

1 **UPDATED CALCULATION OF REVENUE DEFICIENCY OR SUFFICIENCY**

3 **1. INTRODUCTION**

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

15 **2. CALCULATION OF DEFICIENCY OR SUFFICIENCY**

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

- 18 • 2020 ~~proposed~~ approved rates; and
- 19 • 2021-2025 load forecast and forecast of customers and connections, as developed
20 using the methodology described in **UPDATED** Exhibit 3-1-1: Load Forecast.

21
22 The revenue deficiency/sufficiency was then determined by calculating what the revenue would
23 have been with 2020 rates and the forecasted 2021-2025 load and customer numbers. As a
24 result, revenue deficiency in the tables of this Schedule and Revenue Requirement Workforms
25 produce a cumulative revenue requirement rather than a year-over-year revenue requirement.
26 Hydro Ottawa compiled the analysis in this matter, as the 2020 rates give a stable base upon
27 which to compare each year.

1 **2.1. REVENUE DEFICIENCY/SUFFICIENCY 2016-2020**

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

3

- 4 • 2015 approved rates;
- 5 • 2016-2020 approved load forecast and forecast of customers/connections; and
- 6 • 2016-2020 base revenue requirement, as per the Approved Settlement Agreement
- 7 governing Hydro Ottawa's 2016-2020 rate term, including the mid-term adjustments.¹

8

9 **Table 1 – Approved Revenue Deficiency/Sufficiency for 2016-2020 with Mid-Term**
10 **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
Service Revenue Requirement	\$175,045	\$182,070	\$190,594	\$196,782	\$200,544
Less Revenue Offsets	\$11,697	\$11,563	\$11,719	\$11,799	\$11,895
Per Approved Settlement Agreement					
Adjustment per Pole Attachment Decision ²	\$(225)	\$(225)	\$(282)	\$(282)	\$(282)
Base Revenue Requirement	\$163,573	\$170,733	\$179,157	\$185,264	\$188,931
Transformer Ownership Credit	\$1,125	\$1,114	\$1,109	\$1,106	\$1,105
Revenue Requirement from Rates	\$164,698	\$171,847	\$180,266	\$186,371	\$190,036
Forecasted Load at 2015 Rates	\$159,360	\$158,986	\$159,421	\$159,977	\$160,464
Cumulative Revenue Deficiency (over 2015)	\$(5,338)	\$(12,861)	\$(20,845)	\$(26,394)	\$(29,572)
Yearly Revenue Deficiency over 2015	\$(5,338)	\$(7,523)	\$(7,984)	\$(5,549)	\$(3,179)

11

12 ¹ Ontario Energy Board, *Decision and Order*, EB-2015-0004 (December 22, 2015).

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

1 **2.2. REVENUE DEFICIENCY/SUFFICIENCY 2021-2025**

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

5

- 6 • UPDATED Attachment 6-1-1(A): OEB Workform - 2021 Revenue Requirement Workform
- 7 • UPDATED Attachment 6-1-1(B): OEB Workform - 2022 Revenue Requirement Workform
- 8 • UPDATED Attachment 6-1-1(C): OEB Workform - 2023 Revenue Requirement Workform
- 9 • UPDATED Attachment 6-1-1(D): OEB Workform - 2024 Revenue Requirement Workform
- 10 • UPDATED Attachment 6-1-1(E): OEB Workform - 2025 Revenue Requirement Workform

11

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

1 **Table 2 – AS ORIGINALLY SUBMITTED – Revenue Deficiency/Sufficiency for 2021-2025**

2 (\$'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
Service Revenue Requirement	\$214,886	\$231,939	\$244,045	\$253,405	\$260,053
Less Revenue Offsets	\$10,977	\$11,013	\$11,667	\$12,151	\$12,457
Base Revenue Requirement	\$203,909	\$220,926	\$232,378	\$241,254	\$247,596
Transformer Ownership Credit	\$1,056	\$1,056	\$1,056	\$1,059	\$886
Revenue Requirement from Rates	\$204,965	\$221,982	\$233,434	\$242,312	\$248,483
Forecasted Load at 2020 Rates	\$187,905	\$188,833	\$189,716	\$190,703	\$191,468
Cumulative Revenue Deficiency (over 2020)	\$(17,060)	\$(33,149)	\$(43,719)	\$(51,609)	\$(57,014)
Yearly Revenue Deficiency over 2020³	\$(17,060)	\$(16,089)	\$(10,570)	\$(7,891)	\$(5,405)

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4 ³ Totals may not sum due to rounding.

1 **Table 2 – UPDATED FOR 2019 ACTUALS – Revenue Deficiency/Sufficiency for 2021-2025**

2 (\$'000s)

	2021	2022	2023	2024	2025
Return on Rate Base	\$68,158	\$74,253	\$78,242	\$80,677	\$85,470
Distribution Expenses (not including amortization)	\$93,923	\$96,280	\$98,697	\$101,174	\$103,714
Amortization	\$52,333	\$56,699	\$59,015	\$60,585	\$63,900
Payment in Lieu of Taxes	\$2,224	\$3,881	\$8,604	\$11,533	\$7,590
Service Revenue Requirement	\$216,638	\$231,113	\$244,558	\$253,969	\$260,674
Less Revenue Offsets	\$11,013	\$10,971	\$11,667	\$12,151	\$12,457
Base Revenue Requirement	\$205,624	\$220,142	\$232,891	\$241,817	\$248,217
Transformer Ownership Credit	\$1,056	\$1,056	\$1,056	\$1,059	\$886
Revenue Requirement from Rates	\$206,680	\$221,197	\$233,947	\$242,876	\$249,104
Forecasted Load at 2020 Rates	\$187,888	\$188,816	\$189,699	\$190,686	\$191,453
Cumulative Revenue Deficiency (over 2020)	\$(18,792)	\$(32,381)	\$(44,248)	\$(52,190)	\$(57,651)
Yearly Revenue Deficiency over 2020⁴	\$(18,792)	\$(13,589)	\$(11,867)	\$(7,942)	\$(5,461)

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4 Table 3, as updated below, provides Revenue Deficiency that is calculated by multiplying the
5 previous Test Year's updated rates against the current Test Year's updated load forecast.

6 ⁴ Totals may not sum due to rounding.

1 **Table 3 – AS ORIGINALLY SUBMITTED – Revenue Sufficiency/Deficiency using Prior Test**
2 **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
Yearly Revenue Deficiency	\$(17,060)	\$(15,998)	\$(10,425)	\$(7,637)	\$(5,224)

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4 **Table 3 – UPDATED FOR 2019 ACTUALS – Revenue Sufficiency/Deficiency using Prior**
5 **Test Year's Rates (\$'000s)**

	2021	2022	2023	2024	2025
Total Revenue Requirement from Rates	\$206,680	\$221,197	\$233,947	\$242,876	\$249,104
Forecast Load at Prior Year's Rates	\$187,888	\$207,709	\$222,206	\$235,192	\$243,831
Yearly Revenue Deficiency	\$(18,792)	\$(13,489)	\$(11,741)	\$(7,684)	\$(5,273)

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7 **3. YEAR-OVER-YEAR REVENUE DEFICIENCY/SUFFICIENCY**

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

¹ **Table 4 – AS ORIGINALLY SUBMITTED – 2020-2021 Revenue Deficiency Amounts & Cost Drivers (\$'000s)⁵**

Driver of Deficiency	2020 OEB-Approved ⁶	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)
Service Revenue Requirement	\$200,544	\$214,886	\$14,342		6-1-1(A)
Less Revenue Offsets ⁷	\$11,613	\$10,977	\$(636)	– Changes in other revenue rates	3-2-1
Base Revenue Requirement	\$188,931	\$203,909	\$14,978		6-1-1(A) 8-1-1
Transformer Ownership Credit	\$1,105	\$1,056	\$(49)	– Changes in load forecast	3-1-1
Revenue Requirement from Rates	\$190,036	\$204,965	\$14,929		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
Cumulative Revenue Deficiency (over 2020)		\$(17,060)			

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⁴ ⁵ Totals may not sum due to rounding.

⁵ ⁶ This figure includes mid-term adjustments.

⁶ ⁷ The amount for 2020 includes adjustments as per the OEB's Pole Attachment Decision (see footnote 2 above).

1 **Table 4 – UPDATED FOR 2019 ACTUALS – 2020-2021 Revenue Deficiency Amounts &**
2 **Cost Drivers (\$'000s)⁸**

Driver of Deficiency	2020 OEB- Approved ⁹	2021 Test Year	+/-	Cost Drivers	Exhibit Reference
Return on Rate Base	\$56,211	\$68,158	\$11,947	<ul style="list-style-type: none"> \$173.8M increase in net fixed assets (as originally submitted) \$171.9M increase in net fixed assets (accounting for 2019 actuals) Previously excluded items added back to rate base 	UPDATED 2-1-1
Distribution Expenses (not including amortization)	\$89,007	\$93,923	\$4,916	<ul style="list-style-type: none"> Increases in compensation Inflationary increases Increase in distribution operations expenses 	UPDATED 1-1-8 (Table 5) UPDATED 4-1-3 UPDATED 4-1-4
Amortization	\$49,384	\$ 52,333	\$2,949	<ul style="list-style-type: none"> Increase in sustainment additions 	UPDATED 2-2-1 2-2-1(E)-(F) 2-4-3(E)
Payment in Lieu of Taxes	\$5,943	\$ 2,224	\$(3,719)	<ul style="list-style-type: none"> Higher CCA deduction caused by large amount of fixed asset additions (as originally submitted) Higher accounting depreciation add back caused by large amount of fixed asset additions (accounting for 2019 actuals) 	UPDATED 4-4-1 4-4-1(D)
Service Revenue Requirement	\$200,544	\$ 216,638	\$ 16,094		UPDATED 6-1-1(A)
Less Revenue Offsets ¹⁰	\$11,613	\$ 11,013	\$(600)	<ul style="list-style-type: none"> Changes in other revenue rates 	UPDATED 3-2-1
Base Revenue Requirement	\$188,931	\$ 205,624	\$16,693		UPDATED 6-1-1(A) UPDATED 8-1-1
Transformer Ownership Credit	\$1,105	\$1,056	\$(49)	<ul style="list-style-type: none"> Changes in load forecast 	UPDATED 3-1-1
Revenue Requirement from Rates	\$190,036	\$206,680	\$16,644		UPDATED 6-1-1(A)
Forecasted Load at 2015/2020 Rates	\$160,464	\$187,888	\$27,424	<ul style="list-style-type: none"> Changes in load forecast Increase in distribution rates Impact of revenue requirement item in Regulatory Accounts 	UPDATED 3-1-1 UPDATED 8-12-1 UPDATED 9-1-3
Cumulative Revenue Deficiency (over 2020)		\$(18,792)			

3 ⁸ Totals may not sum due to rounding.

4 ⁹ This figure includes mid-term adjustments.

5 ¹⁰ The amount for 2020 includes adjustments as per the OEB's Pole Attachment Decision (see footnote 2 above).

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

1 **Table 5 – AS ORIGINALLY SUBMITTED – 2021-2025 Revenue Deficiency Amounts & Drivers (\$'000s)¹**

		Bridge ²	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		

² ¹ Totals may not sum due to rounding.

³ ² Figures in this column include revenue requirement of New Facilities and Connection Cost Recovery Agreement Payments currently held in Regulatory

⁴ Accounts.

		Bridge ³ (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)		

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

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Table 5 – AS REVISED – 2021-2025 Revenue Deficiency Amounts & Drivers (\$'000s)⁴

		Bridge ⁵	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		
Less Revenue Offsets	\$	\$10,767	\$10,977	\$11,013	\$11,667	\$12,151	\$12,457	Inflationary increases and changes to other revenue rates	UPDATED 3-2-1
	+/-		\$210	\$36	\$654	\$484	\$305		

² ⁴ Totals may not sum due to rounding.

³ ⁵ Figures in this column include revenue requirement of New Facilities and Connection Cost Recovery Agreement Payments currently held in Regulatory

⁴ Accounts.

		Bridge ⁶ (Cont'd)	Test (Cont'd)					Drivers (Cont'd)	Reference (Cont'd)
		2020	2021	2022	2023	2024	2025		
Base Revenue Requirement	\$	\$200,607	\$203,909	\$220,926	\$232,378	\$241,254	\$247,596		UPDATED 6-1-1(A) 8-1-1
	+/-		\$3,302	\$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	\$	\$201,738	\$204,965	\$221,982	\$233,434	\$242,312	\$248,483		
	+/-		\$3,227	\$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)		

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² ⁶ Figures in this column include revenue requirement of New Facilities and Connection Cost Recovery Agreement Payments currently held in Regulatory
³ Accounts.

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Table 5 – UPDATED FOR 2019 ACTUALS – 2021-2025 Revenue Deficiency Amounts & Drivers (\$'000s)⁷

		Bridge ⁸	Test					Drivers	Reference
		2020	2021	2022	2023	2024	2025		
Return on Rate Base	\$	\$67,036	\$68,158	\$74,253	\$78,242	\$80,677	\$85,470	Annual increases in net fixed assets and working capital	UPDATED 2-1-1
	+/-		\$1,122	\$6,095	\$3,989	\$2,435	\$4,793		
Distribution Expenses (not including amortization)	\$	\$91,990	\$93,923	\$96,280	\$98,697	\$101,174	\$103,714	Annual inflationary increases and increases in compensation	UPDATED 1-1-8 (Table 6) UPDATED 4-1-3 UPDATED 4-1-4
	+/-		\$1,933	\$2,357	\$2,417	\$2,477	\$2,539		
Amortization	\$	\$50,704	\$52,333	\$56,699	\$59,015	\$60,585	\$63,900	Annual increases in sustainment additions	UPDATED 2-2-1 2-2-1(E)-(J) 2-4-3(E) 6-6-1 (Table 3)
	+/-		\$1,629	\$4,366	\$2,317	\$1,570	\$3,315		
Payment in Lieu of Taxes	\$	\$1,394	\$2,224	\$3,881	\$8,604	\$11,533	\$7,590	2021 & 2025 (as originally submitted) - Decrease due to increase in accelerated CCA, large amount of fixed assets placed into service 2021 (updated for 2019 actuals) - Increase due to higher income and depreciation add back driven by large amount of fixed assets placed into service 2022-2024 - Increases due to higher accounting depreciation and lower accelerated CCA 2025 (updated for 2019 actuals) - Decrease due to increase in accelerated CCA due to a large amount of fixed assets placed into service	UPDATED 4-4-1 4-4-1(D)-(H)
	+/-		\$830	\$1,656	\$4,723	\$2,929	\$(3,943)		

² ⁷ Totals may not sum due to rounding.

³ ⁸ Figures in this column include revenue requirement of New Facilities and Connection Cost Recovery Agreement Payments currently held in Regulatory

⁴ Accounts.

		Bridge ⁹ (Cont'd)	Test (Cont'd)					Drivers (Cont'd)	Reference (Cont'd)
		2020	2021	2022	2023	2024	2025		
Service Revenue Requirement	\$	\$211,124	\$216,638	\$231,113	\$244,558	\$253,969	\$260,674		UPDATED 6-1-1(A)-(E)
	+/-		\$5,514	\$14,475	\$13,446	\$9,411	\$6,705		
Less Revenue Offsets	\$	\$10,773	\$11,013	\$10,971	\$11,667	\$12,151	\$12,457	Inflationary increases and changes to other revenue rates	UPDATED 3-2-1
	+/-		\$240	\$(43)	\$696	\$484	\$305		
Base Revenue Requirement	\$	\$200,351	\$205,624	\$220,142	\$232,891	\$241,817	\$248,217		UPDATED 6-1-1(A) UPDATED 8-1-1
	+/-		\$5,273	\$14,517	\$12,749	\$8,926	\$6,400		
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	UPDATED 3-1-1 UPDATED 8-1-1
	+/-		\$(75)	\$(0)	\$0	\$2	\$(172)		
Revenue Requirement from Rates	\$	\$201,482	\$206,680	\$221,197	\$233,947	\$242,876	\$249,104		
	+/-		\$5,198	\$14,517	\$12,750	\$8,929	\$6,228		
Forecasted Load at 2015/2020 Rates	\$	\$160,464	\$187,888	\$188,816	\$189,699	\$190,686	\$191,453	Annual changes in load forecast Impact of revenue requirement item in Regulatory Accounts added to rate base	UPDATED 3-1-1 UPDATED 9-1-3
	+/-		\$27,424	\$928	\$883	\$987	\$767		
Cumulative Revenue Deficiency (over 2020)	\$		\$(18,792)	\$(32,381)	\$(44,248)	\$(52,190)	\$(57,651)		
	+/-			\$(13,589)	\$(11,867)	\$(7,942)	\$(5,461)		

1

⁹ 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	RegulatoryAffairs@HydroOttawa.com
Test Year	2021
Bridge Year	
Last Rebasing Year	2016

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

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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 ⁽¹⁾

	Initial Application	(2)	Adjustments	Application Update	(6)	Adjustments	Per Board Decision
1 Rate Base							
Gross Fixed Assets (average)	\$1,444,394,960		\$4,004,564	\$1,448,399,524			\$1,448,399,524
Accumulated Depreciation (average)	(\$309,700,143)	(5)	\$7,166,338	(\$302,533,805)			(\$302,533,805)
Allowance for Working Capital:							
Controllable Expenses	\$93,922,657		\$ -	\$ 93,922,657			\$93,922,657
Cost of Power	\$1,025,612,762		\$12,071,147	\$1,037,683,909			\$1,037,683,909
Working Capital Rate (%)	7.50%	(9)	\$0	7.50%	(9)		(9)
2 Utility Income							
Operating Revenues:							
Distribution Revenue at Current Rates	\$186,849,349	(10)	(\$17,019)	\$186,832,330			
Distribution Revenue at Proposed Rates	\$203,908,920		\$1,715,319	\$205,624,239			
Other Revenue:							
Specific Service Charges	\$5,118,168		\$0	\$5,118,168			
Late Payment Charges	\$1,000,000		\$0	\$1,000,000			
Other Distribution Revenue	\$2,789,981		\$0	\$2,789,981			
Other Income and Deductions	\$2,069,167		\$36,061	\$2,105,228			
Total Revenue Offsets	\$10,977,316	(7)	\$36,061	\$11,013,377			
Operating Expenses:							
OM+A Expenses	\$90,790,555		(\$117,336)	\$ 90,790,555			\$90,790,555
Depreciation/Amortization	\$52,450,059			\$ 52,332,723			\$52,332,723
Property taxes	\$3,132,102			\$ 3,132,102			\$3,132,102
Other expenses							
3 Taxes/PILs							
Taxable Income:							
	(\$40,125,534)	(3)	\$0	(\$40,125,534)			
Adjustments required to arrive at taxable income							
Utility Income Taxes and Rates:							
Income taxes (not grossed up)	\$752,736		\$881,952	\$1,634,688			
Income taxes (grossed up)	\$1,024,131			\$2,224,065			
Federal tax (%)	15.00%		\$0	15.00%			
Provincial tax (%)	11.50%		\$0	11.50%			
Income Tax Credits	(\$85,000)		\$0	(\$85,000)			
4 Capitalization/Cost of Capital							
Capital Structure:							
Long-term debt Capitalization Ratio (%)	56.0%		\$0	56.0%			
Short-term debt Capitalization Ratio (%)	4.0%	(8)	\$0	4.0%	(8)		(8)
Common Equity Capitalization Ratio (%)	40.0%		\$0	40.0%			
Preferred Shares Capitalization Ratio (%)							
	100.0%			100.0%			
Cost of Capital							
Long-term debt Cost Rate (%)	3.35%		\$0	3.35%			
Short-term debt Cost Rate (%)	2.75%		\$0	2.75%			
Common Equity Cost Rate (%)	8.88%		\$0	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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Rate Base and Working Capital

Line No.	Particulars	Initial Application	Adjustments	Application Update	Adjustments	Per Board Decision
1	Gross Fixed Assets (average) ⁽²⁾	\$1,444,394,960	\$4,004,564	\$1,448,399,524	\$ -	\$1,448,399,524
2	Accumulated Depreciation (average) ⁽²⁾	<u>(\$309,700,143)</u>	\$7,166,338	<u>(\$302,533,805)</u>	\$ -	<u>(\$302,533,805)</u>
3	Net Fixed Assets (average) ⁽²⁾	\$1,134,694,817	\$11,170,902	\$1,145,865,719	\$ -	\$1,145,865,719
4	Allowance for Working Capital ⁽¹⁾	\$83,965,156	\$905,336	\$84,870,492	<u>(\$84,870,492)</u>	\$ -
5	Total Rate Base	<u>\$1,218,659,973</u>	<u>\$12,076,238</u>	<u>\$1,230,736,211</u>	<u>(\$84,870,492)</u>	<u>\$1,145,865,719</u>

(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	\$12,071,147	\$1,037,683,909	\$ -	\$1,037,683,909
8	Working Capital Base	\$1,119,535,420	\$12,071,147	\$1,131,606,567	\$ -	\$1,131,606,567
9	Working Capital Rate % ⁽¹⁾	7.50%	0.00%	7.50%	-7.50%	0.00%
10	Working Capital Allowance	<u>\$83,965,156</u>	<u>\$905,336</u>	<u>\$84,870,492</u>	<u>(\$84,870,492)</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.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Utility Income

Line No.	Particulars	Initial Application	Adjustments	Application Update	Adjustments	Per Board Decision
	Operating Revenues:					
1	Distribution Revenue (at Proposed Rates)	\$203,908,920	\$1,715,319	\$205,624,239	\$ -	\$205,624,239
2	Other Revenue ⁽¹⁾	\$10,977,316	\$36,061	\$11,013,377	\$ -	\$11,013,377
3	Total Operating Revenues	\$214,886,236	\$1,751,380	\$216,637,616	\$ -	\$216,637,616
	Operating Expenses:					
4	OM+A Expenses	\$90,790,555	\$ -	\$90,790,555	\$ -	\$90,790,555
5	Depreciation/Amortization	\$52,450,059	(\$117,336)	\$52,332,723	\$ -	\$52,332,723
6	Property taxes	\$3,132,102	\$ -	\$3,132,102	\$ -	\$3,132,102
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$146,372,716	(\$117,336)	\$146,255,380	\$ -	\$146,255,380
10	Deemed Interest Expense	\$24,202,587	\$239,834	\$24,442,421	(\$1,685,528)	\$22,756,893
11	Total Expenses (lines 9 to 10)	\$170,575,303	\$122,498	\$170,697,801	(\$1,685,528)	\$169,012,273
12	Utility income before income taxes	\$44,310,933	\$1,628,882	\$45,939,815	\$1,685,528	\$47,625,343
13	Income taxes (grossed-up)	\$1,024,131	\$1,199,935	\$2,224,065	\$ -	\$2,224,065
14	Utility net income	\$43,286,803	\$428,947	\$43,715,750	\$1,685,528	\$45,401,278

Notes

Other Revenues / Revenue Offsets

⁽¹⁾	Specific Service Charges	\$5,118,168	\$ -	\$5,118,168		\$5,118,168
	Late Payment Charges	\$1,000,000	\$ -	\$1,000,000		\$1,000,000
	Other Distribution Revenue	\$2,789,981	\$ -	\$2,789,981		\$2,789,981
	Other Income and Deductions	\$2,069,167	\$36,061	\$2,105,228		\$2,105,228
	Total Revenue Offsets	\$10,977,316	\$36,061	\$11,013,377	\$ -	\$11,013,377



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Taxes/PILs

Line No.	Particulars	Application	Application Update	Per Board Decision
<u>Determination of Taxable Income</u>				
1	Utility net income before taxes	\$43,286,802	\$43,715,750	\$40,701,150
2	Adjustments required to arrive at taxable utility income	(\$40,125,534)	(\$40,125,534)	(\$40,125,534)
3	Taxable income	<u>\$3,161,268</u>	<u>\$3,590,216</u>	<u>\$575,616</u>
<u>Calculation of Utility Income Taxes</u>				
4	Income taxes	<u>\$752,736</u>	<u>\$1,634,688</u>	<u>\$1,634,688</u>
6	Total taxes	<u>\$752,736</u>	<u>\$1,634,688</u>	<u>\$1,634,688</u>
7	Gross-up of Income Taxes	<u>\$271,395</u>	<u>\$589,377</u>	<u>\$589,377</u>
8	Grossed-up Income Taxes	<u>\$1,024,131</u>	<u>\$2,224,065</u>	<u>\$2,224,065</u>
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$1,024,131</u>	<u>\$2,224,065</u>	<u>\$2,224,065</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%	\$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
Application Update					
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	56.00%	\$689,212,278	3.35%	\$23,088,611
2	Short-term Debt	4.00%	\$49,229,448	2.75%	\$1,353,810
3	Total Debt	60.00%	\$738,441,727	3.31%	\$24,442,421
Equity					
4	Common Equity	40.00%	\$492,294,485	8.88%	\$43,715,750
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$492,294,485	8.88%	\$43,715,750
7	Total	100.00%	\$1,230,736,211	5.54%	\$68,158,171
Per Board Decision					
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	56.00%	\$641,684,803	3.35%	\$21,496,441
9	Short-term Debt	4.00%	\$45,834,629	2.75%	\$1,260,452
10	Total Debt	60.00%	\$687,519,431	3.31%	\$22,756,893
Equity					
11	Common Equity	40.00%	\$458,346,288	8.88%	\$40,701,150
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	40.00%	\$458,346,288	8.88%	\$40,701,150
14	Total	100.00%	\$1,145,865,719	5.54%	\$63,458,044

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Deficiency/Sufficiency

Line No.	Particulars	Initial Application		Application Update		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		\$22,425,639		\$16,030,907
2	Distribution Revenue	\$186,849,349	\$182,207,641	\$186,832,330	\$183,198,601	\$186,832,330	\$189,593,333
3	Other Operating Revenue	\$10,977,316	\$10,977,316	\$11,013,377	\$11,013,377	\$11,013,377	\$11,013,377
	Offsets - net						
4	Total Revenue	\$197,826,665	\$214,886,236	\$197,845,707	\$216,637,616	\$197,845,707	\$216,637,616
5	Operating Expenses	\$146,372,716	\$146,372,716	\$146,255,380	\$146,255,380	\$146,255,380	\$146,255,380
6	Deemed Interest Expense	\$24,202,587	\$24,202,587	\$24,442,421	\$24,442,421	\$22,756,893	\$22,756,893
8	Total Cost and Expenses	\$170,575,303	\$170,575,303	\$170,697,801	\$170,697,801	\$169,012,273	\$169,012,273
9	Utility Income Before Income Taxes	\$27,251,362	\$44,310,933	\$27,147,906	\$45,939,815	\$28,833,434	\$47,625,343
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$40,125,534)	(\$40,125,534)	(\$40,125,534)	(\$40,125,534)	(\$40,125,534)	(\$40,125,534)
11	Taxable Income	(\$12,874,172)	\$4,185,399	(\$12,977,628)	\$5,814,281	(\$11,292,100)	\$7,499,809
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%	26.50%	26.50%
13		\$ -	\$1,109,131	\$ -	\$1,540,785	\$ -	\$1,987,449
14	Income Tax on Taxable Income	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)
15	Utility Net Income	\$27,336,362	\$43,286,803	\$27,232,906	\$43,715,750	\$28,918,434	\$45,401,278
16	Utility Rate Base	\$1,218,659,973	\$1,218,659,973	\$1,230,736,211	\$1,230,736,211	\$1,145,865,719	\$1,145,865,719
17	Deemed Equity Portion of Rate Base	\$487,463,989	\$487,463,989	\$492,294,485	\$492,294,485	\$458,346,288	\$458,346,288
18	Income/(Equity Portion of Rate Base)	5.61%	8.88%	5.53%	8.88%	6.31%	9.91%
19	Target Return - Equity on Rate Base	8.88%	8.88%	8.88%	8.88%	8.88%	8.88%
20	Deficiency/Sufficiency in Return on Equity	-3.27%	0.00%	-3.35%	0.00%	-2.57%	1.03%
21	Indicated Rate of Return	4.23%	5.54%	4.20%	5.54%	4.51%	5.95%
22	Requested Rate of Return on Rate Base	5.54%	5.54%	5.54%	5.54%	5.54%	5.54%
23	Deficiency/Sufficiency in Rate of Return	-1.31%	0.00%	-1.34%	0.00%	-1.03%	0.41%
24	Target Return on Equity	\$43,286,802	\$43,286,802	\$43,715,750	\$43,715,750	\$40,701,150	\$40,701,150
25	Revenue Deficiency/(Sufficiency)	\$15,950,440	\$1	\$16,482,844	(\$0)	\$11,782,717	\$4,700,128
26	Gross Revenue Deficiency/(Sufficiency)	\$21,701,279 ⁽¹⁾		\$22,425,639 ⁽¹⁾		\$16,030,907 ⁽¹⁾	

Notes:

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Requirement

Line No.	Particulars	Application	Application Update	Per Board Decision
1	OM&A Expenses	\$90,790,555	\$90,790,555	\$90,790,555
2	Amortization/Depreciation	\$52,450,059	\$52,332,723	\$52,332,723
3	Property Taxes	\$3,132,102	\$3,132,102	\$3,132,102
5	Income Taxes (Grossed up)	\$1,024,131	\$2,224,065	\$2,224,065
6	Other Expenses	\$ -		
7	Return			
	Deemed Interest Expense	\$24,202,587	\$24,442,421	\$22,756,893
	Return on Deemed Equity	\$43,286,802	\$43,715,750	\$40,701,150
8	Service Revenue Requirement (before Revenues)	<u>\$214,886,236</u>	<u>\$216,637,617</u>	<u>\$211,937,489</u>
9	Revenue Offsets	\$10,977,316	\$11,013,377	\$ -
10	Base Revenue Requirement (excluding Tranformer Owership Allowance credit adjustment)	<u>\$203,908,920</u>	<u>\$205,624,240</u>	<u>\$211,937,489</u>
11	Distribution revenue	\$203,908,920	\$205,624,239	\$205,624,239
12	Other revenue	\$10,977,316	\$11,013,377	\$11,013,377
13	Total revenue	<u>\$214,886,236</u>	<u>\$216,637,616</u>	<u>\$216,637,616</u>
14	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>\$1</u> ⁽¹⁾	<u>(\$0)</u> ⁽¹⁾	<u>\$4,700,128</u> ⁽¹⁾

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application	Application Update	Δ% ⁽²⁾	Per Board Decision	Δ% ⁽²⁾
Service Revenue Requirement	\$214,886,236	\$216,637,617	\$0	\$211,937,489	(\$1)
Grossed-Up Revenue					
Deficiency/(Sufficiency)	\$21,701,279	\$22,425,639	\$0	\$16,030,907	(\$1)
Base Revenue Requirement (to be recovered from Distribution Rates)	\$203,908,920	\$205,624,240	\$0	\$211,937,489	(\$1)
Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement	\$17,059,571	\$18,791,909	\$0	\$ -	(\$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:

Application Update

Customer Class		Initial Application			Application Update			Per Board Decision		
Input the name of each customer class.		Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	316,346	2,253,081,000		316,346	2,252,937,000				
2	GS < 50 kW	25,391	700,163,000		25,391	699,871,000				
3	GS > 50 to 1,499 kW	3,120	2,819,476,000	6,816,104	3,120	2,817,707,000	6,815,129			
4	GS > 1,500 to 4,999 kW	68	682,977,000	1,518,349	68	682,919,000	1,517,165			
5	Large Use	11	574,292,000	1,052,899	11	574,292,000	1,052,901			
6	Street Lighting	62,806	22,107,000	61,588	62,806	22,107,000	61,590			
7	Sentinel Lighting	55	47,000	132	55	47,000	132			
8	Unmetered Scattered Load	3,321	13,602,000		3,321	13,602,000				
9	Standby Power	3		7,440	3		7,440			
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
Total			7,065,745,000	9,456,512		7,063,482,000	9,454,357		-	-

Notes:

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Cost Allocation and Rate Design

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

Stage in Application Process: *Application Update*

A) Allocated Costs

Name of Customer Class ⁽³⁾	Costs Allocated from Previous Study ⁽¹⁾	%	Allocated Class Revenue Requirement ⁽¹⁾	%
From Sheet 10. Load Forecast				
(7A)				
1 Residential	\$ 107,281,788	53.50%	\$ 119,486,480	55.16%
2 GS < 50 kW	\$ 20,646,221	10.30%	\$ 21,637,911	9.99%
3 GS > 50 to 1,499 kW	\$ 48,750,762	24.31%	\$ 53,847,846	24.86%
4 GS > 1,500 to 4,999 kW	\$ 13,365,246	6.66%	\$ 11,354,589	5.24%
5 Large Use	\$ 8,063,832	4.02%	\$ 8,754,647	4.04%
6 Street Lighting	\$ 1,811,439	0.90%	\$ 982,528	0.45%
7 Sentinel Lighting	\$ 6,568	0.00%	\$ 9,866	0.00%
8 Unmetered Scattered Load	\$ 547,549	0.27%	\$ 550,487	0.25%
9 Standby Power	\$ 70,655	0.04%	\$ 13,261	0.01%
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 200,544,060	100.00%	\$ 216,637,615	100.00%
Service Revenue Requirement (from Sheet 9)			\$ 216,637,616.62	

- (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	\$ 116,105,934	\$ 116,124,290	\$ 8,081,006
2 GS < 50 kW	\$ 23,383,424	\$ 25,735,368	\$ 24,966,258	\$ 985,100
3 GS > 50 to 1,499 kW	\$ 40,375,423	\$ 44,436,450	\$ 44,681,903	\$ 1,394,784
4 GS > 1,500 to 4,999 kW	\$ 9,786,044	\$ 10,770,340	\$ 10,829,246	\$ 272,470
5 Large Use	\$ 6,161,456	\$ 6,781,186	\$ 7,289,429	\$ 191,721
6 Street Lighting	\$ 1,076,408	\$ 1,184,675	\$ 1,126,911	\$ 51,772
7 Sentinel Lighting	\$ 4,052	\$ 4,460	\$ 5,002	\$ 881
8 Unmetered Scattered Load	\$ 532,015	\$ 585,526	\$ 580,904	\$ 35,208
9 Standby Power	\$ 18,443	\$ 20,298	\$ 20,298	\$ 434
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 186,832,330	\$ 205,624,238	\$ 205,624,240	\$ 11,013,377

- (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**

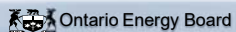
Name of Customer Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year: 2016 %	(7C + 7E) / (7A) %	(7D + 7E) / (7A) %	%
1 Residential	104.29%	103.93%	103.95%	85 - 115
2 GS < 50 kW	118.23%	123.49%	119.93%	80 - 120
3 GS > 50 to 1,499 kW	86.34%	85.11%	85.57%	80 - 120
4 GS > 1,500 to 4,999 kW	98.24%	97.25%	97.77%	80 - 120
5 Large Use	85.36%	79.65%	85.45%	85 - 115
6 Street Lighting	80.00%	125.84%	119.96%	80 - 120
7 Sentinel Lighting	76.00%	54.14%	59.63%	80 - 120
8 Unmetered Scattered Load	118.72%	112.76%	111.92%	80 - 120
9 Standby Power	21.03%	156.34%	156.34%	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 ⁽¹¹⁾

Name of Customer Class	Proposed Revenue-to-Cost Ratio			Policy Range
	Test Year 2021	2022	Price Cap IR Period 2023	
1 Residential	103.95%	103.95%	103.95%	85 - 115
2 GS < 50 kW	119.93%	119.93%	119.93%	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	97.77%	97.77%	97.77%	80 - 120
5 Large Use	85.45%	85.45%	85.45%	85 - 115
6 Street Lighting	119.96%	119.96%	119.96%	80 - 120
7 Sentinel Lighting	59.63%	59.63%	59.63%	80 - 120
8 Unmetered Scattered Load	111.92%	111.92%	111.92%	80 - 120
9 Standby Power	156.34%	156.34%	156.34%	80 - 120
10				
11				
12				
13				
14				
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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'.



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:		Application Update			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 ²		Transformer Ownership Allowance ¹ (\$)		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	Revenues less Transformer Ownership Allowance			
From sheet 10. Load Forecast																					
1 Residential	kWh	316,346	2,252,937,000	-	\$ 116,124,290	\$ 116,124,290	\$ -	100.00%	0.00%			\$30.59	2	\$0.0000 /kWh	4	#####	\$ -	#####			
2 GS < 50 kW	kWh	25,391	699,871,000	-	\$ 24,966,258	\$ 6,279,014	\$ 18,687,244	25.15%	74.85%			\$20.61		\$0.0267 /kWh		\$ 6,279,702.12	\$18,686,555.7000	\$24,966,257.82			
3 GS > 50 to 1,499 kW	kW	3,120	2,817,707,000	6,815,129	\$ 44,661,903	\$ 7,488,017	\$ 37,193,886	16.76%	83.24%	\$ 343,146		\$200.00		\$5.5079 /kW		\$ 7,488,000.00	\$37,537,049.0191	\$44,661,902.83			
4 GS > 1,500 to 4,999 kW	kW	68	682,919,000	1,517,165	\$ 10,829,246	\$ 3,422,248	\$ 7,406,999	31.60%	68.40%	\$ 396,994		\$4,193.93		\$5.1438 /kW		\$ 3,422,246.88	\$ 7,803,993.3270	\$10,829,246.46			
5 Large Use	kW	11	574,292,000	1,052,901	\$ 7,289,429	\$ 2,010,534	\$ 5,278,895	27.58%	72.42%	\$ 315,695		\$15,231.32		\$5.3135 /kW		\$ 2,010,534.24	\$ 5,594,589.4635	\$ 7,289,429.20			
6 Street Lighting	kW	62,806	22,107,000	61,590	\$ 1,126,911	\$ 715,988	\$ 410,922	63.54%	36.46%			\$0.95		\$6.6719 /kW		\$ 715,988.40	\$ 410,922.3210	\$ 1,126,910.72			
7 Sentinel Lighting	kW	55	47,000	132	\$ 5,002	\$ 2,581	\$ 2,421	51.60%	48.40%			\$3.91		\$18.3405 /kW		\$ 2,580.60	\$ 2,420,946.00	\$ 5,001.55			
8 Unmetered Scattered Load	kWh	3,321	13,602,000	-	\$ 580,904	\$ 223,183	\$ 357,721	38.42%	61.58%			\$5.60		\$0.0263 /kWh		\$ 223,171.20	\$ 357,732.6000	\$ 580,903.80			
9 Standby Power	kW	3	-	7,440	\$ 20,298	\$ 5,750	\$ 14,547	28.33%	71.67%			\$159.73		\$1.9553 /kW		\$ 5,750.28	\$ 14,547.4320	\$ 20,297.71			
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -			
Total Transformer Ownership Allowance										\$ 1,055,834											
												Rates recover revenue requirement		Total Distribution Revenues							
														Base Revenue Requirement							
														Difference							
														\$ 0.15							
														% Difference							
														0.000%							

Notes:

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

Notes:

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

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



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.

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

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

Summary of Proposed Changes

Reference ⁽¹⁾	Item / Description ⁽²⁾	Cost of Capital		Rate Base and Capital Expenditures			Operating Expenses			Revenue Requirement			
		Regulated Return on Capital	Regulated Rate of Return	Rate Base	Working Capital	Working Capital Allowance (\$)	Amortization / Depreciation	Taxes/PILs	OM&A	Service Revenue Requirement	Other Revenues	Base Revenue Requirement	Grossed up Revenue Deficiency / Sufficiency
	Original Application	\$ 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
1	Updated Application for 2019 Actuals	\$ 68,158,171	5.54%	\$1,230,736,211	\$1,131,606,567	\$ 84,870,492	\$ 52,332,723	\$ 2,224,065	\$ 90,790,555	\$ 216,637,617	\$ 11,013,377	\$ 205,624,240	\$ 22,425,639
	Change	\$ 668,782	0.00%	\$ 12,076,238	\$ 12,071,147	\$ 905,336	\$ 117,336	\$ 1,199,935	\$ -	\$ 1,751,381	\$ 36,061	\$ 1,715,320	\$ 724,360



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	RegulatoryAffairs@HydroOttawa.com
Test Year	2022
Bridge Year	
Last Rebasing Year	2016

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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[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 ⁽¹⁾

	Initial Application	(2)	Adjustments	Application Update	(6)	Adjustments	Per Board Decision
1 Rate Base							
Gross Fixed Assets (average)	\$1,576,350,307		\$3,579,542	\$1,579,929,849			\$1,579,929,849
Accumulated Depreciation (average)	(\$361,938,366)	(5)	\$7,305,832	(\$354,632,534)			(\$354,632,534)
Allowance for Working Capital:							
Controllable Expenses	\$96,280,116			\$96,280,116			\$96,280,116
Cost of Power	\$1,097,187,257		\$12,011,305	\$1,109,198,562			\$1,109,198,562
Working Capital Rate (%)	7.50%	(9)	\$0	7.50%	(9)		(9)
2 Utility Income							
Operating Revenues:							
Distribution Revenue at Current Rates	\$187,777,386		(\$16,664)	\$187,760,722			
Distribution Revenue at Proposed Rates	\$220,926,272		(\$784,546)	\$220,141,726			
Other Revenue:							
Specific Service Charges	\$5,394,162		(\$0)	\$5,394,162			
Late Payment Charges	\$1,000,000		\$0	\$1,000,000			
Other Distribution Revenue	\$2,885,203		(\$0)	\$2,885,203			
Other Income and Deductions	\$1,733,539		(\$42,119)	\$1,691,420			
Total Revenue Offsets	\$11,012,904	(7)	(\$42,119)	\$10,970,785			
Operating Expenses:							
OM+A Expenses	\$93,069,398			\$93,069,398			\$93,069,398
Depreciation/Amortization	\$56,860,206		(\$161,653)	\$56,698,553			\$56,698,553
Property taxes	\$3,210,718			\$3,210,718			\$3,210,718
Other expenses							
3 Taxes/PILs							
Taxable Income:							
	(\$32,846,126)	(3)	\$0	(\$32,846,126)			
Adjustments required to arrive at taxable income							
Utility Income Taxes and Rates:							
Income taxes (not grossed up)	\$3,829,873		(\$977,682)	\$2,852,191			
Income taxes (grossed up)	\$5,210,712			\$3,880,532			
Federal tax (%)	15.00%		\$0	15.00%			
Provincial tax (%)	11.50%		\$0	11.50%			
Income Tax Credits	(\$85,000)		\$0	(\$85,000)			
4 Capitalization/Cost of Capital							
Capital Structure:							
Long-term debt Capitalization Ratio (%)	56.0%		\$0	56.0%			
Short-term debt Capitalization Ratio (%)	4.0%	(8)	\$0	4.0%	(8)		(8)
Common Equity Capitalization Ratio (%)	40.0%		\$0	40.0%			
Preferred Shares Capitalization Ratio (%)							
	100.0%			100.0%			
Cost of Capital							
Long-term debt Cost Rate (%)	3.36%		\$0	3.36%			
Short-term debt Cost Rate (%)	2.75%		\$0	2.75%			
Common Equity Cost Rate (%)	9.13%		\$0	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

Line No.	Particulars	Initial Application	Adjustments	Application Update	Adjustments	Per Board Decision
1	Gross Fixed Assets (average) ⁽²⁾	\$1,576,350,307	\$3,579,542	\$1,579,929,849	\$ -	\$1,579,929,849
2	Accumulated Depreciation (average) ⁽²⁾	<u>(\$361,938,366)</u>	<u>\$7,305,832</u>	<u>(\$354,632,534)</u>	<u>\$ -</u>	<u>(\$354,632,534)</u>
3	Net Fixed Assets (average) ⁽²⁾	\$1,214,411,941	\$10,885,374	\$1,225,297,315	\$ -	\$1,225,297,315
4	Allowance for Working Capital ⁽¹⁾	\$89,510,053	\$900,848	\$90,410,901	<u>(\$90,410,901)</u>	\$ -
5	Total Rate Base	<u>\$1,303,921,994</u>	<u>\$11,786,222</u>	<u>\$1,315,708,216</u>	<u>(\$90,410,901)</u>	<u>\$1,225,297,315</u>

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$96,280,116	\$ -	\$96,280,116	\$ -	\$96,280,116
7	Cost of Power	<u>\$1,097,187,257</u>	<u>\$12,011,305</u>	<u>\$1,109,198,562</u>	<u>\$ -</u>	<u>\$1,109,198,562</u>
8	Working Capital Base	\$1,193,467,373	\$12,011,305	\$1,205,478,677	\$ -	\$1,205,478,677
9	Working Capital Rate % ⁽¹⁾	7.50%	0.00%	7.50%	-7.50%	0.00%
10	Working Capital Allowance	<u>\$89,510,053</u>	<u>\$900,848</u>	<u>\$90,410,901</u>	<u>(\$90,410,901)</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.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Utility Income

Line No.	Particulars	Initial Application	Adjustments	Application Update	Adjustments	Per Board Decision
	Operating Revenues:					
1	Distribution Revenue (at Proposed Rates)	\$220,926,272	(\$784,546)	\$220,141,726	\$ -	\$220,141,726
2	Other Revenue ⁽¹⁾	\$11,012,904	(\$42,119)	\$10,970,785	\$ -	\$10,970,785
3	Total Operating Revenues	\$231,939,176	(\$826,666)	\$231,112,510	\$ -	\$231,112,510
	Operating Expenses:					
4	OM+A Expenses	\$93,069,398	\$ -	\$93,069,398	\$ -	\$93,069,398
5	Depreciation/Amortization	\$56,860,206	(\$161,653)	\$56,698,553	\$ -	\$56,698,553
6	Property taxes	\$3,210,718	\$ -	\$3,210,718	\$ -	\$3,210,718
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$153,140,322	(\$161,653)	\$152,978,669	\$ -	\$152,978,669
10	Deemed Interest Expense	\$25,968,910	\$234,734	\$26,203,645	(\$1,800,624)	\$24,403,021
11	Total Expenses (lines 9 to 10)	\$179,109,232	\$73,082	\$179,182,314	(\$1,800,624)	\$177,381,691
12	Utility income before income taxes	\$52,829,944	(\$899,748)	\$51,930,196	\$1,800,624	\$53,730,820
13	Income taxes (grossed-up)	\$5,210,712	(\$1,330,180)	\$3,880,532	\$ -	\$3,880,532
14	Utility net income	\$47,619,232	\$430,432	\$48,049,664	\$1,800,624	\$49,850,288

Notes

Other Revenues / Revenue Offsets

⁽¹⁾	Specific Service Charges	\$5,394,162	(\$0)	\$5,394,162		\$5,394,162
	Late Payment Charges	\$1,000,000	\$ -	\$1,000,000		\$1,000,000
	Other Distribution Revenue	\$2,885,203	(\$0)	\$2,885,203		\$2,885,203
	Other Income and Deductions	\$1,733,539	(\$42,119)	\$1,691,420		\$1,691,420
	Total Revenue Offsets	\$11,012,904	(\$42,119)	\$10,970,785	\$ -	\$10,970,785



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Taxes/PILs

Line No.	Particulars	Application	Application Update	Per Board Decision
<u>Determination of Taxable Income</u>				
1	Utility net income before taxes	\$47,619,231	\$48,049,664	\$44,747,858
2	Adjustments required to arrive at taxable utility income	(\$32,846,126)	(\$32,846,126)	(\$32,846,126)
3	Taxable income	<u>\$14,773,105</u>	<u>\$15,203,538</u>	<u>\$11,901,732</u>
<u>Calculation of Utility Income Taxes</u>				
4	Income taxes	<u>\$3,829,873</u>	<u>\$2,852,191</u>	<u>\$2,852,191</u>
6	Total taxes	<u>\$3,829,873</u>	<u>\$2,852,191</u>	<u>\$2,852,191</u>
7	Gross-up of Income Taxes	<u>\$1,380,839</u>	<u>\$1,028,341</u>	<u>\$1,028,341</u>
8	Grossed-up Income Taxes	<u>\$5,210,712</u>	<u>\$3,880,532</u>	<u>\$3,880,532</u>
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$5,210,712</u>	<u>\$3,880,532</u>	<u>\$3,880,532</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%	\$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
Application Update					
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	56.00%	\$736,796,601	3.36%	\$24,756,366
2	Short-term Debt	4.00%	\$52,628,329	2.75%	\$1,447,279
3	Total Debt	60.00%	\$789,424,930	3.32%	\$26,203,645
Equity					
4	Common Equity	40.00%	\$526,283,286	9.13%	\$48,049,664
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$526,283,286	9.13%	\$48,049,664
7	Total	100.00%	\$1,315,708,216	5.64%	\$74,253,309
Per Board Decision					
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	56.00%	\$686,166,497	3.36%	\$23,055,194
9	Short-term Debt	4.00%	\$49,011,893	2.75%	\$1,347,827
10	Total Debt	60.00%	\$735,178,389	3.32%	\$24,403,021
Equity					
11	Common Equity	40.00%	\$490,118,926	9.13%	\$44,747,858
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	40.00%	\$490,118,926	9.13%	\$44,747,858
14	Total	100.00%	\$1,225,297,315	5.64%	\$69,150,879

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Deficiency/Sufficiency

Line No.	Particulars	Initial Application		Application Update		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		\$37,895,475		\$38,660,506		\$31,718,425
2	Distribution Revenue	\$187,777,386	\$183,030,797	\$187,760,722	\$181,481,220	\$187,760,722	\$188,423,301
3	Other Operating Revenue Offsets - net	\$11,012,904	\$11,012,904	\$10,970,785	\$10,970,785	\$10,970,785	\$10,970,785
4	Total Revenue	\$198,790,290	\$231,939,176	\$198,731,506	\$231,112,510	\$198,731,506	\$231,112,510
5	Operating Expenses	\$153,140,322	\$153,140,322	\$152,978,669	\$152,978,669	\$152,978,669	\$152,978,669
6	Deemed Interest Expense	\$25,968,910	\$25,968,910	\$26,203,645	\$26,203,645	\$24,403,021	\$24,403,021
8	Total Cost and Expenses	\$179,109,232	\$179,109,232	\$179,182,314	\$179,182,314	\$177,381,691	\$177,381,691
9	Utility Income Before Income Taxes	\$19,681,057	\$52,829,944	\$19,549,192	\$51,930,196	\$21,349,816	\$53,730,820
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$32,846,126)	(\$32,846,126)	(\$32,846,126)	(\$32,846,126)	(\$32,846,126)	(\$32,846,126)
11	Taxable Income	(\$13,165,069)	\$19,983,818	(\$13,296,934)	\$19,084,070	(\$11,496,310)	\$20,884,694
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%	26.50%	26.50%
13	Income Tax on Taxable Income	\$ -	\$5,295,712	\$ -	\$5,057,279	\$ -	\$5,534,444
14	Income Tax Credits	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)
15	Utility Net Income	\$19,766,057	\$47,619,232	\$19,634,192	\$48,049,664	\$21,434,816	\$49,850,288
16	Utility Rate Base	\$1,303,921,994	\$1,303,921,994	\$1,315,708,216	\$1,315,708,216	\$1,225,297,315	\$1,225,297,315
17	Deemed Equity Portion of Rate Base	\$521,568,798	\$521,568,798	\$526,283,286	\$526,283,286	\$490,118,926	\$490,118,926
18	Income/(Equity Portion of Rate Base)	3.79%	9.13%	3.73%	9.13%	4.37%	10.17%
19	Target Return - Equity on Rate Base	9.13%	9.13%	9.13%	9.13%	9.13%	9.13%
20	Deficiency/Sufficiency in Return on Equity	-5.34%	0.00%	-5.40%	0.00%	-4.76%	1.04%
21	Indicated Rate of Return	3.51%	5.64%	3.48%	5.64%	3.74%	6.06%
22	Requested Rate of Return on Rate Base	5.64%	5.64%	5.64%	5.64%	5.64%	5.64%
23	Deficiency/Sufficiency in Rate of Return	-2.14%	0.00%	-2.16%	0.00%	-1.90%	0.42%
24	Target Return on Equity	\$47,619,231	\$47,619,231	\$48,049,664	\$48,049,664	\$44,747,858	\$44,747,858
25	Revenue Deficiency/(Sufficiency)	\$27,853,174	\$1	\$28,415,472	\$0	\$23,313,042	\$5,102,430
26	Gross Revenue Deficiency/(Sufficiency)	\$37,895,475 ⁽¹⁾		\$38,660,506 ⁽¹⁾		\$31,718,425 ⁽¹⁾	

Notes:

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Requirement

Line No.	Particulars	Application	Application Update	Per Board Decision
1	OM&A Expenses	\$93,069,398	\$93,069,398	\$93,069,398
2	Amortization/Depreciation	\$56,860,206	\$56,698,553	\$56,698,553
3	Property Taxes	\$3,210,718	\$3,210,718	\$3,210,718
5	Income Taxes (Grossed up)	\$5,210,712	\$3,880,532	\$3,880,532
6	Other Expenses	\$ -		
7	Return			
	Deemed Interest Expense	\$25,968,910	\$26,203,645	\$24,403,021
	Return on Deemed Equity	\$47,619,231	\$48,049,664	\$44,747,858
8	Service Revenue Requirement (before Revenues)	<u>\$231,939,175</u>	<u>\$231,112,510</u>	<u>\$226,010,081</u>
9	Revenue Offsets	\$11,012,904	\$10,970,785	\$ -
10	Base Revenue Requirement (excluding Tranformer Owership Allowance credit adjustment)	<u>\$220,926,271</u>	<u>\$220,141,725</u>	<u>\$226,010,081</u>
11	Distribution revenue	\$220,926,272	\$220,141,726	\$220,141,726
12	Other revenue	\$11,012,904	\$10,970,785	\$10,970,785
13	Total revenue	<u>\$231,939,176</u>	<u>\$231,112,510</u>	<u>\$231,112,510</u>
14	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>\$1</u> ⁽¹⁾	<u>\$0</u> ⁽¹⁾	<u>\$5,102,430</u> ⁽¹⁾

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application	Application Update	Δ% ⁽²⁾	Per Board Decision	Δ% ⁽²⁾
Service Revenue Requirement	\$231,939,175	\$231,112,510	(\$0)	\$226,010,081	(\$1)
Grossed-Up Revenue					
Deficiency/(Sufficiency)	\$37,895,475	\$38,660,506	\$0	\$31,718,425	(\$1)
Base Revenue Requirement (to be recovered from Distribution Rates)	\$220,926,271	\$220,141,725	(\$0)	\$226,010,081	(\$1)
Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement	\$33,148,886	\$32,381,004	(\$0)	\$ -	(\$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:

Application Update

Customer Class		Initial Application			Application Update			Per Board Decision		
Input the name of each customer class.		Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	319,386	2,273,964,000		319,386	2,273,821,000				
2	GS < 50 kW	25,554	699,456,000		25,554	699,134,000				
3	GS > 50 to 1,499 kW	3,085	2,825,111,000	6,818,165	3,085	2,823,141,000	6,817,445			
4	GS > 1,500 to 4,999 kW	68	682,362,000	1,517,223	68	682,301,000	1,516,028			
5	Large Use	11	572,889,000	1,050,767	11	572,889,000	1,050,767			
6	Street Lighting	63,725	21,225,000	58,863	63,725	21,225,000	58,864			
7	Sentinel Lighting	55	47,000	132	55	47,000	132			
8	Unmetered Scattered Load	3,321	13,130,000		3,321	13,130,000				
9	Standby Power	3		7,440	3		7,440			
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
Total			7,088,184,000	9,452,590		7,085,688,000	9,450,676		-	-

Notes:

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Cost Allocation and Rate Design

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

Stage in Application Process: **Application Update**

A) Allocated Costs

Name of Customer Class ⁽³⁾	Costs Allocated from Previous Study ⁽¹⁾	%	Allocated Class Revenue Requirement ⁽¹⁾	%
From Sheet 10. Load Forecast				
(7A)				
1 Residential	\$ 107,281,788	53.50%	\$ 127,470,109	55.16%
2 GS < 50 kW	\$ 20,646,221	10.30%	\$ 23,083,674	9.99%
3 GS > 50 to 1,499 kW	\$ 48,750,762	24.31%	\$ 57,445,753	24.86%
4 GS > 1,500 to 4,999 kW	\$ 13,365,246	6.66%	\$ 12,113,259	5.24%
5 Large Use	\$ 8,063,832	4.02%	\$ 9,339,599	4.04%
6 Street Lighting	\$ 1,811,439	0.90%	\$ 1,048,177	0.45%
7 Sentinel Lighting	\$ 6,568	0.00%	\$ 10,525	0.00%
8 Unmetered Scattered Load	\$ 547,549	0.27%	\$ 587,268	0.25%
9 Standby Power	\$ 70,655	0.04%	\$ 14,147	0.01%
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 200,544,060	100.00%	\$ 231,112,510	100.00%
Service Revenue Requirement (from Sheet 9)			\$ 231,112,510.16	

- (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	\$ 117,240,213	\$ 124,454,462	\$ 124,445,561	\$ 8,049,754
2 GS < 50 kW	\$ 24,986,893	\$ 26,704,038	\$ 26,680,774	\$ 981,290
3 GS > 50 to 1,499 kW	\$ 44,953,805	\$ 47,765,964	\$ 47,766,023	\$ 1,389,390
4 GS > 1,500 to 4,999 kW	\$ 11,220,392	\$ 11,572,074	\$ 11,572,133	\$ 271,417
5 Large Use	\$ 7,593,785	\$ 7,790,032	\$ 7,790,002	\$ 190,980
6 Street Lighting	\$ 1,119,200	\$ 1,205,866	\$ 1,205,328	\$ 51,571
7 Sentinel Lighting	\$ 5,002	\$ 5,398	\$ 5,934	\$ 878
8 Unmetered Scattered Load	\$ 568,490	\$ 622,206	\$ 622,437	\$ 35,072
9 Standby Power	\$ 20,298	\$ 21,685	\$ 21,684	\$ 433
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 207,708,077	\$ 220,141,726	\$ 220,109,877	\$ 10,970,785

- (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%	103.95%	103.94%	85 - 115
2 GS < 50 kW	118.23%	119.93%	119.83%	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%	97.77%	97.77%	80 - 120
5 Large Use	85.36%	85.45%	85.45%	85 - 115
6 Street Lighting	80.00%	119.96%	119.91%	80 - 120
7 Sentinel Lighting	76.00%	59.63%	64.72%	80 - 120
8 Unmetered Scattered Load	118.72%	111.92%	111.96%	80 - 120
9 Standby Power	21.03%	156.34%	156.34%	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 ⁽¹¹⁾

Name of Customer Class		Proposed Revenue-to-Cost Ratio			Policy Range
		Test Year	Price Cap IR Period		
		2021	2022	2023	
1	Residential	103.94%	103.94%	103.94%	85 - 115
2	GS < 50 kW	119.83%	119.83%	119.83%	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	97.77%	97.77%	97.77%	80 - 120
5	Large Use	85.45%	85.45%	85.45%	85 - 115
6	Street Lighting	119.91%	119.91%	119.91%	80 - 120
7	Sentinel Lighting	64.72%	64.72%	64.72%	80 - 120
8	Unmetered Scattered Load	111.96%	111.96%	111.96%	80 - 120
9	Standby Power	156.34%	156.34%	156.34%	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	319,386
kWh	2,273,821,000
Proposed Residential Class Specific Revenue Requirement ¹	
	\$ 124,445,561.04
Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 32.47
Distribution Volumetric Rate (\$/kWh)	\$ -

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	32.47	319,386	\$ 124,445,561.04	100.00%
Variable	0	2,273,821,000	\$ -	0.00%
TOTAL	-	-	\$ 124,445,561.04	-

C Calculating Test Year Base Rates

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

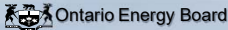
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 124,445,561.04	32.47	\$ 124,445,561.04
Variable	\$ -	0	\$ -
TOTAL	\$ 124,445,561.04	-	\$ 124,445,561.04

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

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

Notes:

- ¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- ² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. 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.
- ³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)



Revenue Requirement Workform
(RRWF) for 2020 Filers

Rate Design and Revenue Reconciliation

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

Stage in Process:		Application Update				Class Allocated Revenues				Fixed / Variable Splits ²				Distribution Rates				Revenue Reconciliation			
Customer and Load Forecast						From Sheet 11. Cost Allocation and Sheet 12. Residential Rate Design				Percentage to be entered as a fraction between 0 and 1											
Customer Class	Volumetric Charge Determinant	Customers / Connections	kWh	KW or KVA	Total Class Revenue Requirement	Monthly Service Charge	Volumetric	Fixed	Variable	Transformer Ownership Allowance ¹ (\$)	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	319,386	2,273,821,000	-	\$ 124,445,561	\$ 124,445,561	\$ -	100.00%	0.00%		\$32.47	2	\$0.0000 /kWh	4	#####	\$ -	#####				
2 GS < 50 kW	kWh	25,554	699,134,000	-	\$ 26,680,774	\$ 6,755,572	\$ 19,925,202	25.32%	74.68%		\$22.03		\$0.0285 /kWh		\$ 6,755,455.44	\$19,925,319.0000	\$26,680,774.44				
3 GS > 50 to 1,499 kW	kW	3,085	2,823,141,000	6,817,445	\$ 47,766,023	\$ 7,867,064	\$ 39,898,959	16.47%	83.53%	\$ 343,111	\$212.51		\$5.9028 /kW		\$ 7,867,120.20	\$40,242,014.3460	\$47,766,023.27				
4 GS > 1,500 to 4,999 kW	kW	68	682,301,000	1,516,028	\$ 11,572,133	\$ 3,529,512	\$ 8,042,621	30.50%	69.50%	\$ 396,953	\$4,325.38		\$5.5669 /kW		\$ 3,529,510.08	\$ 8,439,576.2732	\$11,572,133.00				
5 Large Use	kW	11	572,889,000	1,050,767	\$ 7,790,002	\$ 2,062,493	\$ 5,727,509	26.48%	73.52%	\$ 315,662	\$15,624.95		\$5.7512 /kW		\$ 2,062,493.40	\$ 6,043,171.1704	\$ 7,790,002.20				
6 Street Lighting	kW	63,725	21,225,000	58,864	\$ 1,205,328	\$ 780,022	\$ 425,306	64.71%	35.29%		\$1.02		\$7.2252 /kW		\$ 779,994.00	\$ 425,304.1728	\$ 1,205,298.17				
7 Sentinel Lighting	kW	55	47,000	132	\$ 5,934	\$ 3,062	\$ 2,872	51.81%	48.39%		\$4.64		\$21.7549 /kW		\$ 3,062.40	\$ 2,871.6468	\$ 5,934.05				
8 Unmetered Scattered Load	kWh	3,321	13,130,000	-	\$ 622,437	\$ 244,369	\$ 378,068	39.26%	60.74%		\$6.13		\$0.0288 /kWh		\$ 244,292.76	\$ 378,144.0000	\$ 622,436.76				
9 Standby Power	kW	3	-	7,440	\$ 21,684	\$ 6,143	\$ 15,541	28.33%	71.67%		\$170.64		\$2.0889 /kW		\$ 6,143.04	\$ 15,541.4160	\$ 21,684.46				
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -				
Total Transformer Ownership Allowance											\$ 1,055,727										
													Rates recover revenue requirement								
													Base Revenue Requirement								
													Difference								
													% Difference								



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.

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

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

Summary of Proposed Changes

Reference ⁽¹⁾	Item / Description ⁽²⁾	Cost of Capital		Rate Base and Capital Expenditures			Operating Expenses			Revenue Requirement			
		Regulated Return on Capital	Regulated Rate of Return	Rate Base	Working Capital	Working Capital Allowance (\$)	Amortization / Depreciation	Taxes/PILs	OM&A	Service Revenue Requirement	Other Revenues	Base Revenue Requirement	Grossed up Revenue Deficiency / Sufficiency
1	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
	Updated Application for 2019 Actuals	\$ 74,253,309	5.64%	\$ 1,315,708,216	\$ 1,205,478,677	\$ 90,410,901	\$ 56,698,553	\$ 3,880,532	\$ 93,069,398	\$ 231,112,510	\$ 10,970,785	\$ 220,141,725	\$ 38,660,506
	Change	\$ 665,167	0.00%	\$ 11,786,222	\$ 12,011,305	\$ 900,848	\$ 161,653	\$ 1,330,180	\$ 0	\$ 826,665	\$ 42,119	\$ 784,546	\$ 765,031



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	RegulatoryAffairs@HydroOttawa.com
Test Year	2023
Bridge Year	
Last Rebasing Year	2016

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

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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.**



Revenue Requirement Workform (RRWF) for 2020 Filers

Data Input ⁽¹⁾

	Initial Application ⁽²⁾	Adjustments	Application Update ⁽⁶⁾	Adjustments	Per Board Decision
1 Rate Base					
Gross Fixed Assets (average)	\$1,672,507,871	\$5,535,064	\$1,678,042,935		\$1,678,042,935
Accumulated Depreciation (average)	(\$417,844,547) ⁽⁵⁾	\$7,449,861	(\$410,394,686)		(\$410,394,686)
Allowance for Working Capital:					
Controllable Expenses	\$98,696,747		\$98,696,747		\$98,696,747
Cost of Power	\$1,167,387,072	\$13,030,230	\$1,180,417,302		\$1,180,417,302 ⁽⁹⁾
Working Capital Rate (%)	7.50% ⁽⁹⁾	\$0	7.50% ⁽⁹⁾		
2 Utility Income					
Operating Revenues:					
Distribution Revenue at Current Rates	\$188,659,471	(\$16,311)	\$188,643,160		
Distribution Revenue at Proposed Rates	\$232,378,120	\$512,941	\$232,891,061		
Other Revenue:					
Specific Service Charges	\$5,678,587	\$0	\$5,678,587		
Late Payment Charges	\$1,000,000	\$0	\$1,000,000		
Other Distribution Revenue	\$2,971,480	\$0	\$2,971,480		
Other Income and Deductions	\$2,017,176	\$0	\$2,017,176		
Total Revenue Offsets	\$11,667,243 ⁽⁷⁾	\$0	\$11,667,243		
Operating Expenses:					
OM+A Expenses	\$95,405,440		\$95,405,440		\$95,405,440
Depreciation/Amortization	\$59,141,744	(\$126,405)	\$59,015,339		\$59,015,339
Property taxes	\$3,291,307		\$3,291,307		\$3,291,307
Other expenses					
3 Taxes/PIs					
Taxable Income:					
	(\$25,626,668) ⁽³⁾	\$0	(\$25,626,668)		
Adjustments required to arrive at taxable income					
Utility Income Taxes and Rates:					
Income taxes (not grossed up)	\$6,442,789	(\$118,927)	\$6,323,862		
Income taxes (grossed up)	\$8,765,699		\$8,603,894		
Federal tax (%)	15.00%	\$0	15.00%		
Provincial tax (%)	11.50%	\$0	11.50%		
Income Tax Credits	(\$85,000)	\$0	(\$85,000)		
4 Capitalization/Cost of Capital					
Capital Structure:					
Long-term debt Capitalization Ratio (%)	56.0%	\$0	56.0%		
Short-term debt Capitalization Ratio (%)	4.0% ⁽⁸⁾	\$0	4.0% ⁽⁸⁾		
Common Equity Capitalization Ratio (%)	40.0%	\$0	40.0%		
Preferred Shares Capitalization Ratio (%)					
	100.0%		100.0%		
Cost of Capital					
Long-term debt Cost Rate (%)	3.40%	\$0	3.40%		
Short-term debt Cost Rate (%)	2.75%	\$0	2.75%		
Common Equity Cost Rate (%)	9.31%	\$0	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.

(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	Adjustments	Application Update	Adjustments	Per Board Decision
1	Gross Fixed Assets (average) ⁽²⁾	\$1,672,507,871	\$5,535,064	\$1,678,042,935	\$ -	\$1,678,042,935
2	Accumulated Depreciation (average) ⁽²⁾	<u>(\$417,844,547)</u>	<u>\$7,449,861</u>	<u>(\$410,394,686)</u>	<u>\$ -</u>	<u>(\$410,394,686)</u>
3	Net Fixed Assets (average) ⁽²⁾	\$1,254,663,324	\$12,984,925	\$1,267,648,249	\$ -	\$1,267,648,249
4	Allowance for Working Capital ⁽¹⁾	\$94,956,286	\$977,267	\$95,933,554	<u>(\$95,933,554)</u>	\$ -
5	Total Rate Base	<u>\$1,349,619,610</u>	<u>\$13,962,192</u>	<u>\$1,363,581,803</u>	<u>(\$95,933,554)</u>	<u>\$1,267,648,249</u>

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$98,696,747	\$ -	\$98,696,747	\$ -	\$98,696,747
7	Cost of Power	\$1,167,387,072	\$13,030,230	\$1,180,417,302	\$ -	\$1,180,417,302
8	Working Capital Base	\$1,266,083,819	\$13,030,230	\$1,279,114,049	\$ -	\$1,279,114,049
9	Working Capital Rate % ⁽¹⁾	7.50%	0.00%	7.50%	-7.50%	0.00%
10	Working Capital Allowance	<u>\$94,956,286</u>	<u>\$977,267</u>	<u>\$95,933,554</u>	<u>(\$95,933,554)</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.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Utility Income

Line No.	Particulars	Initial Application	Adjustments	Application Update	Adjustments	Per Board Decision
Operating Revenues:						
1	Distribution Revenue (at Proposed Rates)	\$232,378,120	\$512,941	\$232,891,061	\$ -	\$232,891,061
2	Other Revenue ⁽¹⁾	\$11,667,243	\$ -	\$11,667,243	\$ -	\$11,667,243
3	Total Operating Revenues	\$244,045,363	\$512,941	\$244,558,304	\$ -	\$244,558,304
Operating Expenses:						
4	OM+A Expenses	\$95,405,440	\$ -	\$95,405,440	\$ -	\$95,405,440
5	Depreciation/Amortization	\$59,141,744	(\$126,405)	\$59,015,339	\$ -	\$59,015,339
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	(\$126,405)	\$157,712,086	\$ -	\$157,712,086
10	Deemed Interest Expense	\$27,181,339	\$281,199	\$27,462,538	(\$1,932,102)	\$25,530,436
11	Total Expenses (lines 9 to 10)	\$185,019,830	\$154,794	\$185,174,624	(\$1,932,102)	\$183,242,522
12	Utility income before income taxes	\$59,025,534	\$358,147	\$59,383,681	\$1,932,102	\$61,315,783
13	Income taxes (grossed-up)	\$8,765,699	(\$161,805)	\$8,603,894	\$ -	\$8,603,894
14	Utility net income	\$50,259,834	\$519,953	\$50,779,787	\$1,932,102	\$52,711,889

Notes

Other Revenues / Revenue Offsets

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Taxes/PILs

Line No.	Particulars	Application	Application Update	Per Board Decision
<u>Determination of Taxable Income</u>				
1	Utility net income before taxes	\$50,259,834	\$50,779,786	\$47,207,221
2	Adjustments required to arrive at taxable utility income	(\$25,626,668)	(\$25,626,668)	(\$25,626,668)
3	Taxable income	\$24,633,166	\$25,153,118	\$21,580,553
<u>Calculation of Utility Income Taxes</u>				
4	Income taxes	\$6,442,789	\$6,323,862	\$6,323,862
6	Total taxes	\$6,442,789	\$6,323,862	\$6,323,862
7	Gross-up of Income Taxes	\$2,322,910	\$2,280,032	\$2,280,032
8	Grossed-up Income Taxes	\$8,765,699	\$8,603,894	\$8,603,894
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	\$8,765,699	\$8,603,894	\$8,603,894
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%	\$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
		Application Update			
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	56.00%	\$763,605,810	3.40%	\$25,962,598
2	Short-term Debt	4.00%	\$54,543,272	2.75%	\$1,499,940
3	Total Debt	60.00%	\$818,149,082	3.36%	\$27,462,538
	Equity				
4	Common Equity	40.00%	\$545,432,721	9.31%	\$50,779,786
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$545,432,721	9.31%	\$50,779,786
7	Total	100.00%	\$1,363,581,803	5.74%	\$78,242,324
		Per Board Decision			
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	56.00%	\$709,883,019	3.40%	\$24,136,023
9	Short-term Debt	4.00%	\$50,705,930	2.75%	\$1,394,413
10	Total Debt	60.00%	\$760,588,949	3.36%	\$25,530,436
	Equity				
11	Common Equity	40.00%	\$507,059,300	9.31%	\$47,207,221
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	40.00%	\$507,059,300	9.31%	\$47,207,221
14	Total	100.00%	\$1,267,648,249	5.74%	\$72,737,657

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Deficiency/Sufficiency

Line No.	Particulars	Initial Application		Application Update		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		\$47,439,387		\$48,379,601		\$40,890,257
2	Distribution Revenue	\$188,659,471	\$184,938,733	\$188,643,160	\$184,511,460	\$188,643,160	\$192,000,804
3	Other Operating Revenue	\$11,667,243	\$11,667,243	\$11,667,243	\$11,667,243	\$11,667,243	\$11,667,243
	Offsets - net						
4	Total Revenue	\$200,326,714	\$244,045,363	\$200,310,403	\$244,558,304	\$200,310,403	\$244,558,304
5	Operating Expenses	\$157,838,491	\$157,838,491	\$157,712,086	\$157,712,086	\$157,712,086	\$157,712,086
6	Deemed Interest Expense	\$27,181,339	\$27,181,339	\$27,462,538	\$27,462,538	\$25,530,436	\$25,530,436
8	Total Cost and Expenses	\$185,019,830	\$185,019,830	\$185,174,624	\$185,174,624	\$183,242,522	\$183,242,522
9	Utility Income Before Income Taxes	\$15,306,885	\$59,025,534	\$15,135,780	\$59,383,681	\$17,067,882	\$61,315,783
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$25,626,668)	(\$25,626,668)	(\$25,626,668)	(\$25,626,668)	(\$25,626,668)	(\$25,626,668)
11	Taxable Income	(\$10,319,783)	\$33,398,866	(\$10,490,888)	\$33,757,013	(\$8,558,786)	\$35,689,115
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%	26.50%	26.50%
13	Income Tax on Taxable Income	\$ -	\$8,850,699	\$ -	\$8,945,608	\$ -	\$9,457,615
14	Income Tax Credits	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)
15	Utility Net Income	\$15,391,885	\$50,259,834	\$15,220,780	\$50,779,787	\$17,152,882	\$52,711,889
16	Utility Rate Base	\$1,349,619,610	\$1,349,619,610	\$1,363,581,803	\$1,363,581,803	\$1,267,648,249	\$1,267,648,249
17	Deemed Equity Portion of Rate Base	\$539,847,844	\$539,847,844	\$545,432,721	\$545,432,721	\$507,059,300	\$507,059,300
18	Income/(Equity Portion of Rate Base)	2.85%	9.31%	2.79%	9.31%	3.38%	10.40%
19	Target Return - Equity on Rate Base	9.31%	9.31%	9.31%	9.31%	9.31%	9.31%
20	Deficiency/Sufficiency in Return on Equity	-6.46%	0.00%	-6.52%	0.00%	-5.93%	1.09%
21	Indicated Rate of Return	3.15%	5.74%	3.13%	5.74%	3.37%	6.17%
22	Requested Rate of Return on Rate Base	5.74%	5.74%	5.74%	5.74%	5.74%	5.74%
23	Deficiency/Sufficiency in Rate of Return	-2.58%	0.00%	-2.61%	0.00%	-2.37%	0.43%
24	Target Return on Equity	\$50,259,834	\$50,259,834	\$50,779,786	\$50,779,786	\$47,207,221	\$47,207,221
25	Revenue Deficiency/(Sufficiency)	\$34,867,950	\$0	\$35,559,007	\$1	\$30,054,339	\$5,504,668
26	Gross Revenue Deficiency/(Sufficiency)	\$47,439,387 ⁽¹⁾		\$48,379,601 ⁽¹⁾		\$40,890,257 ⁽¹⁾	

Notes:

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Requirement

Line No.	Particulars	Application	Application Update	Per Board Decision
1	OM&A Expenses	\$95,405,440	\$95,405,440	\$95,405,440
2	Amortization/Depreciation	\$59,141,744	\$59,015,339	\$59,015,339
3	Property Taxes	\$3,291,307	\$3,291,307	\$3,291,307
5	Income Taxes (Grossed up)	\$8,765,699	\$8,603,894	\$8,603,894
6	Other Expenses	\$ -		
7	Return			
	Deemed Interest Expense	\$27,181,339	\$27,462,538	\$25,530,436
	Return on Deemed Equity	\$50,259,834	\$50,779,786	\$47,207,221
8	Service Revenue Requirement (before Revenues)	<u>\$244,045,363</u>	<u>\$244,558,304</u>	<u>\$239,053,636</u>
9	Revenue Offsets	\$11,667,243	\$11,667,243	\$ -
10	Base Revenue Requirement (excluding Tranformer Owership Allowance credit adjustment)	<u>\$232,378,120</u>	<u>\$232,891,060</u>	<u>\$239,053,636</u>
11	Distribution revenue	\$232,378,120	\$232,891,061	\$232,891,061
12	Other revenue	\$11,667,243	\$11,667,243	\$11,667,243
13	Total revenue	<u>\$244,045,363</u>	<u>\$244,558,304</u>	<u>\$244,558,304</u>
14	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>\$0</u> ⁽¹⁾	<u>\$1</u> ⁽¹⁾	<u>\$5,504,668</u> ⁽¹⁾

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application	Application Update	Δ% ⁽²⁾	Per Board Decision	Δ% ⁽²⁾
Service Revenue Requirement	\$244,045,363	\$244,558,304	\$0	\$239,053,636	(\$1)
Grossed-Up Revenue					
Deficiency/(Sufficiency)	\$47,439,387	\$48,379,601	\$0	\$40,890,257	(\$1)
Base Revenue Requirement (to be recovered from Distribution Rates)	\$232,378,120	\$232,891,060	\$0	\$239,053,636	(\$1)
Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement	\$43,718,649	\$44,247,901	\$0	\$ -	(\$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:

Application Update

Customer Class		Initial Application			Application Update			Per Board Decision		
Input the name of each customer class.		Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	322,306	2,299,513,000		322,306	2,299,366,000				
2	GS < 50 kW	25,704	697,989,000		25,704	697,636,000				
3	GS > 50 to 1,499 kW	3,049	2,831,390,000	6,821,528	3,049	2,829,220,000	6,821,057			
4	GS > 1,500 to 4,999 kW	68	682,571,000	1,517,607	68	682,505,000	1,516,400			
5	Large Use	11	572,033,000	1,049,467	11	572,033,000	1,049,467			
6	Street Lighting	64,645	20,413,000	56,618	64,645	20,413,000	56,618			
7	Sentinel Lighting	55	47,000	132	55	47,000	132			
8	Unmetered Scattered Load	3,321	12,663,000		3,321	12,663,000				
9	Standby Power	3		7,440	3		7,440			
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
Total			7,116,619,000	9,452,792		7,113,883,000	9,451,114		-	-

Notes:

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Cost Allocation and Rate Design

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

Stage in Application Process: **Application Update**

A) Allocated Costs

Name of Customer Class ⁽³⁾	Costs Allocated from Previous Study ⁽¹⁾	%	Allocated Class Revenue Requirement ⁽¹⁾	%
From Sheet 10. Load Forecast				
(7A)				
1 Residential	\$ 107,281,788	53.50%	\$ 134,886,137	55.16%
2 GS < 50 kW	\$ 20,646,221	10.30%	\$ 24,426,649	9.99%
3 GS > 50 to 1,499 kW	\$ 48,750,762	24.31%	\$ 60,787,864	24.86%
4 GS > 1,500 to 4,999 kW	\$ 13,365,246	6.66%	\$ 12,817,991	5.24%
5 Large Use	\$ 8,063,832	4.02%	\$ 9,882,964	4.04%
6 Street Lighting	\$ 1,811,439	0.90%	\$ 1,109,158	0.45%
7 Sentinel Lighting	\$ 6,568	0.00%	\$ 11,137	0.00%
8 Unmetered Scattered Load	\$ 547,549	0.27%	\$ 621,435	0.25%
9 Standby Power	\$ 70,655	0.04%	\$ 14,970	0.01%
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 200,544,060	100.00%	\$ 244,558,304	100.00%
Service Revenue Requirement (from Sheet 9)			\$ 244,558,303.73	

- (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	\$ 125,583,310	\$ 131,662,249	\$ 131,655,555	\$ 8,560,777
2 GS < 50 kW	\$ 26,677,735	\$ 28,231,853	\$ 28,258,530	\$ 1,043,585
3 GS > 50 to 1,499 kW	\$ 48,038,651	\$ 50,544,781	\$ 50,544,505	\$ 1,477,593
4 GS > 1,500 to 4,999 kW	\$ 11,971,157	\$ 12,245,671	\$ 12,245,667	\$ 288,647
5 Large Use	\$ 8,098,188	\$ 8,243,364	\$ 8,243,395	\$ 203,104
6 Street Lighting	\$ 1,200,359	\$ 1,275,362	\$ 1,274,794	\$ 54,845
7 Sentinel Lighting	\$ 5,934	\$ 6,276	\$ 6,843	\$ 933
8 Unmetered Scattered Load	\$ 608,987	\$ 658,559	\$ 658,038	\$ 37,299
9 Standby Power	\$ 21,684	\$ 22,947	\$ 22,947	\$ 460
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 222,206,007	\$ 232,891,061	\$ 232,910,273	\$ 11,667,243

- (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%	103.96%	103.95%	85 - 115
2 GS < 50 kW	118.23%	119.85%	119.96%	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%	97.79%	97.79%	80 - 120
5 Large Use	85.36%	85.46%	85.47%	85 - 115
6 Street Lighting	80.00%	119.93%	119.88%	80 - 120
7 Sentinel Lighting	76.00%	64.73%	69.82%	80 - 120
8 Unmetered Scattered Load	118.72%	111.98%	111.89%	80 - 120
9 Standby Power	21.03%	156.36%	156.36%	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 ⁽¹¹⁾

Name of Customer Class		Proposed Revenue-to-Cost Ratio			Policy Range
		Test Year	Price Cap IR Period		
		2021	2022	2023	
1	Residential	103.95%	103.95%	103.95%	85 - 115
2	GS < 50 kW	119.96%	119.96%	119.96%	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	97.79%	97.79%	97.79%	80 - 120
5	Large Use	85.47%	85.47%	85.47%	85 - 115
6	Street Lighting	119.88%	119.88%	119.88%	80 - 120
7	Sentinel Lighting	69.82%	69.82%	69.82%	80 - 120
8	Unmetered Scattered Load	111.89%	111.89%	111.89%	80 - 120
9	Standby Power	156.36%	156.36%	156.36%	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	2,299,366,000
Proposed Residential Class Specific Revenue Requirement ¹	\$ 131,655,554.88
Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 34.04
Distribution Volumetric Rate (\$/kWh)	\$ -

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	34.04	322,306	\$ 131,655,554.88	100.00%
Variable	0	2,299,366,000	\$ -	0.00%
TOTAL	-	-	\$ 131,655,554.88	-

C Calculating Test Year Base Rates

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

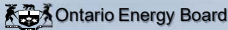
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 131,655,554.88	34.04	\$ 131,655,554.88
Variable	\$ -	0	\$ -
TOTAL	\$ 131,655,554.88	-	\$ 131,655,554.88

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

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

Notes:

- ¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- ² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. 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.
- ³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)



Revenue Requirement Workform (RRWF) for 2020 Filers

Rate Design and Revenue Reconciliation

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

Stage in Process:		Application Update			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 ² Percentage to be entered as a fraction between 0 and 1							
Customer Class	Volumetric Charge Determinant	Customers / Connections	kWh	KW or kVA	Total Class Revenue Requirement	Monthly Service Charge	Volumetric	Fixed	Variable	Transformer Ownership Allowance ¹ (\$)	Monthly Service Charge Rate No. of decimals	Volumetric Rate Rate No. of decimals	MSC Revenues	Volumetric revenues	Revenues less Transformer Ownership Allowance
From sheet 10. Load Forecast															
1 Residential	kWh	322,306	2,299,366,000	-	\$ 131,655,555	\$ 131,655,555	\$ -	100.00%	0.00%		\$34.04	2	\$0.0000 /kWh	4	#####
2 GS < 50 kW	kWh	25,704	697,636,000	-	\$ 28,258,530	\$ 7,188,970	\$ 21,069,560	25.44%	74.56%		\$23.31		\$0.0302 /kWh		\$ 7,189,922.88
3 GS > 50 to 1,499 kW	kW	3,049	2,829,220,000	6,821,057	\$ 50,544,505	\$ 8,181,134	\$ 42,363,372	16.19%	83.81%	\$ 343,209	\$223.60		\$6.2610 /kW		\$ 8,181,076.80
4 GS > 1,500 to 4,999 kW	kW	68	682,505,000	1,516,400	\$ 12,245,667	\$ 3,610,451	\$ 8,635,216	29.48%	70.52%	\$ 397,067	\$4,424.57		\$5.9564 /kW		\$ 3,610,449.12
5 Large Use	kW	11	572,033,000	1,049,467	\$ 8,243,395	\$ 2,099,467	\$ 6,143,927	25.47%	74.53%	\$ 315,753	\$15,905.06		\$6.1552 /kW		\$ 2,099,467.92
6 Street Lighting	kW	64,645	20,413,000	56,618	\$ 1,274,794	\$ 837,797	\$ 436,997	65.72%	34.28%		\$1.08		\$7.7183 /kW		\$ 837,799.20
7 Sentinel Lighting	kW	55	47,000	132	\$ 6,843	\$ 3,531	\$ 3,312	51.60%	48.40%		\$5.35		\$25.0873 /kW		\$ 3,531.00
8 Unmetered Scattered Load	kWh	3,321	12,663,000	-	\$ 658,038	\$ 264,202	\$ 393,836	40.15%	59.85%		\$6.63		\$0.0311 /kWh		\$ 264,218.76
9 Standby Power	kW	3	-	7,440	\$ 22,947	\$ 6,501	\$ 16,446	28.33%	71.67%		\$180.57		\$2.2105 /kW		\$ 6,500.52
10		-	-	-											\$ -
11		-	-	-											\$ -
12		-	-	-											\$ -
13		-	-	-											\$ -
14		-	-	-											\$ -
15		-	-	-											\$ -
16		-	-	-											\$ -
17		-	-	-											\$ -
18		-	-	-											\$ -
19		-	-	-											\$ -
20		-	-	-											\$ -
Total Transformer Ownership Allowance										\$ 1,056,028					
											Rates recover revenue requirement				
											Base Revenue Requirement				
											Difference				
											% Difference				

Notes:

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

Notes:

- ¹ Transformer Ownership Allowance is entered as a positive amount, and only for those classes to which it applies.
- ² The Fixed/Variable split, for each customer class, drives the "rate generator" portion of this sheet of the RRWF. Only the "fixed" fraction is entered, as the sum of the "fixed" and "variable" portions must sum to 100%. For a distributor that may set the Monthly Service Charge, the "fixed" ratio is calculated as: [MSC x (average number of customers or connections) x 12 months] / (Class Allocated Revenue Requirement).



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.

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

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

Summary of Proposed Changes

Reference ⁽¹⁾	Item / Description ⁽²⁾	Cost of Capital		Rate Base and Capital Expenditures			Operating Expenses			Revenue Requirement			
		Regulated Return on Capital	Regulated Rate of Return	Rate Base	Working Capital	Working Capital Allowance (\$)	Amortization / Depreciation	Taxes/PILs	OM&A	Service Revenue Requirement	Other Revenues	Base Revenue Requirement	Grossed up Revenue Deficiency / Sufficiency
	Original Application	\$ 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
1	Updated Application for 2019 Actuals	\$ 78,242,324	5.74%	\$ 1,363,581,803	\$ 1,279,114,049	\$ 95,933,554	\$ 59,015,339	\$ 8,603,894	\$ 95,405,440	\$ 244,558,304	\$ 11,667,243	\$ 232,891,060	\$ 48,379,601
	Change	\$ 801,151	0.00%	\$ 13,962,192	\$ 13,030,230	\$ 977,267	\$ 126,405	\$ 161,805	\$ 0	\$ 512,940	\$ 0	\$ 512,940	\$ 940,213



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	RegulatoryAffairs@HydroOttawa.com
Test Year	2024
Bridge Year	
Last Rebasing Year	2016

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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[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 ⁽¹⁾

	Initial Application	(2)	Adjustments	Application Update	(6)	Adjustments	Per Board Decision
1 Rate Base							
Gross Fixed Assets (average)	\$1,750,450,428		\$5,535,064	\$1,755,985,492			\$1,755,985,492
Accumulated Depreciation (average)	(\$476,047,244)	(5)	\$7,576,266	(\$468,470,978)			(\$468,470,978)
Allowance for Working Capital:							
Controllable Expenses	\$101,174,035			\$101,174,035			\$101,174,035
Cost of Power	\$1,264,188,174		\$12,973,656	\$1,277,161,830			\$1,277,161,830
Working Capital Rate (%)	7.50%	(9)	\$0	7.50%	(9)		(9)
2 Utility Income							
Operating Revenues:							
Distribution Revenue at Current Rates	\$189,644,373		(\$16,564)	\$189,627,810			
Distribution Revenue at Proposed Rates	\$241,253,766		\$563,660	\$241,817,426			
Other Revenue:							
Specific Service Charges	\$5,910,078		\$0	\$5,910,078			
Late Payment Charges	\$1,000,000		\$0	\$1,000,000			
Other Distribution Revenue	\$3,060,205		\$0	\$3,060,205			
Other Income and Deductions	\$2,181,108		\$0	\$2,181,108			
Total Revenue Offsets	\$12,151,392	(7)	\$0	\$12,151,392			
Operating Expenses:							
OM+A Expenses	\$97,800,117		\$ -	\$97,800,117			\$97,800,117
Depreciation/Amortization	\$60,711,328		(\$126,405)	\$60,584,923			\$60,584,923
Property taxes	\$3,373,918		\$ -	\$3,373,918			\$3,373,918
Other expenses							
3 Taxes/PILs							
Taxable Income:							
	(\$19,163,272)	(3)	\$0	(\$19,163,272)			
Adjustments required to arrive at taxable income							
Utility Income Taxes and Rates:							
Income taxes (not grossed up)	\$8,569,789		(\$93,259)	\$8,476,530			
Income taxes (grossed up)	\$11,659,577			\$11,532,694			
Federal tax (%)	15.00%		\$0	15.00%			
Provincial tax (%)	11.50%		\$0	11.50%			
Income Tax Credits	(\$85,000)		\$0	(\$85,000)			
4 Capitalization/Cost of Capital							
Capital Structure:							
Long-term debt Capitalization Ratio (%)	56.0%		\$0	56.0%			
Short-term debt Capitalization Ratio (%)	4.0%	(8)	\$0	4.0%	(8)		(8)
Common Equity Capitalization Ratio (%)	40.0%		\$0	40.0%			
Preferred Shares Capitalization Ratio (%)							
	100.0%			100.0%			
Cost of Capital							
Long-term debt Cost Rate (%)	3.44%		\$0	3.44%			
Short-term debt Cost Rate (%)	2.75%		\$0	2.75%			
Common Equity Cost Rate (%)	9.41%		\$0	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	Adjustments	Application Update	Adjustments	Per Board Decision
1	Gross Fixed Assets (average) ⁽²⁾	\$1,750,450,428	\$5,535,064	\$1,755,985,492	\$ -	\$1,755,985,492
2	Accumulated Depreciation (average) ⁽²⁾	(\$476,047,244)	\$7,576,266	(\$468,470,978)	\$ -	(\$468,470,978)
3	Net Fixed Assets (average) ⁽²⁾	\$1,274,403,184	\$13,111,330	\$1,287,514,514	\$ -	\$1,287,514,514
4	Allowance for Working Capital ⁽¹⁾	\$102,402,166	\$973,024	\$103,375,190	#####	\$ -
5	Total Rate Base	\$1,376,805,350	\$14,084,354	\$1,390,889,704	#####	\$1,287,514,514

(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	\$12,973,656	\$1,277,161,830	\$ -	\$1,277,161,830
8	Working Capital Base	\$1,365,362,209	\$12,973,656	\$1,378,335,865	\$ -	\$1,378,335,865
9	Working Capital Rate % ⁽¹⁾	7.50%	0.00%	7.50%	-7.50%	0.00%
10	Working Capital Allowance	\$102,402,166	\$973,024	\$103,375,190	#####	\$ -

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	Adjustments	Application Update	Adjustments	Per Board Decision
Operating Revenues:						
1	Distribution Revenue (at Proposed Rates)	\$241,253,766	\$563,660	\$241,817,426	\$ -	\$241,817,426
2	Other Revenue ⁽¹⁾	\$12,151,392	\$ -	\$12,151,392	\$ -	\$12,151,392
3	Total Operating Revenues	\$253,405,158	\$563,660	\$253,968,818	\$ -	\$253,968,818
Operating Expenses:						
4	OM+A Expenses	\$97,800,117	\$ -	\$97,800,117	\$ -	\$97,800,117
5	Depreciation/Amortization	\$60,711,328	(\$126,405)	\$60,584,923	\$ -	\$60,584,923
6	Property taxes	\$3,373,918	\$ -	\$3,373,918	\$ -	\$3,373,918
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$161,885,363	(\$126,405)	\$161,758,958	\$ -	\$161,758,958
10	Deemed Interest Expense	\$28,037,264	\$286,814	\$28,324,078	(\$2,105,132)	\$26,218,946
11	Total Expenses (lines 9 to 10)	\$189,922,628	\$160,409	\$190,083,036	(\$2,105,132)	\$187,977,904
12	Utility income before income taxes	\$63,482,530	\$403,251	\$63,885,782	\$2,105,132	\$65,990,914
13	Income taxes (grossed-up)	\$11,659,577	(\$126,883)	\$11,532,694	\$ -	\$11,532,694
14	Utility net income	\$51,822,953	\$530,134	\$52,353,088	\$2,105,132	\$54,458,220

Notes

Other Revenues / Revenue Offsets

⁽¹⁾	Specific Service Charges	\$5,910,078	\$ -	\$5,910,078	\$ -	\$5,910,078
	Late Payment Charges	\$1,000,000	\$ -	\$1,000,000	\$ -	\$1,000,000
	Other Distribution Revenue	\$3,060,205	\$ -	\$3,060,205	\$ -	\$3,060,205
	Other Income and Deductions	\$2,181,108	\$ -	\$2,181,108	\$ -	\$2,181,108
	Total Revenue Offsets	\$12,151,392	\$ -	\$12,151,392	\$ -	\$12,151,392



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Taxes/PILs

Line No.	Particulars	Application	Application Update	Per Board Decision
<u>Determination of Taxable Income</u>				
1	Utility net income before taxes	\$51,822,953	\$52,353,088	\$48,462,046
2	Adjustments required to arrive at taxable utility income	(\$19,163,272)	(\$19,163,272)	(\$19,163,272)
3	Taxable income	<u>\$32,659,681</u>	<u>\$33,189,816</u>	<u>\$29,298,774</u>
<u>Calculation of Utility Income Taxes</u>				
4	Income taxes	<u>\$8,569,789</u>	<u>\$8,476,530</u>	<u>\$8,476,530</u>
6	Total taxes	<u>\$8,569,789</u>	<u>\$8,476,530</u>	<u>\$8,476,530</u>
7	Gross-up of Income Taxes	<u>\$3,089,788</u>	<u>\$3,056,164</u>	<u>\$3,056,164</u>
8	Grossed-up Income Taxes	<u>\$11,659,577</u>	<u>\$11,532,694</u>	<u>\$11,532,694</u>
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$11,659,577</u>	<u>\$11,532,694</u>	<u>\$11,532,694</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%		\$771,010,996	3.44%		\$26,522,778
2	Short-term Debt	4.00%		\$55,072,214	2.75%		\$1,514,486
3	Total Debt	60.00%		\$826,083,210	3.39%		\$28,037,264
	Equity						
4	Common Equity	40.00%		\$550,722,140	9.41%		\$51,822,953
5	Preferred Shares	0.00%		\$ -	0.00%		\$ -
6	Total Equity	40.00%		\$550,722,140	9.41%		\$51,822,953
7	Total	100.00%		\$1,376,805,350	5.80%		\$79,860,218
		Application Update					
		(%)		(\$)	(%)		(\$)
	Debt						
1	Long-term Debt	56.00%		\$778,898,234	3.44%		\$26,794,099
2	Short-term Debt	4.00%		\$55,635,588	2.75%		\$1,529,979
3	Total Debt	60.00%		\$834,533,822	3.39%		\$28,324,078
	Equity						
4	Common Equity	40.00%		\$556,355,882	9.41%		\$52,353,088
5	Preferred Shares	0.00%		\$ -	0.00%		\$ -
6	Total Equity	40.00%		\$556,355,882	9.41%		\$52,353,088
7	Total	100.00%		\$1,390,889,704	5.80%		\$80,677,166
		Per Board Decision					
		(%)		(\$)	(%)		(\$)
	Debt						
8	Long-term Debt	56.00%		\$721,008,128	3.44%		\$24,802,680
9	Short-term Debt	4.00%		\$51,500,581	2.75%		\$1,416,266
10	Total Debt	60.00%		\$772,508,708	3.39%		\$26,218,946
	Equity						
11	Common Equity	40.00%		\$515,005,806	9.41%		\$48,462,046
12	Preferred Shares	0.00%		\$ -	0.00%		\$ -
13	Total Equity	40.00%		\$515,005,806	9.41%		\$48,462,046
14	Total	100.00%		\$1,287,514,514	5.80%		\$74,680,992

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Deficiency/Sufficiency

Line No.	Particulars	Initial Application		Application Update		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		\$54,237,845		\$55,199,896		\$47,041,835
2	Distribution Revenue	\$189,644,373	\$187,015,921	\$189,627,810	\$186,617,530	\$189,627,810	\$194,775,591
3	Other Operating Revenue Offsets - net	\$12,151,392	\$12,151,392	\$12,151,392	\$12,151,392	\$12,151,392	\$12,151,392
4	Total Revenue	\$201,795,765	\$253,405,158	\$201,779,201	\$253,968,818	\$201,779,201	\$253,968,818
5	Operating Expenses	\$161,885,363	\$161,885,363	\$161,758,958	\$161,758,958	\$161,758,958	\$161,758,958
6	Deemed Interest Expense	\$28,037,264	\$28,037,264	\$28,324,078	\$28,324,078	\$26,218,946	\$26,218,946
8	Total Cost and Expenses	\$189,922,628	\$189,922,628	\$190,083,036	\$190,083,036	\$187,977,904	\$187,977,904
9	Utility Income Before Income Taxes	\$11,873,138	\$63,482,530	\$11,696,165	\$63,885,782	\$13,801,297	\$65,990,914
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$19,163,272)	(\$19,163,272)	(\$19,163,272)	(\$19,163,272)	(\$19,163,272)	(\$19,163,272)
11	Taxable Income	(\$7,290,134)	\$44,319,258	(\$7,467,107)	\$44,722,510	(\$5,361,975)	\$46,827,642
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%	26.50%	26.50%
13	Income Tax on Taxable Income	\$ -	\$11,744,603	\$ -	\$11,851,465	\$ -	\$12,409,325
14	Income Tax Credits	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)
15	Utility Net Income	\$11,958,138	\$51,822,953	\$11,781,165	\$52,353,088	\$13,886,297	\$54,458,220
16	Utility Rate Base	\$1,376,805,350	\$1,376,805,350	\$1,390,889,704	\$1,390,889,704	\$1,287,514,514	\$1,287,514,514
17	Deemed Equity Portion of Rate Base	\$550,722,140	\$550,722,140	\$556,355,882	\$556,355,882	\$515,005,806	\$515,005,806
18	Income/(Equity Portion of Rate Base)	2.17%	9.41%	2.12%	9.41%	2.70%	10.57%
19	Target Return - Equity on Rate Base	9.41%	9.41%	9.41%	9.41%	9.41%	9.41%
20	Deficiency/Sufficiency in Return on Equity	-7.24%	0.00%	-7.29%	0.00%	-6.71%	1.16%
21	Indicated Rate of Return	2.90%	5.80%	2.88%	5.80%	3.11%	6.27%
22	Requested Rate of Return on Rate Base	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%
23	Deficiency/Sufficiency in Rate of Return	-2.90%	0.00%	-2.92%	0.00%	-2.69%	0.47%
24	Target Return on Equity	\$51,822,953	\$51,822,953	\$52,353,088	\$52,353,088	\$48,462,046	\$48,462,046
25	Revenue Deficiency/(Sufficiency)	\$39,864,816	\$0	\$40,571,923	(\$1)	\$34,575,749	\$5,996,174
26	Gross Revenue Deficiency/(Sufficiency)	\$54,237,845 ⁽¹⁾		\$55,199,896 ⁽¹⁾		\$47,041,835 ⁽¹⁾	

Notes:

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Requirement

Line No.	Particulars	Application	Application Update	Per Board Decision
1	OM&A Expenses	\$97,800,117	\$97,800,117	\$97,800,117
2	Amortization/Depreciation	\$60,711,328	\$60,584,923	\$60,584,923
3	Property Taxes	\$3,373,918	\$3,373,918	\$3,373,918
5	Income Taxes (Grossed up)	\$11,659,577	\$11,532,694	\$11,532,694
6	Other Expenses	\$ -		
7	Return			
	Deemed Interest Expense	\$28,037,264	\$28,324,078	\$26,218,946
	Return on Deemed Equity	\$51,822,953	\$52,353,088	\$48,462,046
8	Service Revenue Requirement (before Revenues)	<u>\$253,405,158</u>	<u>\$253,968,819</u>	<u>\$247,972,644</u>
9	Revenue Offsets	\$12,151,392	\$12,151,392	\$ -
10	Base Revenue Requirement (excluding Tranformer Owership Allowance credit adjustment)	<u>\$241,253,766</u>	<u>\$241,817,427</u>	<u>\$247,972,644</u>
11	Distribution revenue	\$241,253,766	\$241,817,426	\$241,817,426
12	Other revenue	\$12,151,392	\$12,151,392	\$12,151,392
13	Total revenue	<u>\$253,405,158</u>	<u>\$253,968,818</u>	<u>\$253,968,818</u>
14	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>\$0</u>	<u>(\$1)</u>	<u>\$5,996,174</u>

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application	Application Update	Δ% ⁽²⁾	Per Board Decision	Δ% ⁽²⁾
Service Revenue Requirement	\$253,405,158	\$253,968,819	\$0	\$247,972,644	(\$1)
Grossed-Up Revenue					
Deficiency/(Sufficiency)	\$54,237,845	\$55,199,896	\$0	\$47,041,835	(\$1)
Base Revenue Requirement (to be recovered from Distribution Rates)	\$241,253,766	\$241,817,427	\$0	\$247,972,644	(\$1)
Revenue Deficiency/(Sufficiency) Associated with Base Revenue Requirement	\$51,609,393	\$52,189,616	\$0	\$ -	(\$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:

Application Update

Customer Class		Initial Application			Application Update			Per Board Decision		
Input the name of each customer class.		Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	325,150	2,333,345,000		325,150	2,333,198,000				
2	GS < 50 kW	25,846	698,161,000		25,846	697,774,000				
3	GS > 50 to 1,499 kW	3,013	2,844,419,000	6,838,752	3,013	2,841,988,000	6,838,407			
4	GS > 1,500 to 4,999 kW	68	684,488,000	1,521,105	68	684,409,000	1,519,896			
5	Large Use	11	572,834,000	1,050,683	11	572,834,000	1,050,683			
6	Street Lighting	65,564	19,603,000	54,373	65,564	19,603,000	54,374			
7	Sentinel Lighting	55	47,000	132	55	47,000	132			
8	Unmetered Scattered Load	3,321	12,195,000		3,321	12,195,000				
9	Standby Power	3		7,440	3		7,440			
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
Total			7,165,092,000	9,472,485		7,162,048,000	9,470,932		-	-

Notes:

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Cost Allocation and Rate Design

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

Stage in Application Process: **Application Update**

A) Allocated Costs

Name of Customer Class ⁽³⁾	Costs Allocated from Previous Study ⁽¹⁾	%	Allocated Class Revenue Requirement ⁽¹⁾	%
From Sheet 10. Load Forecast				
(7A)				
1 Residential	\$ 107,281,788	53.50%	\$ 140,076,506	55.16%
2 GS < 50 kW	\$ 20,646,221	10.30%	\$ 25,366,577	9.99%
3 GS > 50 to 1,499 kW	\$ 48,750,762	24.31%	\$ 63,126,959	24.86%
4 GS > 1,500 to 4,999 kW	\$ 13,365,246	6.66%	\$ 13,311,223	5.24%
5 Large Use	\$ 8,063,832	4.02%	\$ 10,263,257	4.04%
6 Street Lighting	\$ 1,811,439	0.90%	\$ 1,151,838	0.45%
7 Sentinel Lighting	\$ 6,568	0.00%	\$ 11,566	0.00%
8 Unmetered Scattered Load	\$ 547,549	0.27%	\$ 645,347	0.25%
9 Standby Power	\$ 70,655	0.04%	\$ 15,546	0.01%
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 200,544,060	100.00%	\$ 253,968,818	100.00%
Service Revenue Requirement (from Sheet 9)			\$ 253,968,818.71	

- (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	\$ 132,817,272	\$ 136,684,348	\$ 136,680,054	\$ 8,916,019
2 GS < 50 kW	\$ 28,302,418	\$ 29,340,369	\$ 29,333,599	\$ 1,086,890
3 GS > 50 to 1,499 kW	\$ 50,899,748	\$ 52,480,738	\$ 52,481,058	\$ 1,538,907
4 GS > 1,500 to 4,999 kW	\$ 12,663,558	\$ 12,714,983	\$ 12,714,911	\$ 300,625
5 Large Use	\$ 8,566,632	\$ 8,559,296	\$ 8,559,248	\$ 211,532
6 Street Lighting	\$ 1,269,384	\$ 1,323,574	\$ 1,322,985	\$ 57,121
7 Sentinel Lighting	\$ 6,843	\$ 7,102	\$ 7,691	\$ 972
8 Unmetered Scattered Load	\$ 643,483	\$ 683,190	\$ 682,993	\$ 38,846
9 Standby Power	\$ 22,947	\$ 23,826	\$ 23,827	\$ 479
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 235,192,284	\$ 241,817,426	\$ 241,806,366	\$ 12,151,392

- (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%	103.94%	103.94%	85 - 115
2 GS < 50 kW	118.23%	119.95%	119.92%	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%	97.78%	97.78%	80 - 120
5 Large Use	85.36%	85.46%	85.46%	85 - 115
6 Street Lighting	80.00%	119.87%	119.82%	80 - 120
7 Sentinel Lighting	76.00%	69.81%	74.91%	80 - 120
8 Unmetered Scattered Load	118.72%	111.88%	111.85%	80 - 120
9 Standby Power	21.03%	156.35%	156.35%	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 ⁽¹¹⁾

Name of Customer Class		Proposed Revenue-to-Cost Ratio			Policy Range
		Test Year	Price Cap IR Period		
		2021	2022	2023	
1	Residential	103.94%	103.94%	103.94%	85 - 115
2	GS < 50 kW	119.92%	119.92%	119.92%	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	97.78%	97.78%	97.78%	80 - 120
5	Large Use	85.46%	85.46%	85.46%	85 - 115
6	Street Lighting	119.82%	119.82%	119.82%	80 - 120
7	Sentinel Lighting	74.91%	74.91%	74.91%	80 - 120
8	Unmetered Scattered Load	111.85%	111.85%	111.85%	80 - 120
9	Standby Power	156.35%	156.35%	156.35%	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	2,333,198,000
Proposed Residential Class Specific Revenue Requirement ¹	\$ 136,680,054.00
Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 35.03
Distribution Volumetric Rate (\$/kWh)	\$ -

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	35.03	325,150	\$ 136,680,054.00	100.00%
Variable	0	2,333,198,000	\$ -	0.00%
TOTAL	-	-	\$ 136,680,054.00	-

C Calculating Test Year Base Rates

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

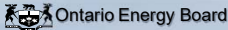
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 136,680,054.00	35.03	\$ 136,680,054.00
Variable	\$ -	0	\$ -
TOTAL	\$ 136,680,054.00	-	\$ 136,680,054.00

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

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

Notes:

- ¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- ² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. 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.
- ³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)



Revenue Requirement Workform (RRWF) for 2020 Filers

Rate Design and Revenue Reconciliation

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

Stage in Process:		Application Update			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 ² Percentage to be entered as a fraction between 0 and 1							
Customer Class	Volumetric Charge Determinant	Customers / Connections	kWh	KW or kVA	Total Class Revenue Requirement	Monthly Service Charge	Volumetric	Fixed	Variable	Transformer Ownership Allowance ¹ (\$)	Monthly Service Charge Rate No. of decimals	Volumetric Rate Rate No. of decimals	MSC Revenues	Volumetric revenues	Revenues less Transformer Ownership Allowance
From sheet 10. Load Forecast															
1 Residential	kWh	325,150	2,333,198,000	-	\$ 136,680,054	\$ 136,680,054	\$ -	100.00%	0.00%		\$35.03	2	\$0.0000 /kWh	4	##### \$ - #####
2 GS < 50 kW	kWh	25,846	697,774,000	-	\$ 29,333,599	\$ 7,491,801	\$ 21,841,797	25.54%	74.46%		\$24.16		\$0.0313 /kWh		\$ 7,493,272.32 \$21,840,326.2000 \$29,333,598.52
3 GS > 50 to 1,499 kW	kW	3,013	2,841,988,000	6,838,407	\$ 52,481,058	\$ 8,335,829	\$ 44,145,229	15.88%	84.12%	\$ 344,016	\$230.55		\$6.5058 /kW		\$ 8,335,765.80 \$44,489,308.2606 \$52,481,058.01
4 GS > 1,500 to 4,999 kW	kW	68	684,409,000	1,519,896	\$ 12,714,911	\$ 3,625,110	\$ 9,089,801	28.51%	71.49%	\$ 398,000	\$4,442.54		\$6.2424 /kW		\$ 3,625,112.64 \$ 9,487,798.7904 \$12,714,911.32
5 Large Use	kW	11	572,834,000	1,050,683	\$ 8,559,248	\$ 2,099,468	\$ 6,459,780	24.53%	75.47%	\$ 316,495	\$15,905.06		\$6.4494 /kW		\$ 2,099,467.92 \$ 6,776,274.9402 \$ 8,559,248.09
6 Street Lighting	kW	65,564	19,603,000	54,374	\$ 1,322,985	\$ 889,046	\$ 433,939	67.20%	32.80%		\$11.13		\$7.9806 /kW		\$ 889,047.84 \$ 433,937.1444 \$ 1,322,984.98
7 Sentinel Lighting	kW	55	47,000	132	\$ 7,691	\$ 3,967	\$ 3,725	51.57%	48.43%		\$6.01		\$28.2183 /kW		\$ 3,966.60 \$ 3,724.8156 \$ 7,691.42
8 Unmetered Scattered Load	kWh	3,321	12,195,000	-	\$ 682,993	\$ 280,505	\$ 402,488	41.07%	58.93%		\$7.04		\$0.0330 /kWh		\$ 280,558.08 \$ 402,435.0000 \$ 682,993.08
9 Standby Power	kW	3	-	7,440	\$ 23,827	\$ 6,750	\$ 17,077	28.33%	71.67%		\$187.49		\$2.2953 /kW		\$ 6,749.64 \$ 17,077.0320 \$ 23,826.67
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Transformer Ownership Allowance										\$ 1,058,511					
											Rates recover revenue requirement				
											Base Revenue Requirement				
											Difference				
											% Difference				
											\$ 11,060.62				
											-0.005%				

Notes:

1

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

Notes:

- ¹ Transformer Ownership Allowance is entered as a positive amount, and only for those classes to which it applies.
- ² The Fixed/Variable split, for each customer class, drives the "rate generator" portion of this sheet of the RRWF. Only the "fixed" fraction is entered, as the sum of the "fixed" and "variable" portions must sum to 100%. For a distributor that may set the Monthly Service Charge, the "fixed" ratio is calculated as: [MSC x (average number of customers or connections) x 12 months] / (Class Allocated Revenue Requirement).



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.

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

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

Summary of Proposed Changes

Reference ⁽¹⁾	Item / Description ⁽²⁾	Cost of Capital		Rate Base and Capital Expenditures			Operating Expenses			Revenue Requirement			
		Regulated Return on Capital	Regulated Rate of Return	Rate Base	Working Capital	Working Capital Allowance (\$)	Amortization / Depreciation	Taxes/PILs	OM&A	Service Revenue Requirement	Other Revenues	Base Revenue Requirement	Grossed up Revenue Deficiency / Sufficiency
	Original Application	\$ 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	\$ 12,151,392	\$ 241,253,766	\$ 54,237,845
1	Updated Application for 2019 Actuals	\$ 80,677,166	5.80%	\$ 1,390,889,704	\$ 1,378,335,865	\$ 103,375,190	\$ 60,584,923	\$ 11,532,694	\$ 97,800,117	\$ 253,968,819	\$ 12,151,392	\$ 241,817,427	\$ 55,199,896



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	RegulatoryAffairs@HydroOttawa.com
Test Year	2025
Bridge Year	
Last Rebasing Year	2016

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



Version 9.00

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Service Territory	
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Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

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[6. Taxes PILs](#)

[7. Cost of Capital](#)

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[10. Load Forecast](#)

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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.**



Revenue Requirement Workform (RRWF) for 2020 Filers

Data Input ⁽¹⁾

	Initial Application	(2)	Adjustments	Application Update	(6)	Adjustments	Per Board Decision
1 Rate Base							
Gross Fixed Assets (average)	\$1,850,890,773		\$5,535,064	\$1,856,425,837			\$1,856,425,837
Accumulated Depreciation (average)	(\$537,205,937)	(5)	\$7,702,671	(\$529,503,266)			(\$529,503,266)
Allowance for Working Capital:							
Controllable Expenses	\$103,713,503			\$103,713,503			\$103,713,503
Cost of Power	\$1,310,655,495		\$12,955,221	\$1,323,610,716			\$1,323,610,716
Working Capital Rate (%)	7.50%	(9)	\$0	7.50%	(9)		(9)
2 Utility Income							
Operating Revenues:							
Distribution Revenue at Current Rates	\$190,581,980		(\$15,383)	\$190,566,597			
Distribution Revenue at Proposed Rates	\$247,596,176		\$621,157	\$248,217,333			
Other Revenue:							
Specific Service Charges	\$6,212,623		\$0	\$6,212,623			
Late Payment Charges	\$1,000,000		\$0	\$1,000,000			
Other Distribution Revenue	\$3,162,990		\$0	\$3,162,990			
Other Income and Deductions	\$2,081,096		\$0	\$2,081,096			
Total Revenue Offsets	\$12,456,709	(7)	\$0	\$12,456,709			
Operating Expenses:							
OM+A Expenses	\$100,254,900			\$100,254,900			\$100,254,900
Depreciation/Amortization	\$64,026,637		(\$126,405)	\$63,900,232			\$63,900,232
Property taxes	\$3,458,604			\$3,458,604			\$3,458,604
Other expenses							
3 Taxes/PILs							
Taxable Income:							
	(\$32,076,354)	(3)	\$0	(\$32,076,354)			
Adjustments required to arrive at taxable income							
Utility Income Taxes and Rates:							
Income taxes (not grossed up)	\$5,651,577		(\$73,041)	\$5,578,536			
Income taxes (grossed up)	\$7,689,220			\$7,589,845			
Federal tax (%)	15.00%		\$0	15.00%			
Provincial tax (%)	11.50%		\$0	11.50%			
Income Tax Credits	(\$85,000)		\$0	(\$85,000)			
4 Capitalization/Cost of Capital							
Capital Structure:							
Long-term debt Capitalization Ratio (%)	56.0%		\$0	56.0%			
Short-term debt Capitalization Ratio (%)	4.0%	(8)	\$0	4.0%	(8)		(8)
Common Equity Capitalization Ratio (%)	40.0%		\$0	40.0%			
Preferred Shares Capitalization Ratio (%)							
	100.0%			100.0%			
Cost of Capital							
Long-term debt Cost Rate (%)	3.69%		\$0	3.69%			
Short-term debt Cost Rate (%)	2.75%		\$0	2.75%			
Common Equity Cost Rate (%)	9.46%		\$0	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

Line No.	Particulars	Initial Application	Adjustments	Application Update	Adjustments	Per Board Decision
1	Gross Fixed Assets (average) ⁽²⁾	\$1,850,890,773	\$5,535,064	\$1,856,425,837	\$ -	\$1,856,425,837
2	Accumulated Depreciation (average) ⁽²⁾	<u>(\$537,205,937)</u>	<u>\$7,702,671</u>	<u>(\$529,503,266)</u>	<u>\$ -</u>	<u>(\$529,503,266)</u>
3	Net Fixed Assets (average) ⁽²⁾	\$1,313,684,836	\$13,237,735	\$1,326,922,571	\$ -	\$1,326,922,571
4	Allowance for Working Capital ⁽¹⁾	\$106,077,675	\$971,642	\$107,049,316	#####	\$ -
5	Total Rate Base	<u>\$1,419,762,511</u>	<u>\$14,209,377</u>	<u>\$1,433,971,887</u>	<u>#####</u>	<u>\$1,326,922,571</u>

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses	\$103,713,503	\$ -	\$103,713,503	\$ -	\$103,713,503
7	Cost of Power	<u>\$1,310,655,495</u>	<u>\$12,955,221</u>	<u>\$1,323,610,716</u>	<u>\$ -</u>	<u>\$1,323,610,716</u>
8	Working Capital Base	\$1,414,368,998	\$12,955,221	\$1,427,324,219	\$ -	\$1,427,324,219
9	Working Capital Rate % ⁽¹⁾	7.50%	0.00%	7.50%	-7.50%	0.00%
10	Working Capital Allowance	<u>\$106,077,675</u>	<u>\$971,642</u>	<u>\$107,049,316</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.



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Utility Income

Line No.	Particulars	Initial Application	Adjustments	Application Update	Adjustments	Per Board Decision
Operating Revenues:						
1	Distribution Revenue (at Proposed Rates)	\$247,596,176	\$621,157	\$248,217,333	\$ -	\$248,217,333
2	Other Revenue ⁽¹⁾	\$12,456,709	\$ -	\$12,456,709	\$ -	\$12,456,709
3	Total Operating Revenues	\$260,052,885	\$621,157	\$260,674,042	\$ -	\$260,674,042
Operating Expenses:						
4	OM+A Expenses	\$100,254,900	\$ -	\$100,254,900	\$ -	\$100,254,900
5	Depreciation/Amortization	\$64,026,637	(\$126,405)	\$63,900,232	\$ -	\$63,900,232
6	Property taxes	\$3,458,604	\$ -	\$3,458,604	\$ -	\$3,458,604
7	Capital taxes	\$ -	\$ -	\$ -	\$ -	\$ -
8	Other expense	\$ -	\$ -	\$ -	\$ -	\$ -
9	Subtotal (lines 4 to 8)	\$167,740,140	(\$126,405)	\$167,613,735	\$ -	\$167,613,735
10	Deemed Interest Expense	\$30,899,711	\$309,253	\$31,208,964	(\$2,329,821)	\$28,879,143
11	Total Expenses (lines 9 to 10)	\$198,639,852	\$182,848	\$198,822,700	(\$2,329,821)	\$196,492,878
12	Utility income before income taxes	\$61,413,034	\$438,309	\$61,851,343	\$2,329,821	\$64,181,164
13	Income taxes (grossed-up)	\$7,689,220	(\$99,376)	\$7,589,845	\$ -	\$7,589,845
14	Utility net income	\$53,723,813	\$537,684	\$54,261,498	\$2,329,821	\$56,591,319

Notes

Other Revenues / Revenue Offsets

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Taxes/PILs

Line No.	Particulars	Application	Application Update	Per Board Decision
Determination of Taxable Income				
1	Utility net income before taxes	\$53,723,813	\$54,261,496	\$50,210,750
2	Adjustments required to arrive at taxable utility income	(\$32,076,354)	(\$32,076,354)	(\$32,076,354)
3	Taxable income	\$21,647,459	\$22,185,142	\$18,134,396
Calculation of Utility Income Taxes				
4	Income taxes	\$5,651,577	\$5,578,536	\$5,578,536
6	Total taxes	\$5,651,577	\$5,578,536	\$5,578,536
7	Gross-up of Income Taxes	\$2,037,643	\$2,011,309	\$2,011,309
8	Grossed-up Income Taxes	\$7,689,220	\$7,589,845	\$7,589,845
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	\$7,689,220	\$7,589,845	\$7,589,845
10	Other tax Credits	(\$85,000)	(\$85,000)	(\$85,000)
Tax Rates				
11	Federal tax (%)	15.00%	15.00%	15.00%
12	Provincial tax (%)	11.50%	11.50%	11.50%
13	Total tax rate (%)	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%	\$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
Application Update					
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	56.00%	\$803,024,257	3.69%	\$29,631,595
2	Short-term Debt	4.00%	\$57,358,875	2.75%	\$1,577,369
3	Total Debt	60.00%	\$860,383,132	3.63%	\$31,208,964
Equity					
4	Common Equity	40.00%	\$573,588,755	9.46%	\$54,261,496
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$573,588,755	9.46%	\$54,261,496
7	Total	100.00%	\$1,433,971,887	5.96%	\$85,470,460
Per Board Decision					
		(%)	(\$)	(%)	(\$)
	Debt				
8	Long-term Debt	56.00%	\$743,076,640	3.69%	\$27,419,528
9	Short-term Debt	4.00%	\$53,076,903	2.75%	\$1,459,615
10	Total Debt	60.00%	\$796,153,543	3.63%	\$28,879,143
Equity					
11	Common Equity	40.00%	\$530,769,028	9.46%	\$50,210,750
12	Preferred Shares	0.00%	\$ -	0.00%	\$ -
13	Total Equity	40.00%	\$530,769,028	9.46%	\$50,210,750
14	Total	100.00%	\$1,326,922,571	5.96%	\$79,089,893

Notes



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Deficiency/Sufficiency

Line No.	Particulars	Initial Application		Application Update		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		\$66,993,165		\$67,994,408		\$59,313,363
2	Distribution Revenue	\$190,581,980	\$180,603,011	\$190,566,597	\$180,222,925	\$190,566,597	\$188,903,970
3	Other Operating Revenue Offsets - net	\$12,456,709	\$12,456,709	\$12,456,709	\$12,456,709	\$12,456,709	\$12,456,709
4	Total Revenue	\$203,038,689	\$260,052,885	\$203,023,306	\$260,674,042	\$203,023,306	\$260,674,042
5	Operating Expenses	\$167,740,140	\$167,740,140	\$167,613,735	\$167,613,735	\$167,613,735	\$167,613,735
6	Deemed Interest Expense	\$30,899,711	\$30,899,711	\$31,208,964	\$31,208,964	\$28,879,143	\$28,879,143
8	Total Cost and Expenses	\$198,639,852	\$198,639,852	\$198,822,700	\$198,822,700	\$196,492,878	\$196,492,878
9	Utility Income Before Income Taxes	\$4,398,837	\$61,413,034	\$4,200,607	\$61,851,343	\$6,530,428	\$64,181,164
10	Tax Adjustments to Accounting Income per 2013 PILs model	(\$32,076,354)	(\$32,076,354)	(\$32,076,354)	(\$32,076,354)	(\$32,076,354)	(\$32,076,354)
11	Taxable Income	(\$27,677,517)	\$29,336,680	(\$27,875,747)	\$29,774,989	(\$25,545,926)	\$32,104,810
12	Income Tax Rate	26.50%	26.50%	26.50%	26.50%	26.50%	26.50%
13	Income Tax on Taxable Income	\$ -	\$7,774,220	\$ -	\$7,890,372	\$ -	\$8,507,775
14	Income Tax Credits	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)	(\$85,000)
15	Utility Net Income	\$4,483,837	\$53,723,813	\$4,285,607	\$54,261,498	\$6,615,428	\$56,591,319
16	Utility Rate Base	\$1,419,762,511	\$1,419,762,511	\$1,433,971,887	\$1,433,971,887	\$1,326,922,571	\$1,326,922,571
17	Deemed Equity Portion of Rate Base	\$567,905,004	\$567,905,004	\$573,588,755	\$573,588,755	\$530,769,028	\$530,769,028
18	Income/(Equity Portion of Rate Base)	0.79%	9.46%	0.75%	9.46%	1.25%	10.66%
19	Target Return - Equity on Rate Base	9.46%	9.46%	9.46%	9.46%	9.46%	9.46%
20	Deficiency/Sufficiency in Return on Equity	-8.67%	0.00%	-8.71%	0.00%	-8.21%	1.20%
21	Indicated Rate of Return	2.49%	5.96%	2.48%	5.96%	2.67%	6.44%
22	Requested Rate of Return on Rate Base	5.96%	5.96%	5.96%	5.96%	5.96%	5.96%
23	Deficiency/Sufficiency in Rate of Return	-3.47%	0.00%	-3.49%	0.00%	-3.29%	0.48%
24	Target Return on Equity	\$53,723,813	\$53,723,813	\$54,261,496	\$54,261,496	\$50,210,750	\$50,210,750
25	Revenue Deficiency/(Sufficiency)	\$49,239,976	(\$0)	\$49,975,890	\$1	\$43,595,322	\$6,380,569
26	Gross Revenue Deficiency/(Sufficiency)	\$66,993,165 ⁽¹⁾		\$67,994,408 ⁽¹⁾		\$59,313,363 ⁽¹⁾	

Notes:

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Revenue Requirement

Line No.	Particulars	Application	Application Update	Per Board Decision
1	OM&A Expenses	\$100,254,900	\$100,254,900	\$100,254,900
2	Amortization/Depreciation	\$64,026,637	\$63,900,232	\$63,900,232
3	Property Taxes	\$3,458,604	\$3,458,604	\$3,458,604
5	Income Taxes (Grossed up)	\$7,689,220	\$7,589,845	\$7,589,845
6	Other Expenses	\$ -		
7	Return			
	Deemed Interest Expense	\$30,899,711	\$31,208,964	\$28,879,143
	Return on Deemed Equity	\$53,723,813	\$54,261,496	\$50,210,750
8	Service Revenue Requirement (before Revenues)	<u>\$260,052,886</u>	<u>\$260,674,041</u>	<u>\$254,293,473</u>
9	Revenue Offsets	\$12,456,709	\$12,456,709	\$ -
10	Base Revenue Requirement (excluding Tranformer Owership Allowance credit adjustment)	<u>\$247,596,177</u>	<u>\$248,217,332</u>	<u>\$254,293,473</u>
11	Distribution revenue	\$247,596,176	\$248,217,333	\$248,217,333
12	Other revenue	\$12,456,709	\$12,456,709	\$12,456,709
13	Total revenue	<u>\$260,052,885</u>	<u>\$260,674,042</u>	<u>\$260,674,042</u>
14	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>(\$0)</u> ⁽¹⁾	<u>\$1</u> ⁽¹⁾	<u>\$6,380,569</u> ⁽¹⁾

Summary Table of Revenue Requirement and Revenue Deficiency/Sufficiency

	Application	Application Update	Δ% ⁽²⁾	Per Board Decision	Δ% ⁽²⁾
Service Revenue Requirement	\$260,052,886	\$260,674,041	\$0	\$254,293,473	(\$1)
Grossed-Up Revenue					
Deficiency/(Sufficiency)	\$66,993,165	\$67,994,408	\$0	\$59,313,363	(\$1)
Base Revenue Requirement (to be recovered from Distribution Rates)					
Revenue Deficiency/(Sufficiency)	\$247,596,177	\$248,217,332	\$0	\$254,293,473	(\$1)
Associated with Base Revenue Requirement	\$57,014,196	\$57,650,736	\$0	\$ -	(\$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:

Application Update

Customer Class		Initial Application			Application Update			Per Board Decision		
Input the name of each customer class.		Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾	Customer / Connections	kWh	kW/kVA ⁽¹⁾
		Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual	Test Year average or mid-year	Annual	Annual
1	Residential	327,975	2,353,299,000		327,975	2,353,149,000				
2	GS < 50 kW	25,987	696,245,000		25,987	695,837,000				
3	GS > 50 to 1,499 kW	2,976	2,845,454,000	6,831,218	2,976	2,842,881,000	6,831,256			
4	GS > 1,500 to 4,999 kW	68	683,614,000	1,519,514	68	683,532,000	1,518,291			
5	Large Use	11	570,390,000	1,046,964	11	570,390,000	1,046,964			
6	Street Lighting	66,484	18,854,000	52,530	66,484	18,854,000	52,530			
7	Sentinel Lighting	55	47,000	132	55	47,000	132			
8	Unmetered Scattered Load	3,321	11,728,000		3,321	11,728,000				
9	Standby Power	3		7,440	3		7,440			
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
Total			7,179,631,000	9,457,798		7,176,418,000	9,456,613		-	-

Notes:

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



Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2020 Filers

Cost Allocation and Rate Design

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

Stage in Application Process: **Application Update**

A) Allocated Costs

Name of Customer Class ⁽³⁾	Costs Allocated from Previous Study ⁽¹⁾	%	Allocated Class Revenue Requirement ⁽¹⁾	%
From Sheet 10. Load Forecast				
(7A)				
1 Residential	\$ 107,281,788	53.50%	\$ 143,774,772	55.16%
2 GS < 50 kW	\$ 20,646,221	10.30%	\$ 26,036,299	9.99%
3 GS > 50 to 1,499 kW	\$ 48,750,762	24.31%	\$ 64,793,622	24.86%
4 GS > 1,500 to 4,999 kW	\$ 13,365,246	6.66%	\$ 13,662,663	5.24%
5 Large Use	\$ 8,063,832	4.02%	\$ 10,534,225	4.04%
6 Street Lighting	\$ 1,811,439	0.90%	\$ 1,182,248	0.45%
7 Sentinel Lighting	\$ 6,568	0.00%	\$ 11,871	0.00%
8 Unmetered Scattered Load	\$ 547,549	0.27%	\$ 662,386	0.25%
9 Standby Power	\$ 70,655	0.04%	\$ 15,956	0.01%
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 200,544,060	100.00%	\$ 260,674,042	100.00%
Service Revenue Requirement (from Sheet 9)			\$ 260,674,040.72	

- (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	\$ 137,867,571	\$ 140,306,530	\$ 140,307,705	\$ 9,140,043
2 GS < 50 kW	\$ 29,313,849	\$ 30,110,803	\$ 30,076,336	\$ 1,114,200
3 GS > 50 to 1,499 kW	\$ 52,676,187	\$ 53,871,028	\$ 53,870,770	\$ 1,577,574
4 GS > 1,500 to 4,999 kW	\$ 13,102,892	\$ 13,051,573	\$ 13,051,553	\$ 308,178
5 Large Use	\$ 8,851,758	\$ 8,785,889	\$ 8,785,857	\$ 216,847
6 Street Lighting	\$ 1,320,744	\$ 1,358,049	\$ 1,357,443	\$ 58,556
7 Sentinel Lighting	\$ 7,691	\$ 7,896	\$ 8,500	\$ 996
8 Unmetered Scattered Load	\$ 667,582	\$ 701,107	\$ 701,468	\$ 39,823
9 Standby Power	\$ 23,827	\$ 24,457	\$ 24,458	\$ 491
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total	\$ 243,832,101	\$ 248,217,333	\$ 248,184,089	\$ 12,456,709

- (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%	103.94%	103.95%	85 - 115
2 GS < 50 kW	118.23%	119.93%	119.80%	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%	97.78%	97.78%	80 - 120
5 Large Use	85.36%	85.46%	85.46%	85 - 115
6 Street Lighting	80.00%	119.82%	119.77%	80 - 120
7 Sentinel Lighting	76.00%	74.91%	80.00%	80 - 120
8 Unmetered Scattered Load	118.72%	111.86%	111.91%	80 - 120
9 Standby Power	21.03%	156.36%	156.36%	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 ⁽¹¹⁾

Name of Customer Class		Proposed Revenue-to-Cost Ratio			Policy Range
	Test Year	Price Cap IR Period			
	2021	2022	2023		
1	Residential	103.95%	103.95%	103.95%	85 - 115
2	GS < 50 kW	119.80%	119.80%	119.80%	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	97.78%	97.78%	97.78%	80 - 120
5	Large Use	85.46%	85.46%	85.46%	85 - 115
6	Street Lighting	119.77%	119.77%	119.77%	80 - 120
7	Sentinel Lighting	80.00%	80.00%	80.00%	80 - 120
8	Unmetered Scattered Load	111.91%	111.91%	111.91%	80 - 120
9	Standby Power	156.36%	156.36%	156.36%	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	327,975
kWh	2,353,149,000

Proposed Residential Class Specific Revenue Requirement ¹	\$ 140,307,705.00
--	-------------------

Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$ 35.65
Distribution Volumetric Rate (\$/kWh)	\$ -

B Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	35.65	327,975	\$ 140,307,705.00	100.00%
Variable	0	2,353,149,000	\$ -	0.00%
TOTAL	-	-	\$ 140,307,705.00	-

C Calculating Test Year Base Rates

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

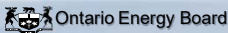
	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$ 140,307,705.00	35.65	\$ 140,307,705.00
Variable	\$ -	0	\$ -
TOTAL	\$ 140,307,705.00	-	\$ 140,307,705.00

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

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

Notes:

- ¹ The final residential class specific revenue requirement, excluding allocated Miscellaneous Revenues, as shown on Sheet 11. Cost Allocation, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- ² The distributor should enter the number of years remaining before the transition to fully fixed rates is completed. 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.
- ³ Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)



Revenue Requirement Workform
(RRWF) for 2020 Filers

Rate Design and Revenue Reconciliation

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

Stage in Process:		Application Update				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 ²		Transformer Ownership Allowance ¹ (\$)		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	327,975	2,353,149,000	-	\$ 140,307,705	\$ 140,307,705	\$ -	100.00%	0.00%	\$35.65	2	\$0.0000 /kWh	4	#####	\$ -	#####		
2	GS < 50 kW	kWh	25,987	695,837,000	-	\$ 30,076,336	\$ 7,738,641	\$ 22,337,695	25.73%	74.27%	\$24.82		\$0.0321 /kWh		\$ 7,739,968.08	\$22,336,367.7000	\$30,076,335.78		
3	GS > 50 to 1,499 kW	kW	2,976	2,842,861,000	6,831,256	\$ 53,870,770	\$ 8,420,001	\$ 45,450,769	15.63%	84.37%	\$ 288.080		\$235.78		\$ 8,420,175.36	\$45,738,674.5480	\$53,870,769.95		
4	GS > 1,500 to 4,999 kW	kW	68	683,532,000	1,518,291	\$ 13,051,553	\$ 3,625,114	\$ 9,426,438	27.78%	72.22%	\$4,442.54		\$6.4281 /kW		\$ 3,625,112.64	\$ 9,759,726.3771	\$13,051,552.66		
5	Large Use	kW	11	570,390,000	1,046,964	\$ 8,785,857	\$ 2,099,465	\$ 6,686,392	23.90%	76.10%	\$15,905.04		\$6.6396 /kW		\$ 2,099,465.28	\$ 6,951,422.1744	\$ 8,785,853.89		
6	Street Lighting	kW	66,484	18,854,000	52,530	\$ 1,357,443	\$ 925,460	\$ 431,983	68.18%	31.82%	\$11.16		\$8.2236 /kW		\$ 925,457.28	\$ 431,985.7080	\$ 1,357,442.99		
7	Sentinel Lighting	kW	55	47,000	132	\$ 8,500	\$ 4,382	\$ 4,118	51.56%	48.44%	\$6.64		\$31.1964 /kW		\$ 4,382.40	\$ 4,117.9248	\$ 8,500.32		
8	Unmetered Scattered Load	kWh	3,321	11,728,000	-	\$ 701,468	\$ 294,687	\$ 406,781	42.01%	57.99%	\$7.39		\$0.0347 /kWh		\$ 294,506.28	\$ 406,961.6000	\$ 701,467.88		
9	Standby Power	kW	3	-	7,440	\$ 24,458	\$ 6,928	\$ 17,529	28.33%	71.67%	\$192.45		\$2.3561 /kW		\$ 6,928.20	\$ 17,529.3840	\$ 24,457.58		
10															\$ -	\$ -	\$ -		
11															\$ -	\$ -	\$ -		
12															\$ -	\$ -	\$ -		
13															\$ -	\$ -	\$ -		
14															\$ -	\$ -	\$ -		
15															\$ -	\$ -	\$ -		
16															\$ -	\$ -	\$ -		
17															\$ -	\$ -	\$ -		
18															\$ -	\$ -	\$ -		
19															\$ -	\$ -	\$ -		
20															\$ -	\$ -	\$ -		
Total Transformer Ownership Allowance										\$ 886,400									
												Rates recover revenue requirement		Total Distribution Revenues					
														#####					
														Base Revenue Requirement					
														#####					
														Difference					
														-\$ 33,245.70					
														% Difference					
														-0.013%					

Notes:

1

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

Notes:

- ¹ Transformer Ownership Allowance is entered as a positive amount, and only for those classes to which it applies.
- ² The Fixed/Variable split, for each customer class, drives the "rate generator" portion of this sheet of the RRWF. Only the "fixed" fraction is entered, as the sum of the "fixed" and "variable" portions must sum to 100%. For a distributor that may set the Monthly Service Charge, the "fixed" ratio is calculated as: [MSC x (average number of customers or connections) x 12 months] / (Class Allocated Revenue Requirement).



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.

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

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

Summary of Proposed Changes

Reference ⁽¹⁾	Item / Description ⁽²⁾	Cost of Capital		Rate Base and Capital Expenditures			Operating Expenses			Revenue Requirement			
		Regulated Return on Capital	Regulated Rate of Return	Rate Base	Working Capital	Working Capital Allowance (\$)	Amortization / Depreciation	Taxes/PILs	OM&A	Service Revenue Requirement	Other Revenues	Base Revenue Requirement	Grossed up Revenue Deficiency / Sufficiency
	Original Application	\$ 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
1	Updated for 2019 Actuals	\$ 85,470,460	5.96%	\$ 1,433,971,887	\$ 1,427,324,219	\$ 107,049,316	\$ 63,900,232	\$ 7,589,845	\$ 100,254,900	\$ 260,674,041	\$ 12,456,709	\$ 248,217,332	\$ 67,994,408
	Change	\$ 846,936	0.00%	\$ 14,209,377	\$ 12,955,221	\$ 971,642	\$ 126,405	\$ 99,376	\$ 0	\$ 621,155	\$ -	\$ 621,155	\$ 1,001,243