00%	\$ -	0.00%		\$ -
2	Short-term Debt	0.00%	\$ -	0.00%		\$ -
3	Total Debt	0.00%	\$ -	0.00%		\$ -
	Equity					
4	Common Equity	0.00%	\$ -	0.00%		\$ -
5	Preferred Shares	0.00%	\$ -	0.00%		\$ -
6	Total Equity	0.00%	\$ -	0.00%		\$ -
7	Total	0.00%	\$4,838,006,535	0.00%		\$ -
		Per Board Decision				
		(%)	(\$)	(%)		(\$)
	Debt					
8	Long-term Debt	0.00%	\$ -	3.71%		\$ -
9	Short-term Debt	0.00%	\$ -	2.61%		\$ -
10	Total Debt	0.00%	\$ -	0.00%		\$ -
	Equity					
11	Common Equity	0.00%	\$ -	8.82%		\$ -
12	Preferred Shares	0.00%	\$ -	0.00%		\$ -
13	Total Equity	0.00%	\$ -	0.00%		\$ -
14	Total	0.00%	\$4,838,006,535	0.00%		\$ -

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 Filers

Revenue Deficiency/Sufficiency

Line No.	Particulars	Initial Application		Per Board Decision	
		At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates
1	Revenue Deficiency from Below		\$21,905,307		(\$284,448,771)
2	Distribution Revenue	\$826,212,025	\$824,993,666	\$826,212,025	\$1,131,347,744
3	Other Operating Revenue	\$48,547,141	\$48,547,141	\$ -	\$ -
4	Offsets - net				
4	Total Revenue	\$874,759,165	\$895,446,114	\$826,212,025	\$846,898,973
5	Operating Expenses	\$575,591,890	\$575,591,890	\$575,591,890	\$575,591,890
6	Deemed Interest Expense	\$110,982,855	\$110,982,855	\$ -	\$ -
8	Total Cost and Expenses	\$686,574,745	\$686,574,745	\$575,591,890	\$575,591,890
9	Utility Income Before Income Taxes	\$188,184,420	\$208,871,369	\$250,620,135	\$271,307,083
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$83,502,066)	(\$83,502,066)	(\$83,502,066)	(\$83,502,066)
11	Taxable Income	\$104,682,354	\$125,369,303	\$167,118,069	\$187,805,017
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%
13	Income Tax on Taxable Income	\$27,740,824	\$33,222,865	\$44,286,288	\$49,768,330
14	Income Tax Credits	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)
15	Utility Net Income	\$163,179,597	\$176,186,526	\$209,069,847	(\$608,276,733)
16	Utility Rate Base	\$5,081,632,571	\$5,081,632,571	\$4,838,006,535	\$4,838,006,535
17	Deemed Equity Portion of Rate Base	\$2,032,653,028	\$2,032,653,028	\$ -	\$ -
18	Income/(Equity Portion of Rate Base)	8.03%	8.67%	0.00%	0.00%
19	Target Return - Equity on Rate Base	8.82%	8.82%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-0.79%	-0.15%	0.00%	0.00%
21	Indicated Rate of Return	5.40%	5.65%	4.32%	0.00%
22	Requested Rate of Return on Rate Base	5.71%	5.71%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-0.32%	-0.06%	4.32%	0.00%
24	Target Return on Equity	\$179,279,997	\$179,279,997	\$ -	\$ -
25	Revenue Deficiency/(Sufficiency)	\$16,100,401	(\$3,093,471)	(\$209,069,847)	\$ -
26	Gross Revenue Deficiency/(Sufficiency)	\$21,905,307 ⁽¹⁾		(\$284,448,771) ⁽¹⁾	\$783,118,217 ⁽¹⁾

Notes:

⁽¹⁾ Revenue Deficiency/Sufficiency divided by (1 - Tax Rate)



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 Filers

Revenue Requirement

Line No.	Particulars	Application				Per Board Decision	
1	OM&A Expenses	\$276,880,228		\$276,880,228		\$276,880,228	
2	Amortization/Depreciation	\$293,076,608		\$293,076,608		\$293,076,608	
3	Property Taxes	\$5,635,054		\$5,635,054		\$5,635,054	
5	Income Taxes (Grossed up)	\$32,684,843		\$32,684,843		\$32,684,843	
6	Other Expenses	\$ -		\$ -		\$ -	
7	Return						
	Deemed Interest Expense	\$110,982,855		\$ -		\$ -	
	Return on Deemed Equity	\$179,279,997		\$ -		\$ -	
8	Service Revenue Requirement (before Revenues)	<u>\$898,539,585</u>		<u>\$608,276,733</u>		<u>\$608,276,733</u>	
9	Revenue Offsets	\$48,547,141		\$ -		\$ -	
10	Base Revenue Requirement (excluding Tranformer Owership Allowance credit adjustment)	<u>\$849,992,444</u>		<u>\$608,276,733</u>		<u>\$608,276,733</u>	
11	Distribution revenue	\$846,898,973		\$ -		\$ -	
12	Other revenue	\$48,547,141		\$ -		\$ -	
13	Total revenue	<u>\$895,446,114</u>		<u>\$ -</u>		<u>\$ -</u>	
14	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>(\$3,093,471)</u>	⁽¹⁾	<u>(\$608,276,733)</u>	⁽¹⁾	<u>(\$608,276,733)</u>	⁽¹⁾

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application		Δ% ⁽²⁾	Per Board Decision	Δ% (2)
Service Revenue Requirement	\$898,539,585	\$608,276,733	(\$0)	\$608,276,733	(\$1)
Grossed-Up Revenue					
Deficiency/(Sufficiency)	\$21,905,307	(\$284,448,771)	(\$14)	\$783,118,217	(\$1)
Base Revenue Requirement (to be recovered from Distribution Rates)	\$849,992,444	\$608,276,733	(\$0)	\$608,276,733	(\$1)
Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement	\$20,686,948	\$ -	(\$1)	\$ -	(\$1)

Notes

⁽¹⁾ Line 11 - Line 8

⁽²⁾ Percentage Change Relative to Initial Application



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 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 and 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
1	Residential	619,254	4,422,717,979						
2	Competitive Sector Multi-Unit Residential	95,962	300,278,055						
3	GS <50	71,692	2,214,262,866						
4	GS - 50 to 999	10,352	9,482,679,716			24,840,867			
5	GS - 1000 to 4999	430	4,444,016,815			10,283,783			
6	Large Use >5MW	44	1,977,187,697			4,748,366			
7	Street Light	165,839	115,380,364			327,591			
8	Unmetered Scattered Load	857	41,200,600						
9	Unmetered Scattered Load (Connections)	12,272							
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
Total					22,997,724,093	40,200,607		-	-

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 2022 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⁾	Costs Allocated from Previous Study ⁽¹⁾	%	Allocated Class Revenue Requirement ⁽¹⁾ (7A)	%
From Sheet 10, Load Forecast				
1 Residential	\$ 287,079,871	42.26%	\$ 345,423,219	38.4%
2 Competitive Sector Multi-Unit Residential	\$ 19,267,312	2.84%	\$ 38,612,112	4.3%
3 GS <50	\$ 99,019,246	14.58%	\$ 140,026,618	15.6%
4 GS - 50 to 999	\$ 157,700,127	23.21%	\$ 223,611,711	24.9%
5 GS - 1000 to 4999	\$ 55,701,964	8.20%	\$ 78,999,924	8.8%
6 Large Use >5MW	\$ 31,087,389	4.58%	\$ 43,020,668	4.8%
7 Street Light	\$ 25,331,820	3.73%	\$ 24,003,346	2.7%
8 Unmetered Scattered Load	\$ 4,173,832	0.61%	\$ 4,841,988	0.5%
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 679,361,561	100.00%	\$ 898,539,585	100.0%
Service Revenue Requirement (from Sheet 9)			\$ 898,539,585	

(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	\$ 327,783,527	\$ 336,012,380	\$ 335,877,177	\$ 19,577,103
2 Competitive Sector Multi-Unit Residential	\$ 40,269,494	\$ 41,280,441	\$ 41,505,964	\$ 1,709,545
3 GS <50	\$ 111,795,446	\$ 114,602,019	\$ 114,450,611	\$ 8,309,228
4 GS - 50 to 999	\$ 220,473,129	\$ 226,008,004	\$ 226,003,812	\$ 7,465,571
5 GS - 1000 to 4999	\$ 70,877,474	\$ 72,656,820	\$ 72,734,767	\$ 1,421,594
6 Large Use >5MW	\$ 34,706,612	\$ 35,577,905	\$ 35,575,066	\$ 582,036
7 Street Light	\$ 16,110,700	\$ 16,515,151	\$ 16,510,255	\$ 9,168,200
8 Unmetered Scattered Load	\$ 4,142,264	\$ 4,246,254	\$ 4,241,320	\$ 313,864
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 826,158,645	\$ 846,898,973	\$ 846,898,973	\$ 48,547,141

(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.

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**

C) Rebalancing Revenue-to-Cost Ratios

Name of Customer Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	2015 %	%	%	
1 Residential	94.3%	102.9%	102.9%	85 - 115
2 Competitive Sector Multi-Unit Residential	100.0%	111.3%	111.9%	
3 GS <50	91.5%	87.8%	87.7%	80 - 120
4 GS - 50 to 999	119.0%	104.4%	104.4%	
5 GS - 1000 to 4999	101.9%	93.8%	93.9%	80 - 120
6 Large Use >5MW	95.3%	84.1%	84.0%	
7 Street Light	82.7%	107.0%	107.0%	80 - 120
8 Unmetered Scattered Load	90.5%	94.2%	94.1%	
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

(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		
	2020	2021	2022	
1 Residential	102.9%			85 - 115
2 Competitive Sector Multi-Unit Residential	111.9%			
3 GS <50	87.7%			80 - 120
4 GS - 50 to 999	104.4%			
5 GS - 1000 to 4999	93.9%			80 - 120
6 Large Use >5MW	84.0%			
7 Street Light	107.0%			80 - 120
8 Unmetered Scattered Load	94.1%			
9 Unmetered Scattered Load (Connection:				80 - 120
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

(11) The applicant should complete Table D if it is applying for approval of a revenue-to-cost ratio in 2019 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 2020 and 2021 Price Cap IR models, as necessary. For 2020 and 2021, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2018 (in the current Revenue/Cost Ratio Adjustment Worksheet, Worksheet C1.1 'Decision - Cost Revenue Adjustment, column d), and enter TBD for class(es) that will be entered as 'Rebalance'.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2022 Filers

New Rate Design Policy For Residential Customers

Please complete the following tables.

A Data Inputs (from Sheet 10. Load Forecast)

Test Year Billing Determinants for Residential Class	
Customers	619,254
kWh	4,422,717,979
Proposed Residential Class Specific Revenue Requirement ¹	
	\$ 335,877,177.06
Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ -
Distribution Volumetric Rate (\$/kWh)	\$ -

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	0	619,254	\$ -	
Variable	0	4,422,717,979	\$ -	
TOTAL	-	-	\$ -	-

C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years ²	1
--	---

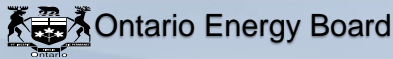
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed			
Variable			
TOTAL		-	

	New F/V Split	Revenue @ new F/V Split	Final Adjusted Base Rates	Revenue Reconciliation @ Adjusted Rates
Fixed				
Variable				
TOTAL	-	\$ -	-	

Checks ³	
Change in Fixed Rate	
Difference Between Revenues @ Proposed Rates and Class Specific Revenue Requirement	

Notes:

- ¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- ² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. A distributor transitioning to fully fixed rates over a four year period and began the transition in 2016 would input the number "3" into cell D40. A distributor transitioning over a five-year period would input the number "4". Where the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, a distributor may propose an additional transition year.
- ³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)



Revenue Requirement Workform (RRWF) for 2022 Filers

Rate Design and Revenue Reconciliation

This sheet replaces Appendix 2-V, and provides a simplified model for calculating the standard monthly and volumetric rates based on the allocated class revenues and fixed/variable split resulting from the cost allocation study and rate design and as proposed by the applicant. However, the RRWF does not replace the rate generator model that an applicant distributor may use in support of its application. The RRWF provides a demonstrative check on the derivation of the revenue requirement and on the proposed base distribution rates to recover the revenue requirement, based on summary information from a more detailed rate generator model and other models that applicants use for cost allocation, load forecasting, taxes/PILs, etc.

Stage in Process:		Initial Application				Class Allocated Revenues			Fixed / Variable Splits ²			Distribution Rates				Revenue Reconciliation			
Customer and Load Forecast					From Sheet 11. Cost Allocation and Sheet 12. Residential Rate Design			Percentage to be entered as a fraction between 0 and 1											
Customer Class		Volumetric Charge Determinant	Customers / Connections	kWh	kW or kVA	Total Class Revenue Requirement	Monthly Service Charge	Volumetric	Fixed	Variable	Transformer Ownership Allowance ¹ (\$)	Monthly Service Charge		Volumetric Rate		1.01388889			
From sheet 10. Load Forecast												Rate	No. of decimals	Rate	No. of decimals	MSC Revenues	Volumetric revenues	Distribution Revenues less Transformer Ownership Allowance	
1	Residential	kWh	619,254	4,422,717,979	-	\$ 335,877,177	\$ 335,877,177	\$ -	100.00%	0.00%	\$ -	\$44.58	2	\$0.00000	/kWh	5	335,877,177	-	\$ 335,877,177.06
2	Competitive Sector Multi-Unit Residential	kWh	95,962	300,278,055	-	\$ 41,505,964	\$ 41,505,964	\$ -	100.00%	0.00%	\$ -	\$35.55		\$0.00000	/kWh	5	41,505,964	-	\$ 41,505,964.05
3	GS <50	kWh	71,692	2,214,262,866	-	\$ 114,450,611	\$ 34,183,160	\$ 80,267,451	29.87%	70.13%	\$ -	\$39.19		\$0.03625	/kWh	5	34,183,582	80,267,029	\$ 114,450,610.90
4	GS - 50 to 999	kVA	10,352	9,482,679,716	24,840,867	\$ 226,003,812	\$ 6,833,426	\$ 219,170,387	3.02%	96.98%	\$ 3,932,887	\$54.26		\$8.8583	/kVA	4	6,834,011	223,104,073	\$ 226,005,197.47
5	GS - 1000 to 4999	kVA	430	4,444,016,815	10,283,783	\$ 72,734,767	\$ 4,844,620	\$ 67,890,147	6.66%	93.34%	\$ 5,383,442	\$926.02		\$7.0276	/kVA	4	4,844,628	73,274,064	\$ 72,735,250.26
6	Large Use >5MW	kVA	44	1,977,187,697	4,748,366	\$ 35,575,066	\$ 2,157,357	\$ 33,417,709	6.06%	93.94%	\$ 2,917,387	\$4,029.93		\$7.5473	/kVA	4	2,157,356	36,335,083	\$ 35,575,052.58
7	Street Light	kVA	165,839	115,380,364	327,591	\$ 16,510,255	\$ 3,528,205	\$ 12,982,050	21.37%	78.63%	\$ -	\$1.75		\$39.0860	/kVA	4	3,530,992	12,982,058	\$ 16,513,050.50
8	Unmetered Scattered Load	kWh	857	41,200,600	-	\$ 4,241,320	\$ 81,375	\$ 4,042,210	1.92%	95.31%	\$ -	\$7.80		\$0.09811	/kWh	5	81,329	4,042,191	\$ 4,123,520.20
9	Unmetered Scattered Load (Connections)		12,272	-	-		\$ 117,735	\$ -	2.78%		\$ -	\$0.79		\$0.00000			117,954	-	\$ 117,954.37
10			-	-	-												\$ -	\$ -	\$ -
11			-	-	-												\$ -	\$ -	\$ -
12			-	-	-												\$ -	\$ -	\$ -
13			-	-	-												\$ -	\$ -	\$ -
14			-	-	-												\$ -	\$ -	\$ -
15			-	-	-												\$ -	\$ -	\$ -
16			-	-	-												\$ -	\$ -	\$ -
17			-	-	-												\$ -	\$ -	\$ -
18			-	-	-												\$ -	\$ -	\$ -
19			-	-	-												\$ -	\$ -	\$ -
20			-	-	-												\$ -	\$ -	\$ -
Total Transformer Ownership Allowance											\$ 12,233,716								
Rates recover revenue requirement																Total Distribution Revenues		\$ 846,903,777.39	
																Base Revenue Requirement		\$ 849,992,444.33	
																Difference		-\$ 3,088,666.94	
																% Difference		-0.363%	

Notes:

¹ Transformer Ownership Allowance is entered as a positive amount, and only for those classes to which it applies.

² The Fixed/Variable split, for each customer class, drives the "rate generator" portion of this sheet of the RRWF. Only the "fixed" fraction is entered, as the sum of the "fixed" and "variable" portions must sum to 100%. For a distributor that may set the Monthly Service Charge, the "fixed" ratio is calculated as: [MSC x (average number of customers or connections) x 12 months] / (Class Allocated Revenue Requirement).

[illegible]



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 Filers



Version 8.00

Utility Name	Toronto Hydro-Electric System Limited
Service Territory	
Assigned EB Number	EB-2018-0165
Name and Title	
Phone Number	
Email Address	
Test Year	
Bridge Year	
Last Rebasing Year	2015

The RRWF has been enhanced commencing with 2017 rate applications to provide estimated base distribution rates. The enhanced RRWF is not intended to replace a utility's formal rate generator model which should continue to be the source of the proposed rates as well as the final ones at the conclusion of the proceeding. The load forecasting addition made to this model is intended to be demonstrative only and does not replace the information filed in the utility's application. In an effort to minimize the incremental work required from utilities, the cost allocation and rate design additions to this model do in fact replace former appendices that were required to be filed as part of the cost of service (Chapter 2) filing requirements.

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While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 Filers

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[2. Table of Contents](#)

[3. Data Input Sheet](#)

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[5. Utility Income](#)

[6. Taxes PILs](#)

[7. Cost of Capital](#)

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[10. Load Forecast](#)

[11. Cost Allocation](#)

[12. Residential Rate Design](#)

[13. Rate Design and Revenue Reconciliation](#)

[14. Tracking Sheet](#)

Notes:

- (1) Pale green cells represent inputs
- (2) Pale green boxes at the bottom of each page are for additional notes
- (3) Pale yellow cells represent drop-down lists
- (4) **Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.**
- (5) **Completed versions of the Revenue Requirement Work Form are required to be filed in working Microsoft Excel format.**



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 Filers

Data Input ⁽¹⁾

	Initial Application	(2)	(6)	Per Board Decision
1 Rate Base				
Gross Fixed Assets (average)	\$7,140,052,883		#####	\$7,140,052,883
Accumulated Depreciation (average)	(\$2,013,781,505) ⁽⁵⁾		#####	(\$2,013,781,505)
Allowance for Working Capital:				
Controllable Expenses	\$285,057,919		\$ 285,057,919	\$285,057,919
Cost of Power	\$3,579,801,165		#####	\$3,579,801,165
Working Capital Rate (%)	6.42% ⁽⁹⁾		⁽⁹⁾	⁽⁹⁾
2 Utility Income				
Operating Revenues:				
Distribution Revenue at Current Rates	\$848,702,180			
Distribution Revenue at Proposed Rates	\$885,241,080			
Other Revenue:				
Specific Service Charges	\$6,760,117			
Late Payment Charges	\$3,853,592			
Other Distribution Revenue	\$38,369,275			
Other Income and Deductions				
Total Revenue Offsets	(\$48,982,985) ⁽⁷⁾			
Operating Expenses:				
OM+A Expenses	\$279,372,150		\$ 279,372,150	\$279,372,150
Depreciation/Amortization	\$310,853,964		\$ 310,853,964	\$310,853,964
Property taxes	\$5,685,769		\$ 5,685,769	\$5,685,769
Other expenses				
3 Taxes/PILs				
Taxable Income:				
Adjustments required to arrive at taxable income	(\$85,418,999) ⁽³⁾			
Utility Income Taxes and Rates:				
Income taxes (not grossed up)	\$26,253,623			
Income taxes (grossed up)	\$35,719,215			
Federal tax (%)	15.00%			
Provincial tax (%)	11.50%			
Income Tax Credits	(\$2,736,000)			
4 Capitalization/Cost of Capital				
Capital Structure:				
Long-term debt Capitalization Ratio (%)	56.0%			
Short-term debt Capitalization Ratio (%)	4.0% ⁽⁸⁾		⁽⁸⁾	⁽⁸⁾
Common Equity Capitalization Ratio (%)	40.0%			
Preferred Shares Capitalization Ratio (%)				
	100.0%			
Cost of Capital				
Long-term debt Cost Rate (%)	3.71%			
Short-term debt Cost Rate (%)	2.61%			
Common Equity Cost Rate (%)	8.82%			
Preferred Shares Cost Rate (%)				

Notes:

General

Data inputs are required on Sheets 3. Data from Sheet 3 will automatically complete calculations on sheets 4 through 9 (Rate Base through Revenue Requirement). Sheets 4 through 9 do not require any inputs except for notes that the Applicant may wish to enter to support the results. Pale green cells are available on sheets 4 through 9 to enter both footnotes beside key cells and the related text for the notes at the bottom of each sheet.

(1) All inputs are in dollars (\$) except where inputs are individually identified as percentages (%)

(2) Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use column M and Adjustments in column I

(3) Net of addbacks and deductions to arrive at taxable income.

(4) Average of Gross Fixed Assets at beginning and end of the Test Year

(5) Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount.

(6) Select option from drop-down list by clicking on cell M10. This column allows for the application update reflecting the end of discovery or Argument-in-Chief. Also, the outcome of any Settlement Process can be reflected.

(7) Input total revenue offsets for deriving the base revenue requirement from the service revenue requirement

(8) 4.0% unless an Applicant has proposed or been approved for another amount.

(9) The default Working Capital Allowance factor is **7.5%** (of Cost of Power plus controllable expenses), per the letter issued by the Board on June 3, 2015. Alternatively, a WCA factor based on lead-lag study, with supporting rationale could be provided.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 Filers

Rate Base and Working Capital

Line No.	Rate Base	Particulars	Initial Application					Per Board Decision
1	Gross Fixed Assets (average)	⁽²⁾	\$7,140,052,883		\$ -	\$7,140,052,883	\$ -	\$7,140,052,883
2	Accumulated Depreciation (average)	⁽²⁾	(\$2,013,781,505)		\$ -	(\$2,013,781,505)	\$ -	(\$2,013,781,505)
3	Net Fixed Assets (average)	⁽²⁾	\$5,126,271,378		\$ -	\$5,126,271,378	\$ -	\$5,126,271,378
4	Allowance for Working Capital	⁽¹⁾	\$248,247,294	#####		\$ -	\$ -	\$ -
5	Total Rate Base		\$5,374,518,672	#####		\$5,126,271,378	\$ -	\$5,126,271,378

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$285,057,919		\$ -	\$285,057,919	\$ -	\$285,057,919
7	Cost of Power	\$3,579,801,165		\$ -	\$3,579,801,165	\$ -	\$3,579,801,165
8	Working Capital Base	\$3,864,859,084		\$ -	\$3,864,859,084	\$ -	\$3,864,859,084
9	Working Capital Rate %	⁽¹⁾ 6.42%	-6.42%		0.00%	0.00%	0.00%
10	Working Capital Allowance	\$248,247,294	#####		\$ -	\$ -	\$ -

Notes

(1) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2018 cost of service applications is 7.5%, per the letter issued by the Board on June 3, 2015.

(2) Average of opening and closing balances for the year.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 Filers

Utility Income

Line No.	Particulars	Initial Application						Per Board Decision
	Operating Revenues:							
1	Distribution Revenue (at Proposed Rates)	\$885,241,080	(\$885,241,080)	\$ -	\$ -	\$ -	\$ -	\$ -
2	Other Revenue ⁽¹⁾	\$48,982,985	(\$48,982,985)	\$ -	\$ -	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$934,224,064	(\$934,224,064)	\$ -	\$ -	\$ -	\$ -	\$ -
	Operating Expenses:							
4	OM+A Expenses	\$279,372,150	\$ -	\$279,372,150	\$ -	\$279,372,150	\$ -	\$279,372,150
5	Depreciation/Amortization	\$310,853,964	\$ -	\$310,853,964	\$ -	\$310,853,964	\$ -	\$310,853,964
6	Property taxes	\$5,685,769	\$ -	\$5,685,769	\$ -	\$5,685,769	\$ -	\$5,685,769
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$595,911,884	\$ -	\$595,911,884	\$ -	\$595,911,884	\$ -	\$595,911,884
10	Deemed Interest Expense	\$117,379,488	(\$117,379,488)	\$ -	\$ -	\$ -	\$ -	\$ -
11	Total Expenses (lines 9 to 10)	\$713,291,371	(\$117,379,488)	\$595,911,884	\$ -	\$595,911,884	\$ -	\$595,911,884
12	Utility income before income taxes	\$220,932,693	(\$816,844,577)	(\$595,911,884)	\$ -	(\$595,911,884)	\$ -	(\$595,911,884)
13	Income taxes (grossed-up)	\$35,719,215	\$ -	\$35,719,215	\$ -	\$35,719,215	\$ -	\$35,719,215
14	Utility net income	\$185,213,478	(\$816,844,577)	(\$631,631,099)	\$ -	(\$631,631,099)	\$ -	(\$631,631,099)

Notes

Other Revenues / Revenue Offsets

(1)	Specific Service Charges	\$6,760,117	\$ -	\$ -	\$ -	\$ -
	Late Payment Charges	\$3,853,592	\$ -	\$ -	\$ -	\$ -
	Other Distribution Revenue	\$38,369,275	\$ -	\$ -	\$ -	\$ -
	Other Income and Deductions	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Revenue Offsets	\$48,982,985	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 Filers

Taxes/PILs

Line No.	Particulars	Application		Per Board Decision	
	Determination of Taxable Income				
1	Utility net income before taxes	\$189,613,019	\$ -	\$ -	
2	Adjustments required to arrive at taxable utility income	(\$85,418,999)	\$ -	\$ -	
3	Taxable income	<u>\$104,194,020</u>	<u>\$ -</u>	<u>\$ -</u>	
	Calculation of Utility income Taxes				
4	Income taxes	<u>\$26,253,623</u>	<u>\$26,253,623</u>	<u>\$26,253,623</u>	
6	Total taxes	<u>\$26,253,623</u>	<u>\$26,253,623</u>	<u>\$26,253,623</u>	
7	Gross-up of Income Taxes	<u>\$9,465,592</u>	<u>\$9,465,592</u>	<u>\$9,465,592</u>	
8	Grossed-up Income Taxes	<u>\$35,719,215</u>	<u>\$35,719,215</u>	<u>\$35,719,215</u>	
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$35,719,215</u>	<u>\$35,719,215</u>	<u>\$35,719,215</u>	
10	Other tax Credits	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)	
	Tax Rates				
11	Federal tax (%)	15.00%	15.00%	15.00%	
12	Provincial tax (%)	11.50%	11.50%	11.50%	
13	Total tax rate (%)	<u>26.50%</u>	<u>26.50%</u>	<u>26.50%</u>	

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 Filers

Capitalization/Cost of Capital

Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
		(%)	(\$)	(%)	(\$)
Initial Application					
	Debt				
1	Long-term Debt	56.00%	\$3,009,730,456	3.71%	\$111,768,490
2	Short-term Debt	4.00%	\$214,980,747	2.61%	\$5,610,997
3	Total Debt	60.00%	\$3,224,711,203	3.64%	\$117,379,488
	Equity				
4	Common Equity	40.00%	\$2,149,807,469	8.82%	\$189,613,019
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$2,149,807,469	8.82%	\$189,613,019
7	Total	100.00%	\$5,374,518,672	5.71%	\$306,992,506
Per Board Decision					
	Debt				
1	Long-term Debt	0.00%	\$ -	0.00%	\$ -
2	Short-term Debt	0.00%	\$ -	0.00%	\$ -
3	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
4	Common Equity	0.00%	\$ -	0.00%	\$ -
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	0.00%	\$ -	0.00%	\$ -
7	Total	0.00%	\$5,126,271,378	0.00%	\$ -
	Debt				
8	Long-term Debt	0.00%	\$ -	3.71%	\$ -
9	Short-term Debt	0.00%	\$ -	2.61%	\$ -
10	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
11	Common Equity	0.00%	\$ -	8.82%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	0.00%	\$ -	0.00%	\$ -
14	Total	0.00%	\$5,126,271,378	0.00%	\$ -

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 Filers

Revenue Deficiency/Sufficiency

Line No.	Particulars	Initial Application		Per Board Decision		Per Board Decision	
		At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates
1	Revenue Deficiency from Below		\$39,063,327		(\$287,310,071)		\$810,764,468
2	Distribution Revenue	\$848,702,180	\$846,177,752	\$848,702,180	\$1,172,551,151	\$ -	(\$810,764,468)
3	Other Operating Revenue	\$48,982,985	\$48,982,985	\$ -	\$ -	\$ -	\$ -
4	Offsets - net						
4	Total Revenue	\$897,685,165	\$934,224,064	\$848,702,180	\$885,241,080	\$ -	\$ -
5	Operating Expenses	\$595,911,884	\$595,911,884	\$595,911,884	\$595,911,884	\$595,911,884	\$595,911,884
6	Deemed Interest Expense	\$117,379,488	\$117,379,488	\$ -	\$ -	\$ -	\$ -
8	Total Cost and Expenses	\$713,291,371	\$713,291,371	\$595,911,884	\$595,911,884	\$595,911,884	\$595,911,884
9	Utility Income Before Income Taxes	\$184,393,794	\$220,932,693	\$252,790,296	\$289,329,196	(\$595,911,884)	(\$595,911,884)
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$85,418,999)	(\$85,418,999)	(\$85,418,999)	(\$85,418,999)	\$ -	\$ -
11	Taxable Income	\$98,974,795	\$135,513,694	\$167,371,297	\$203,910,197	(\$595,911,884)	(\$595,911,884)
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%	26.50%	26.50%
13	Income Tax on Taxable Income	\$26,228,321	\$35,911,129	\$44,353,394	\$54,036,202	\$ -	\$ -
14	Income Tax Credits	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)	\$ -	\$ -
15	Utility Net Income	\$160,901,473	\$185,213,478	\$211,172,903	(\$631,631,099)	(\$595,911,884)	(\$631,631,099)
16	Utility Rate Base	\$5,374,518,672	\$5,374,518,672	\$5,126,271,378	\$5,126,271,378	\$5,126,271,378	\$5,126,271,378
17	Deemed Equity Portion of Rate Base	\$2,149,807,469	\$2,149,807,469	\$ -	\$ -	\$ -	\$ -
18	Income/(Equity Portion of Rate Base)	7.48%	8.62%	0.00%	0.00%	0.00%	0.00%
19	Target Return - Equity on Rate Base	8.82%	8.82%	0.00%	0.00%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-1.34%	-0.20%	0.00%	0.00%	0.00%	0.00%
21	Indicated Rate of Return	5.18%	5.63%	4.12%	0.00%	-11.62%	0.00%
22	Requested Rate of Return on Rate Base	5.71%	5.71%	0.00%	0.00%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-0.53%	-0.08%	4.12%	0.00%	-11.62%	0.00%
24	Target Return on Equity	\$189,613,019	\$189,613,019	\$ -	\$ -	\$ -	\$ -
25	Revenue Deficiency/(Sufficiency)	\$28,711,546	(\$4,399,540)	(\$211,172,903)	\$ -	\$595,911,884	\$ -
26	Gross Revenue Deficiency/(Sufficiency)	\$39,063,327 ⁽¹⁾		(\$287,310,071) ⁽¹⁾		\$810,764,468 ⁽¹⁾	

Notes:

⁽¹⁾ Revenue Deficiency/Sufficiency divided by (1 - Tax Rate)



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 Filers

Revenue Requirement

Line No.	Particulars	Application		Per Board Decision	
1	OM&A Expenses	\$279,372,150	\$279,372,150	\$279,372,150	
2	Amortization/Depreciation	\$310,853,964	\$310,853,964	\$310,853,964	
3	Property Taxes	\$5,685,769	\$5,685,769	\$5,685,769	
5	Income Taxes (Grossed up)	\$35,719,215	\$35,719,215	\$35,719,215	
6	Other Expenses	\$ -			
7	Return				
	Deemed Interest Expense	\$117,379,488	\$ -	\$ -	
	Return on Deemed Equity	\$189,613,019	\$ -	\$ -	
8	Service Revenue Requirement (before Revenues)	<u>\$938,623,605</u>	<u>\$631,631,099</u>	<u>\$631,631,099</u>	
9	Revenue Offsets	<u>(\$48,982,985)</u>	<u>\$ -</u>	<u>\$ -</u>	
10	Base Revenue Requirement (excluding Transformer Ownership Allowance credit adjustment)	<u>\$987,606,590</u>	<u>\$631,631,099</u>	<u>\$631,631,099</u>	
11	Distribution revenue	\$885,241,080	\$ -	\$ -	
12	Other revenue	\$48,982,985	\$ -	\$ -	
13	Total revenue	<u>\$934,224,064</u>	<u>\$ -</u>	<u>\$ -</u>	
14	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>(\$4,399,540)</u> ⁽¹⁾	<u>(\$631,631,099)</u> ⁽¹⁾	<u>(\$631,631,099)</u> ⁽¹⁾	

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application		Δ% ⁽²⁾	Per Board Decision	Δ% ⁽²⁾
Service Revenue Requirement	\$938,623,605	\$631,631,099	(\$0)	\$631,631,099	(\$1)
Grossed-Up Revenue					
Deficiency/(Sufficiency)	\$39,063,327	(\$287,310,071)	(\$8)	\$810,764,468	(\$1)
Base Revenue Requirement (to be recovered from Distribution Rates)	\$987,606,590	\$631,631,099	(\$0)	\$631,631,099	(\$1)
Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement	\$36,538,900	\$ -	(\$1)	\$ -	(\$1)

Notes

⁽¹⁾ Line 11 - Line 8

⁽²⁾ Percentage Change Relative to Initial Application



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 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 and trends from historical actuals to the Bridge and Test Year forecasts.

Stage in Process:		Initial Application						Per Board Decision		
Customer Class		Initial Application						Per Board Decision		
Input the name of each customer class.		Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual	Test Year average or mid-	Annual	Annual
1	Residential	620,899	4,386,740,109							
2	Competitive Sector Multi-Unit Residential	101,879	313,817,857							
3	GS <50	71,788	2,187,481,667							
4	GS - 50 to 999	10,341	9,432,138,729	24,813,648						
5	GS - 1000 to 4999	430	4,387,143,302	10,232,645						
6	Large Use >5MW	44	1,962,015,257	4,730,195						
7	Street Light	166,107	115,566,836	328,076						
8	Unmetered Scattered Load	857	41,200,600							
9	Unmetered Scattered Load (Connections)	12,272								
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
Total			#####	40,104,565		-	-		-	-

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 2023 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⁾	Costs Allocated from Previous Study ⁽¹⁾	%	Allocated Class Revenue Requirement ⁽¹⁾ (7A)	%
From Sheet 10: Load Forecast				
1 Residential	\$ 287,079,871	42.26%	\$ 360,832,613	38.4%
2 Competitive Sector Multi-Unit Resident	\$ 19,267,312	2.84%	\$ 40,334,605	4.3%
3 GS <50	\$ 99,019,246	14.58%	\$ 146,273,232	15.6%
4 GS - 50 to 999	\$ 157,700,127	23.21%	\$ 233,587,071	24.9%
5 GS - 1000 to 4999	\$ 55,701,964	8.20%	\$ 82,524,126	8.8%
6 Large Use >5MW	\$ 31,087,389	4.58%	\$ 44,939,828	4.8%
7 Street Light	\$ 25,331,820	3.73%	\$ 25,074,140	2.7%
8 Unmetered Scattered Load	\$ 4,173,832	0.61%	\$ 5,057,990	0.5%
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 679,361,561	100.00%	\$ 938,623,605	100.0%
Service Revenue Requirement (from Sheet 9)			\$ 938,623,605	

- (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	\$ 336,775,618	\$ 351,270,826	\$ 351,046,981	\$ 19,752,861
2 Competitive Sector Multi-Unit Resident	\$ 43,803,895	\$ 45,689,265	\$ 45,664,205	\$ 1,724,893
3 GS <50	\$ 113,613,325	\$ 118,503,373	\$ 118,435,994	\$ 8,383,826
4 GS - 50 to 999	\$ 225,749,054	\$ 235,465,552	\$ 235,495,164	\$ 7,532,595
5 GS - 1000 to 4999	\$ 72,417,879	\$ 75,534,827	\$ 75,726,989	\$ 1,434,357
6 Large Use >5MW	\$ 35,504,757	\$ 37,032,922	\$ 37,139,549	\$ 587,261
7 Street Light	\$ 16,526,848	\$ 17,238,183	\$ 17,227,775	\$ 9,250,510
8 Unmetered Scattered Load	\$ 4,244,397	\$ 4,427,080	\$ 4,425,373	\$ 316,681
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 848,635,773	\$ 885,162,029	\$ 885,162,029	\$ 48,982,986

- (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.

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**

C) Rebalancing Revenue-to-Cost Ratios

Name of Customer Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	2015 %	%	%	
1 Residential	94.3%	102.8%	102.8%	85 - 115
2 Competitive Sector Multi-Unit Resident	100.0%	117.6%	117.5%	
3 GS <50	91.5%	86.7%	86.7%	80 - 120
4 GS - 50 to 999	119.0%	104.0%	104.0%	80 - 120
5 GS - 1000 to 4999	101.9%	93.3%	93.5%	80 - 120
6 Large Use >5MW	95.3%	83.7%	83.9%	85 - 115
7 Street Light	82.7%	105.6%	105.6%	80 - 120
8 Unmetered Scattered Load	90.5%	93.8%	93.8%	80 - 120
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

(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		
	2020	2021	2022	
1 Residential	102.8%			85 - 115
2 Competitive Sector Multi-Unit Resident	117.5%			
3 GS <50	86.7%			80 - 120
4 GS - 50 to 999	104.0%			80 - 120
5 GS - 1000 to 4999	93.5%			80 - 120
6 Large Use >5MW	83.9%			85 - 115
7 Street Light	105.6%			80 - 120
8 Unmetered Scattered Load	93.8%			80 - 120
9 Unmetered Scattered Load (Connector)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

(11) The applicant should complete Table D if it is applying for approval of a revenue-to-cost ratio in 2019 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 2020 and 2021 Price Cap IR models, as necessary. For 2020 and 2021, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2018 (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'.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2023 Filers

New Rate Design Policy For Residential Customers

Please complete the following tables.

A Data Inputs (from Sheet 10. Load Forecast)

Test Year Billing Determinants for Residential Class	
Customers	620,899
kWh	4,386,740,109

Proposed Residential Class Specific Revenue Requirement ¹	\$ 351,046,981.12
--	-------------------

Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ -
Distribution Volumetric Rate (\$/kWh)	\$ -

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	0	620,899	\$ -	
Variable	0	4,386,740,109	\$ -	
TOTAL	-	-	\$ -	-

C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years ²	1
--	---

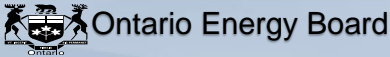
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed			
Variable			
TOTAL		-	

	New F/V Split	Revenue @ new F/V Split	Final Adjusted Base Rates	Revenue Reconciliation @ Adjusted Rates
Fixed				
Variable				
TOTAL	-	\$ -	-	

Checks ³	
Change in Fixed Rate	
Difference Between Revenues @ Proposed Rates and Class Specific Revenue Requirement	

Notes:

- ¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- ² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. A distributor transitioning to fully fixed rates over a four year period and began the transition in 2016 would input the number "3" into cell D40. A distributor transitioning over a five-year period would input the number "4". Where the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, a distributor may propose an additional transition year.
- ³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)



Revenue Requirement Workform (RRWF) for 2023 Filers

Rate Design and Revenue Reconciliation

This sheet replaces Appendix 2-V, and provides a simplified model for calculating the standard monthly and volumetric rates based on the allocated class revenues and fixed/variable split resulting from the cost allocation study and rate design and as proposed by the applicant. However, the RRWF does not replace the rate generator model that an applicant distributor may use in support of its application. The RRWF provides a demonstrative check on the derivation of the revenue requirement and on the proposed base distribution rates to recover the revenue requirement, based on summary information from a more detailed rate generator model and other models that applicants use for cost allocation, load forecasting, taxes/PILs, etc.

Stage in Process:			Initial Application			Class Allocated Revenues			Fixed / Variable Splits ²			Distribution Rates			Revenue Reconciliation						
Customer and Load Forecast					From Sheet 11. Cost Allocation and Sheet 12. Residential Rate Design			Percentage to be entered as a fraction between 0 and 1													
Customer Class		Volumetric Charge Determinant	Customers / Connections	kWh	kW or kVA	Total Class Revenue Requirement	Monthly Service Charge	Volumetric	Fixed	Variable	Transformer Ownership Allowance ¹ (\$)	Monthly Service Charge		Volumetric Rate		1.01388889					
From sheet 10. Load Forecast												Rate	No. of decimals	Rate	No. of decimals	MSC Revenues	Volumetric revenues	Distribution Revenues less Transformer Ownership Allowance			
1	Residential	kWh	620,899	4,386,740,109	-	\$ 351,046,981	\$ 351,046,981	\$ -	100.00%	0.00%	\$ -	\$46.47	2	\$0.00000	/kWh	5	351,046,981	-	\$ 351,046,981.12		
2	Competitive Sector Multi-Unit Residential	kWh	101,879	313,817,857	-	\$ 45,664,205	\$ 45,664,205	\$ -	100.00%	0.00%	\$ -	\$36.84		\$0.00000	/kWh	5	45,664,205	-	\$ 45,664,205.38		
3	GS <50	kWh	71,788	2,187,481,667	-	\$ 118,435,994	\$ 35,707,207	\$ 82,728,786	30.15%	69.85%	\$ -	\$40.88		\$0.03782	/kWh	5	35,705,437	82,730,557	\$ 118,435,993.52		
4	GS - 50 to 999	kVA	10,341	9,432,138,729	24,813,648	\$ 235,495,164	\$ 7,121,349	\$ 228,373,816	3.02%	96.98%	\$ 3,928,646	\$56.60		\$9.2336	/kVA	4	7,121,157	232,301,517	\$ 235,494,028.10		
5	GS - 1000 to 4999	kVA	430	4,387,143,302	10,232,645	\$ 75,726,989	\$ 5,067,463	\$ 70,659,526	6.69%	93.31%	\$ 5,356,674	\$968.61		\$7.3270	/kVA	4	5,067,445	76,015,904	\$ 75,726,674.92		
6	Large Use >5MW	kVA	44	1,962,015,257	4,730,195	\$ 37,139,549	\$ 2,260,352	\$ 34,879,196	6.09%	93.91%	\$ 2,906,232	\$4,222.33		\$7.8787	/kVA	4	2,260,354	37,785,396	\$ 37,139,518.74		
7	Street Light	kVA	166,107	115,566,836	328,076	\$ 17,227,775	\$ 3,677,749	\$ 13,550,026	21.35%	78.65%	\$ -	\$1.82		\$40.7357	/kVA	4	3,678,166	13,550,022	\$ 17,228,188.62		
8	Unmetered Scattered Load	kWh	857	41,200,600	-	\$ 4,425,373	\$ 84,909	\$ 4,217,493	1.92%	95.30%	\$ -	\$8.14		\$0.10236	/kWh	5	84,874	4,217,293	\$ 4,302,167.87		
9	Unmetered Scattered Load (Connections)		12,272	-	-		\$ 122,971	\$ -	2.78%		\$ -	\$0.82		\$0.00000			122,434	-	\$ 122,433.65		
10			-	-	-												\$ -	\$ -	\$ -		
11			-	-	-												\$ -	\$ -	\$ -		
12			-	-	-												\$ -	\$ -	\$ -		
13			-	-	-												\$ -	\$ -	\$ -		
14			-	-	-												\$ -	\$ -	\$ -		
15			-	-	-												\$ -	\$ -	\$ -		
16			-	-	-												\$ -	\$ -	\$ -		
17			-	-	-												\$ -	\$ -	\$ -		
18			-	-	-												\$ -	\$ -	\$ -		
19			-	-	-												\$ -	\$ -	\$ -		
20			-	-	-												\$ -	\$ -	\$ -		
Total Transformer Ownership Allowance											\$ 12,191,552								Total Distribution Revenues	\$ 885,160,191.92	
																			Base Revenue Requirement	\$ 987,606,589.91	
																			Difference	-\$ 102,446,397.99	
																			% Difference	-10.373%	

Notes:

¹ Transformer Ownership Allowance is entered as a positive amount, and only for those classes to which it applies.

² The Fixed/Variable split, for each customer class, drives the "rate generator" portion of this sheet of the RRWF. Only the "fixed" fraction is entered, as the sum of the "fixed" and "variable" portions must sum to 100%. For a distributor that may set the Monthly Service Charge, the "fixed" ratio is calculated as: [MSC x (average number of customers or connections) x 12 months] / (Class Allocated Revenue Requirement).

Revenues recovered from rates deviate materially from revenue requirement - check data inputs and calculations

[illegible]



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers



Version 8.00

Utility Name	Toronto Hydro-Electric System Limited
Service Territory	
Assigned EB Number	EB-2018-0165
Name and Title	
Phone Number	
Email Address	
Test Year	
Bridge Year	
Last Rebasing Year	2015

The RRWF has been enhanced commencing with 2017 rate applications to provide estimated base distribution rates. The enhanced RRWF is not intended to replace a utility's formal rate generator model which should continue to be the source of the proposed rates as well as the final ones at the conclusion of the proceeding. The load forecasting addition made to this model is intended to be demonstrative only and does not replace the information filed in the utility's application. In an effort to minimize the incremental work required from utilities, the cost allocation and rate design additions to this model do in fact replace former appendices that were required to be filed as part of the cost of service (Chapter 2) filing requirements.

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers

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[2. Table of Contents](#)

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[6. Taxes PILs](#)

[7. Cost of Capital](#)

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[12. Residential Rate Design](#)

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[14. Tracking Sheet](#)

Notes:

- (1) Pale green cells represent inputs
- (2) Pale green boxes at the bottom of each page are for additional notes
- (3) Pale yellow cells represent drop-down lists
- (4) **Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.**
- (5) **Completed versions of the Revenue Requirement Work Form are required to be filed in working Microsoft Excel format.**



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers

Data Input ⁽¹⁾

	Initial Application	(2)	(6)	Per Board Decision
1 Rate Base				
Gross Fixed Assets (average)	\$7,697,160,940		#####	\$7,697,160,940
Accumulated Depreciation (average)	(\$2,301,158,835) ⁽⁵⁾		#####	(\$2,301,158,835)
Allowance for Working Capital:				
Controllable Expenses	\$287,623,441		\$ 287,623,441	\$287,623,441
Cost of Power	\$3,666,550,979		#####	\$3,666,550,979
Working Capital Rate (%)	6.42% ⁽⁹⁾		⁽⁹⁾	⁽⁹⁾
2 Utility Income				
Operating Revenues:				
Distribution Revenue at Current Rates	\$888,835,029			
Distribution Revenue at Proposed Rates	\$924,276,142			
Other Revenue:				
Specific Service Charges	\$6,820,809			
Late Payment Charges	\$3,888,190			
Other Distribution Revenue	\$38,713,753			
Other Income and Deductions				
Total Revenue Offsets	\$49,422,752 ⁽⁷⁾			
Operating Expenses:				
OM+A Expenses	\$281,886,499		\$ 281,886,499	\$281,886,499
Depreciation/Amortization	\$325,365,901		\$ 325,365,901	\$325,365,901
Property taxes	\$5,736,941		\$ 5,736,941	\$5,736,941
Other expenses				
3 Taxes/PILs				
Taxable Income:				
Adjustments required to arrive at taxable income	(\$77,248,067) ⁽³⁾			
Utility Income Taxes and Rates:				
Income taxes (not grossed up)	\$30,994,322			
Income taxes (grossed up)	\$42,169,146			
Federal tax (%)	15.00%			
Provincial tax (%)	11.50%			
Income Tax Credits	(\$2,736,000)			
4 Capitalization/Cost of Capital				
Capital Structure:				
Long-term debt Capitalization Ratio (%)	56.0%			
Short-term debt Capitalization Ratio (%)	4.0% ⁽⁸⁾		⁽⁸⁾	⁽⁸⁾
Common Equity Capitalization Ratio (%)	40.0%			
Preferred Shares Capitalization Ratio (%)				
	100.0%			
Cost of Capital				
Long-term debt Cost Rate (%)	3.71%			
Short-term debt Cost Rate (%)	2.61%			
Common Equity Cost Rate (%)	8.82%			
Preferred Shares Cost Rate (%)				

Notes:

General

Data inputs are required on Sheets 3. Data from Sheet 3 will automatically complete calculations on sheets 4 through 9 (Rate Base through Revenue Requirement). Sheets 4 through 9 do not require any inputs except for notes that the Applicant may wish to enter to support the results. Pale green cells are available on sheets 4 through 9 to enter both footnotes beside key cells and the related text for the notes at the bottom of each sheet.

(1) All inputs are in dollars (\$) except where inputs are individually identified as percentages (%)

(2) Data in column E is for Application as originally filed. For updated revenue requirement as a result of interrogatory responses, technical or settlement conferences, etc., use column M and Adjustments in column I

(3) Net of addbacks and deductions to arrive at taxable income.

(4) Average of Gross Fixed Assets at beginning and end of the Test Year

(5) Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount.

(6) Select option from drop-down list by clicking on cell M10. This column allows for the application update reflecting the end of discovery or Argument-in-Chief. Also, the outcome of any Settlement Process can be reflected.

(7) Input total revenue offsets for deriving the base revenue requirement from the service revenue requirement

(8) 4.0% unless an Applicant has proposed or been approved for another amount.

(9) The default Working Capital Allowance factor is **7.5%** (of Cost of Power plus controllable expenses), per the letter issued by the Board on June 3, 2015. Alternatively, a WCA factor based on lead-lag study, with supporting rationale could be provided.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers

Rate Base and Working Capital

Rate Base										
Line No.	Particulars		Initial Application				Per Board Decision			
1	Gross Fixed Assets (average)	(2)	\$7,697,160,940		\$ -		\$7,697,160,940		\$ -	\$7,697,160,940
2	Accumulated Depreciation (average)	(2)	(\$2,301,158,835)		\$ -		(\$2,301,158,835)		\$ -	(\$2,301,158,835)
3	Net Fixed Assets (average)	(2)	\$5,396,002,105		\$ -		\$5,396,002,105		\$ -	\$5,396,002,105
4	Allowance for Working Capital	(1)	\$253,984,189	#####			\$ -		\$ -	\$ -
5	Total Rate Base		\$5,649,986,294	#####			\$5,396,002,105		\$ -	\$5,396,002,105

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$287,623,441	\$ -	\$287,623,441	\$ -	\$287,623,441
7	Cost of Power	\$3,666,550,979	\$ -	\$3,666,550,979	\$ -	\$3,666,550,979
8	Working Capital Base	\$3,954,174,420	\$ -	\$3,954,174,420	\$ -	\$3,954,174,420
9	Working Capital Rate % ⁽¹⁾	6.42%	-6.42%	0.00%	0.00%	0.00%
10	Working Capital Allowance	\$253,984,189	#####	\$ -	\$ -	\$ -

Notes

(1) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2018 cost of service applications is 7.5%, per the letter issued by the Board on June 3, 2015.

(2) Average of opening and closing balances for the year.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers

Utility Income

Line No.	Particulars	Initial Application						Per Board Decision
	Operating Revenues:							
1	Distribution Revenue (at Proposed Rates)	\$924,276,142	(\$924,276,142)	\$ -	\$ -	\$ -	\$ -	\$ -
2	Other Revenue ⁽¹⁾	\$49,422,752	(\$49,422,752)	\$ -	\$ -	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$973,698,894	(\$973,698,894)	\$ -	\$ -	\$ -	\$ -	\$ -
	Operating Expenses:							
4	OM+A Expenses	\$281,886,499	\$ -	\$281,886,499	\$ -	\$281,886,499	\$ -	\$281,886,499
5	Depreciation/Amortization	\$325,365,901	\$ -	\$325,365,901	\$ -	\$325,365,901	\$ -	\$325,365,901
6	Property taxes	\$5,736,941	\$ -	\$5,736,941	\$ -	\$5,736,941	\$ -	\$5,736,941
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$612,989,342	\$ -	\$612,989,342	\$ -	\$612,989,342	\$ -	\$612,989,342
10	Deemed Interest Expense	\$123,395,700	(\$123,395,700)	\$ -	\$ -	\$ -	\$ -	\$ -
11	Total Expenses (lines 9 to 10)	\$736,385,042	(\$123,395,700)	\$612,989,342	\$ -	\$612,989,342	\$ -	\$612,989,342
12	Utility income before income taxes	\$237,313,852	(\$850,303,194)	(\$612,989,342)	\$ -	(\$612,989,342)	\$ -	(\$612,989,342)
13	Income taxes (grossed-up)	\$42,169,146	\$ -	\$42,169,146	\$ -	\$42,169,146	\$ -	\$42,169,146
14	Utility net income	\$195,144,706	(\$850,303,194)	(\$655,158,488)	\$ -	(\$655,158,488)	\$ -	(\$655,158,488)

Notes

Other Revenues / Revenue Offsets

(1)	Specific Service Charges	\$6,820,809	\$ -	\$ -	\$ -	\$ -
	Late Payment Charges	\$3,888,190	\$ -	\$ -	\$ -	\$ -
	Other Distribution Revenue	\$38,713,753	\$ -	\$ -	\$ -	\$ -
	Other Income and Deductions	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Revenue Offsets	\$49,422,752	\$ -	\$ -	\$ -	\$ -



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers

Taxes/PILs

Line No.	Particulars	Application		Per Board Decision	
	<u>Determination of Taxable Income</u>				
1	Utility net income before taxes	\$199,331,516	\$ -	\$ -	
2	Adjustments required to arrive at taxable utility income	(\$77,248,067)	\$ -	\$ -	
3	Taxable income	<u>\$122,083,449</u>	<u>\$ -</u>	<u>\$ -</u>	
	<u>Calculation of Utility income Taxes</u>				
4	Income taxes	\$30,994,322	\$30,994,322	\$30,994,322	
6	Total taxes	<u>\$30,994,322</u>	<u>\$30,994,322</u>	<u>\$30,994,322</u>	
7	Gross-up of Income Taxes	\$11,174,824	\$11,174,824	\$11,174,824	
8	Grossed-up Income Taxes	<u>\$42,169,146</u>	<u>\$42,169,146</u>	<u>\$42,169,146</u>	
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$42,169,146</u>	<u>\$42,169,146</u>	<u>\$42,169,146</u>	
10	Other tax Credits	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)	
	<u>Tax Rates</u>				
11	Federal tax (%)	15.00%	15.00%	15.00%	
12	Provincial tax (%)	11.50%	11.50%	11.50%	
13	Total tax rate (%)	<u>26.50%</u>	<u>26.50%</u>	<u>26.50%</u>	

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers

Capitalization/Cost of Capital

Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
		Initial Application			
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	56.00%	\$3,163,992,324	3.71%	\$117,497,115
2	Short-term Debt	4.00%	\$225,999,452	2.61%	\$5,898,586
3	Total Debt	60.00%	\$3,389,991,776	3.64%	\$123,395,700
	Equity				
4	Common Equity	40.00%	\$2,259,994,517	8.82%	\$199,331,516
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$2,259,994,517	8.82%	\$199,331,516
7	Total	100.00%	\$5,649,986,294	5.71%	\$322,727,217
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	0.00%	\$ -	0.00%	\$ -
2	Short-term Debt	0.00%	\$ -	0.00%	\$ -
3	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
4	Common Equity	0.00%	\$ -	0.00%	\$ -
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	0.00%	\$ -	0.00%	\$ -
7	Total	0.00%	\$5,396,002,105	0.00%	\$ -
		Per Board Decision			
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	0.00%	\$ -	3.71%	\$ -
9	Short-term Debt	0.00%	\$ -	2.61%	\$ -
10	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
11	Common Equity	0.00%	\$ -	8.82%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	0.00%	\$ -	0.00%	\$ -
14	Total	0.00%	\$5,396,002,105	0.00%	\$ -

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers

Revenue Deficiency/Sufficiency

Line No.	Particulars	Initial Application		Per Board Decision	
		At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates
1	Revenue Deficiency from Below		\$37,752,811		(\$307,419,480)
2	Distribution Revenue	\$888,835,029	\$886,523,332	\$888,835,029	\$1,231,695,622
3	Other Operating Revenue	\$49,422,752	\$49,422,752	\$ -	\$ -
	Offsets - net				
4	Total Revenue	\$938,257,781	\$973,698,894	\$888,835,029	\$924,276,142
5	Operating Expenses	\$612,989,342	\$612,989,342	\$612,989,342	\$612,989,342
6	Deemed Interest Expense	\$123,395,700	\$123,395,700	\$ -	\$ -
8	Total Cost and Expenses	\$736,385,042	\$736,385,042	\$612,989,342	\$612,989,342
9	Utility Income Before Income Taxes	\$201,872,739	\$237,313,852	\$275,845,687	\$311,286,800
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$77,248,067)	(\$77,248,067)	(\$77,248,067)	(\$77,248,067)
11	Taxable Income	\$124,624,672	\$160,065,785	\$198,597,620	\$234,038,733
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%
13	Income Tax on Taxable Income	\$33,025,538	\$42,417,433	\$52,628,369	\$62,020,264
14	Income Tax Credits	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)	(\$2,736,000)
15	Utility Net Income	\$171,583,201	\$195,144,706	\$225,953,318	(\$655,158,488)
16	Utility Rate Base	\$5,649,986,294	\$5,649,986,294	\$5,396,002,105	\$5,396,002,105
17	Deemed Equity Portion of Rate Base	\$2,259,994,517	\$2,259,994,517	\$ -	\$ -
18	Income/(Equity Portion of Rate Base)	7.59%	8.63%	0.00%	0.00%
19	Target Return - Equity on Rate Base	8.82%	8.82%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-1.23%	-0.19%	0.00%	0.00%
21	Indicated Rate of Return	5.22%	5.64%	4.19%	0.00%
22	Requested Rate of Return on Rate Base	5.71%	5.71%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-0.49%	-0.07%	4.19%	0.00%
24	Target Return on Equity	\$199,331,516	\$199,331,516	\$ -	\$ -
25	Revenue Deficiency/(Sufficiency)	\$27,748,316	(\$4,186,810)	(\$225,953,318)	\$ -
26	Gross Revenue Deficiency/(Sufficiency)	\$37,752,811 ⁽¹⁾		(\$307,419,480) ⁽¹⁾	\$833,999,105 ⁽¹⁾

Notes:

⁽¹⁾ Revenue Deficiency/Sufficiency divided by (1 - Tax Rate)



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers

Revenue Requirement

Line No.	Particulars	Application				Per Board Decision	
1	OM&A Expenses	\$281,886,499		\$281,886,499		\$281,886,499	
2	Amortization/Depreciation	\$325,365,901		\$325,365,901		\$325,365,901	
3	Property Taxes	\$5,736,941		\$5,736,941		\$5,736,941	
5	Income Taxes (Grossed up)	\$42,169,146		\$42,169,146		\$42,169,146	
6	Other Expenses	\$ -					
7	Return						
	Deemed Interest Expense	\$123,395,700		\$ -		\$ -	
	Return on Deemed Equity	\$199,331,516		\$ -		\$ -	
8	Service Revenue Requirement (before Revenues)	<u>\$977,885,705</u>		<u>\$655,158,488</u>		<u>\$655,158,488</u>	
9	Revenue Offsets	<u>\$49,422,752</u>		<u>\$ -</u>		<u>\$ -</u>	
10	Base Revenue Requirement (excluding Transformer Ownership Allowance credit adjustment)	<u>\$928,462,953</u>		<u>\$655,158,488</u>		<u>\$655,158,488</u>	
11	Distribution revenue	\$924,276,142		\$ -		\$ -	
12	Other revenue	<u>\$49,422,752</u>		<u>\$ -</u>		<u>\$ -</u>	
13	Total revenue	<u>\$973,698,894</u>		<u>\$ -</u>		<u>\$ -</u>	
14	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>(\$4,186,810)</u>	(1)	<u>(\$655,158,488)</u>	(1)	<u>(\$655,158,488)</u>	(1)

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application		Δ% (2)	Per Board Decision	Δ% (2)
Service Revenue Requirement Grossed-Up Revenue Deficiency/(Sufficiency)	\$977,885,705	\$655,158,488	(\$0)	\$655,158,488	(\$1)
	\$37,752,811	(\$307,419,480)	(\$9)	\$833,999,105	(\$1)
Base Revenue Requirement (to be recovered from Distribution Rates) Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement	\$928,462,953	\$655,158,488	(\$0)	\$655,158,488	(\$1)
	\$35,441,113	\$ -	(\$1)	\$ -	(\$1)

Notes

(1) Line 11 - Line 8

(2) Percentage Change Relative to Initial Application



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 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 and 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	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾
				Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential			622,544	4,366,437,563				
2	Competitive Sector Multi-Unit Residential			107,796	328,419,229				
3	GS <50			71,885	2,169,915,395				
4	GS - 50 to 999			10,330	9,419,379,152	24,875,671			
5	GS - 1000 to 4999			430	4,351,721,474	10,228,471			
6	Large Use >5MW			44	1,956,322,242	4,733,922			
7	Street Light			166,375	116,138,779	328,561			
8	Unmetered Scattered Load			857	41,313,479				
9	Unmetered Scattered Load (Connections)			12,272					
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
Total					22,749,647,312	40,166,624		-	-

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 2024 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⁾	Costs Allocated from Previous Study ⁽¹⁾	%	Allocated Class Revenue Requirement ⁽¹⁾ (7A)	%
From Sheet 10, Load Forecast				
1 Residential	\$ 287,079,871	42.26%	\$ 375,926,040	38.4%
2 Competitive Sector Multi-Unit Residential	\$ 19,267,312	2.84%	\$ 42,021,779	4.3%
3 GS <50	\$ 99,019,246	14.58%	\$ 152,391,759	15.6%
4 GS - 50 to 999	\$ 157,700,127	23.21%	\$ 243,357,888	24.9%
5 GS - 1000 to 4999	\$ 55,701,964	8.20%	\$ 85,976,064	8.8%
6 Large Use >5MW	\$ 31,087,389	4.58%	\$ 46,819,636	4.8%
7 Street Light	\$ 25,331,820	3.73%	\$ 26,122,977	2.7%
8 Unmetered Scattered Load	\$ 4,173,832	0.61%	\$ 5,269,563	0.5%
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 679,361,561	100.00%	\$ 977,885,705	100.0%
Service Revenue Requirement (from Sheet 9)			\$ 977,885,705	

- (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	\$ 352,011,279	\$ 366,043,682	\$ 365,837,982	\$ 19,930,202
2 Competitive Sector Multi-Unit Residential	\$ 48,314,167	\$ 50,240,139	\$ 50,218,024	\$ 1,740,379
3 GS <50	\$ 117,821,799	\$ 122,518,589	\$ 122,461,164	\$ 8,459,096
4 GS - 50 to 999	\$ 236,050,526	\$ 245,460,327	\$ 245,490,240	\$ 7,600,223
5 GS - 1000 to 4999	\$ 75,687,090	\$ 78,704,243	\$ 78,883,982	\$ 1,447,235
6 Large Use >5MW	\$ 37,160,502	\$ 38,641,850	\$ 38,741,455	\$ 592,534
7 Street Light	\$ 17,263,427	\$ 17,951,607	\$ 17,928,726	\$ 9,333,561
8 Unmetered Scattered Load	\$ 4,435,147	\$ 4,611,947	\$ 4,610,813	\$ 319,524
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 888,743,938	\$ 924,172,386	\$ 924,172,386	\$ 49,422,753

- (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.

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**

C) Rebalancing Revenue-to-Cost Ratios

Name of Customer Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	2015 %	%	%	%
1 Residential	94.3%	102.7%	102.6%	85 - 115
2 Competitive Sector Multi-Unit Residential	100.0%	123.7%	123.6%	
3 GS <50	91.5%	85.9%	85.9%	80 - 120
4 GS - 50 to 999	119.0%	104.0%	104.0%	80 - 120
5 GS - 1000 to 4999	101.9%	93.2%	93.4%	80 - 120
6 Large Use >5MW	95.3%	83.8%	84.0%	85 - 115
7 Street Light	82.7%	104.4%	104.4%	80 - 120
8 Unmetered Scattered Load	90.5%	93.6%	93.6%	80 - 120
9 Unmetered Scattered Load (Connections)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

(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		
	2020	2021	2022	
1 Residential	102.6%			85 - 115
2 Competitive Sector Multi-Unit Residenti	123.6%			
3 GS <50	85.9%			80 - 120
4 GS - 50 to 999	104.0%			80 - 120
5 GS - 1000 to 4999	93.4%			80 - 120
6 Large Use >5MW	84.0%			85 - 115
7 Street Light	104.4%			80 - 120
8 Unmetered Scattered Load	93.6%			80 - 120
9 Unmetered Scattered Load (Connection)				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

(11) The applicant should complete Table D if it is applying for approval of a revenue-to-cost ratio in 2019 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 2020 and 2021 Price Cap IR models, as necessary. For 2020 and 2021, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2018 (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'.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers

New Rate Design Policy For Residential Customers

Please complete the following tables.

A Data Inputs (from Sheet 10. Load Forecast)

Test Year Billing Determinants for Residential Class	
Customers	622,544
kWh	4,366,437,563
Proposed Residential Class Specific Revenue Requirement ¹	
	\$ 365,837,981.60
Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 37.98
Distribution Volumetric Rate (\$/kWh)	\$ 0.00552

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	37.98	622,544	\$ 283,730,653.44	92.17%
Variable	0.00552	4,366,437,563	\$ 24,102,735.35	7.83%
TOTAL	-	-	\$ 307,833,388.79	-

C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years ²	1
--	---

	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 337,193,603.27	45.14	\$ 337,219,633.92
Variable	\$ 28,644,378.33	0.0066	\$ 28,818,487.91
TOTAL	\$ 365,837,981.60	-	\$ 366,038,121.83

	New F/V Split	Revenue @ new F/V Split	Final Adjusted Base Rates	Revenue Reconciliation @ Adjusted Rates
Fixed	100.00%	\$ 365,837,981.60	\$ 48.97	\$ 365,831,756.16
Variable	0.00%	\$ -	\$ -	\$ -
TOTAL	-	\$ 365,837,981.60	-	\$ 365,831,756.16

Checks ³	
Change in Fixed Rate	\$ 3.83
Difference Between Revenues @ Proposed Rates and Class Specific Revenue Requirement	(\$6,225.44)
	0.00%

Notes:

- ¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- ² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. A distributor transitioning to fully fixed rates over a four year period and began the transition in 2016 would input the number "3" into cell D40. A distributor transitioning over a five-year period would input the number "4". Where the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, a distributor may propose an additional transition year.
- ³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2024 Filers

New Rate Design Policy For Competitive Sector Multi-Unit Customers (CSMUR)

Please complete the following tables.

A Data Inputs (from Sheet 10. Load Forecast)

Test Year Billing Determinants for CSMUR	
Customers	85,161
kWh	277,127,203
Proposed CSMUR Class Specific Revenue Requirement ¹	\$ 34,812,874.82
CSMUR Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 30.98
Distribution Volumetric Rate (\$/kWh)	\$ 0.00845

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	30.98	85,161	\$ 31,659,453.36	93.11%
Variable	0.00845	277,127,203	\$ 2,341,724.87	6.89%
TOTAL	-	-	\$ 34,001,178.23	-

C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years ²	1
--	---

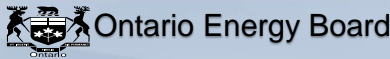
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 32,415,246.89	31.72	\$ 32,415,683.04
Variable	\$ 2,397,627.93	0.0087	\$ 2,411,006.67
TOTAL	\$ 34,812,874.82	-	\$ 34,826,689.71

	New F/V Split	Revenue @ new F/V Split	Final Adjusted Base Rates	Revenue Reconciliation @ Adjusted Rates
Fixed	100.00%	\$ 34,812,874.82	\$ 34.07	\$ 34,817,223.24
Variable	0.00%	\$ -	\$ -	\$ -
TOTAL	-	\$ 34,812,874.82	-	\$ 34,817,223.24

Checks ³	
Change in Fixed Rate	\$ 2.35
Difference Between Revenues @ Proposed Rates and Class Specific Revenue Requirement	\$4,348.42
	0.01%

Notes:

- ¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- ² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. A distributor transitioning to fully fixed rates over a four year period and began the transition in 2016 would input the number "3" into cell D40. A distributor transitioning over a five-year period would input the number "4". Where the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, a distributor may propose an additional transition year.
- ³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)



Revenue Requirement Workform (RRWF) for 2024 Filers

Rate Design and Revenue Reconciliation

This sheet replaces Appendix 2-V, and provides a simplified model for calculating the standard monthly and volumetric rates based on the allocated class revenues and fixed/variable split resulting from the cost allocation study and rate design and as proposed by the applicant. However, the RRWF does not replace the rate generator model that an applicant distributor may use in support of its application. The RRWF provides a demonstrative check on the derivation of the revenue requirement and on the proposed base distribution rates to recover the revenue requirement, based on summary information from a more detailed rate generator model and other models that applicants use for cost allocation, load forecasting, taxes/PILs, etc.

Stage in Process: Initial Application					Class Allocated Revenues			Fixed / Variable Splits ²			Distribution Rates				Revenue Reconciliation		
Customer and Load Forecast					From Sheet 11. Cost Allocation and Sheet 12. Residential Rate Design			Percentage to be entered as a fraction between 0 and 1									
Customer Class	Volumetric Charge Determinant	Customers / Connections	kWh	kW or kVA	Total Class Revenue Requirement	Monthly Service Charge	Volumetric	Fixed	Variable	Transformer Ownership Allowance ¹ (\$)	Monthly Service Charge		Volumetric Rate		MSC Revenues	Volumetric revenues	Distribution Revenues less Transformer Ownership Allowance
From sheet 10. Load Forecast											Rate	No. of decimals	Rate	No. of decimals			
1 Residential	kWh	622,544	4,366,437,563	-	\$ 365,837,982	\$ 365,837,982	\$ -	100.00%	0.00%	\$ -	\$48.30	2	\$0.00000	/kWh	365,837,982	-	\$ 365,837,981.60
2 Competitive Sector Multi-Unit Residential	kWh	107,796	328,419,229	-	\$ 50,218,024	\$ 50,218,024	\$ -	100.00%	0.00%	\$ -	\$38.29		\$0.00000	/kWh	50,218,024	-	\$ 50,218,024.22
3 GS <50	kWh	71,885	2,169,915,395	-	\$ 122,461,164	\$ 35,898,553	\$ 86,562,611	29.31%	70.69%	\$ -	\$41.05		\$0.03989	/kWh	35,902,364	86,557,925	\$ 122,460,289.33
4 GS - 50 to 999	kVA	10,330	9,419,379,152	24,875,671	\$ 245,490,240	\$ 7,557,853	\$ 237,932,387	3.08%	96.92%	\$ 3,941,533	\$60.13		\$9.5901	/kVA	7,557,239	241,873,508	\$ 245,489,213.88
5 GS - 1000 to 4999	kVA	430	4,351,721,474	10,228,471	\$ 78,883,982	\$ 5,612,168	\$ 73,271,814	7.11%	92.89%	\$ 5,440,129	\$1,072.73		\$7.5900	/kVA	5,612,166	78,712,343	\$ 78,884,380.03
6 Large Use >5MW	kVA	44	1,956,322,242	4,733,922	\$ 38,741,455	\$ 2,533,814	\$ 36,207,641	6.54%	93.46%	\$ 2,942,549	\$4,733.15		\$8.1568	/kVA	2,533,813	39,149,953	\$ 38,741,217.19
7 Street Light	kVA	166,375	116,138,779	328,561	\$ 17,928,726	\$ 3,847,064	\$ 14,081,662	21.46%	78.54%	\$ -	\$1.90		\$42.2715	/kVA	3,846,039	14,081,666	\$ 17,927,705.11
8 Unmetered Scattered Load	kWh	857	41,313,479	-	\$ 4,610,813	\$ 88,189	\$ 4,392,436	1.91%	95.26%	\$ -	\$8.46		\$0.10632	/kWh	88,211	4,392,449	\$ 4,480,660.06
9 Unmetered Scattered Load (Connections)		12,272	-	-		\$ 130,188	\$ -	2.82%		\$ -	\$0.87		\$0.00000		129,899	-	\$ 129,899.12
10		-	-	-											\$ -	\$ -	\$ -
11		-	-	-											\$ -	\$ -	\$ -
12		-	-	-											\$ -	\$ -	\$ -
13		-	-	-											\$ -	\$ -	\$ -
14		-	-	-											\$ -	\$ -	\$ -
15		-	-	-											\$ -	\$ -	\$ -
16		-	-	-											\$ -	\$ -	\$ -
17		-	-	-											\$ -	\$ -	\$ -
18		-	-	-											\$ -	\$ -	\$ -
19		-	-	-											\$ -	\$ -	\$ -
20		-	-	-											\$ -	\$ -	\$ -
Total Transformer Ownership Allowance										\$ 12,324,211					Total Distribution Revenues		
															\$ 924,169,370.54		
															Base Revenue Requirement		
															\$ 928,462,952.64		
															Difference		
															-\$ 4,293,582.10		
															% Difference		
															-0.462%		

Notes:

¹ Transformer Ownership Allowance is entered as a positive amount, and only for those classes to which it applies.

² The Fixed/Variable split, for each customer class, drives the "rate generator" portion of this sheet of the RRWF. Only the "fixed" fraction is entered, as the sum of the "fixed" and "variable" portions must sum to 100%. For a distributor that may set the Monthly Service Charge, the "fixed" ratio is calculated as: [MSC x (average number of customers or connections) x 12 months] / (Class Allocated Revenue Requirement).

Rates recover revenue requirement

Revenue Requirement Workform (RRWF) for 2019 Filers

(2) **Short description of change, issue, etc.**

[illegible]