

## CALCULATION OF REVENUE DEFICIENCY OR SUFFICIENCY

### 1. INTRODUCTION

This Schedule provides a summary of the revenue requirement being requested by Hydro Ottawa for 2021-2025 in order to continue delivering electricity safely and reliably. The utility's total Service Revenue Requirement is offset by revenues obtained by sources other than distribution rates (i.e. other revenue). The calculation of the revenue deficiency/sufficiency does not include the recovery of deferral and variance accounts, as outlined in Exhibit 9-3-1: Disposition of Deferral and Variance Accounts, or Low Voltage Charges as outlined in Exhibit 8-8-1: Low Voltage Service Rates. As directed in the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and July 15, 2019, costs and revenues related to the cost of power are kept separate from the determination of the distribution revenue sufficiency/deficiency.

### 2. CALCULATION OF DEFICIENCY OR SUFFICIENCY

The revenue deficiency/sufficiency for 2021-2025 was calculated using the following inputs:

- 2020 proposed rates; and
- 2021-2025 load forecast and forecast of customers and connections, as developed using the methodology described in Exhibit 3-1-1: Load Forecast.

The revenue deficiency/sufficiency was then determined by calculating what the revenue would have been with 2020 rates and the forecasted 2021-2025 load and customer numbers. As a result, revenue deficiency in the tables of this Schedule and Revenue Requirement Workforms produce a cumulative revenue requirement rather than a year-over-year revenue requirement. Hydro Ottawa compiled the analysis in this matter, as the 2020 rates give a stable base upon which to compare each year.

## 2.1. REVENUE DEFICIENCY/SUFFICIENCY 2016-2020

Table 1 outlines the revenue deficiency/sufficiency for 2016-2020 using the following inputs:

- 2015 approved rates;
- 2016-2020 approved load forecast and forecast of customers/connections; and
- 2016-2020 base revenue requirement, as per the Approved Settlement Agreement governing Hydro Ottawa's 2016-2020 rate term, including the mid-term adjustments.<sup>1</sup>

**Table 1 – Approved Revenue Deficiency/Sufficiency for 2016-2020  
with Mid-Term Adjustments (\$'000s)**

	2016	2017	2018	2019	2020
Return on Rate Base	\$47,805	\$50,185	\$52,999	\$54,062	\$56,211
Distribution Expenses (not including amortization)	\$83,106	\$84,693	\$86,311	\$87,648	\$89,007
Amortization	\$40,379	\$43,558	\$46,388	\$48,158	\$49,384
Payment in Lieu of Taxes	\$3,755	\$3,634	\$4,897	\$6,914	\$5,943
<b>Service Revenue Requirement</b>	<b>\$175,045</b>	<b>\$182,070</b>	<b>\$190,594</b>	<b>\$196,782</b>	<b>\$200,544</b>
Less Revenue Offsets	\$11,697	\$11,563	\$11,719	\$11,799	\$11,895
Per Approved Settlement Agreement					
Adjustment per Pole Attachment Decision <sup>2</sup>	\$(225)	\$(225)	\$(282)	\$(282)	\$(282)
<b>Base Revenue Requirement</b>	<b>\$163,573</b>	<b>\$170,733</b>	<b>\$179,157</b>	<b>\$185,264</b>	<b>\$188,931</b>
Transformer Ownership Credit	\$1,125	\$1,114	\$1,109	\$1,106	\$1,105
<b>Revenue Requirement from Rates</b>	<b>\$164,698</b>	<b>\$171,847</b>	<b>\$180,266</b>	<b>\$186,371</b>	<b>\$190,036</b>
Forecasted Load at 2015 Rates	\$159,360	\$158,986	\$159,421	\$159,977	\$160,464
<b>Cumulative Revenue Deficiency (over 2015)</b>	<b>\$(5,338)</b>	<b>\$(12,861)</b>	<b>\$(20,845)</b>	<b>\$(26,394)</b>	<b>\$(29,572)</b>
<b>Yearly Revenue Deficiency over 2015</b>	<b>\$(5,338)</b>	<b>\$(7,523)</b>	<b>\$(7,984)</b>	<b>\$(5,549)</b>	<b>\$(3,179)</b>

<sup>1</sup> Ontario Energy Board, *Decision and Order*, EB-2015-0004 (December 22, 2015).

<sup>2</sup> Ontario Energy Board, *Decision and Rate Order on Pole Attachment Charge*, EB-2015-0004 (February 25, 2016).

## 2.2. REVENUE DEFICIENCY/SUFFICIENCY 2021-2025

Table 2 below shows 2021-2025 base revenue requirement calculations. More details for each year can be found in the Revenue Requirement Workforms ("RRWF") attached to this Schedule:

- Attachment 6-1-1(A): OEB Workform - 2021 Revenue Requirement Workform
- Attachment 6-1-1(B): OEB Workform - 2022 Revenue Requirement Workform
- Attachment 6-1-1(C): OEB Workform - 2023 Revenue Requirement Workform
- Attachment 6-1-1(D): OEB Workform - 2024 Revenue Requirement Workform
- Attachment 6-1-1(E): OEB Workform - 2025 Revenue Requirement Workform

The references to Costs Allocated from Previous Study and Previously Approved Ratios on Sheet 11 Cost Allocation in the RRWF Workforms refer to 2020 in each case. In addition, the difference in Sheet 11 Cost Allocation between columns (7C) and (7D) is the difference between allocated Base Revenue Requirement and achieved Base Revenue Requirement.

**Table 2 – Revenue Deficiency/Sufficiency for 2021-2025 (\$'000s)**

	2021	2022	2023	2024	2025
Return on Rate Base	\$67,489	\$73,588	\$77,441	\$79,860	\$84,624
Distribution Expenses (not including amortization)	\$93,923	\$96,280	\$98,697	\$101,174	\$103,714
Amortization	\$52,450	\$56,860	\$59,142	\$60,711	\$64,027
Payment in Lieu of Taxes	\$1,024	\$5,211	\$8,766	\$11,660	\$7,689
<b>Service Revenue Requirement</b>	<b>\$214,886</b>	<b>\$231,939</b>	<b>\$244,045</b>	<b>\$253,405</b>	<b>\$260,053</b>
Less Revenue Offsets	\$10,977	\$11,013	\$11,667	\$12,151	\$12,457
<b>Base Revenue Requirement</b>	<b>\$203,909</b>	<b>\$220,926</b>	<b>\$232,378</b>	<b>\$241,254</b>	<b>\$247,596</b>
Transformer Ownership Credit	\$1,056	\$1,056	\$1,056	\$1,059	\$886
<b>Revenue Requirement from Rates</b>	<b>\$204,965</b>	<b>\$221,982</b>	<b>\$233,434</b>	<b>\$242,312</b>	<b>\$248,483</b>
Forecasted Load at 2020 Rates	\$187,905	\$188,833	\$189,716	\$190,703	\$191,468
<b>Cumulative Revenue Deficiency (over 2020)</b>	<b>\$(17,060)</b>	<b>\$(33,149)</b>	<b>\$(43,719)</b>	<b>\$(51,609)</b>	<b>\$(57,014)</b>
<b>Yearly Revenue Deficiency over 2020<sup>3</sup></b>	<b>\$(17,060)</b>	<b>\$(16,089)</b>	<b>\$(10,570)</b>	<b>\$(7,891)</b>	<b>\$(5,405)</b>

<sup>3</sup> Totals may not sum due to rounding.

Table 3 provides Revenue Deficiency that is calculated by multiplying the previous Test Year's rates against the current Test Year's load forecast.

**Table 3 – Revenue Sufficiency/Deficiency using Prior Test Year's Rates (\$'000s)**

	2021	2022	2023	2024	2025
Total Revenue Requirement from Rates	\$204,965	\$221,982	\$233,434	\$242,312	\$248,483
Forecast Load at Prior Year's Rates	\$187,905	\$205,984	\$223,009	\$234,675	\$243,259
<b>Yearly Revenue Deficiency</b>	<b>\$(17,060)</b>	<b>\$(15,998)</b>	<b>\$(10,425)</b>	<b>\$(7,637)</b>	<b>\$(5,224)</b>

### 3. YEAR-OVER-YEAR REVENUE DEFICIENCY/SUFFICIENCY

Table 4 below provides the 2020-2021 year-over-year revenue deficiency/sufficiency amounts and major cost drivers. The references to other Exhibits in this Application indicate where additional details on year-over-year variance and cost drivers can be found.

1 **Table 4 – 2020-2021 Revenue Deficiency Amounts & Cost Drivers (\$'000s)<sup>4</sup>**

Driver of Deficiency	2020 OEB- Approved <sup>5</sup>	2021 Test Year	+/-	Cost Drivers	Exhibit Reference
Return on Rate Base	\$56,211	\$67,489	\$11,278	- \$173.8M increase in net fixed assets - Previously excluded items added back to rate base	2-1-1
Distribution Expenses (not including amortization)	\$89,007	\$93,923	\$4,916	- Increases in compensation - Inflationary increases - Increase in distribution operations expenses	1-1-8 (Table 5) 4-1-3 4-1-4
Amortization	\$49,384	\$52,450	\$3,066	- Increase in sustainment additions	2-2-1 2-2-1(E)-(F) 2-4-3(E)
Payment in Lieu of Taxes	\$5,943	\$1,024	\$(4,919)	- Higher CCA deduction caused by large amount of fixed asset additions	4-4-1 4-4-1(D)
<b>Service Revenue Requirement</b>	<b>\$200,544</b>	<b>\$214,886</b>	<b>\$14,342</b>		6-1-1(A)
Less Revenue Offsets <sup>6</sup>	\$11,613	\$10,977	\$(636)	- Changes in other revenue rates	3-2-1
<b>Base Revenue Requirement</b>	<b>\$188,931</b>	<b>\$203,909</b>	<b>\$14,978</b>		6-1-1(A) 8-1-1
Transformer Ownership Credit	\$1,105	\$1,056	\$(49)	- Changes in load forecast	3-1-1
<b>Revenue Requirement from Rates</b>	<b>\$190,036</b>	<b>\$204,965</b>	<b>\$14,929</b>		6-1-1(A)
Forecasted Load at 2015/2020 Rates	\$160,464	\$187,905	\$27,441	- Changes in load forecast - Increase in distribution rates - Impact of revenue requirement item in Regulatory Accounts	3-1-1 8-12-1 9-1-3
<b>Cumulative Revenue Deficiency (over 2020)</b>		<b>\$(17,060)</b>			

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3 Table 5 provides the 2020-2025 year-over-year revenue requirement amounts, the increase or  
4 decrease from prior test year, major cost drivers, and references to Exhibits where further  
5 information on the drivers can be found.

<sup>4</sup> Totals may not sum due to rounding.

<sup>5</sup> This figure includes mid-term adjustments.

<sup>6</sup> The amount for 2020 includes adjustments as per the OEB's Pole Attachment Decision (see footnote 2 above).

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**Table 5 – 2021-2025 Revenue Deficiency Amounts & Drivers (\$'000s)<sup>1</sup>**

		Bridge <sup>2</sup>	Test					Drivers	Reference
		2020	2021	2022	2023	2024	2025		
Return on Rate Base	\$	\$66,298	\$67,489	\$73,588	\$77,441	\$79,860	\$84,624	Annual increases in net fixed assets and working capital	2-1-1
	+/-		\$1,191	\$6,099	\$3,853	\$2,419	\$4,763		
Distribution Expenses (not including amortization)	\$	\$91,990	\$93,923	\$96,280	\$98,697	\$101,174	\$103,714	Annual inflationary increases and increases in compensation	1-1-8 (Table 6) 4-1-3 4-1-4
	+/-		\$1,933	\$2,357	\$2,417	\$2,477	\$2,539		
Amortization	\$	\$50,723	\$52,450	\$56,860	\$59,142	\$60,711	\$64,027	Annual increases in sustainment additions	2-2-1 2-2-1(E)-(J) 2-4-3(E) 6-6-1 (Table 3)
	+/-		\$1,727	\$4,410	\$2,282	\$1,570	\$3,315		
Payment in Lieu of Taxes	\$	\$2,362	\$1,024	\$5,211	\$8,766	\$11,660	\$7,689	2021 & 2025 - Decrease due to increase in accelerated CCA, large amount of fixed assets placed into service 2022-2024 - Increases due to higher accounting depreciation and lower accelerated CCA	4-4-1 4-4-1(D)-(H)
	+/-		\$(1,338)	\$4,187	\$3,555	\$2,894	\$(3,970)		
Service Revenue Requirement	\$	\$211,374	\$214,886	\$231,939	\$244,045	\$253,405	\$260,053		6-1-1(A)-(E)
	+/-		\$3,512	\$17,053	\$12,106	\$9,360	\$6,648		

<sup>1</sup> Totals may not sum due to rounding.

<sup>2</sup> Figures in this column include revenue requirement of New Facilities and Connection Cost Recovery Agreement Payments currently held in Regulatory Accounts.

		Bridge <sup>3</sup> (Cont'd)	Test (Cont'd)					Drivers (Cont'd)	Reference (Cont'd)
		2020	2021	2022	2023	2024	2025		
Less Revenue Offsets	\$	\$10,268	\$10,977	\$11,013	\$11,667	\$12,151	\$12,457	Inflationary increases and changes to other revenue rates	3-2-1
	+/-		\$709	\$36	\$654	\$484	\$305		
Base Revenue Requirement	\$	\$201,106	\$203,909	\$220,926	\$232,378	\$241,254	\$247,596		6-1-1(A) 8-1-1
	+/-		\$2,803	\$17,017	\$11,452	\$8,876	\$6,342		
Transformer Ownership Credit	\$	\$1,131	\$1,056	\$1,056	\$1,056	\$1,059	\$886	2021-2025 - Changes in load forecast 2025 - Transformer Ownership Credit discontinued	3-1-1 8-1-1
	+/-		\$(75)	\$(0)	\$0	\$2	\$(172)		
Revenue Requirement from Rates	\$	\$202,237	\$204,965	\$221,982	\$233,434	\$242,312	\$248,483		
	+/-		\$2,803	\$17,017	\$11,452	\$8,878	\$6,170		
Forecasted Load at 2015/2020 Rates	\$	\$160,464	\$187,905	\$188,833	\$189,716	\$190,703	\$191,468	Annual changes in load forecast Impact of revenue requirement item in Regulatory Accounts	3-1-1 9-1-3
	+/-		\$27,441	\$928	\$882	\$987	\$765		
Cumulative Revenue Deficiency (over 2020)	\$		(\$17,060)	(\$33,149)	(\$43,719)	(\$51,609)	(\$57,014)		
	+/-			\$(16,089)	\$(10,570)	\$(7,891)	\$(5,405)		

<sup>3</sup> Figures in this column include revenue requirement of New Facilities and Connection Cost Recovery Agreement Payments currently held in Regulatory Accounts.



Ontario Energy Board

## Revenue Requirement Workform (RRWF) for 2020 Filers



Version 9.00

Utility Name	Hydro Ottawa Limited
Service Territory	
Assigned EB Number	EB-2019-0261
Name and Title	Gregory Van Dusen, Director, Regulatory Affairs
Phone Number	613-738-5499 ext 7472
Email Address	<a href="mailto:RegulatoryAffairs@HydroOttawa.com">RegulatoryAffairs@HydroOttawa.com</a>
Test Year	<a href="#">2021</a>
Bridge Year	
Last Rebasing Year	<a href="#">2016</a>

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 2020 Filers

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## 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 <sup>(1)</sup>

	Initial Application <sup>(2)</sup>					Per Board Decision
<b>1</b>	<b>Rate Base</b>					
	Gross Fixed Assets (average)	\$1,444,394,960		\$1,444,394,960		\$1,444,394,960
	Accumulated Depreciation (average)	(\$309,700,143) <sup>(5)</sup>		(\$309,700,143)		(\$309,700,143)
	Allowance for Working Capital:					
	Controllable Expenses	\$93,922,657		\$93,922,657		\$93,922,657
	Cost of Power	\$1,025,612,762		\$1,025,612,762		\$1,025,612,762
	Working Capital Rate (%)	7.50% <sup>(9)</sup>				
<b>2</b>	<b>Utility Income</b>					
	Operating Revenues:					
	Distribution Revenue at Current Rates	\$186,849,349 <sup>(10)</sup>				
	Distribution Revenue at Proposed Rates	\$203,908,920				
	Other Revenue:					
	Specific Service Charges	\$5,118,168				
	Late Payment Charges	\$1,000,000				
	Other Distribution Revenue	\$2,789,981				
	Other Income and Deductions	\$2,069,167				
	Total Revenue Offsets	\$10,977,316 <sup>(7)</sup>				
	Operating Expenses:					
	OM+A Expenses	\$90,790,555		\$90,790,555		\$90,790,555
	Depreciation/Amortization	\$52,450,059		\$52,450,059		\$52,450,059
	Property taxes	\$3,132,102		\$3,132,102		\$3,132,102
	Other expenses					
<b>3</b>	<b>Taxes/PILs</b>					
	Taxable Income:					
	Adjustments required to arrive at taxable income	(\$40,125,534) <sup>(3)</sup>				
	Utility Income Taxes and Rates:					
	Income taxes (not grossed up)	\$752,736				
	Income taxes (grossed up)	\$1,024,131				
	Federal tax (%)	15.00%				
	Provincial tax (%)	11.50%				
	Income Tax Credits	(\$85,000)				
<b>4</b>	<b>Capitalization/Cost of Capital</b>					
	Capital Structure:					
	Long-term debt Capitalization Ratio (%)	56.0%				
	Short-term debt Capitalization Ratio (%)	4.0% <sup>(8)</sup>				
	Common Equity Capitalization Ratio (%)	40.0%				
	Preferred Shares Capitalization Ratio (%)					
		100.0%				
	Cost of Capital					
	Long-term debt Cost Rate (%)	3.35%				
	Short-term debt Cost Rate (%)	2.75%				
	Common Equity Cost Rate (%)	8.88%				
	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 M12. 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) Revenue at 2020 rates minus 2021 Transformer Ownership Allowance



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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) <sup>(2)</sup>	\$1,444,394,960		\$ -		\$1,444,394,960		\$ -	\$1,444,394,960
2	Accumulated Depreciation (average) <sup>(2)</sup>	(\$309,700,143)		\$ -		(\$309,700,143)		\$ -	(\$309,700,143)
3	Net Fixed Assets (average) <sup>(2)</sup>	\$1,134,694,817		\$ -		\$1,134,694,817		\$ -	\$1,134,694,817
4	Allowance for Working Capital <sup>(1)</sup>	\$83,965,156	(\$83,965,156)			\$ -		\$ -	\$ -
5	Total Rate Base	\$1,218,659,973	(\$83,965,156)			\$1,134,694,817		\$ -	\$1,134,694,817

### (1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$93,922,657	\$ -	\$93,922,657	\$ -	\$93,922,657
7	Cost of Power	\$1,025,612,762	\$ -	\$1,025,612,762	\$ -	\$1,025,612,762
8	Working Capital Base	\$1,119,535,420	\$ -	\$1,119,535,420	\$ -	\$1,119,535,420
9	Working Capital Rate % <sup>(1)</sup>	7.50%	-7.50%	0.00%	0.00%	0.00%
10	Working Capital Allowance	\$83,965,156	(\$83,965,156)	\$ -	\$ -	\$ -

#### Notes

(1)

Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2020 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 2020 Filers

### Utility Income

Line No.	Particulars	Initial Application					Per Board Decision
<b>Operating Revenues:</b>							
1	Distribution Revenue (at Proposed Rates)	\$203,908,920	(\$203,908,920)	\$ -	\$ -	\$ -	\$ -
2	Other Revenue <sup>(1)</sup>	\$10,977,316	(\$10,977,316)	\$ -	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$214,886,236	(\$214,886,236)	\$ -	\$ -	\$ -	\$ -
<b>Operating Expenses:</b>							
4	OM+A Expenses	\$90,790,555	\$ -	\$90,790,555	\$ -	\$90,790,555	\$90,790,555
5	Depreciation/Amortization	\$52,450,059	\$ -	\$52,450,059	\$ -	\$52,450,059	\$52,450,059
6	Property taxes	\$3,132,102	\$ -	\$3,132,102	\$ -	\$3,132,102	\$3,132,102
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$146,372,716	\$ -	\$146,372,716	\$ -	\$146,372,716	\$146,372,716
10	Deemed Interest Expense	\$24,202,587	(\$24,202,587)	\$ -	\$ -	\$ -	\$ -
11	Total Expenses (lines 9 to 10)	\$170,575,303	(\$24,202,587)	\$146,372,716	\$ -	\$146,372,716	\$146,372,716
12	Utility income before income taxes	\$44,310,933	(\$190,683,649)	(\$146,372,716)	\$ -	(\$146,372,716)	(\$146,372,716)
13	Income taxes (grossed-up)	\$1,024,131	\$ -	\$1,024,131	\$ -	\$1,024,131	\$1,024,131
14	Utility net income	\$43,286,803	(\$190,683,649)	(\$147,396,847)	\$ -	(\$147,396,847)	(\$147,396,847)

### Notes

#### Other Revenues / Revenue Offsets

<sup>(1)</sup>	Specific Service Charges	\$5,118,168	\$ -	\$ -	\$ -	\$ -
	Late Payment Charges	\$1,000,000	\$ -	\$ -	\$ -	\$ -
	Other Distribution Revenue	\$2,789,981	\$ -	\$ -	\$ -	\$ -
	Other Income and Deductions	\$2,069,167	\$ -	\$ -	\$ -	\$ -
	Total Revenue Offsets	\$10,977,316	\$ -	\$ -	\$ -	\$ -



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	\$43,286,802		\$ -	\$ -
2	Adjustments required to arrive at taxable utility income	(\$40,125,534)		\$ -	\$ -
3	Taxable income	\$3,161,268		\$ -	\$ -
<u>Calculation of Utility income Taxes</u>					
4	Income taxes	\$752,736		\$752,736	
6	Total taxes	\$752,736		\$752,736	
7	Gross-up of Income Taxes	\$271,395		\$271,395	
8	Grossed-up Income Taxes	\$1,024,131		\$1,024,131	
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	\$1,024,131		\$1,024,131	
10	Other tax Credits	(\$85,000)		(\$85,000)	(\$85,000)
<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 2020 Filers

## Capitalization/Cost of Capital

Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
		Initial Application			
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	56.00%	\$682,449,585	3.35%	\$22,862,061
2	Short-term Debt	4.00%	\$48,746,399	2.75%	\$1,340,526
3	Total Debt	60.00%	\$731,195,984	3.31%	\$24,202,587
	Equity				
4	Common Equity	40.00%	\$487,463,989	8.88%	\$43,286,802
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$487,463,989	8.88%	\$43,286,802
7	Total	100.00%	\$1,218,659,973	5.54%	\$67,489,389
		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%	\$1,134,694,817	0.00%	\$ -
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	0.00%	\$ -	3.35%	\$ -
9	Short-term Debt	0.00%	\$ -	2.75%	\$ -
10	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
11	Common Equity	0.00%	\$ -	8.88%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	0.00%	\$ -	0.00%	\$ -
14	Total	0.00%	\$1,134,694,817	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		\$21,701,279		(\$55,059,309)		\$199,146,552
2	Distribution Revenue	\$186,849,349	\$182,207,641	\$186,849,349	\$258,968,229	\$ -	(\$199,146,552)
3	Other Operating Revenue	\$10,977,316	\$10,977,316	\$ -	\$ -	\$ -	\$ -
	Offsets - net						
4	<b>Total Revenue</b>	<b>\$197,826,666</b>	<b>\$214,886,236</b>	<b>\$186,849,349</b>	<b>\$203,908,920</b>	<b>\$ -</b>	<b>\$ -</b>
5	Operating Expenses	\$146,372,716	\$146,372,716	\$146,372,716	\$146,372,716	\$146,372,716	\$146,372,716
6	Deemed Interest Expense	\$24,202,587	\$24,202,587	\$ -	\$ -	\$ -	\$ -
8	<b>Total Cost and Expenses</b>	<b>\$170,575,303</b>	<b>\$170,575,303</b>	<b>\$146,372,716</b>	<b>\$146,372,716</b>	<b>\$146,372,716</b>	<b>\$146,372,716</b>
9	<b>Utility Income Before Income Taxes</b>	<b>\$27,251,363</b>	<b>\$44,310,933</b>	<b>\$40,476,633</b>	<b>\$57,536,204</b>	<b>(\$146,372,716)</b>	<b>(\$146,372,716)</b>
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$40,125,534)	(\$40,125,534)	(\$40,125,534)	(\$40,125,534)	\$ -	\$ -
11	<b>Taxable Income</b>	<b>(\$12,874,171)</b>	<b>\$4,185,399</b>	<b>\$351,099</b>	<b>\$17,410,670</b>	<b>(\$146,372,716)</b>	<b>(\$146,372,716)</b>
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%	26.50%	26.50%
13	<b>Income Tax on Taxable Income</b>	<b>\$ -</b>	<b>\$1,109,131</b>	<b>\$93,041</b>	<b>\$4,613,828</b>	<b>\$ -</b>	<b>\$ -</b>
14	<b>Income Tax Credits</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>\$ -</b>	<b>\$ -</b>
15	<b>Utility Net Income</b>	<b>\$27,336,363</b>	<b>\$43,286,803</b>	<b>\$40,468,592</b>	<b>(\$147,396,847)</b>	<b>(\$146,372,716)</b>	<b>(\$147,396,847)</b>
16	<b>Utility Rate Base</b>	<b>\$1,218,659,973</b>	<b>\$1,218,659,973</b>	<b>\$1,134,694,817</b>	<b>\$1,134,694,817</b>	<b>\$1,134,694,817</b>	<b>\$1,134,694,817</b>
17	Deemed Equity Portion of Rate Base	\$487,463,989	\$487,463,989	\$ -	\$ -	\$ -	\$ -
18	Income/(Equity Portion of Rate Base)	5.61%	8.88%	0.00%	0.00%	0.00%	0.00%
19	Target Return - Equity on Rate Base	8.88%	8.88%	0.00%	0.00%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-3.27%	0.00%	0.00%	0.00%	0.00%	0.00%
21	Indicated Rate of Return	4.23%	5.54%	3.57%	0.00%	-12.90%	0.00%
22	Requested Rate of Return on Rate Base	5.54%	5.54%	0.00%	0.00%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-1.31%	0.00%	3.57%	0.00%	-12.90%	0.00%
24	Target Return on Equity	\$43,286,802	\$43,286,802	\$ -	\$ -	\$ -	\$ -
25	Revenue Deficiency/(Sufficiency)	\$15,950,440	\$1	(\$40,468,592)	\$ -	\$146,372,716	\$ -
26	<b>Gross Revenue Deficiency/(Sufficiency)</b>	<b>\$21,701,279 <sup>(1)</sup></b>		<b>(\$55,059,309) <sup>(1)</sup></b>		<b>\$199,146,552 <sup>(1)</sup></b>	

### Notes:

<sup>(1)</sup> 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	\$90,790,555	\$90,790,555	\$90,790,555	
2	Amortization/Depreciation	\$52,450,059	\$52,450,059	\$52,450,059	
3	Property Taxes	\$3,132,102	\$3,132,102	\$3,132,102	
5	Income Taxes (Grossed up)	\$1,024,131	\$1,024,131	\$1,024,131	
6	Other Expenses	\$ -			
7	Return				
	Deemed Interest Expense	\$24,202,587	\$ -	\$ -	
	Return on Deemed Equity	\$43,286,802	\$ -	\$ -	
8	<b>Service Revenue Requirement (before Revenues)</b>	<u>\$214,886,236</u>	<u>\$147,396,847</u>	<u>\$147,396,847</u>	
9	Revenue Offsets	\$10,977,316	\$ -	\$ -	
10	<b>Base Revenue Requirement (excluding Transformer Ownership Allowance credit adjustment)</b>	<u>\$203,908,920</u>	<u>\$147,396,847</u>	<u>\$147,396,847</u>	
11	Distribution revenue	\$203,908,920	\$ -	\$ -	
12	Other revenue	\$10,977,316	\$ -	\$ -	
13	<b>Total revenue</b>	<u>\$214,886,236</u>	<u>\$ -</u>	<u>\$ -</u>	
14	<b>Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)</b>	<u>\$1</u> <sup>(1)</sup>	<u>(\$147,396,847)</u> <sup>(1)</sup>	<u>(\$147,396,847)</u> <sup>(1)</sup>	

## Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application	Δ% <sup>(2)</sup>	Per Board Decision	Δ% <sup>(2)</sup>
<b>Service Revenue Requirement Grossed-Up Revenue</b>	\$214,886,236	\$147,396,847	\$147,396,847	
<b>Deficiency/(Sufficiency)</b>	\$21,701,279	(\$55,059,309)	\$199,146,552	
<b>Base Revenue Requirement (to be recovered from Distribution Rates)</b>	\$203,908,920	\$147,396,847	\$147,396,847	
<b>Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement</b>	\$17,059,571	\$ -	\$ -	

### Notes

<sup>(1)</sup> Line 11 - Line 8

<sup>(2)</sup> 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 <sup>(1)</sup>	Customer / Connections	kWh	kW/kVA <sup>(1)</sup>
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	316,346	2,253,081,000				
2	GS < 50 kW	25,391	700,163,000				
3	GS > 50 to 1,499 kW	3,120	2,819,476,000	6,816,104			
4	GS > 1,500 to 4,999 kW	68	682,977,000	1,518,349			
5	Large Use	11	574,292,000	1,052,899			
6	Street Lighting	62,806	22,107,000	61,588			
7	Sentinel Lighting	55	47,000	132			
8	Unmetered Scattered Load	3,321	13,602,000				
9	Standby Power	3		7,440			
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Total			7,065,745,000	9,456,512		-	-

Notes:

<sup>(1)</sup> 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 <sup>(3)</sup>	Costs Allocated from Previous Study <sup>(1)</sup>	%	Allocated Class Revenue Requirement <sup>(1)</sup>	%
From Sheet 10. Load Forecast				
(7A)				
1 Residential	\$ 107,281,788	53.50%	\$ 118,467,234	55.13%
2 GS < 50 kW	\$ 20,646,221	10.30%	\$ 21,458,225	9.99%
3 GS > 50 to 1,499 kW	\$ 48,750,762	24.31%	\$ 53,434,771	24.87%
4 GS > 1,500 to 4,999 kW	\$ 13,365,246	6.66%	\$ 11,287,559	5.25%
5 Large Use	\$ 8,063,832	4.02%	\$ 8,700,527	4.05%
6 Street Lighting	\$ 1,811,439	0.90%	\$ 971,554	0.45%
7 Sentinel Lighting	\$ 6,568	0.00%	\$ 9,764	0.00%
8 Unmetered Scattered Load	\$ 547,549	0.27%	\$ 543,397	0.25%
9 Standby Power	\$ 70,655	0.04%	\$ 13,205	0.01%
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
<b>Total</b>	<b>\$ 200,544,060</b>	<b>100.00%</b>	<b>\$ 214,886,236</b>	<b>100.00%</b>
<b>Service Revenue Requirement (from Sheet 9)</b>			<b>\$ 214,886,235.87</b>	

- (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	\$ 105,495,064	\$ 115,126,861	\$ 115,137,290	\$ 8,057,257
2	GS < 50 kW	\$ 23,390,724	\$ 25,526,319	\$ 24,718,302	\$ 981,476
3	GS > 50 to 1,499 kW	\$ 40,380,098	\$ 44,066,838	\$ 44,338,210	\$ 1,388,172
4	GS > 1,500 to 4,999 kW	\$ 9,791,229	\$ 10,685,177	\$ 10,747,637	\$ 271,430
5	Large Use	\$ 6,161,375	\$ 6,723,915	\$ 7,247,862	\$ 190,940
6	Street Lighting	\$ 1,076,396	\$ 1,174,672	\$ 1,114,249	\$ 51,613
7	Sentinel Lighting	\$ 4,052	\$ 4,422	\$ 4,955	\$ 879
8	Unmetered Scattered Load	\$ 532,015	\$ 580,589	\$ 580,271	\$ 35,117
9	Standby Power	\$ 18,443	\$ 20,126	\$ 20,126	\$ 433
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
<b>Total</b>		<b>\$ 186,849,396</b>	<b>\$ 203,908,920</b>	<b>\$ 203,908,902</b>	<b>\$ 10,977,316</b>

- (4) In columns 7B to 7D, LF means Load Forecast of Annual Billing Quantities (i.e., customers or connections, as applicable X 12 months, and kWh, kW or kVA as applicable. Revenue quantities should be net of the Transformer Ownership Allowance for applicable customer classes. Exclude revenues from rate adders and rate riders.
- (5) Columns 7C and 7D - Column Total should equal the Base Revenue Requirement for each.
- (6) Column 7C - The OEB-issued cost allocation model calculates "1+d" on worksheet O-1, cell C22. "d" is defined as Revenue Deficiency/Revenue at Current Rates.
- (7) Column 7E - If using the OEB-issued cost allocation model, enter Miscellaneous Revenues as it appears on worksheet O-1, row 19,

**C) Rebalancing Revenue-to-Cost Ratios**

	Name of Customer Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
		Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
		2016			
		%	%	%	%
1	Residential	104.29%	103.98%	103.99%	85 - 115
2	GS < 50 kW	118.23%	123.53%	119.77%	80 - 120
3	GS > 50 to 1,499 kW	86.34%	85.07%	85.57%	80 - 120
4	GS > 1,500 to 4,999 kW	98.24%	97.07%	97.62%	80 - 120
5	Large Use	85.36%	79.48%	85.50%	85 - 115
6	Street Lighting	80.00%	126.22%	120.00%	80 - 120
7	Sentinel Lighting	76.00%	54.29%	59.75%	80 - 120
8	Unmetered Scattered Load	118.72%	113.31%	113.25%	80 - 120
9	Standby Power	21.03%	155.69%	155.69%	80 - 120
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 <sup>(11)</sup>

Name of Customer Class	Proposed Revenue-to-Cost Ratio			Policy Range
	Test Year 2021	2022	Price Cap IR Period 2023	
1 Residential	103.99%	103.99%	103.99%	85 - 115
2 GS < 50 kW	119.77%	119.77%	119.77%	80 - 120
3 GS > 50 to 1,499 kW	85.57%	85.57%	85.57%	80 - 120
4 GS > 1,500 to 4,999 kW	97.62%	97.62%	97.62%	80 - 120
5 Large Use	85.50%	85.50%	85.50%	85 - 115
6 Street Lighting	120.00%	120.00%	120.00%	80 - 120
7 Sentinel Lighting	59.75%	59.75%	59.75%	80 - 120
8 Unmetered Scattered Load	113.25%	113.25%	113.25%	80 - 120
9 Standby Power	155.69%	155.69%	155.69%	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 2020 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 2021 and 2022 Price Cap IR models, as necessary. For 2021 and 2022, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2019 (in the current Revenue/Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment, column d), and enter TBD for class(es) that will be entered as 'Rebalance'.



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	316,346
kWh	2,253,081,000
Proposed Residential Class Specific Revenue Requirement <sup>1</sup>	
	\$ 115,137,290.16
Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 30.33
Distribution Volumetric Rate (\$/kWh)	\$ -

### B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	30.33	316,346	\$ 115,137,290.16	100.00%
Variable	0	2,253,081,000	\$ -	0.00%
<b>TOTAL</b>	-	-	\$ 115,137,290.16	-

### C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years <sup>2</sup>	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	\$ 115,137,290.16	30.33	\$ 115,137,290.16
Variable	\$ -	0	\$ -
<b>TOTAL</b>	\$ 115,137,290.16	-	\$ 115,137,290.16

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

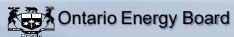
Checks <sup>3</sup>	
Change in Fixed Rate	
Difference Between Revenues @ Proposed Rates and Class Specific Revenue Requirement	

### Notes:

<sup>1</sup> 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).

<sup>2</sup> The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. The change in residential rate design is almost complete and distributors should have either 0 or 1 year remaining. If the distributor has fully transitioned to fixed rates put "0" in cell D40. If the distributor has proposed an additional transition year because the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, put "1" in cell D40.

<sup>3</sup> 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]					Class Allocated Revenues			Distribution Rates				Revenue Reconciliation								
Customer and Load Forecast					From Sheet 11. Cost Allocation and Sheet 12. Residential Rate Design			Fixed / Variable Splits <sup>2</sup> Percentage to be entered as a fraction between 0 and 1		Transformer Ownership Allowance <sup>1</sup> (\$)	Monthly Service Charge		Volumetric Rate		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		MSC Revenues	Volumetric revenues			
From sheet 10. Load Forecast																				
1 Residential	kWh	316,346	2,253,081,000	-	\$ 115,137,290	\$ 115,137,290	\$ -	100.00%	0.00%	\$30.33	2	\$0.0000 /kWh	4	#####	\$ -	#####				
2 GS < 50 kW	kWh	25,391	700,163,000	-	\$ 24,718,302	\$ 6,233,998	\$ 18,484,303	25.22%	74.78%	\$20.46		\$0.0264 /kWh		\$ 6,233,998.32	\$18,484,303.2000	\$24,718,301.52				
3 GS > 50 to 1,499 kW	kW	3,120	2,819,476,000	6,616,104	\$ 44,338,210	\$ 7,487,837	\$ 36,850,373	16.89%	83.11%	\$200.00		\$5.4567 /kW		\$ 7,488,000.00	\$37,193,434.6968	\$44,338,209.64				
4 GS > 1,500 to 4,999 kW	kW	68	682,977,000	1,518,349	\$ 10,747,637	\$ 3,422,246	\$ 7,325,390	31.84%	68.16%	\$4,193.93		\$5.0861 /kW		\$ 3,422,246.88	\$ 7,722,474.8489	\$10,747,636.74				
5 Large Use	kW	11	574,292,000	1,052,899	\$ 7,247,862	\$ 2,010,534	\$ 5,237,328	27.74%	72.26%	\$15,231.32		\$5.2741 /kW		\$ 2,010,534.24	\$ 5,553,094.6159	\$ 7,247,861.81				
6 Street Lighting	kW	62,806	22,107,000	61,588	\$ 1,114,249	\$ 708,452	\$ 405,797	63.58%	36.42%	\$0.94		\$6.5889 /kW		\$ 708,451.68	\$ 405,797.1732	\$ 1,114,248.85				
7 Sentinel Lighting	kW	55	47,000	132	\$ 4,955	\$ 2,561	\$ 2,394	51.68%	48.32%	\$3.88		\$18.1382 /kW		\$ 2,560.80	\$ 2,394.2424	\$ 4,955.04				
8 Unmetered Scattered Load	kWh	3,321	13,602,000	-	\$ 580,271	\$ 221,179	\$ 359,093	38.12%	61.88%	\$5.55		\$0.0264 /kWh		\$ 221,178.60	\$ 359,092.8000	\$ 580,271.40				
9 Standby Power	kW	3	-	7,440	\$ 20,126	\$ 5,702	\$ 14,425	28.33%	71.67%	\$158.38		\$1.9388 /kW		\$ 5,701.68	\$ 14,424.6720	\$ 20,126.35				
10		-	-	-										\$ -	\$ -	\$ -				
11		-	-	-										\$ -	\$ -	\$ -				
12		-	-	-										\$ -	\$ -	\$ -				
13		-	-	-										\$ -	\$ -	\$ -				
14		-	-	-										\$ -	\$ -	\$ -				
15		-	-	-										\$ -	\$ -	\$ -				
16		-	-	-										\$ -	\$ -	\$ -				
17		-	-	-										\$ -	\$ -	\$ -				
18		-	-	-										\$ -	\$ -	\$ -				
19		-	-	-										\$ -	\$ -	\$ -				
20		-	-	-										\$ -	\$ -	\$ -				
Total Transformer Ownership Allowance										\$ 1,056,077		Total Distribution Revenues					#####			
												Rates recover revenue requirement					Base Revenue Requirement		#####	
																	Difference		-\$ 18.08	
																	% Difference		0.000%	

Notes:

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

#### Notes:

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

<sup>2</sup> 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).



## Revenue Requirement Workform (RRWF) for 2020 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.

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

<sup>(2)</sup> Short description of change, issue, etc.

### Summary of Proposed Changes

Reference <sup>(1)</sup>	Item / Description <sup>(2)</sup>	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	\$ 67,489,389	5.54%	\$ 1,218,659,973	\$ 1,119,535,420	\$ 83,965,156	\$ 52,450,059	\$ 1,024,131	\$ 90,790,555	\$ 214,886,236	\$ 10,977,316	\$ 203,908,920	\$ 21,701,279





Ontario Energy Board

# Revenue Requirement Workform (RRWF) for 2020 Filers



Version 9.00

Utility Name	Hydro Ottawa Limited
Service Territory	
Assigned EB Number	EB-2019-0261
Name and Title	Gregory Van Dusen, Director, Regulatory Affairs
Phone Number	613-738-5499 ext 7472
Email Address	<a href="mailto:RegulatoryAffairs@HydroOttawa.com">RegulatoryAffairs@HydroOttawa.com</a>
Test Year	<a href="#">2022</a>
Bridge Year	
Last Rebasing Year	<a href="#">2016</a>

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](#)

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[5. Utility Income](#)

[6. Taxes PILs](#)

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[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.**



# Revenue Requirement Workform (RRWF) for 2020 Filers

Data Input <sup>(1)</sup>

	Initial Application	(2)	(6)	Per Board Decision
<b>1 Rate Base</b>				
Gross Fixed Assets (average)	\$1,576,350,307		\$ 1,576,350,307	\$1,576,350,307
Accumulated Depreciation (average)	(\$361,938,366)	(5)	(\$361,938,366)	(\$361,938,366)
<b>Allowance for Working Capital:</b>				
Controllable Expenses	\$96,280,116		\$ 96,280,116	\$96,280,116
Cost of Power	\$1,097,187,257		\$ 1,097,187,257	\$1,097,187,257
Working Capital Rate (%)	7.50%	(9)	(9)	(9)
<b>2 Utility Income</b>				
Operating Revenues:				
Distribution Revenue at Current Rates	\$187,777,386			
Distribution Revenue at Proposed Rates	\$220,926,272			
<b>Other Revenue:</b>				
Specific Service Charges	\$5,394,162			
Late Payment Charges	\$1,000,000			
Other Distribution Revenue	\$2,885,203			
Other Income and Deductions	\$1,733,539			
<b>Total Revenue Offsets</b>	\$11,012,904	(7)		
<b>Operating Expenses:</b>				
OM+A Expenses	\$93,069,398		\$ 93,069,398	\$93,069,398
Depreciation/Amortization	\$56,860,206		\$ 56,860,206	\$56,860,206
Property taxes	\$3,210,718		\$ 3,210,718	\$3,210,718
Other expenses				
<b>3 Taxes/PILs</b>				
Taxable Income:	(\$32,846,126)	(3)		
Adjustments required to arrive at taxable income				
<b>Utility Income Taxes and Rates:</b>				
Income taxes (not grossed up)	\$3,829,873			
Income taxes (grossed up)	\$5,210,712			
Federal tax (%)	15.00%			
Provincial tax (%)	11.50%			
Income Tax Credits	(\$85,000)			
<b>4 Capitalization/Cost of Capital</b>				
<b>Capital Structure:</b>				
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%			
<b>Cost of Capital</b>				
Long-term debt Cost Rate (%)	3.36%			
Short-term debt Cost Rate (%)	2.75%			
Common Equity Cost Rate (%)	9.13%			
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 M12. 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 2020 Filers

## Rate Base and Working Capital

Rate Base									
Line No.	Particulars		Initial Application				Per Board Decision		
1	Gross Fixed Assets (average)	(2)	\$1,576,350,307		\$ -		\$1,576,350,307		\$ -
2	Accumulated Depreciation (average)	(2)	(\$361,938,366)		\$ -		(\$361,938,366)		\$ -
3	Net Fixed Assets (average)	(2)	\$1,214,411,941		\$ -		\$1,214,411,941		\$ -
4	Allowance for Working Capital	(1)	\$89,510,053		(\$89,510,053)		\$ -		\$ -
5	Total Rate Base		\$1,303,921,994		(\$89,510,053)		\$1,214,411,941		\$ -

### (1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$96,280,116	\$ -	\$96,280,116	\$ -	\$96,280,116
7	Cost of Power	\$1,097,187,257	\$ -	\$1,097,187,257	\$ -	\$1,097,187,257
8	Working Capital Base	\$1,193,467,373	\$ -	\$1,193,467,373	\$ -	\$1,193,467,373
9	Working Capital Rate % <sup>(1)</sup>	7.50%	-7.50%	0.00%	0.00%	0.00%
10	Working Capital Allowance	\$89,510,053	(\$89,510,053)	\$ -	\$ -	\$ -

#### Notes

- <sup>(1)</sup> Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2020 cost of service applications is 7.5%, per the letter issued by the Board on June 3, 2015.
- <sup>(2)</sup> Average of opening and closing balances for the year.



# Revenue Requirement Workform (RRWF) for 2020 Filers

## Utility Income

Line No.	Particulars	Initial Application					Per Board Decision
<b>Operating Revenues:</b>							
1	Distribution Revenue (at Proposed Rates)	\$220,926,272	(\$220,926,272)	\$ -	\$ -	\$ -	\$ -
2	Other Revenue <sup>(1)</sup>	\$11,012,904	(\$11,012,904)	\$ -	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$231,939,176	(\$231,939,176)	\$ -	\$ -	\$ -	\$ -
<b>Operating Expenses:</b>							
4	OM+A Expenses	\$93,069,398	\$ -	\$93,069,398	\$ -	\$93,069,398	\$93,069,398
5	Depreciation/Amortization	\$56,860,206	\$ -	\$56,860,206	\$ -	\$56,860,206	\$56,860,206
6	Property taxes	\$3,210,718	\$ -	\$3,210,718	\$ -	\$3,210,718	\$3,210,718
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$153,140,322	\$ -	\$153,140,322	\$ -	\$153,140,322	\$153,140,322
10	Deemed Interest Expense	\$25,968,910	(\$25,968,910)	\$ -	\$ -	\$ -	\$ -
11	Total Expenses (lines 9 to 10)	\$179,109,232	(\$25,968,910)	\$153,140,322	\$ -	\$153,140,322	\$153,140,322
12	Utility income before income taxes	\$52,829,944	(\$205,970,266)	(\$153,140,322)	\$ -	(\$153,140,322)	(\$153,140,322)
13	Income taxes (grossed-up)	\$5,210,712	\$ -	\$5,210,712	\$ -	\$5,210,712	\$5,210,712
14	Utility net income	\$47,619,232	(\$205,970,266)	(\$158,351,033)	\$ -	(\$158,351,033)	(\$158,351,033)

### Notes

#### Other Revenues / Revenue Offsets

<sup>(1)</sup>	Specific Service Charges	\$5,394,162	\$ -	\$ -	\$ -	\$ -
	Late Payment Charges	\$1,000,000	\$ -	\$ -	\$ -	\$ -
	Other Distribution Revenue	\$2,885,203	\$ -	\$ -	\$ -	\$ -
	Other Income and Deductions	\$1,733,539	\$ -	\$ -	\$ -	\$ -
	Total Revenue Offsets	\$11,012,904	\$ -	\$ -	\$ -	\$ -



# 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	\$47,619,231		\$ -		\$ -	
2	Adjustments required to arrive at taxable utility income	(\$32,846,126)		\$ -		\$ -	
3	Taxable income	<u>\$14,773,105</u>		<u>\$ -</u>		<u>\$ -</u>	
<u>Calculation of Utility income Taxes</u>							
4	Income taxes	<u>\$3,829,873</u>		<u>\$3,829,873</u>		<u>\$3,829,873</u>	
6	Total taxes	<u>\$3,829,873</u>		<u>\$3,829,873</u>		<u>\$3,829,873</u>	
7	Gross-up of Income Taxes	<u>\$1,380,839</u>		<u>\$1,380,839</u>		<u>\$1,380,839</u>	
8	Grossed-up Income Taxes	<u>\$5,210,712</u>		<u>\$5,210,712</u>		<u>\$5,210,712</u>	
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$5,210,712</u>		<u>\$5,210,712</u>		<u>\$5,210,712</u>	
10	Other tax Credits	(\$85,000)		(\$85,000)		(\$85,000)	
<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



# 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%	\$730,196,317	3.36%	\$24,534,596
2	Short-term Debt	4.00%	\$52,156,880	2.75%	\$1,434,314
3	Total Debt	60.00%	\$782,353,196	3.32%	\$25,968,910
	Equity				
4	Common Equity	40.00%	\$521,568,798	9.13%	\$47,619,231
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$521,568,798	9.13%	\$47,619,231
7	Total	100.00%	\$1,303,921,994	5.64%	\$73,588,142
		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%	\$1,214,411,941	0.00%	\$ -
		Per Board Decision			
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	0.00%	\$ -	3.36%	\$ -
9	Short-term Debt	0.00%	\$ -	2.75%	\$ -
10	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
11	Common Equity	0.00%	\$ -	9.13%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	0.00%	\$ -	0.00%	\$ -
14	Total	0.00%	\$1,214,411,941	0.00%	\$ -

### Notes



Ontario Energy Board

# Revenue Requirement Workform (RRWF) for 2020 Filers

Hydro Ottawa Limited  
EB-2019-0261  
Exhibit 6  
Tab 1  
Schedule 1  
Attachment B  
ORIGINAL  
Page 8 of 17

## 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		\$37,895,475		(\$46,595,191)
2	Distribution Revenue	\$187,777,386	\$183,030,797	\$187,777,386	\$267,521,463
3	Other Operating Revenue	\$11,012,904	\$11,012,904	\$ -	\$ -
	Offsets - net				
4	<b>Total Revenue</b>	<b>\$198,790,290</b>	<b>\$231,939,176</b>	<b>\$187,777,386</b>	<b>\$220,926,272</b>
5	Operating Expenses	\$153,140,322	\$153,140,322	\$153,140,322	\$153,140,322
6	Deemed Interest Expense	\$25,968,910	\$25,968,910	\$ -	\$ -
8	<b>Total Cost and Expenses</b>	<b>\$179,109,232</b>	<b>\$179,109,232</b>	<b>\$153,140,322</b>	<b>\$153,140,322</b>
9	<b>Utility Income Before Income Taxes</b>	<b>\$19,681,057</b>	<b>\$52,829,944</b>	<b>\$34,637,064</b>	<b>\$67,785,950</b>
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$32,846,126)	(\$32,846,126)	(\$32,846,126)	(\$32,846,126)
11	<b>Taxable Income</b>	<b>(\$13,165,069)</b>	<b>\$19,983,818</b>	<b>\$1,790,938</b>	<b>\$34,939,824</b>
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%
13	<b>Income Tax on Taxable Income</b>	<b>\$ -</b>	<b>\$5,295,712</b>	<b>\$474,599</b>	<b>\$9,259,053</b>
14	<b>Income Tax Credits</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>
15	<b>Utility Net Income</b>	<b>\$19,766,057</b>	<b>\$47,619,232</b>	<b>\$34,247,465</b>	<b>(\$158,351,033)</b>
16	<b>Utility Rate Base</b>	<b>\$1,303,921,994</b>	<b>\$1,303,921,994</b>	<b>\$1,214,411,941</b>	<b>\$1,214,411,941</b>
17	Deemed Equity Portion of Rate Base	\$521,568,798	\$521,568,798	\$ -	\$ -
18	Income/(Equity Portion of Rate Base)	3.79%	9.13%	0.00%	0.00%
19	Target Return - Equity on Rate Base	9.13%	9.13%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-5.34%	0.00%	0.00%	0.00%
21	Indicated Rate of Return	3.51%	5.64%	2.82%	0.00%
22	Requested Rate of Return on Rate Base	5.64%	5.64%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-2.14%	0.00%	2.82%	0.00%
24	Target Return on Equity	\$47,619,231	\$47,619,231	\$ -	\$ -
25	Revenue Deficiency/(Sufficiency)	\$27,853,174	\$1	(\$34,247,465)	\$ -
26	<b>Gross Revenue Deficiency/(Sufficiency)</b>	<b>\$37,895,475 <sup>(1)</sup></b>		<b>(\$46,595,191) <sup>(1)</sup></b>	<b>\$208,354,179 <sup>(1)</sup></b>

### Notes:

<sup>(1)</sup> 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	\$93,069,398	\$93,069,398	\$93,069,398	
2	Amortization/Depreciation	\$56,860,206	\$56,860,206	\$56,860,206	
3	Property Taxes	\$3,210,718	\$3,210,718	\$3,210,718	
5	Income Taxes (Grossed up)	\$5,210,712	\$5,210,712	\$5,210,712	
6	Other Expenses	\$ -	\$ -	\$ -	
7	Return				
	Deemed Interest Expense	\$25,968,910	\$ -	\$ -	
	Return on Deemed Equity	\$47,619,231	\$ -	\$ -	
8	<b>Service Revenue Requirement (before Revenues)</b>	<u>\$231,939,175</u>	<u>\$158,351,033</u>	<u>\$158,351,033</u>	
9	Revenue Offsets	\$11,012,904	\$ -	\$ -	
10	<b>Base Revenue Requirement (excluding Tranformer Owership Allowance credit adjustment)</b>	<u>\$220,926,271</u>	<u>\$158,351,033</u>	<u>\$158,351,033</u>	
11	Distribution revenue	\$220,926,272	\$ -	\$ -	
12	Other revenue	\$11,012,904	\$ -	\$ -	
13	<b>Total revenue</b>	<u>\$231,939,176</u>	<u>\$ -</u>	<u>\$ -</u>	
14	<b>Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)</b>	<u>\$1</u> <sup>(1)</sup>	<u>(\$158,351,033)</u> <sup>(1)</sup>	<u>(\$158,351,033)</u> <sup>(1)</sup>	

## Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application		Δ% <sup>(2)</sup>	Per Board Decision	Δ% <sup>(2)</sup>
<b>Service Revenue Requirement</b>	\$231,939,175	\$158,351,033	<b>(\$0)</b>	\$158,351,033	<b>(\$1)</b>
<b>Grossed-Up Revenue</b>					
<b>Deficiency/(Sufficiency)</b>	\$37,895,475	(\$46,595,191)	<b>(\$2)</b>	\$208,354,179	<b>(\$1)</b>
<b>Base Revenue Requirement (to be recovered from Distribution Rates)</b>	\$220,926,271	\$158,351,033	<b>(\$0)</b>	\$158,351,033	<b>(\$1)</b>
<b>Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement</b>	\$33,148,886	\$ -	<b>(\$1)</b>	\$ -	<b>(\$1)</b>

### Notes

<sup>(1)</sup> Line 11 - Line 8

<sup>(2)</sup> 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 <sup>(1)</sup>	Customer / Connections	kWh	kW/kVA <sup>(1)</sup>
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	319,386	2,273,964,000				
2	GS < 50 kW	25,554	699,456,000				
3	GS > 50 to 1,499 kW	3,085	2,825,111,000	6,818,165			
4	GS > 1,500 to 4,999 kW	68	682,362,000	1,517,223			
5	Large Use	11	572,889,000	1,050,767			
6	Street Lighting	63,725	21,225,000	58,863			
7	Sentinel Lighting	55	47,000	132			
8	Unmetered Scattered Load	3,321	13,130,000				
9	Standby Power	3		7,440			
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Total			7,088,184,000	9,452,590		-	-

Notes:

<sup>(1)</sup> 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 <sup>(3)</sup>	Costs Allocated from Previous Study <sup>(1)</sup>	%	Allocated Class Revenue Requirement <sup>(1)</sup>	%
From Sheet 10. Load Forecast				
(7A)				
1 Residential	\$ 107,281,788	53.50%	\$ 127,868,556	55.13%
2 GS < 50 kW	\$ 20,646,221	10.30%	\$ 23,161,106	9.99%
3 GS > 50 to 1,499 kW	\$ 48,750,762	24.31%	\$ 57,675,248	24.87%
4 GS > 1,500 to 4,999 kW	\$ 13,365,246	6.66%	\$ 12,183,317	5.25%
5 Large Use	\$ 8,063,832	4.02%	\$ 9,390,983	4.05%
6 Street Lighting	\$ 1,811,439	0.90%	\$ 1,048,655	0.45%
7 Sentinel Lighting	\$ 6,568	0.00%	\$ 10,539	0.00%
8 Unmetered Scattered Load	\$ 547,549	0.27%	\$ 586,520	0.25%
9 Standby Power	\$ 70,655	0.04%	\$ 14,253	0.01%
10				
11				
12				
13				
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17				
18				
19				
20				
<b>Total</b>	<b>\$ 200,544,060</b>	<b>100.00%</b>	<b>\$ 231,939,176</b>	<b>100.00%</b>
Service Revenue Requirement (from Sheet 9)			<b>\$ 231,939,175.07</b>	

- (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	\$ 116,243,729	\$ 124,887,652	\$ 124,905,477	\$ 8,083,378
2 GS < 50 kW	\$ 24,739,656	\$ 26,754,605	\$ 26,720,616	\$ 984,658
3 GS > 50 to 1,499 kW	\$ 44,608,681	\$ 47,962,467	\$ 47,962,727	\$ 1,392,672
4 GS > 1,500 to 4,999 kW	\$ 11,138,995	\$ 11,621,209	\$ 11,621,263	\$ 272,310
5 Large Use	\$ 7,552,384	\$ 7,837,572	\$ 7,837,541	\$ 191,559
6 Street Lighting	\$ 1,106,660	\$ 1,206,602	\$ 1,206,068	\$ 51,781
7 Sentinel Lighting	\$ 4,955	\$ 5,415	\$ 5,949	\$ 882
8 Unmetered Scattered Load	\$ 567,811	\$ 628,994	\$ 628,486	\$ 35,230
9 Standby Power	\$ 20,126	\$ 21,756	\$ 21,756	\$ 434
10				
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20				
<b>Total</b>	<b>\$ 205,982,998</b>	<b>\$ 220,926,272</b>	<b>\$ 220,909,883</b>	<b>\$ 11,012,904</b>

- (4) In columns 7B to 7D, LF means Load Forecast of Annual Billing Quantities (i.e., customers or connections, as applicable X 12 months, and kWh, kW or kVA as applicable. Revenue quantities should be net of the Transformer Ownership Allowance for applicable customer classes. Exclude revenues from rate adders and rate riders.
- (5) Columns 7C and 7D - Column Total should equal the Base Revenue Requirement for each.
- (6) Column 7C - The OEB-issued cost allocation model calculates "1+d" on worksheet O-1, cell C22. "d" is defined as Revenue Deficiency/Revenue at Current Rates.
- (7) Column 7E - If using the OEB-issued cost allocation model, enter Miscellaneous Revenues as it appears on worksheet O-1, row 19,

C) **Rebalancing Revenue-to-Cost Ratios**

Name of Customer Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	2016			
	%	%	%	%
1 Residential	104.29%	103.99%	104.00%	85 - 115
2 GS < 50 kW	118.23%	119.77%	119.62%	80 - 120
3 GS > 50 to 1,499 kW	86.34%	85.57%	85.57%	80 - 120
4 GS > 1,500 to 4,999 kW	98.24%	97.62%	97.62%	80 - 120
5 Large Use	85.36%	85.50%	85.50%	85 - 115
6 Street Lighting	80.00%	120.00%	119.95%	80 - 120
7 Sentinel Lighting	76.00%	59.75%	64.81%	80 - 120
8 Unmetered Scattered Load	118.72%	113.25%	113.16%	80 - 120
9 Standby Power	21.03%	155.69%	155.69%	80 - 120
10				
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- (8) Previously Approved Revenue-to-Cost (R/C) Ratios - For most applicants, the most recent year would be the third year (at the latest) of the Price Cap IR period. For example, if the applicant, rebased in 2012 with further adjustments to move within the range over two years, the Most Recent Year would be 2015. However, the ratios in 2015 would be equal to those after the adjustment in 2014.
- (9) Status Quo Ratios - The OEB-issued cost allocation model provides the Status Quo Ratios on Worksheet O-1. The Status Quo means "Before Rebalancing".
- (10) Ratios shown in **red** are outside of the allowed range. Applies to both Tables C and D.

(D) Proposed Revenue-to-Cost Ratios <sup>(11)</sup>

Name of Customer Class	Proposed Revenue-to-Cost Ratio			Policy Range
	Test Year 2021	2022	Price Cap IR Period 2023	
1 Residential	104.00%	104.00%	104.00%	85 - 115
2 GS < 50 kW	119.62%	119.62%	119.62%	80 - 120
3 GS > 50 to 1,499 kW	85.57%	85.57%	85.57%	80 - 120
4 GS > 1,500 to 4,999 kW	97.62%	97.62%	97.62%	80 - 120
5 Large Use	85.50%	85.50%	85.50%	85 - 115
6 Street Lighting	119.95%	119.95%	119.95%	80 - 120
7 Sentinel Lighting	64.81%	64.81%	64.81%	80 - 120
8 Unmetered Scattered Load	113.16%	113.16%	113.16%	80 - 120
9 Standby Power	155.69%	155.69%	155.69%	80 - 120
10				
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(11) The applicant should complete Table D if it is applying for approval of a revenue-to-cost ratio in 2020 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 2021 and 2022 Price Cap IR models, as necessary. For 2021 and 2022, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2019 (in the current Revenue/Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment, column d), and enter TBD for class(es) that will be entered as 'Rebalance'.



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	319,386
kWh	2,273,964,000

Proposed Residential Class Specific Revenue Requirement <sup>1</sup>	\$ 124,905,476.88
--	-------------------

Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 32.59
Distribution Volumetric Rate (\$/kWh)	\$ -

### B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	32.59	319,386	\$ 124,905,476.88	100.00%
Variable	0	2,273,964,000	\$ -	0.00%
<b>TOTAL</b>	-	-	\$ 124,905,476.88	-

### C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years <sup>2</sup>	0
--	---

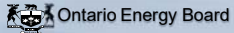
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 124,905,476.88	32.59	\$ 124,905,476.88
Variable	\$ -	0	\$ -
<b>TOTAL</b>	\$ 124,905,476.88	-	\$ 124,905,476.88

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

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

### Notes:

- <sup>1</sup> 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).
- <sup>2</sup> The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. The change in residential rate design is almost complete and distributors should have either 0 or 1 year remaining. If the distributor has fully transitioned to fixed rates put "0" in cell D40. If the distributor has proposed an additional transition year because the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, put "1" in cell D40.
- <sup>3</sup> 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				Class Allocated Revenues				Distribution Rates				Revenue Reconciliation				
Customer and Load Forecast					From Sheet 11. Cost Allocation and Sheet 12. Residential Rate Design				Fixed / Variable Splits <sup>2</sup>		Transformer Ownership Allowance <sup>1</sup> (\$)		Monthly Service Charge		Volumetric Rate		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	MSC Revenues	Volumetric revenues		
From sheet 10. Load Forecast																		
1 Residential	kWh	319,386	2,273,964,000	-	\$ 124,905,477	\$ 124,905,477	\$ -	100.00%	0.00%		\$32.59	2	\$0.0000 /kWh	4	#####	\$ -	#####	
2 GS < 50 kW	kWh	25,554	699,456,000	-	\$ 26,720,616	\$ 6,787,037	\$ 19,933,580	25.40%	74.60%		\$22.13		\$0.0285 /kWh		\$ 6,786,120.24	\$19,934,496.0000	\$26,720,616.24	
3 GS > 50 to 1,499 kW	kW	3,085	2,825,111,000	6,818,165	\$ 47,962,727	\$ 7,960,853	\$ 40,001,874	16.90%	83.10%	\$ 343,181	\$215.04		\$5.9173 /kW		\$ 7,960,780.80	\$40,345,127.7545	\$47,962,727.26	
4 GS > 1,500 to 4,999 kW	kW	68	682,362,000	1,517,223	\$ 11,621,263	\$ 3,570,401	\$ 8,050,862	30.72%	69.28%	\$ 397,034	\$4,375.49		\$5.5680 /kW		\$ 3,570,399.84	\$ 8,447,897.6640	\$11,621,263.14	
5 Large Use	kW	11	572,889,000	1,050,767	\$ 7,837,541	\$ 2,086,454	\$ 5,751,087	26.62%	73.38%	\$ 315,727	\$15,806.47		\$5.7737 /kW		\$ 2,086,454.04	\$ 6,066,813.4279	\$ 7,837,540.68	
6 Street Lighting	kW	63,725	21,225,000	58,863	\$ 1,206,068	\$ 779,994	\$ 426,074	64.67%	35.33%		\$1.02		\$7.2384 /kW		\$ 779,994.00	\$ 426,073.9392	\$ 1,206,067.94	
7 Sentinel Lighting	kW	55	47,000	132	\$ 5,949	\$ 3,076	\$ 2,873	51.70%	48.30%		\$4.66		\$21.7657 /kW		\$ 3,075.60	\$ 2,873.0724	\$ 5,948.67	
8 Unmetered Scattered Load	kWh	3,321	13,130,000	-	\$ 628,486	\$ 244,892	\$ 383,594	38.97%	61.03%		\$6.15		\$0.0292 /kWh		\$ 245,069.80	\$ 383,396.0000	\$ 628,485.80	
9 Standby Power	kW	3	-	7,440	\$ 21,756	\$ 6,164	\$ 15,593	28.33%	71.67%		\$171.21		\$2.0958 /kW		\$ 6,163.56	\$ 15,592.7520	\$ 21,756.31	
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	
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20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	
Total Transformer Ownership Allowance										\$ 1,055,942					Total Distribution Revenues			#####
															Base Revenue Requirement			#####
															Rates recover revenue requirement			
															Difference			-\$ 16,388.15
															% Difference			-0.007%

Notes:

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

Notes:

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

<sup>2</sup> 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).





Ontario Energy Board

## Revenue Requirement Workform (RRWF) for 2020 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.

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

<sup>(2)</sup> Short description of change, issue, etc.

### Summary of Proposed Changes

Reference <sup>(1)</sup>	Item / Description <sup>(2)</sup>	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	\$ 73,588,142	5.64%	\$1,303,921,994	\$1,193,467,373	\$ 89,510,053	\$ 56,860,206	\$ 5,210,712	\$ 93,069,398	\$ 231,939,175	\$ 11,012,904	\$ 220,926,271	\$ 37,895,475



Ontario Energy Board

## Revenue Requirement Workform (RRWF) for 2020 Filers



Version 9.00

Utility Name	Hydro Ottawa Limited
Service Territory	
Assigned EB Number	EB-2019-0261
Name and Title	Gregory Van Dusen, Director, Regulatory Affairs
Phone Number	613-738-5499 ext 7472
Email Address	<a href="mailto:RegulatoryAffairs@HydroOttawa.com">RegulatoryAffairs@HydroOttawa.com</a>
Test Year	<a href="#">2023</a>
Bridge Year	
Last Rebasing Year	<a href="#">2016</a>

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 2020 Filers

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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 2020 Filers

## Data Input <sup>(1)</sup>

	Initial Application <sup>(2)</sup>		<sup>(6)</sup>	Per Board Decision
<b>1</b>	<b>Rate Base</b>			
	Gross Fixed Assets (average)	\$1,672,507,871	\$1,672,507,871	\$1,672,507,871
	Accumulated Depreciation (average)	(\$417,844,547) <sup>(5)</sup>	(\$417,844,547)	(\$417,844,547)
	<b>Allowance for Working Capital:</b>			
	Controllable Expenses	\$98,696,747	\$98,696,747	\$98,696,747
	Cost of Power	\$1,167,387,072	\$1,167,387,072	\$1,167,387,072
	Working Capital Rate (%)	7.50% <sup>(9)</sup>	<sup>(9)</sup>	<sup>(9)</sup>
<b>2</b>	<b>Utility Income</b>			
	Operating Revenues:			
	Distribution Revenue at Current Rates	\$188,659,471		
	Distribution Revenue at Proposed Rates	\$232,378,120		
	<b>Other Revenue:</b>			
	Specific Service Charges	\$5,678,587		
	Late Payment Charges	\$1,000,000		
	Other Distribution Revenue	\$2,971,480		
	Other Income and Deductions	\$2,017,176		
	Total Revenue Offsets	\$11,667,243 <sup>(7)</sup>		
	<b>Operating Expenses:</b>			
	OM+A Expenses	\$95,405,440	\$95,405,440	\$95,405,440
	Depreciation/Amortization	\$59,141,744	\$59,141,744	\$59,141,744
	Property taxes	\$3,291,307	\$3,291,307	\$3,291,307
	Other expenses			
<b>3</b>	<b>Taxes/PILs</b>			
	Taxable Income:	(\$25,626,668) <sup>(3)</sup>		
	Adjustments required to arrive at taxable income			
	<b>Utility Income Taxes and Rates:</b>			
	Income taxes (not grossed up)	\$6,442,789		
	Income taxes (grossed up)	\$8,765,699		
	Federal tax (%)	15.00%		
	Provincial tax (%)	11.50%		
	Income Tax Credits	(\$85,000)		
<b>4</b>	<b>Capitalization/Cost of Capital</b>			
	<b>Capital Structure:</b>			
	Long-term debt Capitalization Ratio (%)	56.0%		
	Short-term debt Capitalization Ratio (%)	4.0% <sup>(8)</sup>	<sup>(8)</sup>	<sup>(8)</sup>
	Common Equity Capitalization Ratio (%)	40.0%		
	Preferred Shares Capitalization Ratio (%)			
		100.0%		
	<b>Cost of Capital</b>			
	Long-term debt Cost Rate (%)	3.40%		
	Short-term debt Cost Rate (%)	2.75%		
	Common Equity Cost Rate (%)	9.31%		
	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.
- <sup>(1)</sup> All inputs are in dollars (\$) except where inputs are individually identified as percentages (%)
- <sup>(2)</sup> 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
- <sup>(3)</sup> Net of addbacks and deductions to arrive at taxable income.
- <sup>(4)</sup> Average of Gross Fixed Assets at beginning and end of the Test Year
- <sup>(5)</sup> Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount.
- <sup>(6)</sup> Select option from drop-down list by clicking on cell M12. 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.
- <sup>(7)</sup> Input total revenue offsets for deriving the base revenue requirement from the service revenue requirement
- <sup>(8)</sup> 4.0% unless an Applicant has proposed or been approved for another amount.
- <sup>(9)</sup> 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 2020 Filers

## Rate Base and Working Capital

Line No.	Particulars	Initial Application				Per Board Decision			
1	Gross Fixed Assets (average) <sup>(2)</sup>	\$1,672,507,871		\$ -		\$1,672,507,871		\$ -	
2	Accumulated Depreciation (average) <sup>(2)</sup>	(\$417,844,547)		\$ -		(\$417,844,547)		\$ -	
3	Net Fixed Assets (average) <sup>(2)</sup>	\$1,254,663,324		\$ -		\$1,254,663,324		\$ -	
4	Allowance for Working Capital <sup>(1)</sup>	\$94,956,286		(\$94,956,286)		\$ -		\$ -	
5	<b>Total Rate Base</b>	<b>\$1,349,619,610</b>		<b>(\$94,956,286)</b>		<b>\$1,254,663,324</b>		<b>\$ -</b>	

### (1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$98,696,747		\$ -		\$98,696,747		\$ -	
7	Cost of Power	\$1,167,387,072		\$ -		\$1,167,387,072		\$ -	
8	Working Capital Base	\$1,266,083,819		\$ -		\$1,266,083,819		\$ -	
9	Working Capital Rate % <sup>(1)</sup>	7.50%		-7.50%		0.00%		0.00%	
10	Working Capital Allowance	\$94,956,286		(\$94,956,286)		\$ -		\$ -	

### Notes

- (1) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2020 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 2020 Filers

### Utility Income

Line No.	Particulars	Initial Application					Per Board Decision
	<b>Operating Revenues:</b>						
1	Distribution Revenue (at Proposed Rates)	\$232,378,120		(\$232,378,120)	\$ -	\$ -	\$ -
2	Other Revenue <sup>(1)</sup>	\$11,667,243		(\$11,667,243)	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$244,045,363		(\$244,045,363)	\$ -	\$ -	\$ -
	<b>Operating Expenses:</b>						
4	OM+A Expenses	\$95,405,440	\$ -	\$95,405,440	\$ -	\$95,405,440	
5	Depreciation/Amortization	\$59,141,744	\$ -	\$59,141,744	\$ -	\$59,141,744	
6	Property taxes	\$3,291,307	\$ -	\$3,291,307	\$ -	\$3,291,307	
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -	
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -	
9	Subtotal (lines 4 to 8)	\$157,838,491	\$ -	\$157,838,491	\$ -	\$157,838,491	
10	Deemed Interest Expense	\$27,181,339	(\$27,181,339)	\$ -	\$ -	\$ -	
11	Total Expenses (lines 9 to 10)	\$185,019,830	(\$27,181,339)	\$157,838,491	\$ -	\$157,838,491	
12	Utility income before income taxes	\$59,025,534	(\$216,864,024)	(\$157,838,491)	\$ -	(\$157,838,491)	
13	Income taxes (grossed-up)	\$8,765,699	\$ -	\$8,765,699	\$ -	\$8,765,699	
14	Utility net income	\$50,259,834	(\$216,864,024)	(\$166,604,190)	\$ -	(\$166,604,190)	

### Notes

#### Other Revenues / Revenue Offsets

<sup>(1)</sup>	Specific Service Charges	\$5,678,587	\$ -	\$ -	\$ -
	Late Payment Charges	\$1,000,000	\$ -	\$ -	\$ -
	Other Distribution Revenue	\$2,971,480	\$ -	\$ -	\$ -
	Other Income and Deductions	\$2,017,176	\$ -	\$ -	\$ -
	Total Revenue Offsets	\$11,667,243	\$ -	\$ -	\$ -



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	\$50,259,834	\$ -	\$ -	
2	Adjustments required to arrive at taxable utility income	(\$25,626,668)	\$ -	\$ -	
3	Taxable income	<u>\$24,633,166</u>	<u>\$ -</u>	<u>\$ -</u>	
<u>Calculation of Utility income Taxes</u>					
4	Income taxes	\$6,442,789	\$6,442,789	\$6,442,789	
6	Total taxes	<u>\$6,442,789</u>	<u>\$6,442,789</u>	<u>\$6,442,789</u>	
7	Gross-up of Income Taxes	<u>\$2,322,910</u>	<u>\$2,322,910</u>	<u>\$2,322,910</u>	
8	Grossed-up Income Taxes	<u>\$8,765,699</u>	<u>\$8,765,699</u>	<u>\$8,765,699</u>	
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$8,765,699</u>	<u>\$8,765,699</u>	<u>\$8,765,699</u>	
10	Other tax Credits	(\$85,000)	(\$85,000)	(\$85,000)	
<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%		\$755,786,982	3.40%			\$25,696,757
2	Short-term Debt	4.00%		\$53,984,784	2.75%			\$1,484,582
3	Total Debt	60.00%		\$809,771,766	3.36%			\$27,181,339
	Equity							
4	Common Equity	40.00%		\$539,847,844	9.31%			\$50,259,834
5	Preferred Shares	0.00%		\$ -	0.00%			\$ -
6	Total Equity	40.00%		\$539,847,844	9.31%			\$50,259,834
7	Total	100.00%		\$1,349,619,610	5.74%			\$77,441,173
		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%		\$1,254,663,324	0.00%			\$ -
		Per Board Decision						
		(%)		(\$)		(%)		(\$)
	Debt							
8	Long-term Debt	0.00%		\$ -	3.40%			\$ -
9	Short-term Debt	0.00%		\$ -	2.75%			\$ -
10	Total Debt	0.00%		\$ -	0.00%			\$ -
	Equity							
11	Common Equity	0.00%		\$ -	9.31%			\$ -
12	Preferred Shares	0.00%		\$ -	0.00%			\$ -
13	Total Equity	0.00%		\$ -	0.00%			\$ -
14	Total	0.00%		\$1,254,663,324	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
1	Revenue Deficiency from Below		\$47,439,387		(\$40,176,174)
2	Distribution Revenue	\$188,659,471	\$184,938,733	\$188,659,471	\$272,554,294
3	Other Operating Revenue	\$11,667,243	\$11,667,243	\$ -	\$ -
	Offsets - net				
4	<b>Total Revenue</b>	<b>\$200,326,714</b>	<b>\$244,045,363</b>	<b>\$188,659,471</b>	<b>\$232,378,120</b>
5	Operating Expenses	\$157,838,491	\$157,838,491	\$157,838,491	\$157,838,491
6	Deemed Interest Expense	\$27,181,339	\$27,181,339	\$ -	\$ -
8	<b>Total Cost and Expenses</b>	<b>\$185,019,830</b>	<b>\$185,019,830</b>	<b>\$157,838,491</b>	<b>\$157,838,491</b>
9	<b>Utility Income Before Income Taxes</b>	<b>\$15,306,885</b>	<b>\$59,025,534</b>	<b>\$30,820,980</b>	<b>\$74,539,629</b>
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$25,626,668)	(\$25,626,668)	(\$25,626,668)	(\$25,626,668)
11	<b>Taxable Income</b>	<b>(\$10,319,783)</b>	<b>\$33,398,866</b>	<b>\$5,194,312</b>	<b>\$48,912,961</b>
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%
13	<b>Income Tax on Taxable Income</b>	<b>\$ -</b>	<b>\$8,850,699</b>	<b>\$1,376,493</b>	<b>\$12,961,935</b>
14	<b>Income Tax Credits</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>
15	<b>Utility Net Income</b>	<b>\$15,391,885</b>	<b>\$50,259,834</b>	<b>\$29,529,488</b>	<b>(\$166,604,190)</b>
16	<b>Utility Rate Base</b>	<b>\$1,349,619,610</b>	<b>\$1,349,619,610</b>	<b>\$1,254,663,324</b>	<b>\$1,254,663,324</b>
17	Deemed Equity Portion of Rate Base	\$539,847,844	\$539,847,844	\$ -	\$ -
18	Income/(Equity Portion of Rate Base)	2.85%	9.31%	0.00%	0.00%
19	Target Return - Equity on Rate Base	9.31%	9.31%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-6.46%	0.00%	0.00%	0.00%
21	Indicated Rate of Return	3.15%	5.74%	2.35%	0.00%
22	Requested Rate of Return on Rate Base	5.74%	5.74%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-2.58%	0.00%	2.35%	0.00%
24	Target Return on Equity	\$50,259,834	\$50,259,834	\$ -	\$ -
25	Revenue Deficiency/(Sufficiency)	\$34,867,950	(\$0)	(\$29,529,488)	\$ -
26	<b>Gross Revenue Deficiency/(Sufficiency)</b>	<b>\$47,439,387 <sup>(1)</sup></b>		<b>(\$40,176,174) <sup>(1)</sup></b>	<b>\$214,746,246 <sup>(1)</sup></b>

### Notes:

<sup>(1)</sup> 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	\$95,405,440	\$95,405,440	\$95,405,440	
2	Amortization/Depreciation	\$59,141,744	\$59,141,744	\$59,141,744	
3	Property Taxes	\$3,291,307	\$3,291,307	\$3,291,307	
5	Income Taxes (Grossed up)	\$8,765,699	\$8,765,699	\$8,765,699	
6	Other Expenses	\$ -			
7	Return				
	Deemed Interest Expense	\$27,181,339	\$ -	\$ -	
	Return on Deemed Equity	\$50,259,834	\$ -	\$ -	
8	<b>Service Revenue Requirement (before Revenues)</b>	<u>\$244,045,363</u>	<u>\$166,604,190</u>	<u>\$166,604,190</u>	
9	Revenue Offsets	\$11,667,243	\$ -	\$ -	
10	<b>Base Revenue Requirement (excluding Transformer Ownership Allowance credit adjustment)</b>	<u>\$232,378,120</u>	<u>\$166,604,190</u>	<u>\$166,604,190</u>	
11	Distribution revenue	\$232,378,120	\$ -	\$ -	
12	Other revenue	\$11,667,243	\$ -	\$ -	
13	<b>Total revenue</b>	<u>\$244,045,363</u>	<u>\$ -</u>	<u>\$ -</u>	
14	<b>Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)</b>	<u>(\$0)</u> <sup>(1)</sup>	<u>(\$166,604,190)</u> <sup>(1)</sup>	<u>(\$166,604,190)</u> <sup>(1)</sup>	

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application		Δ% <sup>(2)</sup>	Per Board Decision	Δ% <sup>(2)</sup>
<b>Service Revenue Requirement</b>	\$244,045,363	\$166,604,190	(\$0)	\$166,604,190	(\$1)
<b>Grossed-Up Revenue</b>					
<b>Deficiency/(Sufficiency)</b>	\$47,439,387	(\$40,176,174)	(\$2)	\$214,746,246	(\$1)
<b>Base Revenue Requirement (to be recovered from Distribution Rates)</b>	\$232,378,120	\$166,604,190	(\$0)	\$166,604,190	(\$1)
<b>Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement</b>	\$43,718,649	\$ -	(\$1)	\$ -	(\$1)

### Notes

- <sup>(1)</sup> Line 11 - Line 8  
<sup>(2)</sup> 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 <sup>(1)</sup>	Customer / Connections	kWh	kW/kVA <sup>(1)</sup>
				Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential			322,306	2,299,513,000				
2	GS < 50 kW			25,704	697,989,000				
3	GS > 50 to 1,499 kW			3,049	2,831,390,000	6,821,528			
4	GS > 1,500 to 4,999 kW			68	682,571,000	1,517,607			
5	Large Use			11	572,033,000	1,049,467			
6	Street Lighting			64,645	20,413,000	56,618			
7	Sentinel Lighting			55	47,000	132			
8	Unmetered Scattered Load			3,321	12,663,000				
9	Standby Power			3		7,440			
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
Total					7,116,619,000	9,452,792		-	-

Notes:

<sup>(1)</sup> 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 <sup>(3)</sup>	Costs Allocated from Previous Study <sup>(1)</sup>	%	Allocated Class Revenue Requirement <sup>(1)</sup>	%
From Sheet 10. Load Forecast				
(7A)				
1 Residential	\$ 107,281,788	53.50%	\$ 134,542,722	55.13%
2 GS < 50 kW	\$ 20,646,221	10.30%	\$ 24,370,012	9.99%
3 GS > 50 to 1,499 kW	\$ 48,750,762	24.31%	\$ 60,685,637	24.87%
4 GS > 1,500 to 4,999 kW	\$ 13,365,246	6.66%	\$ 12,819,232	5.25%
5 Large Use	\$ 8,063,832	4.02%	\$ 9,881,150	4.05%
6 Street Lighting	\$ 1,811,439	0.90%	\$ 1,103,390	0.45%
7 Sentinel Lighting	\$ 6,568	0.00%	\$ 11,089	0.00%
8 Unmetered Scattered Load	\$ 547,549	0.27%	\$ 617,134	0.25%
9 Standby Power	\$ 70,655	0.04%	\$ 14,997	0.01%
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
<b>Total</b>	<b>\$ 200,544,060</b>	<b>100.00%</b>	<b>\$ 244,045,363</b>	<b>100.00%</b>
<b>Service Revenue Requirement (from Sheet 9)</b>			<b>\$ 244,045,363.33</b>	

- (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	\$ 126,047,430	\$ 131,376,509	\$ 131,384,818	\$ 8,563,657
2 GS < 50 kW	\$ 26,718,641	\$ 28,110,263	\$ 28,120,339	\$ 1,043,162
3 GS > 50 to 1,499 kW	\$ 48,232,911	\$ 50,459,782	\$ 50,459,724	\$ 1,475,419
4 GS > 1,500 to 4,999 kW	\$ 12,020,436	\$ 12,226,759	\$ 12,226,820	\$ 288,490
5 Large Use	\$ 8,145,762	\$ 8,245,839	\$ 8,245,884	\$ 202,941
6 Street Lighting	\$ 1,201,079	\$ 1,268,739	\$ 1,268,175	\$ 54,857
7 Sentinel Lighting	\$ 5,949	\$ 6,253	\$ 6,815	\$ 934
8 Unmetered Scattered Load	\$ 614,849	\$ 661,085	\$ 661,040	\$ 37,324
9 Standby Power	\$ 21,756	\$ 22,890	\$ 22,891	\$ 460
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
<b>Total</b>	<b>\$ 223,008,813</b>	<b>\$ 232,378,120</b>	<b>\$ 232,396,505</b>	<b>\$ 11,667,243</b>

- (4) In columns 7B to 7D, LF means Load Forecast of Annual Billing Quantities (i.e., customers or connections, as applicable X 12 months, and kWh, kW or kVA as applicable. Revenue quantities should be net of the Transformer Ownership Allowance for applicable customer classes. Exclude revenues from rate adders and rate riders.
- (5) Columns 7C and 7D - Column Total should equal the Base Revenue Requirement for each.
- (6) Column 7C - The OEB-issued cost allocation model calculates "1+d" on worksheet O-1, cell C22. "d" is defined as Revenue Deficiency/Revenue at Current Rates.
- (7) Column 7E - If using the OEB-issued cost allocation model, enter Miscellaneous Revenues as it appears on worksheet O-1, row 19,

**C) Rebalancing Revenue-to-Cost Ratios**

	Name of Customer Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
		Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
		2016			
		%	%	%	%
1	Residential	104.29%	104.01%	104.02%	85 - 115
2	GS < 50 kW	118.23%	119.63%	119.67%	80 - 120
3	GS > 50 to 1,499 kW	86.34%	85.58%	85.58%	80 - 120
4	GS > 1,500 to 4,999 kW	98.24%	97.63%	97.63%	80 - 120
5	Large Use	85.36%	85.50%	85.50%	85 - 115
6	Street Lighting	80.00%	119.96%	119.91%	80 - 120
7	Sentinel Lighting	76.00%	64.82%	69.88%	80 - 120
8	Unmetered Scattered Load	118.72%	113.17%	113.16%	80 - 120
9	Standby Power	21.03%	155.70%	155.70%	80 - 120
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 <sup>(11)</sup>

Name of Customer Class	Proposed Revenue-to-Cost Ratio			Policy Range
	Test Year 2021	2022	Price Cap IR Period 2023	
1 Residential	104.02%	104.02%	104.02%	85 - 115
2 GS < 50 kW	119.67%	119.67%	119.67%	80 - 120
3 GS > 50 to 1,499 kW	85.58%	85.58%	85.58%	80 - 120
4 GS > 1,500 to 4,999 kW	97.63%	97.63%	97.63%	80 - 120
5 Large Use	85.50%	85.50%	85.50%	85 - 115
6 Street Lighting	119.91%	119.91%	119.91%	80 - 120
7 Sentinel Lighting	69.88%	69.88%	69.88%	80 - 120
8 Unmetered Scattered Load	113.16%	113.16%	113.16%	80 - 120
9 Standby Power	155.70%	155.70%	155.70%	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 2020 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 2021 and 2022 Price Cap IR models, as necessary. For 2021 and 2022, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2019 (in the current Revenue/Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment, column d), and enter TBD for class(es) that will be entered as 'Rebalance'.



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	322,306
kWh	2,299,513,000
Proposed Residential Class Specific Revenue Requirement <sup>1</sup>	
	\$ 131,384,817.84
Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 34.28
Distribution Volumetric Rate (\$/kWh)	\$ -

### B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	34.28	322,306	\$ 132,583,796.16	100.00%
Variable	0	2,299,513,000	\$ -	0.00%
<b>TOTAL</b>	-	-	\$ 132,583,796.16	-

### C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years <sup>2</sup>	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	\$ 131,384,817.84	33.97	\$ 131,384,817.84
Variable	\$ -	0	\$ -
<b>TOTAL</b>	\$ 131,384,817.84	-	\$ 131,384,817.84

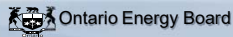
	New F/V Split	Revenue @ new F/V Split	Final Adjusted Base Rates	Revenue Reconciliation @ Adjusted Rates
Fixed				
Variable				
<b>TOTAL</b>	-	\$ -	-	

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

### Notes:

- 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).
- The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. The change in residential rate design is almost complete and distributors should have either 0 or 1 year remaining. If the distributor has fully transitioned to fixed rates put "0" in cell D40. If the distributor has proposed an additional transition year because the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, put "1" in cell D40.
- 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			Class Allocated Revenues			Fixed / Variable Splits <sup>2</sup>			Transformer Ownership Allowance <sup>1</sup> (\$)		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					Monthly Service Charge		Volumetric Rate		MSC Revenues		Volumetric revenues		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	322,306	2,299,513,000	-	\$ 131,384,818	\$ 131,384,818	\$ -	100.00%	0.00%			\$33.97	2	\$0.0000 /kWh	4	#####	\$ -	#####	\$ -	#####	\$ -	
2 GS < 50 kW	kWh	25,704	697,989,000	-	\$ 28,120,339	\$ 7,181,935	\$ 20,938,405	25.54%	74.46%			\$23.28		\$0.0300 /kWh		\$ 7,180,669.44	\$20,939,670.0000	\$28,120,339.44	\$ -	\$ -	\$ -	
3 GS > 50 to 1,499 kW	kW	3,049	2,831,390,000	6,821,528	\$ 50,459,724	\$ 8,231,242	\$ 42,228,481	16.31%	83.69%	\$ 343,271		\$224.97		\$6.2408 /kW		\$ 8,231,202.36	\$42,571,791.9424	\$50,459,723.54	\$ -	\$ -	\$ -	
4 GS > 1,500 to 4,999 kW	kW	68	682,571,000	1,517,607	\$ 12,226,820	\$ 3,631,684	\$ 8,595,137	29.70%	70.30%	\$ 397,138		\$4,450.59		\$5.9253 /kW		\$ 3,631,681.44	\$ 8,992,276.7571	\$12,226,820.34	\$ -	\$ -	\$ -	
5 Large Use	kW	11	572,033,000	1,049,467	\$ 8,245,884	\$ 2,112,088	\$ 6,133,795	25.61%	74.39%	\$ 315,809		\$16,000.67		\$6.1456 /kW		\$ 2,112,088.44	\$ 6,449,604.3952	\$ 8,245,883.74	\$ -	\$ -	\$ -	
6 Street Lighting	kW	64,645	20,413,000	56,618	\$ 1,268,175	\$ 837,801	\$ 430,374	66.06%	33.94%			\$1.08		\$7.6014 /kW		\$ 837,799.20	\$ 430,376.0652	\$ 1,268,175.27	\$ -	\$ -	\$ -	
7 Sentinel Lighting	kW	55	47,000	132	\$ 6,615	\$ 3,524	\$ 3,290	51.72%	48.28%			\$5.34		\$24.9250 /kW		\$ 3,524.40	\$ 3,290.1000	\$ 6,814.50	\$ -	\$ -	\$ -	
8 Unmetered Scattered Load	kWh	3,321	12,663,000	-	\$ 661,040	\$ 263,404	\$ 397,636	39.85%	60.15%			\$6.61		\$0.0314 /kWh		\$ 263,421.72	\$ 397,618.2000	\$ 661,039.92	\$ -	\$ -	\$ -	
9 Standby Power	kW	3	-	7,440	\$ 22,691	\$ 6,485	\$ 16,406	28.33%	71.67%			\$180.13		\$2.2051 /kW		\$ 6,484.68	\$ 16,405.9440	\$ 22,890.62	\$ -	\$ -	\$ -	
10		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
11		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
12		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
13		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
14		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
15		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
16		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
17		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
18		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
19		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
20		-	-	-												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Transformer Ownership Allowance											\$ 1,056,218					Total Distribution Revenues		#####				
																Base Revenue Requirement		#####				
																Difference		\$ 18,385.21				
																% Difference		0.008%				

Notes:

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

#### Notes:

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

<sup>2</sup> 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 2020 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.

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

<sup>(2)</sup> Short description of change, issue, etc.

### Summary of Proposed Changes

Reference <sup>(1)</sup>	Item / Description <sup>(2)</sup>	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	\$ 77,441,173	5.74%	\$ 1,349,619,610	\$ 1,266,083,819	\$ 94,956,286	\$ 59,141,744	\$ 8,765,699	\$ 95,405,440	\$ 244,045,363	\$ 11,667,243	\$ 232,378,120	\$ 47,439,387



Ontario Energy Board

# Revenue Requirement Workform (RRWF) for 2020 Filers



Version 9.00

Utility Name	Hydro Ottawa Limited
Service Territory	
Assigned EB Number	EB-2019-0261
Name and Title	Gregory Van Dusen, Director, Regulatory Affairs
Phone Number	613-738-5499 ext 7472
Email Address	<a href="mailto:RegulatoryAffairs@HydroOttawa.com">RegulatoryAffairs@HydroOttawa.com</a>
Test Year	<a href="#">2024</a>
Bridge Year	
Last Rebasing Year	<a href="#">2016</a>

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 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 Reqt](#)

[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.**



# Revenue Requirement Workform (RRWF) for 2020 Filers

Data Input <sup>(1)</sup>

	Initial Application	(2)	(6)	Per Board Decision
<b>1 Rate Base</b>				
Gross Fixed Assets (average)	\$1,750,450,428		\$ 1,750,450,428	\$1,750,450,428
Accumulated Depreciation (average)	(\$476,047,244)	(5)	(\$476,047,244)	(\$476,047,244)
<b>Allowance for Working Capital:</b>				
Controllable Expenses	\$101,174,035		\$ 101,174,035	\$101,174,035
Cost of Power	\$1,264,188,174		\$ 1,264,188,174	\$1,264,188,174
Working Capital Rate (%)	7.50%	(9)	(9)	(9)
<b>2 Utility Income</b>				
Operating Revenues:				
Distribution Revenue at Current Rates	\$189,644,373			
Distribution Revenue at Proposed Rates	\$241,253,766			
<b>Other Revenue:</b>				
Specific Service Charges	\$5,910,078			
Late Payment Charges	\$1,000,000			
Other Distribution Revenue	\$3,060,205			
Other Income and Deductions	\$2,181,108			
<b>Total Revenue Offsets</b>	\$12,151,392	(7)		
<b>Operating Expenses:</b>				
OM+A Expenses	\$97,800,117		\$ 97,800,117	\$97,800,117
Depreciation/Amortization	\$60,711,328		\$ 60,711,328	\$60,711,328
Property taxes	\$3,373,918		\$ 3,373,918	\$3,373,918
Other expenses				
<b>3 Taxes/PILs</b>				
Taxable Income:				
	(\$19,163,272)	(3)		
Adjustments required to arrive at taxable income				
<b>Utility Income Taxes and Rates:</b>				
Income taxes (not grossed up)	\$8,569,789			
Income taxes (grossed up)	\$11,659,577			
Federal tax (%)	15.00%			
Provincial tax (%)	11.50%			
Income Tax Credits	(\$85,000)			
<b>4 Capitalization/Cost of Capital</b>				
<b>Capital Structure:</b>				
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%			
<b>Cost of Capital</b>				
Long-term debt Cost Rate (%)	3.44%			
Short-term debt Cost Rate (%)	2.75%			
Common Equity Cost Rate (%)	9.41%			
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 M12. 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 2020 Filers

## Rate Base and Working Capital

Line No.	Particulars	Initial Application				Per Board Decision
1	Gross Fixed Assets (average) <sup>(2)</sup>	\$1,750,450,428	\$ -	\$1,750,450,428	\$ -	\$1,750,450,428
2	Accumulated Depreciation (average) <sup>(2)</sup>	(\$476,047,244)	\$ -	(\$476,047,244)	\$ -	(\$476,047,244)
3	Net Fixed Assets (average) <sup>(2)</sup>	\$1,274,403,184	\$ -	\$1,274,403,184	\$ -	\$1,274,403,184
4	Allowance for Working Capital <sup>(1)</sup>	\$102,402,166	#####	\$ -	\$ -	\$ -
5	<b>Total Rate Base</b>	<b>\$1,376,805,350</b>	<b>#####</b>	<b>\$1,274,403,184</b>	<b>\$ -</b>	<b>\$1,274,403,184</b>

### (1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$101,174,035	\$ -	\$101,174,035	\$ -	\$101,174,035
7	Cost of Power	\$1,264,188,174	\$ -	\$1,264,188,174	\$ -	\$1,264,188,174
8	Working Capital Base	\$1,365,362,209	\$ -	\$1,365,362,209	\$ -	\$1,365,362,209
9	Working Capital Rate % <sup>(1)</sup>	7.50%	-7.50%	0.00%	0.00%	0.00%
10	Working Capital Allowance	\$102,402,166	#####	\$ -	\$ -	\$ -

#### Notes

- (1) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2020 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.



# Revenue Requirement Workform (RRWF) for 2020 Filers

## Utility Income

Line No.	Particulars	Initial Application					Per Board Decision
<b>Operating Revenues:</b>							
1	Distribution Revenue (at Proposed Rates)	\$241,253,766	(\$241,253,766)	\$ -	\$ -	\$ -	\$ -
2	Other Revenue <sup>(1)</sup>	\$12,151,391	(\$12,151,391)	\$ -	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$253,405,157	(\$253,405,157)	\$ -	\$ -	\$ -	\$ -
<b>Operating Expenses:</b>							
4	OM+A Expenses	\$97,800,117	\$ -	\$97,800,117	\$ -	\$97,800,117	\$97,800,117
5	Depreciation/Amortization	\$60,711,328	\$ -	\$60,711,328	\$ -	\$60,711,328	\$60,711,328
6	Property taxes	\$3,373,918	\$ -	\$3,373,918	\$ -	\$3,373,918	\$3,373,918
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$161,885,363	\$ -	\$161,885,363	\$ -	\$161,885,363	\$161,885,363
10	Deemed Interest Expense	\$28,037,264	(\$28,037,264)	\$ -	\$ -	\$ -	\$ -
11	Total Expenses (lines 9 to 10)	\$189,922,628	(\$28,037,264)	\$161,885,363	\$ -	\$161,885,363	\$161,885,363
12	Utility income before income taxes	\$63,482,530	(\$225,367,893)	(\$161,885,363)	\$ -	(\$161,885,363)	(\$161,885,363)
13	Income taxes (grossed-up)	\$11,659,577	\$ -	\$11,659,577	\$ -	\$11,659,577	\$11,659,577
14	Utility net income	\$51,822,953	(\$225,367,893)	(\$173,544,940)	\$ -	(\$173,544,940)	(\$173,544,940)

### Notes

#### Other Revenues / Revenue Offsets

<sup>(1)</sup>	Specific Service Charges	\$5,910,078	\$ -	\$ -	\$ -	\$ -
	Late Payment Charges	\$1,000,000	\$ -	\$ -	\$ -	\$ -
	Other Distribution Revenue	\$3,060,205	\$ -	\$ -	\$ -	\$ -
	Other Income and Deductions	\$2,181,108	\$ -	\$ -	\$ -	\$ -
	Total Revenue Offsets	\$12,151,391	\$ -	\$ -	\$ -	\$ -



# 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	\$51,822,953		\$ -	\$ -
2	Adjustments required to arrive at taxable utility income	(\$19,163,272)		\$ -	\$ -
3	Taxable income	<u>\$32,659,681</u>		<u>\$ -</u>	<u>\$ -</u>
<u>Calculation of Utility income Taxes</u>					
4	Income taxes	<u>\$8,569,789</u>		<u>\$8,569,789</u>	<u>\$8,569,789</u>
6	Total taxes	<u>\$8,569,789</u>		<u>\$8,569,789</u>	<u>\$8,569,789</u>
7	Gross-up of Income Taxes	<u>\$3,089,788</u>		<u>\$3,089,788</u>	<u>\$3,089,788</u>
8	Grossed-up Income Taxes	<u>\$11,659,577</u>		<u>\$11,659,577</u>	<u>\$11,659,577</u>
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$11,659,577</u>		<u>\$11,659,577</u>	<u>\$11,659,577</u>
10	Other tax Credits	(\$85,000)		(\$85,000)	(\$85,000)
<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





# Revenue Requirement Workform (RRWF) for 2020 Filers

## Capitalization/Cost of Capital

Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
		Initial Application			
		(%)	(\$)	(%)	(\$)
	<b>Debt</b>				
1	Long-term Debt	56.00%	\$771,010,996	3.44%	\$26,522,778
2	Short-term Debt	4.00%	\$55,072,214	2.75%	\$1,514,486
3	<b>Total Debt</b>	60.00%	\$826,083,210	3.39%	\$28,037,264
	<b>Equity</b>				
4	Common Equity	40.00%	\$550,722,140	9.41%	\$51,822,953
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	<b>Total Equity</b>	40.00%	\$550,722,140	9.41%	\$51,822,953
7	<b>Total</b>	100.00%	\$1,376,805,350	5.80%	\$79,860,218
		Per Board Decision			
		(%)	(\$)	(%)	(\$)
	<b>Debt</b>				
1	Long-term Debt	0.00%	\$ -	0.00%	\$ -
2	Short-term Debt	0.00%	\$ -	0.00%	\$ -
3	<b>Total Debt</b>	0.00%	\$ -	0.00%	\$ -
	<b>Equity</b>				
4	Common Equity	0.00%	\$ -	0.00%	\$ -
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	<b>Total Equity</b>	0.00%	\$ -	0.00%	\$ -
7	<b>Total</b>	0.00%	\$1,274,403,184	0.00%	\$ -
		Per Board Decision			
		(%)	(\$)	(%)	(\$)
	<b>Debt</b>				
8	Long-term Debt	0.00%	\$ -	3.44%	\$ -
9	Short-term Debt	0.00%	\$ -	2.75%	\$ -
10	<b>Total Debt</b>	0.00%	\$ -	0.00%	\$ -
	<b>Equity</b>				
11	Common Equity	0.00%	\$ -	9.41%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	<b>Total Equity</b>	0.00%	\$ -	0.00%	\$ -
14	<b>Total</b>	0.00%	\$1,274,403,184	0.00%	\$ -

### Notes



Ontario Energy Board

# Revenue Requirement Workform (RRWF) for 2020 Filers

Hydro Ottawa Limited  
EB-2019-0261  
Exhibit 6  
Tab 1  
Schedule 1  
Attachment D  
ORIGINAL  
Page 8 of 17

## 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		\$54,237,845		(\$34,783,863)
2	Distribution Revenue	\$189,644,373	\$187,015,921	\$189,644,373	\$276,037,629
3	Other Operating Revenue	\$12,151,391	\$12,151,391	\$ -	\$ -
	Offsets - net				
4	<b>Total Revenue</b>	<b>\$201,795,765</b>	<b>\$253,405,157</b>	<b>\$189,644,373</b>	<b>\$241,253,766</b>
5	Operating Expenses	\$161,885,363	\$161,885,363	\$161,885,363	\$161,885,363
6	Deemed Interest Expense	\$28,037,264	\$28,037,264	\$ -	\$ -
8	<b>Total Cost and Expenses</b>	<b>\$189,922,628</b>	<b>\$189,922,628</b>	<b>\$161,885,363</b>	<b>\$161,885,363</b>
9	<b>Utility Income Before Income Taxes</b>	<b>\$11,873,137</b>	<b>\$63,482,530</b>	<b>\$27,759,010</b>	<b>\$79,368,403</b>
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$19,163,272)	(\$19,163,272)	(\$19,163,272)	(\$19,163,272)
11	<b>Taxable Income</b>	<b>(\$7,290,135)</b>	<b>\$44,319,258</b>	<b>\$8,595,738</b>	<b>\$60,205,131</b>
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%
13	<b>Income Tax on Taxable Income</b>	<b>\$ -</b>	<b>\$11,744,603</b>	<b>\$2,277,870</b>	<b>\$15,954,360</b>
14	<b>Income Tax Credits</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>
15	<b>Utility Net Income</b>	<b>\$11,958,137</b>	<b>\$51,822,953</b>	<b>\$25,566,139</b>	<b>(\$173,544,940)</b>
16	<b>Utility Rate Base</b>	<b>\$1,376,805,350</b>	<b>\$1,376,805,350</b>	<b>\$1,274,403,184</b>	<b>\$1,274,403,184</b>
17	Deemed Equity Portion of Rate Base	\$550,722,140	\$550,722,140	\$ -	\$ -
18	Income/(Equity Portion of Rate Base)	2.17%	9.41%	0.00%	0.00%
19	Target Return - Equity on Rate Base	9.41%	9.41%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-7.24%	0.00%	0.00%	0.00%
21	Indicated Rate of Return	2.90%	5.80%	2.01%	0.00%
22	Requested Rate of Return on Rate Base	5.80%	5.80%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-2.90%	0.00%	2.01%	0.00%
24	Target Return on Equity	\$51,822,953	\$51,822,953	\$ -	\$ -
25	Revenue Deficiency/(Sufficiency)	\$39,864,816	(\$0)	(\$25,566,139)	\$ -
26	<b>Gross Revenue Deficiency/(Sufficiency)</b>	<b>\$54,237,845 <sup>(1)</sup></b>		<b>(\$34,783,863) <sup>(1)</sup></b>	<b>\$220,252,195 <sup>(1)</sup></b>

### Notes:

<sup>(1)</sup> 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	\$97,800,117	\$97,800,117	\$97,800,117	
2	Amortization/Depreciation	\$60,711,328	\$60,711,328	\$60,711,328	
3	Property Taxes	\$3,373,918	\$3,373,918	\$3,373,918	
5	Income Taxes (Grossed up)	\$11,659,577	\$11,659,577	\$11,659,577	
6	Other Expenses	\$ -			
7	Return				
	Deemed Interest Expense	\$28,037,264	\$ -	\$ -	
	Return on Deemed Equity	\$51,822,953	\$ -	\$ -	
8	<b>Service Revenue Requirement (before Revenues)</b>	<u>\$253,405,158</u>	<u>\$173,544,940</u>	<u>\$173,544,940</u>	
9	Revenue Offsets	\$12,151,392	\$ -	\$ -	
10	<b>Base Revenue Requirement (excluding Tranformer Owership Allowance credit adjustment)</b>	<u>\$241,253,766</u>	<u>\$173,544,940</u>	<u>\$173,544,940</u>	
11	Distribution revenue	\$241,253,766	\$ -	\$ -	
12	Other revenue	\$12,151,391	\$ -	\$ -	
13	<b>Total revenue</b>	<u>\$253,405,157</u>	<u>\$ -</u>	<u>\$ -</u>	
14	<b>Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)</b>	<u>(\$0)</u> <sup>(1)</sup>	<u>(\$173,544,940)</u> <sup>(1)</sup>	<u>(\$173,544,940)</u> <sup>(1)</sup>	

## Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application		Δ% <sup>(2)</sup>	Per Board Decision	Δ% <sup>(2)</sup>
<b>Service Revenue Requirement</b>	\$253,405,158	\$173,544,940	(\$0)	\$173,544,940	(\$1)
<b>Grossed-Up Revenue</b>					
<b>Deficiency/(Sufficiency)</b>	\$54,237,845	(\$34,783,863)	(\$2)	\$220,252,195	(\$1)
<b>Base Revenue Requirement (to be recovered from Distribution Rates)</b>	\$241,253,766	\$173,544,940	(\$0)	\$173,544,940	(\$1)
<b>Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement</b>	\$51,609,393	\$ -	(\$1)	\$ -	(\$1)

### Notes

<sup>(1)</sup> Line 11 - Line 8

<sup>(2)</sup> 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 <sup>(1)</sup>	Customer / Connections	kWh	kW/kVA <sup>(1)</sup>
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	325,150	2,333,345,000				
2	GS < 50 kW	25,846	698,161,000				
3	GS > 50 to 1,499 kW	3,013	2,844,419,000	6,838,752			
4	GS > 1,500 to 4,999 kW	68	684,488,000	1,521,105			
5	Large Use	11	572,834,000	1,050,683			
6	Street Lighting	65,564	19,603,000	54,373			
7	Sentinel Lighting	55	47,000	132			
8	Unmetered Scattered Load	3,321	12,195,000				
9	Standby Power	3		7,440			
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Total			7,165,092,000	9,472,485		-	-

Notes:

<sup>(1)</sup> 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 <sup>(3)</sup>	Costs Allocated from Previous Study <sup>(1)</sup>	%	Allocated Class Revenue Requirement <sup>(1)</sup>	%
From Sheet 10. Load Forecast				
(7A)				
1 Residential	\$ 107,281,788	53.50%	\$ 139,702,797	55.13%
2 GS < 50 kW	\$ 20,646,221	10.30%	\$ 25,304,668	9.99%
3 GS > 50 to 1,499 kW	\$ 48,750,762	24.31%	\$ 63,013,095	24.87%
4 GS > 1,500 to 4,999 kW	\$ 13,365,246	6.66%	\$ 13,310,884	5.25%
5 Large Use	\$ 8,063,832	4.02%	\$ 10,260,119	4.05%
6 Street Lighting	\$ 1,811,439	0.90%	\$ 1,145,708	0.45%
7 Sentinel Lighting	\$ 6,568	0.00%	\$ 11,514	0.00%
8 Unmetered Scattered Load	\$ 547,549	0.27%	\$ 640,802	0.25%
9 Standby Power	\$ 70,655	0.04%	\$ 15,572	0.01%
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
<b>Total</b>	<b>\$ 200,544,060</b>	<b>100.00%</b>	<b>\$ 253,405,158</b>	<b>100.00%</b>
Service Revenue Requirement (from Sheet 9)			<b>\$ 253,405,157.82</b>	

- (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	\$ 132,544,146	\$ 136,385,910	\$ 136,367,910	\$ 8,919,018
2 GS < 50 kW	\$ 28,165,169	\$ 29,193,269	\$ 29,196,775	\$ 1,086,449
3 GS > 50 to 1,499 kW	\$ 50,813,299	\$ 52,386,289	\$ 52,386,108	\$ 1,536,644
4 GS > 1,500 to 4,999 kW	\$ 12,644,685	\$ 12,693,866	\$ 12,693,803	\$ 300,461
5 Large Use	\$ 8,569,166	\$ 8,560,837	\$ 8,560,784	\$ 211,362
6 Street Lighting	\$ 1,263,020	\$ 1,316,537	\$ 1,315,952	\$ 57,134
7 Sentinel Lighting	\$ 6,815	\$ 7,072	\$ 7,655	\$ 973
8 Unmetered Scattered Load	\$ 646,345	\$ 686,221	\$ 685,855	\$ 38,872
9 Standby Power	\$ 22,891	\$ 23,765	\$ 23,765	\$ 479
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
<b>Total</b>	<b>\$ 234,675,534</b>	<b>\$ 241,253,766</b>	<b>\$ 241,238,607</b>	<b>\$ 12,151,392</b>

- (4) In columns 7B to 7D, LF means Load Forecast of Annual Billing Quantities (i.e., customers or connections, as applicable X 12 months, and kWh, kW or kVA as applicable. Revenue quantities should be net of the Transformer Ownership Allowance for applicable customer classes. Exclude revenues from rate adders and rate riders.
- (5) Columns 7C and 7D - Column Total should equal the Base Revenue Requirement for each.
- (6) Column 7C - The OEB-issued cost allocation model calculates "1+d" on worksheet O-1, cell C22. "d" is defined as Revenue Deficiency/Revenue at Current Rates.
- (7) Column 7E - If using the OEB-issued cost allocation model, enter Miscellaneous Revenues as it appears on worksheet O-1, row 19,

C) **Rebalancing Revenue-to-Cost Ratios**

Name of Customer Class	Previously Approved Ratios Most Recent Year: 2016 %	Status Quo Ratios (7C + 7E) / (7A) %	Proposed Ratios (7D + 7E) / (7A) %	Policy Range %
1 Residential	104.29%	104.01%	104.00%	85 - 115
2 GS < 50 kW	118.23%	119.66%	119.67%	80 - 120
3 GS > 50 to 1,499 kW	86.34%	85.57%	85.57%	80 - 120
4 GS > 1,500 to 4,999 kW	98.24%	97.62%	97.62%	80 - 120
5 Large Use	85.36%	85.50%	85.50%	85 - 115
6 Street Lighting	80.00%	119.90%	119.85%	80 - 120
7 Sentinel Lighting	76.00%	69.87%	74.94%	80 - 120
8 Unmetered Scattered Load	118.72%	113.15%	113.10%	80 - 120
9 Standby Power	21.03%	155.69%	155.69%	80 - 120
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 <sup>(11)</sup>

Name of Customer Class		Proposed Revenue-to-Cost Ratio			Policy Range
	Test Year	Price Cap IR Period			
	2021	2022	2023		
1	Residential	104.00%	104.00%	104.00%	85 - 115
2	GS < 50 kW	119.67%	119.67%	119.67%	80 - 120
3	GS > 50 to 1,499 kW	85.57%	85.57%	85.57%	80 - 120
4	GS > 1,500 to 4,999 kW	97.62%	97.62%	97.62%	80 - 120
5	Large Use	85.50%	85.50%	85.50%	85 - 115
6	Street Lighting	119.85%	119.85%	119.85%	80 - 120
7	Sentinel Lighting	74.94%	74.94%	74.94%	80 - 120
8	Unmetered Scattered Load	113.10%	113.10%	113.10%	80 - 120
9	Standby Power	155.69%	155.69%	155.69%	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 2020 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 2021 and 2022 Price Cap IR models, as necessary. For 2021 and 2022, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2019 (in the current Revenue/Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment, column d), and enter TBD for class(es) that will be entered as 'Rebalance'.





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	325,150
kWh	2,333,345,000

Proposed Residential Class Specific Revenue Requirement <sup>1</sup>	\$ 136,367,910.00
--	-------------------

Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 34.95
Distribution Volumetric Rate (\$/kWh)	\$ -

### B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	34.95	325,150	\$ 136,367,910.00	100.00%
Variable	0	2,333,345,000	\$ -	0.00%
<b>TOTAL</b>	-	-	\$ 136,367,910.00	-

### C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years <sup>2</sup>	0
--	---

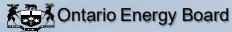
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 136,367,910.00	34.95	\$ 136,367,910.00
Variable	\$ -	0	\$ -
<b>TOTAL</b>	\$ 136,367,910.00	-	\$ 136,367,910.00

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

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

### Notes:

- <sup>1</sup> 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).
- <sup>2</sup> The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. The change in residential rate design is almost complete and distributors should have either 0 or 1 year remaining. If the distributor has fully transitioned to fixed rates put "0" in cell D40. If the distributor has proposed an additional transition year because the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, put "1" in cell D40.
- <sup>3</sup> 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				Class Allocated Revenues			Fixed / Variable Splits <sup>2</sup>			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 <sup>1</sup> (\$)	Monthly Service Charge Rate	No. of decimals	Volumetric Rate	No. of decimals	MSC Revenues	Volumetric revenues	Revenues less Transformer Ownership Allowance	
From sheet 10. Load Forecast																		
1 Residential	kWh	325,150	2,333,345,000	-	\$ 136,367,910	\$ 136,367,910	\$ -	100.00%	0.00%		\$34.95	2	\$0.0000 /kWh	4	#####	\$ -	#####	
2 GS < 50 kW	kWh	25,846	696,161,000	-	\$ 29,196,775	\$ 7,484,009	\$ 21,712,766	25.63%	74.37%		\$24.13		\$0.0311 /kWh		\$ 7,483,967.76	\$21,712,807.1000	\$29,196,774.86	
3 GS > 50 to 1,499 kW	kW	3,013	2,844,419,000	6,838,752	\$ 52,386,108	\$ 8,385,706	\$ 44,000,402	16.01%	83.99%	\$ 344,073	\$231.93		\$6.4843 /kW		\$ 8,385,661.08	\$44,344,519.5936	\$52,386,107.80	
4 GS > 1,500 to 4,999 kW	kW	68	684,488,000	1,521,105	\$ 12,693,803	\$ 3,645,806	\$ 9,047,997	28.72%	71.28%	\$ 398,066	\$4,467.90		\$6.2100 /kW		\$ 3,645,806.40	\$ 9,446,062.0500	\$12,693,802.61	
5 Large Use	kW	11	572,834,000	1,050,683	\$ 8,560,784	\$ 2,112,088	\$ 6,448,696	24.67%	75.33%	\$ 316,547	\$16,000.67		\$6.4389 /kW		\$ 2,112,088.44	\$ 6,765,242.7687	\$ 8,560,784.17	
6 Street Lighting	kW	65,564	19,603,000	54,373	\$ 1,315,952	\$ 889,046	\$ 426,906	67.56%	32.44%		\$1.13		\$7.8514 /kW		\$ 889,047.84	\$ 426,904.1722	\$ 1,315,952.01	
7 Sentinel Lighting	kW	55	47,000	132	\$ 7,655	\$ 3,960	\$ 3,695	51.73%	48.27%		\$6.00		\$27.9950 /kW		\$ 3,960.00	\$ 3,695.3400	\$ 7,655.34	
8 Unmetered Scattered Load	kWh	3,321	12,195,000	-	\$ 685,855	\$ 279,612	\$ 406,243	40.77%	59.23%		\$7.02		\$0.0333 /kWh		\$ 279,761.04	\$ 406,093.5000	\$ 685,854.54	
9 Standby Power	kW	3	-	7,440	\$ 23,765	\$ 6,732	\$ 17,033	28.33%	71.67%		\$187.01		\$2.2894 /kW		\$ 6,732.36	\$ 17,033.1360	\$ 23,765.50	
10		-	-	-											\$ -	\$ -	\$ -	
11		-	-	-											\$ -	\$ -	\$ -	
12		-	-	-											\$ -	\$ -	\$ -	
13		-	-	-											\$ -	\$ -	\$ -	
14		-	-	-											\$ -	\$ -	\$ -	
15		-	-	-											\$ -	\$ -	\$ -	
16		-	-	-											\$ -	\$ -	\$ -	
17		-	-	-											\$ -	\$ -	\$ -	
18		-	-	-											\$ -	\$ -	\$ -	
19		-	-	-											\$ -	\$ -	\$ -	
20		-	-	-											\$ -	\$ -	\$ -	
Total Transformer Ownership Allowance										\$ 1,058,686						Total Distribution Revenues		#####
											Rates recover revenue requirement					Base Revenue Requirement		#####
																Difference		-\$ 15,158.99
																% Difference		-0.006%

Notes:

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

Notes:

- <sup>1</sup> Transformer Ownership Allowance is entered as a positive amount, and only for those classes to which it applies.
- <sup>2</sup> 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).



Ontario Energy Board

## Revenue Requirement Workform (RRWF) for 2020 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.

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

<sup>(2)</sup> Short description of change, issue, etc.

### Summary of Proposed Changes

Reference <sup>(1)</sup>	Item / Description <sup>(2)</sup>	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	\$ 79,860,218	5.80%	\$ 1,376,805,350	\$ 1,365,362,209	\$ 102,402,166	\$ 60,711,328	\$ 11,659,577	\$ 97,800,117	\$ 253,405,158	\$ 12,151,391	\$ 241,253,766	\$ 54,237,845



Ontario Energy Board

# Revenue Requirement Workform (RRWF) for 2020 Filers



Version 9.00

Utility Name	Hydro Ottawa Limited
Service Territory	
Assigned EB Number	EB-2019-0261
Name and Title	Gregory Van Dusen, Director, Regulatory Affairs
Phone Number	613-738-5499 ext 7472
Email Address	<a href="mailto:RegulatoryAffairs@HydroOttawa.com">RegulatoryAffairs@HydroOttawa.com</a>
Test Year	<a href="#">2025</a>
Bridge Year	
Last Rebasing Year	<a href="#">2016</a>

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 2020 Filers

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## 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.**



# Revenue Requirement Workform (RRWF) for 2020 Filers

Data Input <sup>(1)</sup>

	Initial Application	(2)	(6)	Per Board Decision
<b>1 Rate Base</b>				
Gross Fixed Assets (average)	\$1,850,890,773		\$1,850,890,773	\$1,850,890,773
Accumulated Depreciation (average)	(\$537,205,937)	(5)	(\$537,205,937)	(\$537,205,937)
<b>Allowance for Working Capital:</b>				
Controllable Expenses	\$103,713,503		\$103,713,503	\$103,713,503
Cost of Power	\$1,310,655,495		\$1,310,655,495	\$1,310,655,495
Working Capital Rate (%)	7.50%	(9)		(9)
<b>2 Utility Income</b>				
Operating Revenues:				
Distribution Revenue at Current Rates	\$190,581,980			
Distribution Revenue at Proposed Rates	\$247,596,176			
<b>Other Revenue:</b>				
Specific Service Charges	\$6,212,623			
Late Payment Charges	\$1,000,000			
Other Distribution Revenue	\$3,162,990			
Other Income and Deductions	\$2,081,096			
Total Revenue Offsets	\$12,456,709	(7)		
<b>Operating Expenses:</b>				
OM+A Expenses	\$100,254,900		\$100,254,900	\$100,254,900
Depreciation/Amortization	\$64,026,637		\$64,026,637	\$64,026,637
Property taxes	\$3,458,604		\$3,458,604	\$3,458,604
Other expenses				
<b>3 Taxes/PILs</b>				
Taxable Income:	(\$32,076,354)	(3)		
Adjustments required to arrive at taxable income				
<b>Utility Income Taxes and Rates:</b>				
Income taxes (not grossed up)	\$5,651,577			
Income taxes (grossed up)	\$7,689,220			
Federal tax (%)	15.00%			
Provincial tax (%)	11.50%			
Income Tax Credits	(\$85,000)			
<b>4 Capitalization/Cost of Capital</b>				
<b>Capital Structure:</b>				
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%			
<b>Cost of Capital</b>				
Long-term debt Cost Rate (%)	3.69%			
Short-term debt Cost Rate (%)	2.75%			
Common Equity Cost Rate (%)	9.46%			
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 M12. 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 2020 Filers

## Rate Base and Working Capital

Rate Base										
Line No.	Particulars		Initial Application				Per Board Decision			
1	Gross Fixed Assets (average)	(2)	\$1,850,890,773		\$ -		\$1,850,890,773		\$ -	\$1,850,890,773
2	Accumulated Depreciation (average)	(2)	(\$537,205,937)		\$ -		(\$537,205,937)		\$ -	(\$537,205,937)
3	Net Fixed Assets (average)	(2)	\$1,313,684,836		\$ -		\$1,313,684,836		\$ -	\$1,313,684,836
4	Allowance for Working Capital	(1)	\$106,077,675	#####			\$ -		\$ -	\$ -
5	Total Rate Base		\$1,419,762,511	#####			\$1,313,684,836		\$ -	\$1,313,684,836

### (1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$103,713,503	\$ -	\$103,713,503	\$ -	\$103,713,503
7	Cost of Power	\$1,310,655,495	\$ -	\$1,310,655,495	\$ -	\$1,310,655,495
8	Working Capital Base	\$1,414,368,998	\$ -	\$1,414,368,998	\$ -	\$1,414,368,998
9	Working Capital Rate % <sup>(1)</sup>	7.50%	-7.50%	0.00%	0.00%	0.00%
10	Working Capital Allowance	<u>\$106,077,675</u>	<u>#####</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

#### Notes

- (1) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2020 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.



# Revenue Requirement Workform (RRWF) for 2020 Filers

## Utility Income

Line No.	Particulars	Initial Application					Per Board Decision
<b>Operating Revenues:</b>							
1	Distribution Revenue (at Proposed Rates)	\$247,596,176	(\$247,596,176)	\$ -	\$ -	\$ -	\$ -
2	Other Revenue <sup>(1)</sup>	\$12,456,709	(\$12,456,709)	\$ -	\$ -	\$ -	\$ -
3	Total Operating Revenues	\$260,052,885	(\$260,052,885)	\$ -	\$ -	\$ -	\$ -
<b>Operating Expenses:</b>							
4	OM+A Expenses	\$100,254,900	\$ -	\$100,254,900	\$ -	\$100,254,900	\$100,254,900
5	Depreciation/Amortization	\$64,026,637	\$ -	\$64,026,637	\$ -	\$64,026,637	\$64,026,637
6	Property taxes	\$3,458,604	\$ -	\$3,458,604	\$ -	\$3,458,604	\$3,458,604
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$167,740,140	\$ -	\$167,740,140	\$ -	\$167,740,140	\$167,740,140
10	Deemed Interest Expense	\$30,899,711	(\$30,899,711)	\$ -	\$ -	\$ -	\$ -
11	Total Expenses (lines 9 to 10)	\$198,639,852	(\$30,899,711)	\$167,740,140	\$ -	\$167,740,140	\$167,740,140
12	Utility income before income taxes	\$61,413,034	(\$229,153,174)	(\$167,740,140)	\$ -	(\$167,740,140)	(\$167,740,140)
13	Income taxes (grossed-up)	\$7,689,220	\$ -	\$7,689,220	\$ -	\$7,689,220	\$7,689,220
14	Utility net income	\$53,723,813	(\$229,153,174)	(\$175,429,361)	\$ -	(\$175,429,361)	(\$175,429,361)

### Notes

#### Other Revenues / Revenue Offsets

<sup>(1)</sup>	Specific Service Charges	\$6,212,623	\$ -	\$ -	\$ -	\$ -
	Late Payment Charges	\$1,000,000	\$ -	\$ -	\$ -	\$ -
	Other Distribution Revenue	\$3,162,990	\$ -	\$ -	\$ -	\$ -
	Other Income and Deductions	\$2,081,096	\$ -	\$ -	\$ -	\$ -
	Total Revenue Offsets	\$12,456,709	\$ -	\$ -	\$ -	\$ -





# 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	\$53,723,813		\$ -	\$ -
2	Adjustments required to arrive at taxable utility income	(\$32,076,354)		\$ -	\$ -
3	Taxable income	<u>\$21,647,459</u>		<u>\$ -</u>	<u>\$ -</u>
<u>Calculation of Utility income Taxes</u>					
4	Income taxes	<u>\$5,651,577</u>		<u>\$5,651,577</u>	<u>\$5,651,577</u>
6	Total taxes	<u>\$5,651,577</u>		<u>\$5,651,577</u>	<u>\$5,651,577</u>
7	Gross-up of Income Taxes	<u>\$2,037,643</u>		<u>\$2,037,643</u>	<u>\$2,037,643</u>
8	Grossed-up Income Taxes	<u>\$7,689,220</u>		<u>\$7,689,220</u>	<u>\$7,689,220</u>
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$7,689,220</u>		<u>\$7,689,220</u>	<u>\$7,689,220</u>
10	Other tax Credits	(\$85,000)		(\$85,000)	(\$85,000)
<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



# 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%	\$795,067,006	3.69%	\$29,337,973
2	Short-term Debt	4.00%	\$56,790,500	2.75%	\$1,561,739
3	Total Debt	60.00%	\$851,857,507	3.63%	\$30,899,711
	Equity				
4	Common Equity	40.00%	\$567,905,004	9.46%	\$53,723,813
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$567,905,004	9.46%	\$53,723,813
7	Total	100.00%	\$1,419,762,511	5.96%	\$84,623,525
		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%	\$1,313,684,836	0.00%	\$ -
		Per Board Decision			
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	0.00%	\$ -	3.69%	\$ -
9	Short-term Debt	0.00%	\$ -	2.75%	\$ -
10	Total Debt	0.00%	\$ -	0.00%	\$ -
	Equity				
11	Common Equity	0.00%	\$ -	9.46%	\$ -
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	0.00%	\$ -	0.00%	\$ -
14	Total	0.00%	\$1,313,684,836	0.00%	\$ -

### Notes



Ontario Energy Board

# Revenue Requirement Workform (RRWF) for 2020 Filers

Hydro Ottawa Limited  
EB-2019-0261  
Exhibit 6  
Tab 1  
Schedule 1  
Attachment E  
ORIGINAL  
Page 8 of 17

## 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		\$66,993,165		(\$31,192,979)
2	Distribution Revenue	\$190,581,980	\$180,603,011	\$190,581,980	\$278,789,155
3	Other Operating Revenue	\$12,456,709	\$12,456,709	\$ -	\$ -
	Offsets - net				
4	<b>Total Revenue</b>	<b>\$203,038,689</b>	<b>\$260,052,885</b>	<b>\$190,581,980</b>	<b>\$247,596,176</b>
5	Operating Expenses	\$167,740,140	\$167,740,140	\$167,740,140	\$167,740,140
6	Deemed Interest Expense	\$30,899,711	\$30,899,711	\$ -	\$ -
8	<b>Total Cost and Expenses</b>	<b>\$198,639,852</b>	<b>\$198,639,852</b>	<b>\$167,740,140</b>	<b>\$167,740,140</b>
9	<b>Utility Income Before Income Taxes</b>	<b>\$4,398,837</b>	<b>\$61,413,034</b>	<b>\$22,841,839</b>	<b>\$79,856,036</b>
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$32,076,354)	(\$32,076,354)	(\$32,076,354)	(\$32,076,354)
11	<b>Taxable Income</b>	<b>(\$27,677,517)</b>	<b>\$29,336,680</b>	<b>(\$9,234,515)</b>	<b>\$47,779,682</b>
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%
13	<b>Income Tax on Taxable Income</b>	<b>\$ -</b>	<b>\$7,774,220</b>	<b>\$ -</b>	<b>\$12,661,616</b>
14	<b>Income Tax Credits</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>	<b>(\$85,000)</b>
15	<b>Utility Net Income</b>	<b>\$4,483,837</b>	<b>\$53,723,813</b>	<b>\$22,926,839</b>	<b>(\$175,429,361)</b>
16	<b>Utility Rate Base</b>	<b>\$1,419,762,511</b>	<b>\$1,419,762,511</b>	<b>\$1,313,684,836</b>	<b>\$1,313,684,836</b>
17	Deemed Equity Portion of Rate Base	\$567,905,004	\$567,905,004	\$ -	\$ -
18	Income/(Equity Portion of Rate Base)	0.79%	9.46%	0.00%	0.00%
19	Target Return - Equity on Rate Base	9.46%	9.46%	0.00%	0.00%
20	Deficiency/Sufficiency in Return on Equity	-8.67%	0.00%	0.00%	0.00%
21	Indicated Rate of Return	2.49%	5.96%	1.75%	0.00%
22	Requested Rate of Return on Rate Base	5.96%	5.96%	0.00%	0.00%
23	Deficiency/Sufficiency in Rate of Return	-3.47%	0.00%	1.75%	0.00%
24	Target Return on Equity	\$53,723,813	\$53,723,813	\$ -	\$ -
25	Revenue Deficiency/(Sufficiency)	\$49,239,976	(\$0)	(\$22,926,839)	\$ -
26	<b>Gross Revenue Deficiency/(Sufficiency)</b>	<b>\$66,993,165 <sup>(1)</sup></b>		<b>(\$31,192,979) <sup>(1)</sup></b>	<b>\$228,217,878 <sup>(1)</sup></b>

### Notes:

<sup>(1)</sup> 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	\$100,254,900	\$100,254,900	\$100,254,900	
2	Amortization/Depreciation	\$64,026,637	\$64,026,637	\$64,026,637	
3	Property Taxes	\$3,458,604	\$3,458,604	\$3,458,604	
5	Income Taxes (Grossed up)	\$7,689,220	\$7,689,220	\$7,689,220	
6	Other Expenses	\$ -	\$ -	\$ -	
7	Return				
	Deemed Interest Expense	\$30,899,711	\$ -	\$ -	
	Return on Deemed Equity	\$53,723,813	\$ -	\$ -	
8	<b>Service Revenue Requirement (before Revenues)</b>	<u>\$260,052,886</u>	<u>\$175,429,361</u>	<u>\$175,429,361</u>	
9	Revenue Offsets	\$12,456,709	\$ -	\$ -	
10	<b>Base Revenue Requirement (excluding Tranformer Owership Allowance credit adjustment)</b>	<u>\$247,596,177</u>	<u>\$175,429,361</u>	<u>\$175,429,361</u>	
11	Distribution revenue	\$247,596,176	\$ -	\$ -	
12	Other revenue	\$12,456,709	\$ -	\$ -	
13	<b>Total revenue</b>	<u>\$260,052,885</u>	<u>\$ -</u>	<u>\$ -</u>	
14	<b>Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)</b>	<u>(\$0)</u> <sup>(1)</sup>	<u>(\$175,429,361)</u> <sup>(1)</sup>	<u>(\$175,429,361)</u> <sup>(1)</sup>	

## Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application		Δ% <sup>(2)</sup>	Per Board Decision	Δ% <sup>(2)</sup>
<b>Service Revenue Requirement</b>	\$260,052,886	\$175,429,361	(\$0)	\$175,429,361	(\$1)
<b>Grossed-Up Revenue</b>					
<b>Deficiency/(Sufficiency)</b>	\$66,993,165	(\$31,192,979)	(\$1)	\$228,217,878	(\$1)
<b>Base Revenue Requirement (to be recovered from Distribution Rates)</b>	\$247,596,177	\$175,429,361	(\$0)	\$175,429,361	(\$1)
<b>Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement</b>	\$57,014,196	\$ -	(\$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 <sup>(1)</sup>	Customer / Connections	kWh	kW/kVA <sup>(1)</sup>
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	327,975	2,353,299,000				
2	GS < 50 kW	25,987	696,245,000				
3	GS > 50 to 1,499 kW	2,976	2,845,454,000	6,831,218			
4	GS > 1,500 to 4,999 kW	68	683,614,000	1,519,514			
5	Large Use	11	570,390,000	1,046,964			
6	Street Lighting	66,484	18,854,000	52,530			
7	Sentinel Lighting	55	47,000	132			
8	Unmetered Scattered Load	3,321	11,728,000				
9	Standby Power	3		7,440			
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Total			7,179,631,000	9,457,798		-	-

Notes:

<sup>(1)</sup> 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 <sup>(3)</sup>	Costs Allocated from Previous Study <sup>(1)</sup>	%	Allocated Class Revenue Requirement <sup>(1)</sup>	%
From Sheet 10. Load Forecast				
(7A)				
1 Residential	\$ 107,281,788	53.50%	\$ 143,367,703	55.13%
2 GS < 50 kW	\$ 20,646,221	10.30%	\$ 25,968,500	9.99%
3 GS > 50 to 1,499 kW	\$ 48,750,762	24.31%	\$ 64,666,154	24.87%
4 GS > 1,500 to 4,999 kW	\$ 13,365,246	6.66%	\$ 13,660,076	5.25%
5 Large Use	\$ 8,063,832	4.02%	\$ 10,529,279	4.05%
6 Street Lighting	\$ 1,811,439	0.90%	\$ 1,175,764	0.45%
7 Sentinel Lighting	\$ 6,568	0.00%	\$ 11,816	0.00%
8 Unmetered Scattered Load	\$ 547,549	0.27%	\$ 657,613	0.25%
9 Standby Power	\$ 70,655	0.04%	\$ 15,981	0.01%
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
<b>Total</b>	<b>\$ 200,544,060</b>	<b>100.00%</b>	<b>\$ 260,052,885</b>	<b>100.00%</b>
Service Revenue Requirement (from Sheet 9)			<b>\$ 260,052,885.54</b>	

- (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	\$ 137,552,715	\$ 139,964,128	\$ 139,953,492	\$ 9,143,118
2 GS < 50 kW	\$ 29,178,015	\$ 29,965,774	\$ 29,937,710	\$ 1,113,748
3 GS > 50 to 1,499 kW	\$ 52,578,351	\$ 53,765,396	\$ 53,765,060	\$ 1,575,253
4 GS > 1,500 to 4,999 kW	\$ 13,081,988	\$ 13,027,937	\$ 13,027,958	\$ 308,010
5 Large Use	\$ 8,853,385	\$ 8,786,137	\$ 8,786,098	\$ 216,673
6 Street Lighting	\$ 1,313,957	\$ 1,350,621	\$ 1,350,026	\$ 58,569
7 Sentinel Lighting	\$ 7,655	\$ 7,858	\$ 8,456	\$ 997
8 Unmetered Scattered Load	\$ 670,303	\$ 703,934	\$ 704,189	\$ 39,849
9 Standby Power	\$ 23,765	\$ 24,391	\$ 24,391	\$ 491
10				
11				
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17				
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19				
20				
<b>Total</b>	<b>\$ 243,260,136</b>	<b>\$ 247,596,176</b>	<b>\$ 247,557,380</b>	<b>\$ 12,456,709</b>

- (4) In columns 7B to 7D, LF means Load Forecast of Annual Billing Quantities (i.e., customers or connections, as applicable X 12 months, and kWh, kW or kVA as applicable. Revenue quantities should be net of the Transformer Ownership Allowance for applicable customer classes. Exclude revenues from rate adders and rate riders.
- (5) Columns 7C and 7D - Column Total should equal the Base Revenue Requirement for each.
- (6) Column 7C - The OEB-issued cost allocation model calculates "1+d" on worksheet O-1, cell C22. "d" is defined as Revenue Deficiency/Revenue at Current Rates.
- (7) Column 7E - If using the OEB-issued cost allocation model, enter Miscellaneous Revenues as it appears on worksheet O-1, row 19,

C) **Rebalancing Revenue-to-Cost Ratios**

Name of Customer Class	Previously Approved Ratios Most Recent Year: 2016 %	Status Quo Ratios (7C + 7E) / (7A) %	Proposed Ratios (7D + 7E) / (7A) %	Policy Range %
1 Residential	104.29%	104.00%	104.00%	85 - 115
2 GS < 50 kW	118.23%	119.68%	119.57%	80 - 120
3 GS > 50 to 1,499 kW	86.34%	85.58%	85.58%	80 - 120
4 GS > 1,500 to 4,999 kW	98.24%	97.63%	97.63%	80 - 120
5 Large Use	85.36%	85.50%	85.50%	85 - 115
6 Street Lighting	80.00%	119.85%	119.80%	80 - 120
7 Sentinel Lighting	76.00%	74.94%	80.00%	80 - 120
8 Unmetered Scattered Load	118.72%	113.10%	113.14%	80 - 120
9 Standby Power	21.03%	155.70%	155.70%	80 - 120
10				
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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 <sup>(11)</sup>

Name of Customer Class		Proposed Revenue-to-Cost Ratio			Policy Range
		Test Year	Price Cap IR Period		
	2021	2022	2023		
1 Residential	104.00%	104.00%	104.00%	85 - 115	
2 GS < 50 kW	119.57%	119.57%	119.57%	80 - 120	
3 GS > 50 to 1,499 kW	85.58%	85.58%	85.58%	80 - 120	
4 GS > 1,500 to 4,999 kW	97.63%	97.63%	97.63%	80 - 120	
5 Large Use	85.50%	85.50%	85.50%	85 - 115	
6 Street Lighting	119.80%	119.80%	119.80%	80 - 120	
7 Sentinel Lighting	80.00%	80.00%	80.00%	80 - 120	
8 Unmetered Scattered Load	113.14%	113.14%	113.14%	80 - 120	
9 Standby Power	155.70%	155.70%	155.70%	80 - 120	
10					
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(11) The applicant should complete Table D if it is applying for approval of a revenue-to-cost ratio in 2020 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 2021 and 2022 Price Cap IR models, as necessary. For 2021 and 2022, enter the planned revenue-to-cost ratios that will be "Change" or "No Change" in 2019 (in the current Revenue/Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment, column d), and enter TBD for class(es) that will be entered as 'Rebalance'.



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	327,975
kWh	2,353,299,000
Proposed Residential Class Specific Revenue Requirement <sup>1</sup>	
	\$ 139,953,492.00
Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 35.56
Distribution Volumetric Rate (\$/kWh)	\$ -

### B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	35.56	327,975	\$ 139,953,492.00	100.00%
Variable	0	2,353,299,000	\$ -	0.00%
<b>TOTAL</b>	-	-	\$ 139,953,492.00	-

### C Calculating Test Year Base Rates

Number of Remaining Rate Design Policy Transition Years <sup>2</sup>	0
--	---

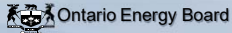
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 139,953,492.00	35.56	\$ 139,953,492.00
Variable	\$ -	0	\$ -
<b>TOTAL</b>	\$ 139,953,492.00	-	\$ 139,953,492.00

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

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

### Notes:

- <sup>1</sup> 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).
- <sup>2</sup> The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. The change in residential rate design is almost complete and distributors should have either 0 or 1 year remaining. If the distributor has fully transitioned to fixed rates put "0" in cell D40. If the distributor has proposed an additional transition year because the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, put "1" in cell D40.
- <sup>3</sup> 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				Class Allocated Revenues				Distribution Rates				Revenue Reconciliation					
Customer and Load Forecast					From Sheet 11, Cost Allocation and Sheet 12, Residential Rate Design				Fixed / Variable Splits <sup>2</sup> Percentage to be entered as a fraction between 0 and 1		Transformer Ownership Allowance <sup>1</sup> (\$)		Monthly Service Charge		Volumetric Rate		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	Transformer Ownership Allowance <sup>1</sup> (\$)	Rate	No. of decimals	Rate	No. of decimals	MSC Revenues	Volumetric revenues	Revenues less Transformer Ownership Allowance		
From sheet 10, Load Forecast																			
1 Residential	kWh	327,975	2,353,299,000	-	\$ 139,953,492	\$ 139,942,886	\$ 10,606	99.99%	0.01%		\$35.56	2	\$0.0000 /kWh	4	#####	\$ -	#####		
2 GS < 50 kW	kWh	25,987	696,245,000	-	\$ 29,937,710	\$ 7,726,923	\$ 22,210,787	25.81%	74.19%		\$24.78		\$0.0319 /kWh		\$ 7,727,494.32	\$22,210,215.5000	\$29,937,709.82		
3 GS > 50 to 1,499 kW	kW	2,976	2,845,454,000	6,831,218	\$ 53,765,060	\$ 8,469,879	\$ 45,295,181	15.75%	84.25%	\$ 288,107	\$237.17		\$6.6728 /kW		\$ 8,469,815.04	\$45,583,351.4704	\$53,765,059.97		
4 GS > 1,500 to 4,999 kW	kW	68	683,614,000	1,519,514	\$ 13,027,958	\$ 3,645,809	\$ 9,382,149	27.98%	72.02%	\$ 333,317	\$4,467.90		\$6.3938 /kW		\$ 3,645,806.40	\$ 9,715,468.6132	\$13,027,957.90		
5 Large Use	kW	11	570,390,000	1,046,964	\$ 8,786,098	\$ 2,112,088	\$ 6,674,010	24.04%	75.96%	\$ 265,058	\$16,000.67		\$6.6278 /kW		\$ 2,112,088.44	\$ 6,939,067.9992	\$ 8,786,098.42		
6 Street Lighting	kW	66,484	18,854,000	52,530	\$ 1,350,026	\$ 925,459	\$ 424,567	68.55%	31.45%		\$1.16		\$8.0824 /kW		\$ 925,457.28	\$ 424,568.4720	\$ 1,350,025.75		
7 Sentinel Lighting	kW	55	47,000	132	\$ 8,456	\$ 4,376	\$ 4,080	51.75%	48.25%		\$6.63		\$30.9073 /kW		\$ 4,375.80	\$ 4,079.7636	\$ 8,455.56		
8 Unmetered Scattered Load	kWh	3,321	11,728,000	-	\$ 704,189	\$ 293,816	\$ 410,374	41.72%	58.28%		\$7.37		\$0.0350 /kWh		\$ 293,709.24	\$ 410,480.0000	\$ 704,189.24		
9 Standby Power	kW	3	-	7,440	\$ 24,391	\$ 6,910	\$ 17,482	28.33%	71.67%		\$191.93		\$2.3497 /kW		\$ 6,909.48	\$ 17,481.7680	\$ 24,391.25		
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -		
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -		
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -		
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -		
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -		
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -		
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -		
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -		
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19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -		
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -		
Total Transformer Ownership Allowance										\$ 886,482									
											Rates recover revenue requirement								
														Total Distribution Revenues					
														#####					
														Base Revenue Requirement					
														#####					
														Difference					
														-\$ 38,796.66					
														% Difference					
														-0.016%					

Notes:

1

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

Notes:

- <sup>1</sup> Transformer Ownership Allowance is entered as a positive amount, and only for those classes to which it applies.
- <sup>2</sup> 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).



Ontario Energy Board

# Revenue Requirement Workform (RRWF) for 2020 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.

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

<sup>(2)</sup> Short description of change, issue, etc.

## Summary of Proposed Changes

Reference <sup>(1)</sup>	Item / Description <sup>(2)</sup>	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	\$ 84,623,525	5.96%	\$ 1,419,762,511	\$ 1,414,368,998	\$ 106,077,675	\$ 64,026,637	\$ 7,689,220	\$ 100,254,900	\$ 260,052,886	\$ 12,456,709	\$ 247,596,177	\$ 66,993,165