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UPDATED ADMINISTRATION

1. INTRODUCTION

In accordance with the Ontario Energy Board's ("OEB") *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019 ("Filing Requirements"), this Schedule provides information relating to the administration of this Application.

2. PRIMARY CONTACT INFORMATION

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4. INTERNET ADDRESS & MEDIA ACCOUNTS

Hydro Ottawa Limited's ("Hydro Ottawa" or "the utility") main webpage is the following: www.hydroottawa.com.

Regulatory documents will be available in the Active Applications tab of the Regulatory Affairs section of the website: https://hydroottawa.com/about-us/regulatory-affairs/active-applications.

The social media accounts maintained by Hydro Ottawa are as follows:

- Twitter – twitter.com/hydroottawa
- Facebook – facebook.com/hydroottawa
- Instagram – Instagram.com/hydroottawa
- YouTube – youtube.com/hydroottawa
- LinkedIn – linkedin.com/company/hydro-ottawa

5. MATERIAL IMPACTS ON CUSTOMERS

While the proposals set forth in this Application will change the rates for all customer classes, there are no proposed changes that will result in bill impacts which exceed the 10% bill impact threshold and which would thus have a material impact on customers.

6. MATERIALITY THRESHOLD

As per the Filing Requirements, default materiality threshold is defined as $1.0M for distributors with a revenue requirement greater than $200.0M. As originally submitted, Hydro Ottawa's service revenue requirement for 2021 is $214.9M. After accounting for 2019 actuals, the 2021 service revenue requirement is $216.6M. Consequently, the default materiality threshold is $1.0M. However, consistent with the approach taken in its prior rebasing application,[1] Hydro Ottawa has generally explained variances based on a materiality threshold of $750K for purposes of this Application.

Hydro Ottawa notes that the $1.0M materiality threshold will apply to the utility for any future Z factor application.

[1] Hydro Ottawa Limited, *2016-2020 Custom Incentive Rate-setting Distribution Rate Application*, EB-2015-0004 (April 29, 2015).

7. PUBLICATION AND NOTICE

Hydro Ottawa recommends that the Notice of Hearing for this Application be published in the *Ottawa Citizen* and *Le Droit* newspapers, both of which are paid daily publications. The *Ottawa Citizen* is the English language newspaper serving Ottawa and the surrounding region, including the Village of Casselman. It has a total daily circulation of approximately 80,200. *Le Droit* is the French language newspaper serving Ottawa and the surrounding region, including the Village of Casselman. Its total daily circulation is approximately 30,000.

8. BILL IMPACTS

Table 1 and Table 2 provide a summary of distribution bill impacts and total bill percentage impact for a typical residential customer using 750 kWh per month and for a General Service < 50 kW customer using 2,000 kWh per month. Both tables have been updated to incorporate 2019 actuals.

Table 1 – AS ORIGINALLY SUBMITTED – Residential Bill Impact

Residential (750 kWh)	2021	2022	2023	2024	2025
Change in Distribution Charge ($)	$1.31	$2.18	$1.84	$0.98	$0.61
Change in Distribution Charge (%)	4.57%	7.28%	5.73%	2.88%	1.75%
Total Bill % change	1.32%	1.54%	1.28%	0.68%	0.43%

Table 1 – UPDATED FOR 2019 ACTUALS – Residential Bill Impact

Residential (750 kWh)	2021	2022	2023	2024	2025
Change in Distribution Charge ($)	$1.98	$1.88	$1.54	$0.99	$0.62
Change in Distribution Charge (%)	6.91%	6.15%	4.74%	2.91%	1.77%
Total Bill % change	1.53%	1.33%	1.38%	0.69%	0.43%

Table 2 – AS ORIGINALLY SUBMITTED – General Service < 50 kW Bill Impact

General Service < 50 kW (2000 kWh)	2021	2022	2023	2024	2025
Change in Distribution Charge ($)	$1.74	$5.07	$5.15	$3.05	$2.25
Change in Distribution Charge (%)	2.44%	6.94%	6.59%	3.66%	2.61%
Total Bill % change	0.65%	1.37%	1.37%	0.81%	0.59%

Table 2 – UPDATED FOR 2019 ACTUALS – General Service < 50 kW Bill Impact

General Service < 50 kW (2000 kWh)	2021	2022	2023	2024	2025
Change in Distribution Charge ($)	$2.89	$5.02	$4.48	$3.05	$2.26
Change in Distribution Charge (%)	4.05%	6.76%	5.65%	3.64%	2.60%
Total Bill % change	0.69%	1.36%	1.52%	0.80%	0.59%

9. FORM OF HEARING REQUESTED

Hydro Ottawa requests that this Application be disposed of by way of an oral hearing.

10. REQUESTED EFFECTIVE DATE

Hydro Ottawa is requesting approval of the proposed distribution rates and other charges set forth in this Application effective January 1, 2021.

11. CHANGES TO METHODOLOGIES USED IN PREVIOUS APPLICATIONS

For certain business processes and for certain components in this Application, the methodology employed by Hydro Ottawa has changed since the filing of the utility's previous rebasing application. These changes are as follows:

- Hydro Ottawa has adopted three new accounting standards, all of which are in the International Financial Reporting Standard ("IFRS") family of standards: IFRS 15 – *Revenue from Contracts with Customers*, IFRS 9 – *Financial Instruments,* and IFRS 16 – *Leases*. Please see Exhibit 1-3-10: Changes to Accounting Policies Used in Previous Applications for more information.
- With the goal of achieving greater alignment with the definitions utilized in the *Chapter 5 Filing Requirements for Electricity Transmission and Distribution Applications*, Hydro Ottawa has restructured certain classifications within its capital program. For example, the utility has shifted both the Metering Program and Station Enhancements Program to the System Service category, as the projects within these programs are more aligned

with the drivers under this category. For additional examples and details, please see Exhibit 2-4-3: Distribution System Plan.

- As noted in section 16 below, Hydro Ottawa is requesting changes to the years of useful life for certain assets within the General Plant category. Please see Exhibit 2-4-4: Capitalization Policy and UPDATED Exhibit 4-3-1: Depreciation, Amortization, Disposal for more information.
- In light of the modifications to the Conservation First Framework, this Application is proposing to rate-base certain conservation and demand management activities for all classes of customers, with a focus on commercial customers. For details, please refer to Exhibit 4-1-6: Conservation and Demand Management.
- Various modifications have been made to the pricing methodology and the scope of Service Level Agreements governing the provision of shared services and allocation of costs between Hydro Ottawa and its affiliates. Please see Exhibit 4-2-1: Shared Services and Corporate Cost Allocation.
- In accordance with Bill C-97, which received Royal Assent in June 2019, Hydro Ottawa has implemented new rules permitting accelerated capital cost allowance for eligible capital assets. Please see UPDATED Exhibit 4-4-1: Payments in Lieu of Taxes for more information.
- In this Application, Hydro Ottawa has completed a cost allocation study based upon the OEB-approved model. The utility has made minor adjustments to the load profile data for purposes of cost allocation, as further explained in UPDATED Exhibit 7-1-1: Cost Allocation.
- Hydro Ottawa is proposing to use updated Loss Adjustment Factors for the 2021-2025 period. Please see UPDATED Exhibit 8-9-1: Loss Adjustment Factors for more information.

12. OEB DIRECTIONS FROM PREVIOUS DECISIONS AND/OR ORDERS

Below is a summary of previous OEB directives and a description of how such directives are addressed by Hydro Ottawa in this Application.

12.1. DIRECTIVE #1

In EB-2012-0383, the OEB indicated that unmetered load (kW) and consumption (kWh) data should ultimately be used to update load profile data for the purpose of the distributor's next cost allocation filing with the OEB, which occurs during the distributor's next cost of service application to the OEB. Subsequently, in a letter dated June 12, 2015, the OEB stated that "[t]here may be merit in updating load profiles to be more reflective of an individual distributor's circumstances. The OEB expects individual distributors to be mindful of material changes to load profiles and to propose updates in their respective cost of service or Custom IR applications when warranted."[2]

In this Application, details on updated load profiles can be found in UPDATED Exhibit 7-1-1: Cost Allocation.

12.2. DIRECTIVE #2

On August 21, 2014, amendments to the *Distribution System Code* ("DSC") came into force which require a distributor to install a MIST meter on any installation that is forecast by the distributor to have a monthly average peak demand during a calendar year of over 50 kW.[3] The deadline for distributors to comply with this DSC provision is August 21, 2020. Hydro Ottawa confirms that it is on track to achieve compliance with this requirement within the prescribed timeline.

12.3. DIRECTIVE #3

In its Decision rendered in EB-2015-0004 on February 25, 2016 (in the matter of a pole attachment charge for Hydro Ottawa for the utility's 2016-2020 Custom Incentive Rate-Setting ["Custom IR"] term), the OEB stated that Hydro Ottawa should use the pole attachment rate

[2] Ontario Energy Board, Letter re: *Issuance of New Cost Allocation Policy for Street Lighting Rate Class* (June 12, 2015), page 4.
[3] Ontario Energy Board, *Notice of Amendment to a Code: Amendments to the Distribution System Code*, EB-2013-0311 (May 21, 2014).

approved in the Decision, "subject to any direction from the OEB regarding the implementation of any changes resulting from the Policy Review."[4]

The OEB's policy review culminated with the issuance of the *Report of the Board on Wireline Pole Attachment Charges* on March 22, 2018.[5] In this report, the OEB established a policy that "at the time of rebasing, LDCs may choose to select the provincially approved charge or to use utility-specific costs and pursue an LDC-specific pole attachment charge that better reflects their cost structures."[6]

As directed, during its 2016-2020 rate term, Hydro Ottawa has maintained use of the pole attachment charge that was approved as part of the adjudication of its 2016-2020 Custom IR application. By way of this Application, Hydro Ottawa is proposing to use the OEB's generic pole attachment rate for the 2021-2025 rate period. For additional information, please see UPDATED Exhibit 8-7-1: Specific Service Charges.

12.4. DIRECTIVE #4

In the aforementioned decision rendered in EB-2015-0004 with respect to a pole attachment charge for Hydro Ottawa (hereafter referred to as the "Pole Attachment Decision"), the OEB directed Hydro Ottawa to issue invoices for the difference between the interim rate of $22.35 and the approved pole attachment rate of $53.00, should the utility have already issued invoices. Hydro Ottawa issued invoices for the pole attachment difference where invoices had already been issued. Please see UPDATED Exhibit 6-1-1: Calculation of Revenue Deficiency or Sufficiency for the adjustment to base revenue requirement related to the Pole Attachment Decision.

[4] Ontario Energy Board, *Decision and Rate Order on Pole Attachment Charge*, EB-2015-0004 (February 25, 2016) page 15.
[5] Ontario Energy Board, *Report of the Ontario Energy Board - Wireline Pole Attachment Charges*, EB-2015-0304 (March 22, 2018).
[6] *Ibid*, page 52.

12.5. DIRECTIVE #5

In the Decision rendered in EB-2015-0004 on December 22, 2015 (in the matter of Hydro Ottawa's 2016-2020 Custom IR application), the OEB established a variance account for "the difference between revenue based on the final pole attachment charge yet to be approved by the OEB for Hydro Ottawa for 2016, and revenue based on the pole attachment charge underpinning the distribution rates approved by this order (i.e. $57)."[7] As instructed by the Pole Attachment Decision and approved as part of Hydro Ottawa's 2017 rate adjustment application, the amount was collected as part of Hydro Ottawa's 2017 rates.[8] For additional information, please see UPDATED Exhibit 9-1-3: Group 2 Accounts.

12.6. DIRECTIVE #6

In the Decision rendered in EB-2018-0044 on December 13, 2018 (in the matter of Hydro Ottawa's 2019 rate adjustment application), the OEB stated that it expected Hydro Ottawa to continue reporting on both the Efficiency Adjustment Mechanism and the Earnings Sharing Mechanism in the utility's 2021 application.[9] Hydro Ottawa is therefore reporting on the 2019 Efficiency Adjustment Mechanism and 2018 Earnings Sharing Mechanism deferral accounts as part of this Application. For additional details, please see UPDATED Exhibit 9-1-3: Group 2 Accounts.

12.7. DIRECTIVE #7

In the aforementioned Decision rendered in EB-2018-0044, the OEB instructed Hydro Ottawa to provide an update on the resolution to an Industrial Conservation Initiative ("ICI") enrollment matter and report on any necessary adjustments.[10] Hydro Ottawa has engaged the OEB on this matter and, at this time, is not requesting any adjustments. As part of its Decision and Order on Hydro Ottawa's 2020 rate adjustment application, the OEB stated, in reference to this directive, that "the OEB will proceed to finalize the balances for 2017 and 2018, and in light of the OEB's October 31, 2019 letter regarding Adjustments to Correct for Errors in Electricity Distributor

[7] Ontario Energy Board, *Decision and Order*, EB-2015-0004 (December 22, 2015), page 7.
[8] Hydro Ottawa Limited, *2017 Electricity Distribution Rate Application*, EB-2019-0046 (August 12, 2019).
[9] Ontario Energy Board, *Decision and Rate Order*, EB-2019-0046 (December 17, 2019), page 6.
[10] Ontario Energy Board, *Decision and Rate Order*, EB-2018-0044 (December 13, 2018), page 15.

'Pass-Through' Variance Accounts After Disposition, the OEB expects that any revisions to previous balances relating to this matter will be accommodated through the disposition of future variance account balances."[11]

12.8. DIRECTIVE #8

On February 14, 2019, the OEB issued a Decision and Order directing electricity distributors – including distributors with utility-specific charges – to implement new Retail Service Charges.[12] Hydro Ottawa implemented the new charges as directed and has used the updated rates as a placeholder as part of this Application. For additional details, please see Exhibit 8-4-1: Retail Service Charges.

In addition, any electricity distributor which had discontinued the use of Account 1518 and Account 1548 was to establish a new 1508 Sub-Account to record the difference in the incremental revenue as a result of the Decision and Order.[13] As Hydro Ottawa had discontinued the use of Account 1518 and Account 1548, a new Sub-Account to 1508 has been established. In accordance with OEB direction, Hydro Ottawa started tracking the incremental revenue in this new Sub-Account effective May 1, 2019. For additional details, please see UPDATED Exhibit 9-1-3: Group 2 Accounts.

12.9. DIRECTIVE #9

In its Decision rendered in EB-2019-0077 on October 17, 2019, the OEB approved an application submitted by Hydro One Networks Inc. ("HONI") and Hydro Ottawa, pursuant to section 92 of the *Ontario Energy Board Act*, *1998*, seeking leave to construct the Power South Nepean Project.[14] The project consists of two key components: (1) a new municipal transformer station to be constructed by Hydro Ottawa; and (2) upgrades to existing transmission facilities, as well as construction of a segment of new transmission line by HONI. The leave granted was

[11] Ontario Energy Board, *Decision and Rate Order*, EB-2019-0046 (December 17, 2019), page 13.
[12] Ontario Energy Board, *Decision and Order in the matter of energy retailer service charges effective May 1, 2019*, EB-2015-0304 (February 14, 2019).
[13] *Ibid*, Schedule B, page 1.
[14] Ontario Energy Board, *Decision and Order*, EB-2019-0077 (October 17, 2019).

subject to the OEB's standard conditions of approval, one of which was that "[t]he applicants shall advise the OEB of any proposed material change in the project, including but not limited to changes in: the proposed route, construction schedule, the necessary environmental assessment approvals, and all other approvals, permits, licences, certificates and rights required to construct the proposed facilities."[15]

By way of this Application, Hydro Ottawa is informing the OEB of minor modifications to the project's construction schedule. Whereas the original schedule had contemplated an in-service date of November 2021, this date has subsequently been revised to Q2 2022. In addition, the name of the station has been changed from South Nepean Municipal Transformer Station ("MTS") to Cambrian MTS. For additional information, please see Attachment 2-4-3(E): Material Investments.

13. CONDITIONS OF SERVICE

The current version of Hydro Ottawa's Conditions of Service is available for viewing on the following page of the utility's website:
https://hydroottawa.com/about-us/policies/conditions-service.

Since the filing of Hydro Ottawa's last rebasing application, there have been two sets of revisions to the utility's Conditions of Service. Version 6 came into effect on April 1, 2017, while Version 7 came into effect on April 1, 2019. A summary of the major changes to both versions can be found below in Table 3 below.

[15] *Ibid*, Schedule B.

Table 3 – Summary of Changes to Hydro Ottawa's Conditions of Service (2016-2019)

Section	Subject	Details	Implementation Date
1.6	Customer Rights and Responsibilities	Updated to identify customer rights	April 1, 2019
1.7	Distributor Rights and Responsibilities	Added distributor responsibilities to line up with the OEB's Consumer Charter	April 1, 2019
2.1	Connection	Added provisions for a Design Deposit for preparing and Offer to Connect, as well as a potential material and construction deposit for project-specific equipment.	April 1, 2017.
2.1.1	Point of Supply	Updated to reflect that Hydro Ottawa may choose to permit multiple services per property to accommodate electric vehicle charging (at its discretion)	April 1, 2019
2.1.2.1 / 3.1.3.7	Basic Credit	Policy clarified - one basic connection credit including one clearance or in-line pole. Expansion beyond that is subject to economic evaluation	April 1, 2019
2.2.1	Refusal to Connect for Previous Arrears	Updated to reflect Hydro Ottawa's policy on a refusal to connect unless previous amounts owing (related to previous accounts) are paid in full	April 1, 2019
2.4.5.5	Transformer Ownership Credit	Clarified that unmetered and temporary services do not receive a Transformer Ownership Credit ("TOC") and grandfathering conditions for TOCs that existed prior to November 1, 2000.	April 1, 2017
2.4.6.1	Methods of Payment and Payment Plans	Expanded options for bill payment.	April 1, 2017.
2.6.1 / 2.6.2	Customer Rate Classification	Clarified and updated criteria in determining customer rate classification.	April 1, 2017
3.0.8	Property Reinstatement	Added section outlining developer and property owner responsibilities with respect to new subdivision driveways and sidewalks.	April 1, 2017
3.0.17	Other Points of Ownership Demarcation	New section detailing demarcation of control signal lines and secondary distribution vault supplies	April 1, 2017
3.2.2 / 3.9.1	Service Requirements	Added 120/280 V, 2-phase, 3-wire, and 347.600V, 3-phase, 4-wire overhead supply up to 400A as offerings.	April 1, 2017
3.9	Temporary Services	Added conditions with respect to separate Temporary Services in addition to existing electrical Services	April 1, 2017

At the time of filing, Hydro Ottawa is not expecting that any of the approvals requested in this Application would result in changes to its Conditions of Service.

Hydro Ottawa confirms that no rates and charges are listed in its Conditions of Service that are not in its Tariff of Rates and Charges.

14. CORPORATE AND UTILITY ORGANIZATIONAL STRUCTURE

A description of Hydro Ottawa's corporate and utility organizational structure, along with a corporate entities relationship chart, is included in Exhibit 1-4-1: Corporate Structure and Governance.

There are currently no plans for modifying Hydro Ottawa's corporate or operational structure, nor for amending the utility's legal organization or control.

15. ACCOUNTING GUIDANCE FOR ACCOUNTS 1588 & 1589

In 2019, the OEB issued updated accounting guidance with respect to Account 1588 RSVA – Power and Account 1589 RSVA – Global Adjustment.[16] Hydro Ottawa confirms that its journal entries are recorded, as per the instructions set forth in this guidance. For additional details, please see UPDATED Exhibit 9-1-2: Group 1 Accounts.

16. SPECIFIC RELIEF REQUESTED

This Application is submitted pursuant to section 78 of the *Ontario Energy Board Act, 1998*. Herein, Hydro Ottawa is seeking the following approvals, which are also separately identified in UPDATED Appendix 2-A and clearly documented throughout applicable sections of this Application:

a) Approval of 2021-2025 revenue requirement, as proposed in UPDATED Exhibit 6-1-1: Calculation of Revenue Deficiency or Sufficiency;
b) Approval of 2021 distribution rates and charges, effective January 1, 2021, as proposed in UPDATED Exhibit 8-10-1: Current and Proposed Tariff of Rates and Charges;

[16] Ontario Energy Board, *Accounting Procedures Handbook Update - Accounting Guidance Related to Commodity Pass-Through Accounts 1588 & 1589* (February 21, 2019).

c) Approval of the Custom IR rate-setting formula and related elements for 2022-2025 distribution rates and charges, as proposed in UPDATED Exhibit 1-1-10: Alignment with the Renewed Regulatory Framework;

d) Approvals related to deferral and variance accounts, as thus proposed throughout various Schedules in Exhibit 9:

   i) approval of the continuation of certain existing deferral and variance accounts, as set out in UPDATED Exhibit 9-1-1: Summary of Current Deferral and Variance Accounts;

   ii) approval of the discontinuance of certain existing deferral and variance accounts, as proposed in UPDATED Exhibit 9-1-1: Summary of Current Deferral and Variance Accounts and UPDATED Exhibit 9-1-3: Group 2 Accounts;

   iii) approval of new deferral and variance accounts, as proposed in Exhibit 9-2-1: New Deferral and Variance Accounts; and

   iv) disposition of balances in existing deferral and variance accounts, as set out in UPDATED Exhibit 9-3-1: Disposition of Deferral and Variance Accounts.

e) Approval of annual reporting for the 2021-2025 rate term, as proposed in Exhibit 1-1-11: Proposed Annual Reporting - 2021-2025;

f) Approval for a transformer substation called Cambrian MTS, with assets that operate above 50 kV, to form part of the Hydro Ottawa distribution system, as proposed in Exhibit 2-4-3: Distribution System Plan;

g) Approval of the inclusion into the 2021 opening rate base of Hydro Ottawa's New Facilities and Connection Cost Recovery Agreement Payments, whose revenue requirement has been held in deferral and variance accounts;

h) Approval to include the cost of any future right-of-use assets related to leases as part of rate base, as proposed in Exhibit 1-3-10: Changes to Accounting Policies Used in Previous Applications;

i) Approval to cease providing the transformer ownership credit effective November 1, 2025, as proposed in UPDATED Exhibit 8-1-1: Fixed/Variable Proportion;

j) Approval to increase the Standard Supply Service Administrative Charge, as proposed in UPDATED Exhibit 8-7-1: Specific Service Charges;

k) Approval of revised loss factor per UPDATED Exhibit: 8-9-1 Loss Adjustment Factors;

l) Approval to change the years of useful life for certain assets within the General Plant category, as requested in Exhibit 2-4-4: Capitalization Policy and Attachment 2-4-3(F): Fleet Replacement Program; and

m) Approval of other items or amounts that may be requested by Hydro Ottawa in the course of the proceeding, and such other relief or entitlements that the OEB may grant.

UPDATED - Appendix 2-A
List of Requested Approvals

The distributor must fill out the following sheet with the complete list of specific approvals requested and relevant section(s) of the legislation must be provided. All approvals, including accounting orders (deferral and variance accounts) new rate classes, revised specific service charges or retail service charges which the applicant is seeking, must be separately identified, as well being clearly documented in the appropriate sections of the application.

Additional requests may be added by copying and pasting blank input rows, as needed.

If additional requests arise, or requested approvals are removed, during the processing of the application, the distributor should update this list.

Hydro Ottawa Limited is seeking the following approvals in this application:

1		Approval of 2021-2025 revenue requirement, as proposed in **UPDATED** Exhibit 6-1-1: Calculation of Revenue Deficiency or Sufficiency;
2		Approval of 2021 distribution rates and charges, effective January 1, 2021, as proposed in **UPDATED** Exhibit 8-10-1: Current and Proposed Tariff of Rates and Charges;
3		Approval of the Custom Incentive Rate-Setting formula and related elements for 2022-2025 distribution rates and charges, as proposed in **UPDATED** Exhibit 1-1-10: Alignment with the Renewed Regulatory Framework;
4		Approvals related to deferral and variance accounts, as thus proposed throughout various Schedules in Exhibit 9, as oulined in 4i- iv below:
4	i	approval of the continuation of certain existing deferral and variance accounts, as set out in **UPDATED** Exhibit 9-1-1: Summary of Current Deferral and Variance Accounts;

4	ii	approval of the discontinuance of certain existing deferral and variance accounts, as proposed in **UPDATED** Exhibit 9-1-2: Group 1 Accounts and **UPDATED** Exhibit 9-1-3: Group 2 Accounts;
4	iii	approval of new deferral and variance accounts, as proposed in Exhibit 9-2-1: New Deferral and Variance Accounts; and
4	iv	disposition of balances in existing deferral and variance accounts, as set out in **UPDATED** Exhibit 9-3-1: Disposition of Deferral and Variance Accounts
5		Approval of annual reporting for the 2021-2025 rate term, as proposed in Exhibit 1-1-11: Proposed Annual Reporting - 2021-2025;
6		Approval for a transformer substation called Cambrian MTS, with assets that operate above 50kV, to form part of the Hydro Ottawa distribution system, as proposed in Exhibit 2-4-3: Distribution System Plan;
7		Approval of the inclusion into the 2021 opening rate base of Hydro Ottawa's New Facilities and Connection Cost Recovery Agreement Payments, whose revenue requirement has been held in deferral and variance accounts;
8		Approval to include the cost of any future right-of-use assets related to leases as part of rate base, as proposed in Exhibit 1-3-10: Changes to Accounting Policies Used in Previous Applications;
9		Approval to cease providing the transformer ownership credit effective November 1, 2025, as proposed in **UPDATED** Exhibit 8-1-1: Fixed/Variable Proportion;
10		Approval to increase the Standard Supply Service Administrative Charge, **as proposed in UPDATED Exhibit 8-7-1: Specific Service Charges**;

11		Approval of revised loss factor per **UPDATED** Exhibit: 8-9-1 Loss Adjustment Factors;
12		Approval to change the years of useful life for certain assets within the General Plant category, as requested in Exhibit 2-4-4: Capitalization Policy and Attachment 2-4-3(F): Fleet Replacement Program; and
13		Approval of other items or amounts that may be requested by Hydro Ottawa in the course of the proceeding, and such other relief or entitlements that the OEB may grant.

CERTIFICATION OF EVIDENCE

I, Geoff Simpson, Chief Financial Officer of Hydro Ottawa Limited ("Hydro Ottawa"), hereby certify that, to the best of my knowledge, the UPDATED evidence filed in support of Hydro Ottawa's 2021-2025 Custom Incentive Rate-setting Application is accurate, consistent, and complete.

This certification is provided pursuant to the Ontario Energy Board's *Chapter 2, Chapter 3*, and *Chapter 5 Filing Requirements for Electricity Distribution Rate Applications*, as issued on July 12, 2018 and addended on July 15, 2019.

DATED this **4th** day of **May, 2020**.

DocuSigned by:
Geoff Simpson
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Geoff Simpson
Chief Financial Officer
Hydro Ottawa Limited

UPDATED APPLICATION SUMMARY

1. INTRODUCTION

This Schedule provides all of the information that is requested pursuant to section 2.1.6 of the Ontario Energy Board's ("OEB") *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019 ("Filing Requirements"). In addition, this Schedule summarizes the changes proposed in this Application that will have a material impact on customers of Hydro Ottawa Limited ("Hydro Ottawa"), including any changes to rates and charges that may affect discrete customer groups. As appropriate, specific customers or customer groups that will be impacted by such proposals are also identified.

2. REVENUE REQUIREMENT

As presented in Table 1 below, Hydro Ottawa's Service Revenue Requirement (as originally submitted) is $214.9M for the 2021 Test Year.

After accounting for 2019 actuals, Hydro Ottawa's Service Revenue Requirement is $216.6M for the 2021 Test Year, as shown in the updated version of Table 1 below.

Table 1 – AS ORIGINALLY SUBMITTED – Service Revenue Requirement - Change and Drivers ($'000s)

	OEB-Approved	Test Year	Change		Drivers
	2020	2021	$	%	
Return on Rate Base	$56,211	$67,489	$11,278	20%	- $173.8M increase in net fixed assets - Previously excluded items added back to rate base
Distribution Expenses (not including amortization)	$89,007[1]	$93,923	$4,916	6%	- Increases in compensation - Inflationary increases - Increase in distribution operations expenses
Amortization	$49,384	$52,450	$3,066	6%	- Increase in sustainment additions
Payment in Lieu of Taxes	$5,943	$1,024	($4,919)	(83%)	- Higher CCA deduction caused by large amount of fixed asset additions
Service Revenue Requirement[2]	**$200,544**	**$214,886**	**$14,342**	**7%**	

[1] This figure includes the mid-term adjustment to operations, maintenance and administration ("OM&A") expenses.
[2] Totals may not sum due to rounding.

Table 1 – UPDATED FOR 2019 ACTUALS – Service Revenue Requirement - Change and Drivers ($'000s)

	OEB-Approved	Test Year	Change		Drivers
	2020	2021	$	%	
Return on Rate Base	$56,211	$68,158	$11,947	21%	- $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
Distribution Expenses (not including amortization)	$89,007[3]	$93,923	$4,916	6%	- Increases in compensation - Inflationary increases - Increase in distribution operations expenses
Amortization	$49,384	$52,333	$2,949	6%	- Increase in sustainment additions
Payment in Lieu of Taxes	$5,943	$2,224	$(3,719)	(63%)	- 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)
Service Revenue Requirement[4]	**$200,544**	**$216,638**	**$16,094**	**8%**	

For further details on Hydro Ottawa's revenue requirement, please see UPDATED Exhibit 6-1-1: Calculation of Revenue Deficiency or Sufficiency.

3. BUDGETING AND ACCOUNTING ASSUMPTIONS

3.1. ECONOMIC OVERVIEW (GROWTH AND INFLATION)

In keeping with the rate adjustment formula used in its 2016-2020 Custom Incentive Rate-setting ("Custom IR") plan, Hydro Ottawa has assumed the Conference Board of Canada's updated inflation rate of 2.01% for all non-compensation-related costs in this Application.

[3] This figure includes the mid-term adjustment to operations, maintenance and administration ("OM&A") expenses.
[4] Totals may not sum due to rounding.

With respect to operations, maintenance and administration ("OM&A") expenses, year one of the Application term (2021) is a traditional rebasing year, with rates set on the basis of a forecast Test Year of $93.9M. Thereafter, OM&A expenditures in each year of the rate term will be adjusted using a Custom Price Escalation Factor ("CPEF") of 2.51%. The CPEF is comprised of three components, including a forecasted inflation factor of 2.26%. This factor is derived from applying Hydro Ottawa's specific labour/non-labour weighting factors to two indices (the Gross Domestic Product Implicit Price Index and Average Weekly Earnings for workers in Ontario, both reported by Statistics Canada) and averaging them over the 2017-2025 period.

For more information on the CPEF, please see UPDATED Exhibit 1-1-10: Alignment with the Renewed Regulatory Framework.

3.2. ACCOUNTING STANDARDS

Hydro Ottawa adopted International Financial Reporting Standards ("IFRS") for financial reporting purposes on January 1, 2015.

Subsequent to that action, and to the filing of Hydro Ottawa's last rebasing application,[5] the utility has adopted three new accounting standards as required by the International Accounting Standards Board, as follows:

- IFRS 9 – *Financial Instruments*: this standard introduces revised guidance on the classification and measurement of financial assets, including basing the classification of financial assets on their contractual cash flow characteristics and the entity's business model for managing financial assets. Hydro Ottawa's adoption of IFRS 9 was effective as of January 1, 2018. There is no impact to revenue requirement associated with adoption of this standard.
- IFRS 15 – *Revenue from Contracts with Customers*: IFRS 15 provides a standardized, five-step model to recognize revenue (i.e. identify contract, identify performance obligations, determine transaction price, allocate transaction price, and recognize

[5] Hydro Ottawa Limited, *2016-2020 Custom Incentive Rate-Setting Distribution Rate Application*, EB-2015-0004 (April 29, 2015).

revenue). The adoption of IFRS 15 was effective as of January 1, 2018. There is no impact to revenue requirement associated with its adoption.

- IFRS 16 – *Leases*: this standard eliminates the current dual model (i.e. on and off balance sheet) and aims to provide greater comparability between companies who lease assets (i.e. right-of-use assets) and those who purchase assets with a single on-balance sheet approach. Hydro Ottawa adopted IFRS 16 as of January 1, 2019. As of that date, the adoption of IFRS 16 did not result in any right-of-use assets being recognized by the utility. However, by way of this Application, Hydro Ottawa is proposing to include the cost of any future right-of-use assets related to leases as part of rate base, since it is akin to purchasing property, plant, and/or equipment and financing it.

For additional information on the aforementioned IFRS standards, please see Exhibit 1-3-10: Changes to Accounting Policies Used in Previous Applications.

4. LOAD FORECAST SUMMARY

Hydro Ottawa's forecasted energy sales for the 2021 Test Year are 7,065,745 MWh, as originally submitted. This is 374,879 MWh (5.0%) lower than the 2016 OEB-approved MWh forecast. Accounting for 2019 actuals, Hydro Ottawa's forecasted energy sales for the 2021 Test Year are 7,063,482 MWh. This is 377,142 MWh (5.1%) lower than the 2016 OEB-approved MWh forecast.

Hydro Ottawa's demand sales forecast for the 2021 Test Year is 9,465,512 kW, as originally submitted.[6] This is 659,441 kW (6.5%) lower than the 2016 OEB-approved kW forecast. Accounting for 2019 actuals, Hydro Ottawa's forecasted demand sales for the 2021 Test Year are 9,454,357 kW.[6] This is 708,793 kW (7.0%) lower than the 2016 OEB-approved kW forecast.

The utility's forecasted average number of customers for the 2021 Test Year is 344,936, representing an increase of 6.1% over the 2016 OEB-approved number.

[6] This represents kW sales for commercial classes above 50kW, Sentinel Lighting, Street Lighting, and Standby Power.

The updated version of Table 2 provides a high-level summary of Hydro Ottawa's load forecast for the 2021-2025 Custom IR term.

Table 2 – AS ORIGINALLY SUBMITTED – Load Forecast Summary

Year	Total Sales (MWh)	Total Sales Demand (kW)[7]	Average Customers[8]
2021	7,065,745	9,465,512	344,936
2022	7,088,184	9,452,590	348,104
2023	7,116,619	9,452,792	351,138
2024	7,165,092	9,472,485	354,088
2025	7,179,631	9,457,798	357,017

Table 2 – UPDATED FOR 2019 ACTUALS – Load Forecast Summary

Year	Total Sales (MWh)	Total Sales Demand (kW)[9]	Average Customers[10]
2021	7,063,482	9,454,357	344,936
2022	7,085,688	9,450,676	348,104
2023	7,113,883	9,451,114	351,138
2024	7,162,048	9,470,932	354,088
2025	7,176,418	9,456,613	357,017

Hydro Ottawa has provided a detailed five-year, class-specific, and weather-normalized load forecast and customer connection forecast for each rate class in UPDATED Exhibit 3-1-1: Load Forecast. This forecast incorporates modifications to the provincial electricity conservation framework that were enacted in 2019 as well as the impacts of embedded generation.

5. DISTRIBUTION SYSTEM PLAN

Hydro Ottawa has formulated a consolidated Distribution System Plan ("DSP"), which provides a detailed and comprehensive view of the utility's investment plans and supporting information for the 2021-2025 period.[11] The DSP identifies the capital investments in Hydro Ottawa's

[7] *Ibid*.
[8] Customer numbers do not include Street Lighting, Sentinel Lights, Unmetered Scattered Load, and Standby Power.
[9] *Ibid*.
[10] Customer numbers do not include Street Lighting, Sentinel Lights, Unmetered Scattered Load, and Standby Power.
[11] Please see Exhibit 2-4-3.

distribution system and general plant assets which are required to maintain safe and reliable service to customers in the City of Ottawa and Village of Casselman, with operations that remain responsive to their primary needs and preferences: (i) keeping distribution rates low; (ii) maintaining reliability; and (iii) investing in new technology. In addition, the DSP outlines how capital investments will be prioritized, paced, and optimized, while minimizing rate impacts for customers and facilitating continuous improvement and productivity.

The expenditures outlined in the DSP are driven by distinct, specific needs. Table 3 below summarizes the major drivers underlying Hydro Ottawa's capital investment program for the 2021-2025 rate period.

1 **Table 3 – 2021-2025 Capital Expenditure Drivers by Investment Category**

Investment Category	Driver	Description
System Access	Customer Service Request	Customer request for new connection (load or generation)
	Third Party Requirements	Request by a third party for plant relocation or upgrade to an existing service
	Mandated Service Obligation	Regulatory requirement to maintain distribution licence under the *Distribution System Code* or requirement as per Hydro Ottawa's Conditions of Service
System Renewal	Assets at End of Service Life i. Failure ii. Failure Risk iii. Substandard Performance iv. High Performance Risk v. Functional Obsolescence	i. Asset no longer meets functional requirements ii. Asset is at risk of no longer meeting functional requirements iii. Asset still meets functional requirements; however, it falls below standards for operability or efficiency iv. Asset is at risk of failure in a way that can cause harm or damage to other equipment or assets or would put the distribution system in a detrimental state v. Asset is functionally obsolete with no spare parts, tools, and/or software to continue operation
System Service	Capacity Constraint	Requirement for additional capacity (station transformation or circuit) due to planned or realized load increases
	Reliability	Requirements driven by poor distribution system performance such as abnormally high duration or frequency of interruptions
	System Operability	Requirements for improved system operability and visibility
General Plant	System Capital Investment Support	● Capital contributions to Hydro One Networks Inc. for connection projects ● Requirement for fleet/vehicle acquisition
	System Maintenance Support	Requirement for tools and associated equipment
	Business Operations Efficiency	Requirements for information technology software and systems
	Non-System Physical Plant	Building infrastructure requirements

2

Table 4, as updated below, provides a summary of the total capital expenditures that are planned for the 2021-2025 Custom IR rate term. The changes in 2021 and 2022 are the result of updates to the MiGen program, as described in updated section 2.3.3 of Attachment 2-4-3(E): Material Investments.

Table 4 – AS ORIGINALLY SUBMITTED – Summary of 2021-2025 Capital Expenditures ($'000,000s)

Investment Category	2021	2022	2023	2024	2025	Average 2021-2025
System Access	$56.7	$41.0	$37.4	$34.5	$34.0	$40.7
System Renewal	$43.3	$44.0	$40.2	$39.4	$40.5	$41.5
System Service	$31.0	$27.4	$24.3	$25.2	$23.9	$26.4
General Plant	$32.0	$11.7	$7.6	$17.4	$16.9	$17.1
Capital Contributions	$(41.3)	$(25.2)	$(19.9)	$(19.2)	$(19.3)	$(25.0)
TOTAL	**$121.8**	**$98.9**	**$89.6**	**$97.2**	**$96.0**	**$100.7**

Table 4 – UPDATED FOR 2019 ACTUALS – Summary of 2021-2025 Capital Expenditures ($'000,000s)

Investment Category	2021	2022	2023	2024	2025	Average 2021-2025
System Access	$56.7	$41.0	$37.4	$34.5	$34.0	$40.7
System Renewal	$43.3	$44.0	$40.2	$39.4	$40.5	$41.5
System Service	$26.7	$28.3	$24.3	$25.2	$23.9	$25.7
General Plant	$32.0	$11.7	$7.6	$17.4	$16.9	$17.1
Capital Contributions	$(39.2)	$(23.5)	$(19.9)	$(19.2)	$(19.3)	$(24.2)
TOTAL	**$119.5**	**$101.5**	**$89.6**	**$97.2**	**$96.0**	**$100.8**

These figures illustrate the sustained level of need for significant capital investment in Hydro Ottawa's distribution system, in order to maintain reliability and service quality for customers. This need is the result of several factors, including aging infrastructure, an expanding customer base, continued growth across the City of Ottawa, and the effects of severe weather events.

5.1.1. Renewable Energy Connection Costs

There are no renewable energy connection projects included in Hydro Ottawa's DSP which seek cost recovery from all ratepayers.

Similarly, Hydro Ottawa is not planning to specifically address stations that have restrictions for the connection of Energy Resource Facilities ("ERFs") within its capital expenditure plan. Nevertheless, the utility intends to replace station transformers that are identified for replacement through its Asset Management Process with units that have reverse-flow capabilities and can thus accommodate injection of renewable energy onto the grid.

The DSP does acknowledge that the number of ERF connections is expected to continue growing over the 2021-2025 rate period. Hydro Ottawa will respond to customer/generator requests for ERF connection and will seek appropriate recovery of costs from ERF proponents, as per its established Connection Impact Assessment process.

5.1.2. Smart Grid Costs

Table 5 below identifies planned investments related to Smart Grid for the 2021-2025 period.

Table 5 – AS ORIGINALLY SUBMITTED – Planned Smart Grid Investments ($'000s)

Budget Program & Project[12]	Forecast					
	2021	2022	2023	2024	2025	Total
Stations Enhancements • Station Temperature Sensors • Station Cybersecurity (OT Visibility & Safeguards)	$905	$459	$459	$459	$459	$2,741
Distribution Enhancements • Smart Grid Fund Initiatives • Great-DR Phase 2 (MiGen) • Other Distribution Enhancement Projects	$5,955	$4,016	$2,262	$1,860	$1,788	$15,881
SCADA Upgrades • SCADA System Renewal • Outage Management System Replacement • Distribution Management System • AMI Outage Management Integrations	$803	$2,708	$1,521	$501	$1,891	$7,424
RTU Upgrades • Self-Healing Grid	$253	$253	$253	$253	$253	$1,265
Communications Infrastructure • Optical Telecommunications Network Replacement • Field Area Network	$1,790	$1,044	$1,044	$1,044	$2,035	$6,957
Remote Disconnected Smart Meter	$501	$501	$501	$501	$501	$2,505
Cybersecurity Enhancement	$302.3	$201.5	$201.5	$201.5	$201.5	$1,108

[12] Additional information on these projects are available in Attachment 2-4-3(E): Material Investments. With the exception of Cybersecurity Enhancement, all of the projects listed fall under the System Service category. Cybersecurity Enhancement is within the General Plant category.

Table 5 – UPDATED FOR 2019 ACTUALS – Planned Smart Grid Investments ($'000s)

Budget Program & Project[13]	Forecast					
	2021	2022	2023	2024	2025	Total
Stations Enhancements • Station Temperature Sensors • Station Cybersecurity (OT Visibility & Safeguards)	$905	$459	$459	$459	$459	$2,741
Distribution Enhancements • Smart Grid Fund Initiatives • ~~Great-DR Phase 2 (~~MiGen~~)~~ • Other Distribution Enhancement Projects	$1,612	$4,919	$2,262	$1,860	$1,788	$12,440
SCADA Upgrades • SCADA System Renewal • Outage Management System Replacement • Distribution Management System • AMI Outage Management Integrations	$803	$2,708	$1,521	$501	$1,891	$7,424
RTU Upgrades • Self-Healing Grid	$253	$253	$253	$253	$253	$1,265
Communications Infrastructure • Optical Telecommunications Network Replacement • Field Area Network	$1,790	$1,044	$1,044	$1,044	$2,035	$6,957
Remote Disconnected Smart Meter	$501	$501	$501	$501	$501	$2,505
Cybersecurity Enhancement	$302.3	$201.5	$201.5	$201.5	$201.5	$1,108

5.1.3. Regional Planning Initiatives

Hydro Ottawa is currently engaged in the latest Integrated Regional Resource Plan ("IRRP") cycle for the Greater Ottawa area, which is expected to be completed in Q1 2020.[14] A number of regional and bulk system needs are currently being studied to determine optimal solutions. Table 6 below summarizes the preliminary short-term needs that have thus far been identified through the IRRP process. Of note, along with Hydro Ottawa, Hydro One Networks Inc.

[13] Additional information on these projects are available in Attachment 2-4-3(E): Material Investments. With the exception of Cybersecurity Enhancement, all of the projects listed fall under the System Service category. Cybersecurity Enhancement is within the General Plant category.

[14] The new IRRP for Greater Ottawa was published by the Independent Electricity System Operator ("IESO") on March 4, 2020. The planning solutions identified in the final IRRP match those that are identified in Table 6 below. In addition, the IESO is set to undertake an addendum study to investigate a handful of planning matters in more detail. Accordingly, Hydro Ottawa has not made any updates to this section of the Schedule or to its 2021-2025 DSP, as the existing content regarding regional planning initiatives remains relevant.

("HONI") is set to be assigned responsibility for executing certain solutions that are under consideration for addressing identified needs.

Table 6 – Preliminary Results from Active IRRP Cycle for Greater Ottawa Region

Need	Description	Preliminary Solution
Supply to Kanata	Several stations in the area are operating at or near their planning capacity. Large commercial and residential developments are driving significant growth in electricity demand in the near-term and medium-term.	Limitations on the existing transmission system in the area cannot accommodate expansion of the existing stations. A new station is likely required to provide reliable long-term supply in the area. The IESO is currently developing a bulk transmission plan in parallel to the Greater Ottawa IRRP that might impact requirements for connecting the new station. Bulk transmission plan will be finalized in 2020. Hydro Ottawa is planning to implement distribution system upgrades to distribute forecast growth between stations in the area.
Supply to South East Ottawa	Several stations in the area are operating at or near their planning capacity. Demand is expected to increase driven by large residential, mixed and industrial developments.	Hydro Ottawa will proceed with a plan to build a new 230 kV connected supply station in the south east part of the City. The new station is planned for energization in 2025. HONI will evaluate the options for this upgrade in the Regional Infrastructure Plan.
Supply to East Ottawa	Bilberry Creek TS came into service in 1976 and is approaching end of life. Options to decommission or refurbish the station were evaluated including the impact to the bulk system. Large industrial and residential mixed-use developments are forecasted to increase demand over the near-term and medium-term.	HONI will refurbish Bilberry Creek TS, including like for like transformer replacement. HONI will expand the station to provide two additional breaker positions to supply Hydro Ottawa customers.
Supply to the Regional 115 kV System	Several of the 230/115 kV transformers at Merivale and Hawthorne are operating at or near their capability	HONI will replace the more limiting of the 230/115 kV transformers at Merivale TS in the near-term so that the two Merivale transformers have similar capability. Subsequent to the release of the IRRP, the Working Group will undertake an IRRP Addendum Study. This will include an evaluation of the potential benefit of non-wires options to manage future demand growth on the 115 kV system.

Hydro Ottawa's five-year investment plan incorporates required projects to address the near-term regional needs, as identified in Table 7 below. Of note, these investments will remain subject to change through the finalization of the IRRP and subsequent Regional Infrastructure Plan ("RIP") processes.

Table 7 – Planned Investments Related to Regional Planning ($'000,000s)

Project	Forecast					
	2021	2022	2023	2024	2025	Total
Cambrian Municipal Transformer Station[15]	$27.9	$2.2	$0	$0	$0	$30.1
New East Station[16]	$0.51	$2.61	$7.32	$10.46	$9.79	$30.69
Distribution Capacity Upgrades (Kanata North, South Nepean, Bilberry)	$1.49	$2.10	$3.80	$3.04	$1.50	$11.93

6. RATE BASE

Table 8, as updated below, summarizes proposed changes in rate base for 2021. As originally submitted, Hydro Ottawa's 2021 Test Year rate base is budgeted to be $244.8M or 25% higher than the 2020 OEB-approved amount. Accounting for 2019 actuals, Hydro Ottawa's 2021 Test Year rate base is budgeted to be $256.9M or 26% higher than the 2020 OEB-approved amount. The increase is attributable to planned increases in capital additions as well as to previously-excluded items being placed back into rate base at their net book value.

Full details on Hydro Ottawa's proposed rate base for 2021-2025 can be found in UPDATED Exhibit 2-1-1: Rate Base Overview.

[15] Project costs include Connection Cost Recovery Agreement ("CCRA") payments to HONI.
[16] Project costs include CCRA payments to HONI.

Table 8 – AS ORIGINALLY SUBMITTED – 2020 OEB-Approved Rate Base vs. 2021 Test Year Rate Base ($'000s)

	OEB-Approved	Test Year	Change	
	2020	2021	$	%
Rate Base	$973,801	$1,218,659	$244,858	25%

Table 8 – UPDATED FOR 2019 ACTUALS – 2020 OEB-Approved Rate Base vs. 2021 Test Year Rate Base ($'000s)

	OEB-Approved	Test Year	Change	
	2020	2021	$	%
Rate Base	$973,801	$1,230,736	$256,935	26%

Table 9 below provides a summary of the change in capital expenditures between the 2021-2025 Test Year proposals and OEB-approved expenditures for the 2016-2020 period. The $34.0M reduction in capital expenditures can be largely explained by the completion of the Facilities Renewal Program.[17] For further details, please see UPDATED Exhibit 2-4-1: Capital Expenditure Summary and Exhibit 2-4-3: Distribution System Plan.

[17] For more information on the Facilities Renewal Program, please see UPDATED Attachment 2-1-1(A): New Administrative Office and Operations Facilities.

Table 9 – AS ORIGINALLY SUBMITTED – 2016-2020 OEB-Approved Capital Expenditures vs. 2021-2025 Proposed Capital Expenditures ($'000s)

	OEB-Approved	Test Years	Change	
	2016-2020	2021-2025	$	%
Capital Expenditures	$537,450[18]	$503,494	$(33,956)	(6%)

Table 9 – UPDATED FOR 2019 ACTUALS – 2016-2020 OEB-Approved Capital Expenditures vs. 2021-2025 Proposed Capital Expenditures ($'000s)

	OEB-Approved	Test Years	Change	
	2016-2020	2021-2025	$	%
Capital Expenditures	$537,450[19]	$503,799	$(33,651)	(6%)

7. OPERATIONS, MAINTENANCE, AND ADMINISTRATION EXPENSE

Hydro Ottawa's 2021 OM&A budget was developed as a Test Year rebasing budget and is based on the utility's forecast of expenditures needed to maintain service reliability and safety, and to remain in compliance with regulatory and legislative requirements.

As discussed in section 3.1 above, for the 2022-2025 Test Years Hydro Ottawa will adjust OM&A using a CPEF to align with the principles of incentive regulation, as enshrined in the Renewed Regulatory Framework ("RRF"). This formula consists of a two-component Price Cap Index ("PCI"): inflation and productivity. The formula includes an inflation factor and two factors for productivity. One productivity factor is a fixed amount for industry-wide productivity, and the other is a stretch factor which is set each year based on the level of productivity the distributor has achieved. In addition to the PCI components, the CPEF includes a growth factor as well.

[18] Approved capital expenditures for 2016-2020 are equivalent to those which were included in Hydro Ottawa's original 2016-2020 rate application. In the Approved Settlement Agreement governing the utility's 2016-2020 rate plan, the $10.0M reduction was applied to capital additions only.
[19] Approved capital expenditures for 2016-2020 are equivalent to those which were included in Hydro Ottawa's original 2016-2020 rate application. In the Approved Settlement Agreement governing the utility's 2016-2020 rate plan, the $10.0M reduction was applied to capital additions only.

The CPEF that Hydro Ottawa is proposing to apply to OM&A costs for the 2022-2025 Test Years is 2.51%. For more information on the CPEF and how it was developed, please see UPDATED Exhibit 1-1-10: Alignment with the Renewed Regulatory Framework.

Table 10 below outlines Hydro Ottawa's Historical, Bridge, and Test Year OM&A expenditures.

Table 10 – AS ORIGINALLY SUBMITTED – OM&A Expenditures & Variances ($'000s)

	Year	OM&A	Previous Year	Variance	Variance
Historical	2016	$82,621			
	2017	$82,245	$82,621	$(376)	(0.46)%
	2018	$86,863	$82,245	$4,619	5.62%
Bridge	2019	$87,545	$86,863	$682	0.79%
	2020	$91,990	$87,545	$4,445	5.08%
Test	2021	$93,923	$91,990	$1,932	2.10%
	2022	$96,280	$93,923	$2,357	2.51%
	2023	$98,697	$96,280	$2,417	2.51%
	2024	$101,174	$98,697	$2,477	2.51%
	2025	$103,714	$101,174	$2,539	2.51%

Table 10 – UPDATED FOR 2019 ACTUALS – OM&A Expenditures & Variances ($'000s)

	Year	OM&A	Previous Year	Variance	Variance
Historical	2016	$82,621			
	2017	$82,245	$82,621	$(376)	(0.46)%
	2018	$86,863	$82,245	$4,619	5.62%
	2019	$83,113	$86,863	($3,750)	(4.32%)
Bridge	2020	$91,990	$83,113	$8,878	10.68%
Test	2021	$93,923	$91,990	$1,932	2.10%
	2022	$96,280	$93,923	$2,357	2.51%
	2023	$98,697	$96,280	$2,417	2.51%
	2024	$101,174	$98,697	$2,477	2.51%
	2025	$103,714	$101,174	$2,539	2.51%

For 2021 Test Year OM&A, Table 11 below shows both the dollar and percentage change from the last year of OM&A expenditures approved by the OEB (i.e. 2020 Bridge Year).

Table 11 – 2020 OEB-Approved OM&A vs. 2021 Test Year OM&A ($'000s)

	OEB-Approved	Test	Change	
	2020	2021	$	%
OM&A	$89,007	$93,923	$4,916	5.5%

For more information on OM&A, please see UPDATED Exhibit 4-1-1: Operations, Maintenance and Administration Summary and UPDATED Exhibit 4-1-3: Operations, Maintenance and Administration Program Costs.

7.1. COST DRIVERS & TRENDS

Table 12 below shows the overall cost drivers for OM&A. More detailed explanations for each item are provided in UPDATED Exhibit 4-1-4: Operations, Maintenance and Administration Cost Drivers and Program Variance Analysis.

Table 12 – AS ORIGINALLY SUBMITTED – Summary of Overall OM&A Cost Drivers and Trends ($'000,000s)

Major Driver	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year
OPENING BALANCE	**$83.1[20]**	**$ 82.6**	**$ 82.2**	**$ 86.8**	**$ 87.5**	**$ 91.9**
Labour Compensation and Benefits		$(0.2)	$3.3	$0.6	$1.6	$2.0
Proactive and Reactive Distribution System Maintenance		$0.1	$0.5	$0.5	$(0.1)	$0.3
Facilities, Insurance and Fuel		$0.1	$0.3	$2.9	$(1.5)	$0.2
OEB Fees and CDM Allocation		$(0.1)	$0.0	$0.2	$0.2	$0.7
Call Centre, Postage and Bad Debt		$0.3	$(1.0)	$ (0.7)	$0.8	$0.0
Dark Fiber Fees		$(0.1)	$0.0	$0.3	$0.9	$(1.7)
Technology		$0.8	$0.4	$0.5	$1.3	$0.9
SLA Cost Reclassification		$0.0	$0.0	$(3.7)	$(0.2)	$(0.1)
Other	$(0.5)	$(1.3)	$1.1	$0.1	$1.4	$(0.3)
Total Change	**$(0.5)**	**$(0.4)**	**$4.6**	**$0.7**	**$4.4**	**$2.0**
CLOSING BALANCE[21]	**$ 82.6**	**$ 82.2**	**$ 86.8**	**$ 87.5**	**$ 91.9**	**$ 93.9**

[20] The 2016 Opening Balance represents that which was approved by the OEB in the adjudication of Hydro Ottawa's 2016-2020 Custom IR application (EB-2015-0004).
[21] Totals may not sum due to rounding.

Table 12 – UPDATED FOR 2019 ACTUALS – Summary of Overall OM&A Cost Drivers and Trends[22] ($'000,000s)

Major Driver	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year
OPENING BALANCE	**$83.1[23]**	**$ 82.6**	**$ 82.2**	**$ 86.8**	**$ 83.1**	**$ 91.9**
Labour Compensation and Benefits		$(0.2)	$3.3	($1.9)	$4.1	$2.0
Proactive and Reactive Distribution System Maintenance		$0.1	$0.5	$0.0	$0.4	$0.3
Facilities, Insurance, and Fuel		$0.1	$0.3	$3.4	$(2.0)	$0.2
OEB Fees and CDM Allocation		$(0.1)	$0.0	$0.2	$0.2	$0.7
Call Centre, Postage, and Bad Debt		$0.3	$(1.0)	$(0.7)	$0.8	$0.0
Dark Fiber Fees		$(0.1)	$0.0	$0.1	$1.0	$(1.7)
Technology		$0.8	$0.4	$0.5	$1.3	$0.9
SLA Cost Reclassification		$0.0	$0.0	$(3.2)	$(0.7)	$(0.1)
Other	$(0.5)	$(1.3)	$1.1	$(2.1)	$3.7	$(0.3)
Total Change	**$(0.5)**	**$(0.4)**	**$4.6**	**$(3.7)**	**$8.8**	**$2.0**
CLOSING BALANCE[24]	**$ 82.6**	**$ 82.2**	**$ 86.8**	**$ 83.1**	**$ 91.9**	**$ 93.9**

7.2. COMPENSATION

Table 13 below shows the total compensation included in OM&A for each of the Historical, Bridge, and Test Years. For more information, please see UPDATED Exhibit 4-1-4: Operations, Maintenance and Administration Cost Drivers and Program Variance Analysis as well as UPDATED Exhibit 4-1-5: Workforce Staffing and Compensation.

[22] Information has been updated and presented consistent with UPDATED Attachment 4-1-4(A): OEB Appendix 2-JB: Recoverable OM&A Cost Driver Table.
[23] The 2016 Opening Balance represents that which was approved by the OEB in the adjudication of Hydro Ottawa's *2016-2020 Custom Incentive Rate-Setting Distribution Rate Application* (EB-2015-0004).
[24] Totals may not sum due to rounding.

Table 13 – AS ORIGINALLY SUBMITTED – Total Compensation Costs, Including Benefits ($'000s)

	Year	Compensation	Previous Year	Variance ($)	Variance (%)
Historical	2016	$72,127			
	2017	$71,939	$72,127	$(188)	(0.26)%
	2018	$75,205	$71,939	$3,266	4.54%
Bridge	2019	$75,810	$75,205	$605	0.80%
	2020	$77,447	$75,810	$1,637	2.16%
Test	2021	$79,486	$77,447	$2,039	2.63%

Table 13 – UPDATED FOR 2019 ACTUALS – Total Compensation Costs, Including Benefits ($'000s)

	Year	Compensation	Previous Year	Variance ($)	Variance (%)
Historical	2016	$72,127			
	2017	$71,939	$72,127	$(188)	(0.26)%
	2018	$75,205	$71,939	$3,266	4.54%
	2019	$73,329	$75,205	$(1,876)	(2.49)%
Bridge	2020	$77,447	$73,329	$4,118	5.62%
Test	2021	$79,486	$77,447	$2,039	2.63%

The Filing Requirements stipulate that applicants must specify total compensation costs for the Test Year as well as the change in compensation costs between the Test Year and the last OEB-approved year (expressed in both monetary and percentage terms). In this regard, Hydro Ottawa notes that the previous approval granted by the OEB with respect to compensation costs was embedded in the OEB's general approval of the utility's total OM&A costs for the 2016-2020 period. More specifically, in the adjudication of Hydro Ottawa's 2016-2020 Custom IR application, the utility was granted approval for an overall envelope of OM&A costs (inclusive of compensation) for the 2016 base year, with 2017-2020 OM&A costs adjusted on an annual basis using an escalator factor.

For more information on Hydro Ottawa's compensation costs, including a comparison of 2021 Test Year compensation costs with Historical and Bridge Year costs for the 2016-2020 period, please see UPDATED ~~Exhibit~~ Attachment 4-1-5(A): Employee Compensation Strategy.

8. COST OF CAPITAL

Table 14 below summarizes the capital structure, cost of capital parameters, and Weighted Average Cost of Capital ("WACC") that Hydro Ottawa is proposing to utilize for purposes of this Application.

Table 14 – 2021-2025 Weighted Average Cost of Capital

Year	Short-Term Debt Weight	Short-Term Debt Rate	Long-Term Debt Weight	Long-Term Debt Rate	Equity Weight	Return on Equity	WACC
2021	4%	2.75%	56%	3.35%	40%	8.88%	5.54%
2022	4%	2.75%	56%	3.36%	40%	9.13%	5.64%
2023	4%	2.75%	56%	3.40%	40%	9.31%	5.74%
2024	4%	2.75%	56%	3.44%	40%	9.41%	5.80%
2025	4%	2.75%	56%	3.69%	40%	9.46%	5.96%

Hydro Ottawa is using the OEB's cost of capital methodology for its capital components. The short-term debt component uses the 2.75% rate as outlined in the OEB's 2020 Cost of Capital Parameters letter dated October 31, 2019.[25] Hydro Ottawa is proposing that this rate be locked in for the five-year term covered by this Application. The long-term debt and return on equity ("ROE") are calculated as per UPDATED Exhibit 5-1-1: Cost of Capital and Capital Structure, and use the OEB's formulaic methodology to determine the forecast rates. The only deviation from this is the use of Hydro Ottawa's own historical spreads in determining long-term interest rates.

[25] Ontario Energy Board, Letter re: *2020 Cost of Capital Parameters* (October 31, 2019).

9. COST ALLOCATION AND RATE DESIGN

9.1. COST ALLOCATION

Hydro Ottawa engaged Elenchus Research Associates ("Elenchus") to assist in preparing a Cost Allocation Model for the 2021 Test Year. Using the OEB's approved cost allocation methodologies and the V3.7 Cost Allocation Model, Hydro Ottawa's 2021 base revenue requirement has been allocated to the utility's nine rate classes. The primary purpose of the Cost Allocation Report is to determine the proportions of total revenue requirement that are the responsibility of each rate class.[26] The resulting revenue-to-cost ratios for each rate class were determined using the total revenues over costs for the Test Year, pursuant to the OEB's policies for cost allocation by electricity distributors.[27]

9.2. RATE DESIGN

The results of the Cost Allocation Report were the main input into Hydro Ottawa's rate design process. Elenchus undertook the study to determine whether refinements were necessary to better reflect the OEB's principle of cost causality in the utility's cost allocation to customers. The result of Elenchus' study indicated that some classes of customers fell outside the acceptable revenue-to-cost ranges as established by the OEB. The utility adjusted GS <50 kW, Large Use, and Street Lighting customer classes to bring them within the specified ranges. The Sentinel customer class will be adjusted over a five-year period to mitigate the bill impact associated with a large increase in revenue requirement that is necessary to bring that class within its range.

As of January 1, 2020, Residential distribution rates are fully fixed in compliance with the policy adopted by the OEB in 2015.[28] Rates for all other customer classes will continue to have both a fixed component and a variable component based on consumption (kWh) or demand (kW).

[26] Please see Attachment 7-1-1(B): Cost Allocation Report.
[27] Ontario Energy Board, *Report of the Board - Review of Electricity Distribution Cost Allocation Policy*, EB-2010-0219 (March 31, 2011).
[28] Ontario Energy Board, *Board Policy - A New Distribution Rate Design for Residential Electricity Customers*, EB-2012-0410 (April 2, 2015).

10. DEFERRAL AND VARIANCE ACCOUNTS

Hydro Ottawa proposes to clear Group 2 deferral accounts, including the Lost Revenue Adjustment Mechanism ("LRAM") Account. The total net deferral and variance ("DVA") balance proposed for disposition is $(5,751,923), as originally submitted. Hydro Ottawa is proposing that the Rate Riders for Group 2 Accounts (excluding LRAM) be disposed of over two years. For the LRAM Variance Account, a one-year disposition period is proposed. As no Group 1 Accounts are being requested for disposition at this time, the rate riders are the same for Regulated Price Plan ("RPP") and non-RPP customers.

After accounting for 2019 actuals, Hydro Ottawa is proposing to clear Group 1 and Group 2 Accounts, including the LRAM Account. The total net DVA updated balance proposed for disposition is $(6,695,545). Hydro Ottawa is proposing that the Deferral/Variance Accounts Rate Riders for Group 1 and Group 2 Accounts be disposed of over two years. Disposition of all other rate riders is requested over a one-year period.

Hydro Ottawa is proposing modifications to the following DVAs (for details, please refer to Exhibit 9-2-1: New Deferral and Variance Accounts):

- Uniform System of Account ("USofA") Sub-Account 1508 Connections Cost Recovery Agreement Payments Deferral Account
- USofA Sub-Account 1508 Capital Additions Revenue (excluding System Access) Differential Variance Account
- USofA Sub-Account 1508 System Access Capital Additions Revenue Requirement Differential Variance Account
- USofA Sub-Account 1508 Earnings Sharing Mechanism Variance Account

In addition, Hydro Ottawa is requesting that the following DVAs be discontinued:

- 1508 Sub-Account - Energy East Consultation Costs

- 1508 Sub-Account - Pole Attachment Charge Revenues Variance Account
- 1508 Sub-Account - Wireless Attachment Revenues Deferral Account
- 1508 Sub-Account - Y-Factor Variance Account
- 1508 Sub-Account - Gains/Losses from Sale of Existing Facilities Deferral
- 1508 Sub-Account - New Facilities Deferral Account

The following Accounts were approved for discontinuance as part of Hydro Ottawa's 2016-2020 rate plan. However, clearance of final balances are being requested as part of this Application.

- Account 1518 - Retail Cost Variance Account – Retail
- Account 1548 - Retail Cost Variance Account – STR

Further information regarding DVAs, the amounts proposed for clearance, and proposals for new DVAs, please refer to UPDATED Exhibit 9-1-1: Summary of Current Deferral and Variance Accounts, Exhibit 9-2-1: New Deferral and Variance Accounts, and UPDATED Exhibit 9-3-1: Disposition of Deferral and Variance Accounts.

11. BILL IMPACTS

In developing its capital and OM&A budgets for the 2021-2025 period, Hydro Ottawa was careful to have due regard for the impacts that bill increases may have on customers. The utility's objective was to keep the total bill impacts for each of its customer classes as minimal as possible.

The updated version of Table 15 below provides a summary of the total bill impacts for typical customers in all classes and has been updated to account for 2019 actuals. Further details regarding Hydro Ottawa's proposed bill impacts are available in UPDATED Exhibit 8-12-1.

Table 15 – AS ORIGINALLY SUBMITTED – Summary of Bill Impacts

Rate Class		Approved	Proposed				
		2020	2021	2022	2023	2024	2025
Residential (750 kWh)	Distribution Charge	$28.64	$29.95	$32.13	$33.97	$34.95	$35.56
	Change in Distribution Charge		$1.31	$2.18	$1.84	$0.98	$0.61
	% Distribution Increase		4.57%	7.28%	5.73%	2.88%	1.75%
	% Increase of Total Bill		1.32%	1.54%	1.28%	0.68%	0.43%
General Service <50 kW (2,000 kWh)	Distribution Charge	$71.32	$73.06	$78.13	$83.28	$86.33	$88.58
	Change in Distribution Charge		$1.74	$5.07	$5.15	$3.05	$2.25
	% Distribution Increase		2.44%	6.94%	6.59%	3.66%	2.61%
	% Increase of Total Bill		0.65%	1.37%	1.37%	0.81%	0.59%
General Service 50 kW - 1,499 kW (250 kW)	Distribution Charge	$1,461.93	$1,537.98	$1,669.42	$1,785.17	$1,853.01	$1,905.37
	Change in Distribution Charge		$76.05	$131.44	$115.76	$67.84	$52.36
	% Distribution Increase		5.20%	8.55%	6.93%	3.80%	2.83%
	% Increase of Total Bill		1.59%	0.74%	0.65%	0.38%	0.29%
General Service 1,500 kW - 4,999 kW (2,500 kW)	Distribution Charge	$15,941.18	$16,614.68	$18,015.99	$19,263.84	$19,992.90	$20,452.40
	Change in Distribution Charge		$673.50	$1,401.31	$1,247.85	$729.06	$459.50
	% Distribution Increase		4.22%	8.43%	6.93%	3.78%	2.30%
	% Increase of Total Bill		1.53%	0.78%	0.69%	0.40%	0.25%
Large Use (7,500 kW)	Distribution Charge	$48,420.32	$53,922.32	$58,287.22	$62,092.67	$64,292.42	$65,709.17
	Change in Distribution Charge		$5,502.00	$4,364.90	$3,805.45	$2,199.75	$1,416.75
	% Distribution Increase		11.36%	8.09%	6.53%	3.54%	2.20%
	% Increase of Total Bill		2.16%	0.79%	0.68%	0.39%	0.25%
Sentinel Lighting (0.4 kW)	Distribution Charge	$9.53	$10.91	$13.14	$15.31	$17.20	$18.99
	Change in Distribution Charge		$1.38	$2.23	$2.17	$1.89	$1.79
	% Distribution Increase		14.46%	20.46%	16.54%	12.33%	10.44%
	% Increase of Total Bill		7.36%	8.74%	7.83%	6.32%	5.65%
Street Lighting (1 kW)	Distribution Charge	$7.76	$6.99	$7.97	$8.68	$8.98	$9.24
	Change in Distribution Charge		$(0.77)	$0.98	$0.71	$0.30	$0.26
	% Distribution Increase		(9.98)%	14.07%	8.92%	3.46%	2.91%
	% Increase of Total Bill		(1.10)%	3.16%	2.24%	0.96%	0.83%
Unmetered Scattered Load (470 kWh)	Distribution Charge	$17.08	$17.49	$19.55	$21.37	$22.67	$23.82
	Change in Distribution Charge		$0.41	$2.06	$1.82	$1.30	$1.15
	% Distribution Increase		2.42%	11.76%	9.33%	6.10%	5.07%
	% Increase of Total Bill		0.98%	2.36%	2.05%	1.44%	1.26%

Table 15 – UPDATED FOR 2019 ACTUALS – Summary of Bill Impacts

Rate Class		Approved	Proposed				
		2020	2021	2022	2023	2024	2025
Residential (750 kWh)	Distribution Charge	$28.64	$30.62	$32.50	$34.04	$35.03	$35.65
	Change in Distribution Charge		$1.98	$1.88	$1.54	$0.99	$0.62
	% Distribution Increase		6.91%	6.15%	4.74%	2.91%	1.77%
	% Increase of Total Bill		1.53%	1.33%	1.38%	0.69%	0.43%
General Service <50 kW (2,000 kWh)	Distribution Charge	$71.32	$74.21	$79.23	$83.71	$86.76	$89.02
	Change in Distribution Charge		$2.89	$5.02	$4.48	$3.05	$2.26
	% Distribution Increase		4.05%	6.76%	5.65%	3.64%	2.60%
	% Increase of Total Bill		0.69%	1.36%	1.52%	0.80%	0.59%
General Service 50 kW - 1,499 kW (250 kW)	Distribution Charge	$1,461.93	$1,508.85	$1,620.11	$1,788.85	$1,857.00	$1,909.66
	Change in Distribution Charge		$46.93	$111.26	$168.74	$68.15	$52.66
	% Distribution Increase		3.21%	7.37%	10.42%	3.81%	2.84%
	% Increase of Total Bill		2.96%	(1.08)%	1.20%	0.38%	0.29%
General Service 1,500 kW - 4,999 kW (2,500 kW)	Distribution Charge	$15,941.18	$16,483.93	$17,672.63	$19,315.57	$20,048.54	$20,512.79
	Change in Distribution Charge		$542.75	$1,188.70	$1,642.94	$732.97	$464.25
	% Distribution Increase		3.40%	7.21%	9.30%	3.79%	2.32%
	% Increase of Total Bill		2.94%	(1.01)%	1.18%	0.40%	0.25%
Large Use (7,500 kW)	Distribution Charge	$48,420.32	$53,055.32	$56,727.95	$62,069.06	$64,275.56	$65,702.06
	Change in Distribution Charge		$4,635.00	$3,672.63	$5,341.11	$2,206.50	$1,426.50
	% Distribution Increase		9.57%	6.92%	9.42%	3.55%	2.22%
	% Increase of Total Bill		3.46%	(1.19)%	1.38%	0.39%	0.25%
Sentinel Lighting (0.4 kW)	Distribution Charge	$9.53	$11.25	$13.34	$15.38	$17.30	$19.12
	Change in Distribution Charge		$1.72	$2.10	$2.04	$1.91	$1.82
	% Distribution Increase		18.02%	18.64%	15.32%	12.43%	10.53%
	% Increase of Total Bill		8.47%	8.13%	7.62%	6.38%	5.71%
Street Lighting (1 kW)	Distribution Charge	$7.76	$7.46	$8.08	$8.80	$9.11	$9.38
	Change in Distribution Charge		$(0.30)	$0.62	$0.72	$0.31	$0.27
	% Distribution Increase		(3.89)%	8.26%	8.94%	3.55%	3.00%
	% Increase of Total Bill		(0.22)%	1.96%	2.93%	0.99%	0.87%
Unmetered Scattered Load (470 kWh)	Distribution Charge	$17.08	$17.68	$19.38	$21.25	$22.55	$23.70
	Change in Distribution Charge		$0.60	$1.71	$1.86	$1.30	$1.15
	% Distribution Increase		3.54%	9.64%	9.61%	6.13%	5.10%
	% Increase of Total Bill		0.92%	1.96%	2.42%	1.44%	1.26%

UPDATED CUSTOMER SUMMARY

A copy of Hydro Ottawa's Customer Summary is attached below, in accordance with section 2.1.3 of the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019.

In this Schedule, Hydro Ottawa has presented bill impacts with respect to the distribution portion of bills for the residential and GS < 50 kW customer classes. As of January 1, 2020, Hydro Ottawa completed its transition to fully fixed rates for residential customers. Seeing as there is no longer a variable component in the distribution rates charged to residential customers, Hydro Ottawa has not utilized a consumption threshold in its presentation of distribution bill impacts for these customers.

The information related to bill impacts has been updated to account for 2019 actuals. In addition, total capital expenditures for 2021-2025 have been adjusted to reflect updates to the MiGen program, as described in updated section 2.3.3 of Attachment 2-4-3(E): Material Investments.

Understanding Hydro Ottawa's 2021-2025 Rate Application

ABOUT HYDRO OTTAWA

Hydro Ottawa is the third largest municipally-owned electricity distributor in Ontario. We distribute electricity to approximately 340,000 customers, serving a population of more than one million people in the City of Ottawa and the Village of Casselman. We are a private business corporation that is 100% owned by our shareholder, the City of Ottawa.

It's our responsibility to transport power from the provincial transmission grid and deliver it safely and reliably to homes and businesses across our service territory. We own and operate a large, complex distribution network consisting of 50,000 poles, 2,700 km of overhead lines, 3,000 km of underground cable, and 45,000 transformers.

OUR FIVE-YEAR BUSINESS PLAN

Hydro Ottawa is seeking approval from the Ontario Energy Board (OEB) for the distribution rates that will be charged to customers for the 2021-2025 period.

The electricity industry in Ontario is regulated by the OEB. One of the OEB's roles is to review the business and distribution plans of all electricity distributors and approve the rates that they charge customers.

Between 2016 and 2020, Hydro Ottawa invested in distribution system capacity as well as the replacement of aging infrastructure to maintain operational effectiveness and efficiency. Upgrades to our fibre optic network and Customer Care and Billing System were also a focus, in addition to consolidating employees in two new buildings from end-of-life facilities.

HOW DOES HYDRO OTTAWA PLAN?

Hydro Ottawa is proposing a plan that is responsive to:

- **Legal and regulatory requirements** by continuing to meet our obligations.
- **Internal business planning** based on expert analysis and professional judgment to develop construction and operations programs that address safety, business, technical, and operational needs.
- **Customer feedback** collected throughout our consultation on the application and ongoing customer engagements.

Over the course of 2021 to 2025, Hydro Ottawa will need to continue to invest in our infrastructure, equipment, and workforce.

These needs are being driven by a diverse set of factors, such as aging infrastructure, sustained population and economic growth in the Ottawa area, an increasing number of severe weather events, technological evolution, cyber security threats, and workforce retirements. The plan forward includes major asset replacement and upgrades, vehicle replacements, systems and software for resource planning programs, data analytics, and productivity improvements.

> *To learn more about Hydro Ottawa's plan, please see Exhibit 1-1-9 Business Plan in the application.*

As a result, key initiatives that we have planned include:

- Building new distribution stations in growing areas of the city
- Connecting thousands of new customers every year
- Supporting local infrastructure projects like Light Rail Transit
- Upgrading and modifying infrastructure to enhance reliability and capacity on the grid
- Replacing equipment that has reached end-of-life
- Strengthening the grid's ability to withstand the effects of severe weather
- Investing in digital solutions to enhance customer service
- Renewing our vehicle fleet
- Recruiting and retaining a new generation of highly-skilled employees

HOW CUSTOMERS HELPED INFORM OUR PLAN

Our goal is to put the customer at the centre of everything we do. Hydro Ottawa is committed to engaging with our customers, understanding their needs and preferences, and operating in an efficient and cost effective manner. In preparing our business plan, we reached out directly to customers, to better understand their priorities and expectations for the electricity services they receive. Price, reliability, and investing in new technology ranked as the top three priorities.

Together with the customer feedback that we receive on an ongoing basis, we took this input and developed a plan emphasizing four principles:

01 Minimize rate increases

02 Maintain reliability and service quality

03 Address key pressures to the distribution system

04 Make prudent investments in emerging technologies to enhance service offerings and/or reduce operating costs

Nearly 21,000 customers shared their thoughts on our preliminary plan through the completion of an online survey. The majority of residential customers (83%), small business customers (76%), and mid-market and key account customers (69%) shared that they supported Hydro Ottawa's planned increase or even spending a bit more to improve service based on the priorities above.

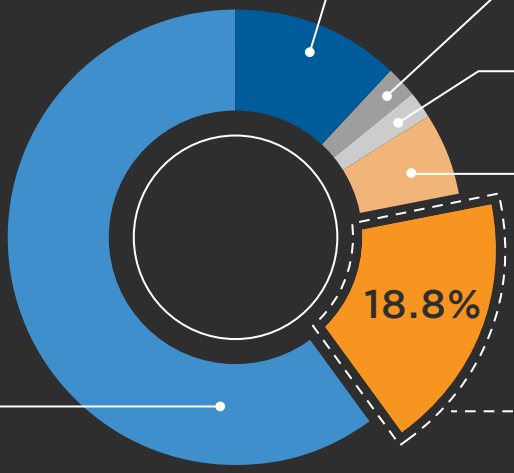
> *To learn more on how Hydro Ottawa engages customers and responds to their needs, please see Exhibit 1-2-1 Customer Engagement in the application.*

Electricity distributors like Hydro Ottawa are funded through the distribution rates paid by customers. We do not receive taxpayer money to fund our operations or investments in the distribution system. While Hydro Ottawa is responsible for collecting payment for the entire electricity bill, we retain only a portion of the delivery charge representing less than 20% of the bill.

Figure 1

Hydro Ottawa Bill Breakdown (January 1, 2020)

These are the electricity charges for the average residential customer using 700 kWh per month. These percentages do not include the Ontario Electricity Rebate.



11.5%
HST

2%
Regulatory Charges
(paid to Independent Electricity System Operator + Provincial Government)

2.4%
Delivery: Line Loss
(paid to Independent Electricity System Operator)

6.1%
Delivery: Transmission
(paid to Hydro One)

18.8%
Delivery: Distribution
(paid to Hydro Ottawa)

59.2%
Electricity Generation Charges
(paid to generation companies)

DOLLARS AND CENTS – EXPECTED COSTS OF THE PLAN

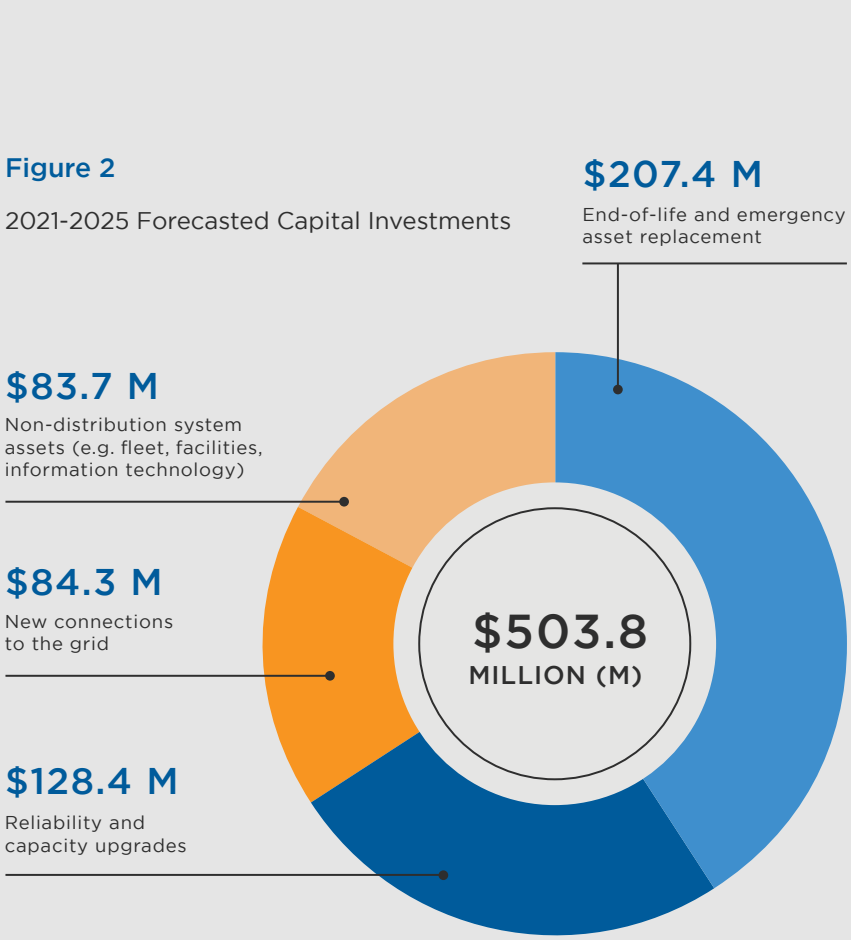
Like most businesses, Hydro Ottawa manages both a capital and an operating budget.

Capital expenditures are assets that have lasting benefits over many years (e.g. poles and wires), while operating expenditures are recurring expenses in day-to-day management of the company (e.g. tree trimming and billing).

For the 2021-2025 period, the capital required to maintain system reliability and safety, and invest in infrastructure and equipment priorities is $503.8 million. For operations, a budget of $493.8 million is needed.

Figure 2

2021-2025 Forecasted Capital Investments



In order to move forward with our proposals, we're seeking approval from the OEB to change our rates.

The expected impacts on the distribution portion of customer bills over the five-year rate period are shown in the table below.

Impacts on Customers' Distribution Rates

	Change in Distribution Charge	2021 Proposed	2022 Proposed	2023 Proposed	2024 Proposed	2025 Proposed	Average
Residential	$/month	$1.98	$1.88	$1.54	$0.99	$0.62	$1.40
	Annual % Change	6.91%	6.15%	4.74%	2.91%	1.77%	4.49%
General Service (<50 kW)	$/month	$2.89	$5.02	$4.48	$3.05	$2.26	$3.54
	Annual % Change	4.05%	6.76%	5.65%	3.64%	2.60%	4.54%

DELIVERING VALUE FOR MONEY – EXPECTED BENEFITS FOR CUSTOMERS

Moving forward on our five-year plan will enable us to maintain a high level of reliability for customers, while ensuring that we keep costs low and continuously improve the way we do business.

Some of the ways in which customers and communities are expected to benefit from the proposals in our plan include the following:

- Improved system reliability (fewer and shorter outages, quicker restoration times, enhanced resilience to severe weather)
- Greater electricity supply capacity for growing areas of the city
- Greater personalization, choice, convenience, and self-serve capability in the services provided to customers
- More options and solutions to help customers manage and monitor energy use with ongoing development of the Hydro Ottawa app and MyAccount
- Stronger protections for grid assets and customer data against cyber threats
- Increased ability to connect more renewable energy resources to the grid
- Lower costs, relative to alternative investment scenarios

HAVE YOUR SAY

The OEB will review Hydro Ottawa's plan and proposed rates in an open and transparent public process.

For more information on how you can participate in that process, please visit hydroottawa.com/active-applications.

UPDATED EXECUTIVE SUMMARY

1. INTRODUCTION

This Schedule provides a summary of Hydro Ottawa Limited's ("Hydro Ottawa" or "the utility") application to the Ontario Energy Board ("OEB") seeking approval of its proposed distribution rates and other charges for the five-year period of January 1, 2021 to December 31, 2025. This application ("Application") is submitted pursuant to section 78 of the *Ontario Energy Board Act, 1998*. In preparing this Application, Hydro Ottawa has been guided by the provisions set forth in the *Chapter 2, Chapter 3*, and *Chapter 5 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019 ("Filing Requirements"), as well as the *Handbook for Utility Rate Applications* issued in 2016.

Herein, Hydro Ottawa highlights the key elements of this Application. These include the business, capital, and operational plans that underpin the Application, and the corresponding funding that is required to enable the utility to continue providing efficient and reliable services, along with a first-class customer experience, to Hydro Ottawa customers. This Schedule likewise explains how these plans align with customer needs and expectations, as well as what types of impacts are expected on customers' bills. For details on the specific approvals that Hydro Ottawa is requesting from the OEB by way of this Application, please see UPDATED Exhibit 1-1-4: Administration and UPDATED Attachment 1-1-4(A): OEB Appendix 2-A - List of Requested Approvals.

This Application employs the Custom Incentive Rate-setting ("Custom IR") method and marks the second successive rate filing in which Hydro Ottawa has opted to avail itself of this particular rate-setting approach.

Looking ahead to the 2021-2025 term, Hydro Ottawa anticipates a sustained need to undertake significant levels of capital investment in its distribution system, in order to maintain reliability and service quality for its customers. This need is the result of several factors, including aging

infrastructure, an expanding customer base, continued growth across the City of Ottawa, and the effects of severe weather events. With respect to operational requirements, the utility likewise continues to face numerous pressures, such as ongoing shifts in consumer expectations for innovative services, the evolution of mission critical technologies, increased penetration of distributed energy resources ("DERs"), and workforce retirements. Together, these and other challenges are driving the need for investments and solutions which will ensure that overall system performance is maintained and customer preferences are met – all while safeguarding rates at a reasonable level. Accordingly, as described further below and elsewhere in this Application, the Custom IR method remains the most suitable rate-setting option to govern the approaching rate period for the utility.

The rate plan set forth in this Application builds upon the scope and success of the Custom IR plan that Hydro Ottawa has been implementing over the course of the 2016-2020 period. Numerous milestones have been achieved in the execution of this plan. Foremost was the roll-out of a multi-year Customer Experience Roadmap, which was anchored in the twin imperatives of putting the customer at the centre of everything that Hydro Ottawa does and facilitating a customer experience that is driven by customer choice. Among the flagship deliverables in this initiative were enhancements to the Customer Contact Centre (including becoming one of the first distributors in Ontario to expand its hours of operation into Saturdays), deployment of omni-channel capabilities and self-serve features to support customer communication through preferred channels, introduction of a mobile application, achievement of the highest level of customer participation in online billing of any distributor in Ontario, and the launch of voice-activated digital assistance through such devices as Amazon Alexa and Google Home (the first of its kind by any electric utility in Canada). Concurrent with the implementation of this roadmap, Hydro Ottawa consistently received high marks from its customers in the annual surveys that were commissioned to measure customer satisfaction with the utility.

Under its 2016-2020 rate plan, Hydro Ottawa has also crossed a new frontier in terms of operational effectiveness. As of the end of 2019, the utility was on track to successfully execute

the largest multi-year capital expenditure plan in its history, with significant progress made in replacing a large portion of assets at the end of their useful lives, connecting new customers to the grid, and enhancing system capacity to keep pace with shifts in loads within the service territory. These expenditures have translated into improved system reliability and performance, with the utility having consistently met or exceeded its reliability targets over the 2016-2018 timeframe. In fact, over the course of 2016-2018, Hydro Ottawa met or exceeded each of the measures in the annual Electricity Utility Scorecard for which a target had been assigned, with 100% of those measures showing performance improvement or consistent trending. Moreover, the outage management and emergency restoration capabilities of the utility were put to the test during several significant extreme weather events – the most damaging of which was the unprecedented series of tornadoes that touched down in Hydro Ottawa's service territory in September 2018. While challenging, these events nevertheless presented the opportunity for the utility to demonstrate its organizational and operational strength, depth, and maturity. The positive response from customers and the community attested to the success of these efforts.

Hydro Ottawa also successfully completed a once-in-a-generation project to consolidate the majority of its employees into new administrative and operations facilities. This project was executed pursuant to approval granted by the OEB in its Decision and Rate Order on Hydro Ottawa's 2016-2020 Custom IR application.[1] For more background information, including a detailed justification of the prudency of the costs incurred by the utility in the completion of this project, please see UPDATED Attachment 2-1-1(A): New Administrative Office and Operations Facilities.

Other noteworthy performance outcomes from 2016-2020 included the following:

- Productivity gains through cost containment and increased automation of business processes;[2]

[1] Ontario Energy Board, *Decision and Order*, EB-2015-0004 (December 22, 2015).
[2] Several productivity initiatives have enabled Hydro Ottawa to seek a reduction in specific customer charges for the 2021-2025 rate term. Please see UPDATED Exhibit 8-7-1: Specific Service Charges for details.

- Successful delivery of conservation programs to customers;
- Greater efficiencies in maintenance and construction work;
- Upgrades to core business systems (including migration to cloud-based platforms);
- Implementation of a formal cyber security program;
- Replenishment of the workforce through execution of a Talent Management Strategy;
- Expansion of the fibre telecommunications network to connect field area devices with select substations; and
- Financial returns consistent with approved Return on Equity ("ROE") levels.

It merits observation that Hydro Ottawa achieved the aforementioned outcomes and their attendant benefits against the backdrop of approximately 6.0% growth in total customer count during the 2016-2020 period, and of successful efforts to ensure no net increase in overall permanent full-time employee headcount.

In light of its best-in-class performance in many areas, Hydro Ottawa received numerous industry and professional awards during the 2016-2020 period, with recognition extended in the contexts of customer programs, human resources and safety innovation, corporate social responsibility, and best employer (among others).

Hydro Ottawa is confident that the accomplishments of the 2016-2020 rate term will position the utility for continued success in delivering value to customers and meeting their needs for reliable, responsive, and cost-effective services over the upcoming five-year period. As they did in the preceding rate plan, customer engagement, continuous improvement, and performance measurement will remain hallmarks of Hydro Ottawa's planned activity for 2021-2025. Productivity expectations and initiatives are embedded throughout the plans underpinning this Application, alongside a robust framework for tracking and measuring outcomes, much of which is informed by the benchmarking of Hydro Ottawa's performance in several key program areas.

2. ABOUT HYDRO OTTAWA

Hydro Ottawa is licensed by the OEB to distribute electricity to approximately 340,000 customers, as of the end of 2019, within the City of Ottawa and the Village of Casselman. By number of customers, Hydro Ottawa is the third largest municipally-owned electricity distributor in Ontario. Its service territory covers 1,116 square kilometres and is comprised of a dense urban core, large areas of suburban development, and a vast rural area that represents 60% of the overall footprint.

Hydro Ottawa and its predecessor utilities have proudly served communities in the National Capital Region for over 100 years. The utility's unique customer base includes residential customers, commercial businesses, farms, and large institutional and industrial customers. As the national seat of government, Ottawa is home to the federal parliament and key institutions within the Government of Canada. Moreover, in terms of population, the city serves as the second largest in the Province of Ontario and the sixth largest in the country.

In its current corporate structure, Hydro Ottawa serves as the successor to five utilities which consolidated in the year 2000 (Ottawa Hydro, Kanata Hydro, Gloucester Hydro, Nepean Hydro, and Goulbourn Hydro), following the amalgamation of several municipalities in the region and the formation of the City of Ottawa. In 2002, the service territory of Casselman Hydro was acquired.

Hydro Ottawa is a wholly-owned subsidiary of Hydro Ottawa Holding Inc., which is 100% owned by the City of Ottawa and governed by an independent Board of Directors.

3. HYDRO OTTAWA'S BUSINESS PLAN

In accordance with the OEB's *Handbook for Utility Rate Applications*, Hydro Ottawa has prepared a formal Business Plan that serves as the basis for the utility's overall strategy and goals, elucidates the intersection between these goals and the proposals set forth in this Application, and speaks to the benefits that will accrue to customers as a result of the plan's

execution. This Business Plan was approved by Hydro Ottawa's Board of Directors on November 28, 2019 and is included in this Application as UPDATED Exhibit 1-1-9.

3.1 CORPORATE VISION & STRATEGIC OBJECTIVES

Hydro Ottawa's vision is to serve as a leading partner in a smart energy future and as the trusted energy advisor for customers. In order to achieve this vision, the utility has organized its business strategy for several years around four critical areas of focus and their accompanying strategic objectives. Hydro Ottawa will maintain continuity in these core objectives heading into the 2021-2025 period. The key rationale for this approach is the level of success achieved during the preceding five-year rate term, as well as the trajectory of the business and policy landscape in which Hydro Ottawa operates.

Accordingly, as denoted in Figure 1 below, the business objectives that will guide Hydro Ottawa's activities and investments throughout the 2021-2025 rate period will be the following:

- **Customer Value:** we will deliver value across the entire customer experience by providing reliable, responsive, and innovative services at competitive rates.

- **Financial Strength:** we will create sustainable growth in our business and our earnings by improving productivity and pursuing business growth opportunities that leverage our strengths – our core capabilities, our assets, and our people.

- **Organizational Effectiveness:** we will achieve performance excellence by cultivating a culture of innovation and continuous improvement.

- **Corporate Citizenship:** we will contribute to the well-being of the community by acting at all times as a responsible and engaged corporate citizen.

Figure 1 – Corporate Strategic Objectives

Of these objectives, the most important driver for Hydro Ottawa's business strategy will remain Customer Value, with the utility striving to put the customer at the centre of everything it does.

3.2 ALIGNMENT WITH THE RENEWED REGULATORY FRAMEWORK

The primary objectives animating Hydro Ottawa's corporate vision are wholly consistent with the main performance outcomes promoted under the OEB's Renewed Regulatory Framework ("RRF"). Hydro Ottawa views this broad alignment as a competitive advantage and remains committed to firmly entrenching RRF principles and objectives throughout its operations and business.

Table 1 below illustrates the alignment between the utility's overarching objectives and the key categories of performance outcomes under the RRF. For additional context, the table also shows the congruence of Hydro Ottawa's high-level performance goals and strategic outcomes – which are utilized to measure progress in achieving the strategic objectives – with the RRF's areas of focus.

Table 1 – Alignment of Hydro Ottawa's Corporate Areas of Focus and Strategic Objectives with the OEB's RRF Performance Outcomes

OEB	Hydro Ottawa		
RRF Performance Outcomes	**Key Area of Focus**	**Corporate Performance Goal**	**Strategic Outcome**
Customer Focus	Customer Value	• Assist customers in managing their energy consumption and electricity costs • Deliver on customer expectations for service quality and responsiveness • Maintain overall distribution system reliability	• Customer loyalty and satisfaction
Operational Effectiveness	Organizational Effectiveness	• Continue to enhance operational performance and productivity • Maintain leading health and safety record • Enhance organizational and employee capability	• Efficient and effective operations • Safe and healthy work environment • Engaged, aligned and prepared workforce
Public Policy Responsiveness	Corporate Citizenship	• Enhance our brand image in the community and the industry • Continue to improve our environmental performance and reduce our impact on the environment	• Leading governance and business practices • Engaged stakeholders • Safe, secure and environmentally responsible services • Positive community impact
Financial Performance	Financial Strength	• Grow revenues from new sources • Enhance / protect revenues from existing business lines	• Growth in shareholder value

Further detail with respect to Hydro Ottawa's alignment with the RRF can be found in UPDATED Exhibit 1-1-10: Alignment with the Renewed Regulatory Framework.

3.3 CUSTOMER ENGAGEMENT

The integration of customer feedback and providing customers with value for money serve as cornerstones of Hydro Ottawa's business planning. In step with its overall business strategy to put the customer at the centre of everything it does, the utility endeavours to ensure that its capital and operational investment plans are guided and informed by customer needs, preferences, and priorities.

Hydro Ottawa avails itself of numerous tools, activities, and interactions to engage customers and to reflect their input in the utility's planning and plans. Foremost among these are the engagement initiatives that are administered on an ongoing basis. These represent an evergreen posture on Hydro Ottawa's part to develop a genuine understanding of customers' interests through a fluid and continuous feedback loop, which helps inform and sharpen the utility's service delivery as a matter of established routine. Several of these activities are in line with industry best practice, such as an annual customer satisfaction survey, formal Key Accounts program, and engagement in numerous social media platforms. Other activities are homegrown, having been formulated and customized to suit the particular needs of the utility and its unique customer base. These include project-specific consultations that are hosted by Hydro Ottawa when major distribution system projects have the potential to impact customers and their community. Based on customer feedback, these consultations have resulted in the evaluation of additional design options, the use of less impactful equipment, and/or the collaborative scheduling of mutually agreeable timelines for project completion. Other examples include surveys that are conducted each month of customers who contact Hydro Ottawa's contact centre. Each customer is contacted and invited to rate their customer service experience. Through analysis and monitoring of these results, Hydro Ottawa is able to identify areas for improvement and adapt its processes to respond to customer preferences.

As a complement to the foregoing activities, Hydro Ottawa undertook targeted customer outreach to inform the development of the specific plans and proposals set forth in this Application. Consisting of a mix of qualitative and quantitative methodologies, this engagement was launched in January 2019 and extended through September 2019.

The initial phase yielded consistent findings across low-volume customer classes – namely, that reliability, prices, and investment in new technology constituted the top three priorities for customers. Moreover, these customers generally held favourable views on making proactive investments in aging infrastructure and grid modernization at the present time, with the understanding that this may lead to near-term costs but will result in future savings.

Based upon the feedback received during Phase I, Hydro Ottawa undertook a second, more expansive phase of engagement, in which the utility surveyed customers for their detailed feedback on proposed plans for capital and operational investments over the 2021-2025 period. A series of expenditure options were presented – namely, a reference case outlining the utility's proposed course of action, along with scenarios which either accelerated and expanded the proposal, or which scaled back the scope and timing of the proposal. Customers were thus able to express their views on a range of alternative proposals, as well as the respective trade-offs, outcomes, and rate impacts.

Ultimately, the response from customers in all classes was heavily weighted in support of Hydro Ottawa's proposed plans or spending more than proposed for certain services. Nearly one-half of respondents in the residential, small business, and mid-market and Key Account classes (48%, 47%, and 46%, respectively) identified that Hydro Ottawa should maintain the forecasted annual increase to deliver a program which focuses on the stated priorities. An additional 35%, 29%, and 23% of customers in these segments, respectively, expressed support for further improvements in service, even if this entailed additional rate increases.

Of note, the number of customers who participated in this engagement exercise – nearly 21,000 in total – was the largest in the history of any Hydro Ottawa rate application. In itself, this result was encouraging and instilled confidence in the quality of the information gleaned and the representativeness of the sample pool of customers. Beyond this, however, Hydro Ottawa was buoyed by the fact that the rate of response (i.e. number of respondents as a percentage of the total customer base) exceeded that which was observed in the most recent rate filings from the three largest distribution utilities in Ontario.[3] In fact, according to the external vendor retained by Hydro Ottawa to help execute the customer consultation process, the utility's engagement

[3] Hydro One Networks Inc., *2018-2022 Custom Incentive Rate-setting Distribution Rate Application*, EB-2017-0049 (March 31, 2017); Toronto Hydro-Electric System Limited, *2020-2024 Custom Incentive Rate-setting Distribution Rate Application*, EB-2018-0165 (August 15, 2018); and Alectra Utilities Inc., *2020 Electricity Distribution Rate Application*, EB-2019-0018 (May 28, 2019).

represented the single largest proportion of customers ever engaged by an electricity distributor in Ontario for the purpose of informing the development of a rate application.[4]

Based upon customer feedback, Hydro Ottawa has crafted capital and operational plans that emphasize the following four core principles:

1. Minimize rate increases
2. Maintain reliability and service quality
3. Address key pressures to the system, including:
    - Aging infrastructure
    - An expanding customer base and continued population growth
    - The effects of severe weather events
4. Make prudent investments in emerging technologies to enhance service offerings and/or reduce operation costs

Additional information on the portfolio of Hydro Ottawa's customer engagement activities, as well as the targeted activities undertaken to consult customers on the development of this Application, is available in Exhibit 1-2-1: Customer Engagement Overview and Exhibit 1-2-2: Customer Engagement on the 2021-2025 Rate Application.

3.4 DISTRIBUTION SYSTEM PLAN

Hydro Ottawa's Distribution System Plan ("DSP") represents the culmination of multiple internal and external planning processes related to business strategy, customer engagement, capital investment, asset management, and regional planning. The DSP details how distribution system expenditures will be prioritized, paced, and optimized, while minimizing rate impacts for customers and facilitating continuous improvement and productivity.

The DSP in its entirety can be viewed in Exhibit 2-4-3.

[4] Attachment 1-2-2(A): Customer Engagement Report, page 2.

3.5 PERFORMANCE MANAGEMENT AND MEASUREMENT

Hydro Ottawa is committing to a robust performance measurement and reporting framework for the upcoming five-year rate period. This framework expands and builds upon the success of the one that was in place for 2016-2020, and will maintain the approach of combining standard OEB performance measures with others that are customized for Hydro Ottawa's unique use.

An integral component of this framework is the set of measures that will form the basis of Hydro Ottawa's 2021-2025 Custom Performance Scorecard (see Table 2 below). These measures have been selected based upon a variety of factors and drivers, including responsiveness to customer preferences, alignment with core RRF and corporate strategic objectives, and correlation to key findings from the benchmarking analyses performed in support of this Application.

Table 2 – Custom Performance Scorecard Measures for 2021-2025

Outcome	OEB Reporting Category	Hydro Ottawa Custom Measures	New/Existing	Target
Customer Focus	Customer Satisfaction	Contact Centre Satisfaction – Transactional Feedback	New	Maintain
		Number of MyAccount Customers	New	Increase
		Number of Online Billing Accounts	New	Increase
Operational Effectiveness	Safety	All Injury/Illness Frequency Rate	New	Reduce
		Lost Workday Severity Rate	New	Reduce
	System Reliability	Customer Average Interruption Duration Index	Existing	Monitor
		Feeders Experiencing Multiple Sustained Interruptions	Existing	Maintain
		Worst Feeder Analysis – Number of Feeders with Very Poor Performance	Existing	Reduce
		Stations Exceeding Planning Capacity	Existing	≤5%
		Feeders Exceeding Planning Capacity	Existing	≤10%
		Stations Approaching Rated Capacity	Existing	0%
		Feeders Approaching Rated Capacity	Existing	0%
	Cost Control	Productive Time	Existing	Maintain
		Labour Allocation	Modified	Maintain
		3-Year Average Cost per Pole – Wood Pole Replacement	New	Monitor
		3-Year Average Cost per Meter – Underground Cable	New	Monitor
		Average Cost per Kilometer – Vegetation Management	New	Monitor
		Average Cost per Pole – Pole Test and Inspection	New	Monitor
	Asset Efficiency	Technology Infrastructure Cost per Employee	New	Monitor
Public Policy Responsiveness	Environment	Annual Oil Spills & Costs of Remediation	Existing	Reduce
		Non-Hazardous Waste Diversion Rate	New	Maintain
		Percentage of Green Suppliers	New	Maintain
Financial Performance	Financial Metrics	OM&A per Customer	New	Monitor
		Bad Debt as a Percentage of Total Electricity Revenue	New	Monitor
		Cumulative Capital Additions per Investment Category	New	Monitor
		Annual Capital Spending per Investment Category	New	Monitor

This proposed reporting regime is intended to equip the OEB, customers, and other stakeholders with the ability to better monitor and understand diverse aspects of Hydro Ottawa's

performance, and to demonstrate the utility's accountability in transparently communicating the outcomes achieved under its performance management framework.

3.6 BENCHMARKING

The preparation of Hydro Ottawa's business plan was supported by year-over-year comparisons of Hydro Ottawa's costs and outcomes, along with evaluations of the utility's performance against its peers. The scope and substance of particular capital and operational programs were shaped, in part, by the analysis of trends in the achievement of system reliability, customer value, and financial strength outcomes. Similarly, the benchmarking of Hydro Ottawa's expenditures and performance relative to samples of utilities across Ontario, Canada, and the United States has yielded valuable insights into areas in which the utility performs well and those in which there is room for improvement.

To help inform the development of its business plan, the utility commissioned the following benchmarking studies from third-party experts:

Table 3 – Benchmarking Studies Filed in this Application

Benchmarking Review	External Consultant	Application Attachment
Econometric Benchmarking Study of Hydro Ottawa's Total Cost and Reliability	Clearspring Energy Advisors	Attachment 1-1-12(A)
Unit Costs Benchmarking Study	UMS Group	Attachment 1-1-12(B)
IT Budget Assessment Benchmark	Gartner	Attachment 1-1-12(F)
2019 Market Benchmarking	Mercer Canada	Attachment 1-1-12(G)

The results from these studies consistently revealed that Hydro Ottawa is a strong performer relative to its peers in numerous categories, and that the utility is well-positioned to sustain ongoing improvements in key areas of performance.

These findings have been internalized and incorporated into specific work programs, and will serve as important baselines and points of reference against which to measure the utility's progress.

3.7 PRODUCTIVITY & CONTINUOUS IMPROVEMENT

Responsibly controlling costs and focusing on cost-effective delivery of outcomes that matter to customers remain core priorities for Hydro Ottawa. Amidst the unique and challenging confluence of compounding demands, pressures, and constraints on operations, the utility is placing increased emphasis on incorporating productivity and continuous improvement gains, so as to offset increasing expenditures and boost organizational capacity. Hydro Ottawa has adopted numerous controls to provide the OEB, customers, and other stakeholders with robust assurance that productivity, cost control, and continuous improvement objectives have been firmly integrated into the utility's business planning process, and the resultant capital and operational plans, for the 2021-2025 rate period.

For information on the range of productivity and continuous improvement activities that are planned over the course of the upcoming rate term, please see Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives.

4. HYDRO OTTAWA'S CUSTOM IR APPLICATION

As noted in the OEB's 2012 report entitled *Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach* ("RRFE Report"), the Custom IR method is "intended to be customized to fit the specific applicant's circumstances"[5] and "may be appropriate for distributors with significantly large multi-year or highly variable investment commitments with relatively certain timing and level of associated expenditures."[6]

[5] Ontario Energy Board, *Report of the Board - Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach* (October 18, 2012), page 19.
[6] *Ibid*, page 14.

4.1. PRINCIPAL DRIVERS JUSTIFYING THE USE OF CUSTOM IR

The foregoing description of the suitable context for employing the Custom IR option is one which remains applicable to Hydro Ottawa, as it prepares to enter into a new five-year rate period. The results of the utility's asset management and network investment planning processes have confirmed that significant capital investments are required over the course of 2021-2025, in order to ensure Hydro Ottawa is able to deliver safe and reliable electricity service and to meet the needs and expectations of customers.

The drivers underlying this need are numerous. For starters, while the overall profile of Hydro Ottawa's asset demographic is positive, a major segment of the asset population (19%) has reached its expected service life and thus poses a higher risk of failure. This includes approximately 51% of stations and 23% of overhead system assets (i.e. poles, transformers, and switches). Alongside these asset demographic figures, the utility's asset demographic ratings show that 17% of assets are in Poor or Very Poor condition.[7]

What's more, the City of Ottawa continues to experience steady year-over-year growth, with municipal policy promoting the development of new residential subdivisions and business parks, as well as intensification in urban areas.

In addition, an increase in storms and severe weather events is placing greater stress on the system, with an upward trend over the last five years in the number of outages caused by adverse weather. During a six-month span in 2018 alone, there were three major weather events that affected the Ottawa area (tornadoes, flooding, and freezing rain), which in turn caused considerable damage to the system and heavily impacted spending in emergency replacement of assets.

[7] Please see Exhibit 2-4-3: Distribution System Plan for more information on the demographics and condition of the utility's assets.

4.2. CAPITAL EXPENDITURES

Hydro Ottawa developed its forecasted capital expenditures for the years 2021-2025 based upon an identification and analysis of system needs, customer expectations, and requirements for general plant capital. The total capital expenditure forecast underwent a number of iterations and refinements, in order to address issues of priority, customer preference, rate and bill impacts, resource capacity, and financing capability.

In response to feedback expressed by customers, appropriate parameters and constraints have been incorporated to limit the costs and impacts on bills associated with planned capital investments. In its customer engagement activities, Hydro Ottawa heard a recurring preference for reliability to be maintained or improved at minimal or no increased cost. As a result, the utility has created a capital plan that paces investments in order to minimize rate impacts, with a focus on continuous improvement with respect to the efficiency and productivity of distribution planning and plan implementation.

One practical effect of this approach is that the proposals set forth in this Application do not encompass all of the investments that Hydro Ottawa would deem to be worthwhile for purposes of optimally fulfilling system needs during the 2021-2025 period.[8] Nevertheless, Hydro Ottawa is confident that the portfolio of capital investments that ultimately emerged from its prioritization and calibration process will enable strong performance of the system and will serve customers' interests effectively.

As originally submitted, Hydro Ottawa's capital expenditure plan for the 2021-2025 period proposes an average annual expenditure of $100.7M per year, with this figure having been slightly adjusted to $100.8M per year based on 2019 actuals, as follows:

[8] As explained further in UPDATED Exhibit 2-4-1: Capital Expenditure Summary, the process undertaken by the utility to rationalize its initial asset needs forecast resulted in a reduction in the 2021-2025 capital expenditure forecast of approximately $50.0M per year.

Table 4 – AS ORIGINALLY SUBMITTED – Summary of 2021-2025 Capital Expenditures ($'000,000s)

Investment Category	2021	2022	2023	2024	2025	Average 2021-2025
System Access	$56.7	$41.0	$37.4	$34.5	$34.0	$40.7
System Renewal	$43.3	$44.0	$40.2	$39.4	$40.5	$41.5
System Service	$31.0	$27.4	$24.3	$25.2	$23.9	$26.4
General Plant	$32.0	$11.7	$7.6	$17.4	$16.9	$17.1
Capital Contributions	$(41.3)	$(25.2)	$(19.9)	$(19.2)	$(19.3)	$(25.0)
TOTAL	**$121.8**	**$98.9**	**$89.6**	**$97.2**	**$96.0**	**$100.7**

Table 4 – UPDATED FOR 2019 ACTUALS – Summary of 2021-2025 Capital Expenditures ($'000,000s)[9]

Investment Category	2021	2022	2023	2024	2025	Average 2021-2025
System Access	$56.7	$41.0	$37.4	$34.5	$34.0	$40.7
System Renewal	$43.3	$44.0	$40.2	$39.4	$40.5	$41.5
System Service	$26.7	$28.3	$24.3	$25.2	$23.9	$25.7
General Plant	$32.0	$11.7	$7.6	$17.4	$16.9	$17.1
Capital Contributions	$(39.2)	$(23.5)	$(19.9)	$(19.2)	$(19.3)	$(24.2)
TOTAL	**$119.5**	**$101.5**	**$89.6**	**$97.2**	**$96.0**	**$100.8**

For more detail on 2021-2025 capital funding requirements, please refer to Hydro Ottawa's DSP and associated attachments in Exhibit 2-4-3.

4.3. OPERATIONS, MAINTENANCE & ADMINISTRATION EXPENDITURES

Hydro Ottawa's duties to manage a safe and reliable distribution system, serve customers in a manner that is responsive to their needs and preferences, and maintain compliance with a broad range of legislative and regulatory requirements compel the utility to incur a level of costs that is proportionate to the magnitude of its operational obligations. Responsibly controlling

[9] The changes reflected in the updated version of Table 4 for 2021 and 2022 are the result of updates to the MiGen project, as described in updated section 2.3.3 of Attachment 2-4-3(E): Material Investments.

these costs and focusing on cost-effective delivery of outcomes therefore remain core priorities for the utility. What's more, the critical importance of cost control is magnified against the backdrop of the evolution underway across the broader North American electricity sector, which is forcing utilities to modernize aspects of their service delivery models in order to adapt to the increased complexity of system operations, the changing expectations of customers, and the shifting economics of the marketplace.

It is important to understand Hydro Ottawa's proposed operations, maintenance, and administration ("OM&A") expenditures for the years 2021-2025 in the context of OM&A costs for the 2016-2020 Custom IR rate period, as presented in Table 5 below.

Table 5 – AS ORIGINALLY SUBMITTED – Historical, Bridge, and Test Year OM&A Costs by Major OM&A Category ($'000s)

OM&A Category	Historical			Bridge		Test	CAGR[10]
	2016	2017	2018	2019	2020	2021	
Operations	$18,399	$18,860	$20,877	$22,398	$23,824	$22,924	4.5%
Maintenance	$9,739	$10,299	$9,125	$8,653	$9,767	$9,855	0.2%
Subtotal	$28,138	$29,158	$30,003	$31,050	$33,591	$32,779	3.1%
Billing and Collecting	$12,594	$12,745	$11,941	$10,220	$12,052	$12,711	0.2%
Community Relations	$5,290	$5,120	$4,759	$5,131	$5,895	$6,365	3.8%
Subtotal	**$17,884**	**$17,865**	**$16,700**	**$15.352**	**$17,946**	**$19,076**	**1.3%**
Administrative and General	$36,599	$35,222	$40,161	$41,143	$40,453	$42,068	2.8%
TOTAL OM&A EXPENSES[11]	**$82,621**	**$82,245**	**$86,863**	**$87,545**	**$91,990**	**$93,923**	**2.6%**

[10] CAGR represents the compound annual growth rate between 2017 and 2021.
[11] Totals may not sum due to rounding.

Table 5 – UPDATED FOR 2019 ACTUALS – Historical, Bridge, and Test Year OM&A Costs by Major OM&A Category ($'000s)

OM&A Category	Historical				Bridge	Test	CAGR[12]
	2016	2017	2018	2019	2020	2021	
Operations	$18,399	$18,860	$20,877	$20,863	$23,824	$22,924	4.5%
Maintenance	$9,739	$10,299	$9,125	$7,693	$9,767	$9,855	0.2%
Subtotal	$28,138	$29,158	$30,003	$28,556	$33,591	$32,779	3.1%
Billing and Collecting	$12,594	$12,745	$11,941	$10,873	$12,052	$12,711	0.2%
Community Relations	$5,290	$5,120	$4,759	$4,796	$5,895	$6,365	3.8%
Subtotal	**$17,884**	**$17,865**	**$16,700**	**$15,670**	**$17,946**	**$19,076**	**1.3%**
Administrative and General	$36,599	$35,222	$40,161	$38,887	$40,453	$42,068	2.8%
TOTAL OM&A EXPENSES[13]	**$82,621**	**$82,245**	**$86,863**	**$83,113**	**$91,990**	**$93,923**	**2.6%**

Based on the proposed costs for the 2021 Test Year, OM&A expenditures for the remaining years of the 2021-2025 Custom IR period have been calculated through the application of an escalation factor, which is discussed in further detail in section 4.4 below. The result is the breakdown of OM&A costs shown in Table 6.

Table 6 – Annual OM&A Program Expenditures for 2021-2025 ($'000s)

2021	2022	2023	2024	2025
$93,923	$96,280	$98,697	$101,174	$103,714

Hydro Ottawa's proposed OM&A costs over the 2021-2025 term translate into an average annual expenditure of $98.8M.

Of note, during the internal budgeting process, the initial levels of OM&A submitted by the various Divisions within the utility resulted in a compound annual growth rate ("CAGR") of 3.5% over the 2021-2025 period. In step with its commitment to continuous improvement and with

[12] CAGR represents the compound annual growth rate between 2017 and 2021.
[13] Totals may not sum due to rounding.

customer preferences for minimizing rate increases, Hydro Ottawa then applied a custom OM&A escalation factor to contain upward pressure on operational expenses and to embed productivity expectations throughout the 2021-2025 period. This lowered the overall OM&A CAGR to 2.51% and achieved a reduction of $13.1M in OM&A spending over the course of the rate term.

For additional information on Hydro Ottawa's OM&A programs, cost drivers, and year-over-year variances, please see UPDATED Exhibit 4-1-1: Operations, Maintenance and Administration Summary and UPDATED Exhibit 4-1-4: Operations, Maintenance and Administration Cost Drivers and Program Variance Analysis.

4.4. CUSTOM PRICE ESCALATION FACTOR

As established by the RRF, under a price cap form of incentive rate-setting, rates are adjusted using a formulaic approach in the years following the first year base rates. This formula consists of a two-component Price Cap Index ("PCI"): inflation and productivity. For electricity distributors, the formula includes an industry-specific inflation factor and two factors for productivity. One productivity factor is a fixed amount for industry-wide productivity, and the other is a stretch factor which is set each year based on the level of productivity the distributor has achieved as evaluated by the Pacific Economics Group ("PEG") econometric model.

Under a Custom IR approach, the annual rate adjustment must be based on a custom index supported by empirical evidence that can be tested. The annual adjustment must include explicit financial incentives for continuous improvement and cost control targets. As noted in the OEB's *Handbook for Utility Rate Applications*, "these incentive elements, including a productivity factor, must be incorporated through a custom index or an explicit revenue reduction over the term of the plan (not built into the cost forecast)."[14]

[14] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 25.

As a result, for years two through five of its upcoming rate term (i.e. 2022-2025), Hydro Ottawa is proposing to adopt a Custom Price Escalation Factor ("CPEF") framework, which is based on the approach approved by the OEB in Hydro Ottawa's 2016-2020 Custom IR application.[15] This framework is aligned with OEB policy and based on sound ratemaking principles, and incorporates the OEB's key principles and expectations of a Custom IR application.

Hydro Ottawa is proposing that OM&A costs in years two through five of its rate term be adjusted by the CPEF, on an annual basis, as follows:

CPEF = I - X + G

where

"I" is the inflation factor
"X" is the two-component productivity factor
"G" is the growth factor

Using this formula, Hydro Ottawa has determined that the CPEF will be 2.51%.

A more detailed explanation of the CPEF and the evidence supporting the use and assigned value of each factor is included in UPDATED Exhibit 1-1-10: Alignment with the Renewed Regulatory Framework.

4.5. RATE BASE

As originally submitted, Hydro Ottawa's requested rate base for the 2021 test year is $1,219M, which represents an increase of approximately $244.8M or 25% over the OEB-approved rate base for the 2020 Bridge Year. After accounting for 2019 actuals, Hydro Ottawa is revising its requested rate base for the 2021 test year to $1,231M. This represents an increase of

[15] Ontario Energy Board, *Decision and Order*, EB-2015-0004 (December 22, 2015), page 1.

approximately $256.9M or 26% over the OEB-approved rate base for 2020. Table 7, as updated below, identifies the rate base requested for each year during the 2021-2025 period. Please refer to UPDATED Exhibit 2-1-1: Rate Base Overview for further details.

Table 7 – AS ORIGINALLY SUBMITTED – Summary of Rate Base ($'000s)

	2021	2022	2023	2024	2025
Rate Base	$1,218,659	$1,303,922	$1,349,619	$1,376,805	$1,419,763

Table 7 – UPDATED FOR 2019 ACTUALS – Summary of Rate Base ($'000s)

	2021	2022	2023	2024	2025
Rate Base	$1,230,736	$1,315,708	$1,363,582	$1,390,890	$1,433,972

4.6. REVENUE REQUIREMENT

Hydro Ottawa is requesting approval for both service and base revenue requirement for each year in its planned 2021-2025 rate term, along with the resulting rates and riders based on forecast capital expenditures, OM&A, depreciation expense, cost of capital, payments in lieu of taxes ("PILS"), and revenue from other sources. For the 2021 Test Year, Hydro Ottawa requests a service revenue requirement of $214.9M, which represents an increase of $14.3M or 7% from the service revenue requirement previously approved by the OEB for 2020. After accounting for 2019 actuals, Hydro Ottawa is revising its request to a service revenue requirement of $216.6M for the 2021 Test Year, which represents an increase of $16.1M or 8% from the service revenue requirement previously approved by the OEB for 2020.

The principal cost drivers underlying Hydro Ottawa's Test Year revenue requirement are the increases to rate base, which are attributable to capital investments that the utility must undertake in order to continue providing safe and reliable electricity service to the residents and businesses in Ottawa and Casselman. Other cost drivers include increases to amortization expense, OM&A expenses, interest, and return on rate base.

Table 8, as updated below, provides a summary of the proposed revenue requirement for 2021-2025.

For additional details regarding Hydro Ottawa's revenue requirement and related cost drivers, please refer to UPDATED Exhibit 6-1-1: Calculation of Revenue Deficiency or Sufficiency.

Table 8 – AS ORIGINALLY SUBMITTED – Summary of Revenue Requirement for 2021-2025 ($'000s)

	2021	2022	2023	2024	2025
Return on Rate Base	$67,489	$73,588	$77,441	$79,860	$84,624
Distribution Expenses (not including amortization)	$93,923	$96,280	$98,697	$101,174	$103,714
Amortization	$52,450	$56,860	$59,142	$60,711	$64,027
Payment in Lieu of Taxes	$1,024	$5,211	$8,766	$11,660	$7,689
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 2020	**$(17,060)**	**$(16,089)**	**$(10,570)**	**$(7,891)**	**$(5,405)**

Table 8 – UPDATED FOR 2019 ACTUALS – Revenue Deficiency/Sufficiency for 2021-2025 ($'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 2020[16]	**$(18,792)**	**$(13,589)**	**$(11,867)**	**$(7,942)**	**$(5,461)**

4.7. LOAD FORECAST

Hydro Ottawa's forecasted energy consumption for the 2021 Test Year is 7,065,745 MWh, as originally submitted. After accounting for 2019 actuals, Hydro Ottawa's forecasted energy consumption for the 2021 Test Year is 7,063,482. This is 377,142 MWh (5.1%) lower than the 2016 OEB-approved MWh forecast. The utility's forecasted number of customers for the 2021 Test Year is 344,936, representing an increase of 6.1% over the 2016 OEB-approved number.

Table 9, as updated below, provides a high-level summary of Hydro Ottawa's forecasted load for 2021-2025.

[16] Totals may not sum due to rounding.

Table 9 – AS ORIGINALLY SUBMITTED – Load Forecast Summary

Year	Total Sales (MWh)	Total Customers[17]
2021	7,065,745	344,936
2022	7,088,184	348,104
2023	7,116,619	351,138
2024	7,165,092	354,088
2025	7,179,631	357,017

Table 9 – UPDATED FOR 2019 ACTUALS – Load Forecast Summary

Year	Total Sales (MWh)	Total Customers[18]
2021	7,063,482	344,936
2022	7,085,688	348,104
2023	7,113,883	351,138
2024	7,162,048	354,088
2025	7,176,418	357,017

Hydro Ottawa has provided a five-year detailed class-specific weather normalized load forecast and customer connection forecast for each rate class in UPDATED Exhibit 3-1-1: Load Forecast. This forecast incorporates modifications to the provincial electricity conservation framework that were enacted by the Government of Ontario in 2019, as well as the impacts of embedded generation.

4.8. COST OF CAPITAL

Cost of capital components have been determined for each year during the 2021-2025 planned rate term. Hydro Ottawa has used the following debt/equity ratio for all years: 4% short-term debt, 56% long-term debt, and 40% equity.

Hydro Ottawa has utilized the short-term debt rate of 2.75%, as provided in the 2020 Cost of Capital Parameters letter dated October 31, 2019, for the full five-year term covered by this Application. The utility has forecasted the weighted average cost of long-term debt based on the

[17] Figures in this column do not include Standby Power customers.
[18] Figures in this column do not include Standby Power customers.

cost of existing embedded debt, anticipated long-term borrowing requirements, and the forecast yield for 2021-2025 long-term debt issuances. Using the OEB's formulaic calculation, Hydro Ottawa has also forecast an ROE for the full five-year period covered by this Application.

It is Hydro Ottawa's intention to provide regulatory efficiency and rate stability over the five-year term of this Application by not making any further updates to the cost of capital components.

For additional details on the cost of capital determinations and calculations employed by Hydro Ottawa, please see UPDATED Exhibit 5-1-1: Cost of Capital and Capital Structure.

4.9. COST ALLOCATION AND RATE DESIGN

Hydro Ottawa has prepared a cost allocation model for each of the five years in the proposed 2021-2025 rate plan using the OEB's cost allocation methodologies and model. Hydro Ottawa's 2021 base revenue requirement has been allocated across the utility's nine rate classes. The resulting revenues-to-cost ratios for each rate class were determined using the total revenues over costs for each year, pursuant to OEB guidelines.

Hydro Ottawa engaged Elenchus Research Associates to undertake a Cost Allocation Model study to determine whether refinements were necessary to better reflect the OEB's principle of cost causality in its cost allocation to customers. The results of the study indicated that four rate classes require adjustments to bring them within OEB-approved ranges. In this Application, the utility is proposing the necessary adjustments to achieve this result. For more information, please see UPDATED Exhibit 7-1-1: Cost Allocation.

With respect to rate design, one noteworthy feature of Hydro Ottawa's 2021-2025 rate plan is that it marks the first five-year rate term for the utility in which distribution rates for residential customers will be set at a fully fixed charge. Effective January 1, 2020, Hydro Ottawa completed the transition to fully fixed rates for these customers, in accordance with the policy adopted by

the OEB in 2015.[19] As noted elsewhere, the execution of this transition has implications for the presentation of information pertaining to the impacts on residential customer rates associated with the proposals and plans set forth in this Application.[20]

4.10. DEFERRAL AND VARIANCE ACCOUNTS

Hydro Ottawa is proposing to clear Group 2 Accounts, including the Lost Revenue Adjustment Mechanism ("LRAM") Account. The total net deferral and variance ("DVA") balance proposed for disposition is $(5,751,923), as originally submitted. Hydro Ottawa is proposing that the Rate Riders for Group 2 Accounts (excluding LRAM) be disposed of over two years. For the LRAM Variance Account, a one-year disposition period is proposed. As no Group 1 Accounts are being requested for disposition at this time, the rate riders are the same for Regulated Price Plan ("RPP") and non-RPP customers.

After accounting for 2019 actuals, Hydro Ottawa is proposing to clear Group 1 and Group 2 Accounts, including the LRAM Account. The total net DVA updated balance proposed for disposition is $(6,695,545). Hydro Ottawa is proposing that the Deferral/Variance Accounts Rate Riders for Group 1 and Group 2 Accounts be disposed of over two years. Disposition of all other rate riders is requested over a one-year period.

In this Application, Hydro Ottawa is also proposing modifications to and the discontinuance of certain DVAs. For further such information, as well as for details on amounts proposed for DVA clearances, please see UPDATED Exhibit 9-1-1: Summary of Current Deferral and Variance Accounts and Exhibit 9-2-1: New Deferral and Variance Accounts.

4.10.1. Capital Variance Account

In this Application, Hydro Ottawa proposes to sustain the use of a variance account wherein it will record, on an annual basis, the impacts on revenue requirement arising from variances

[19] Ontario Energy Board, *Board Policy - A New Distribution Rate Design for Residential Electricity Customers*, EB-2012-0410 (April 2, 2015). Please see Exhibit 8-2-1: Rate Design Policy Consultation for details.
[20] For example, please see the explanation provided in UPDATED Exhibit 1-1-7: Customer Summary.

between actual and forecasted cumulative capital additions. Capital additions would be tracked using three categories: System Access, System Service and System Renewal, and General Plant.[21] The creation and use of such a variance account was sanctioned as part of the Approved Settlement Agreement governing Hydro Ottawa's 2016-2020 rates. The utility believes that the administration of this capital variance account on an ongoing basis is an effective means of ensuring transparency and accountability in the planning, execution, and reporting of annual capital expenditures. By proposing the calculation of the annual variance on a cumulative basis, Hydro Ottawa's intent is to ensure that if projects are delayed, but are completed as planned at a later time, then the reduction to revenue requirement will only reflect the period of delay and will cease when the projects have been added to rate base.

The one modification to the capital variance account that Hydro Ottawa is proposing to introduce for the 2021-2025 period is the use of a separate sub-account for System Access capital additions. The rationale for this proposal is that capital spending in this category is driven by customer requests and is therefore difficult to predict, as the level of required expenditure is outside of the utility's control.

For additional information on the Capital Variance Account, please see Exhibit 9-2-1: New Deferral and Variance Accounts.

4.10.2. Earnings Sharing Mechanism

In order to insulate customers from the risk of Hydro Ottawa generating excess earnings, the utility is proposing the inclusion of an earnings sharing mechanism ("ESM"). ESMs permit the sharing of utility earnings with customers when earnings rise above or fall below a certain threshold. Under an ESM, earnings may be passed along to customers in the form of rate reductions or rate offsets. Hydro Ottawa is proposing an asymmetrical ESM such that it is only

[21] The System Renewal and System Service categories have been merged into one category to reflect Hydro Ottawa's standard operating practice to shift funds between the two categories, as warranted by customer and operational requirements.

proposing to share earnings that exceed a basis point threshold above the utility's ROE, with no corresponding adjustment if its earnings fall below the basis point threshold.

The proposed ESM formula is as follows:

Table 10 – Proposed ESM Formula

#	Threshold	Treatment
1	Under earning	Borne entirely by shareholder
2	0-150 basis points	Fully retained by shareholder
3	Above 150 basis points	50/50 sharing of ratepayer/shareholder

Additional detail on the ESM is included in Exhibit 9-2-1: New Deferral and Variance Accounts.

4.10.3. Z Factor(s)

In its *Handbook for Utility Rate Applications*, the OEB affirmed its policy that "[a]n acceptable adjustment during a Custom IR term is a Z factor mechanism for cost recovery of unforeseen events."[22] In step with this guideline, Hydro Ottawa intends to reserve its right over the course of the 2021-2025 rate term to file a Z factor application in order to recover costs resulting from unforeseen events, decisions, or activities, the results of which cannot be reasonably anticipated or quantified at this juncture and where the costs exceed the utility's materiality threshold. Examples include unforeseen weather events or changes to laws or regulations requiring significant implementation investment.

4.10.4. Certification of Evidence - Commodity Accounts 1588 and 1589

As per the Filing Requirements, Hydro Ottawa's Chief Financial Officer hereby certifies that the utility maintains robust processes and internal controls for the preparation, review, verification, and oversight of Account 1588 RSVA – Power and Account 1589 RSVA – Global Adjustment.

[22] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 27.

4.11. BILL IMPACTS

Table 11, as updated below, provides a summary of the total bill impacts for typical customers in all rate classes. Further details regarding Hydro Ottawa's proposed bill impacts are available in UPDATED Exhibit 8-12-1: Bill Impact Information.

Table 11 – AS ORIGINALLY SUBMITTED – Summary of Bill Impacts

Rate Class		Approved	Proposed				
		2020	2021	2022	2023	2024	2025
Residential (750 kWh)	Distribution Charge	$28.64	$29.95	$32.13	$33.97	$34.95	$35.56
	Change in Distribution Charge		$1.31	$2.18	$1.84	$0.98	$0.61
	% Distribution Increase		4.57%	7.28%	5.73%	2.88%	1.75%
	% Increase of Total Bill		1.32%	1.54%	1.28%	0.68%	0.43%
General Service <50 kW (2,000 kWh)	Distribution Charge	$71.32	$73.06	$78.13	$83.28	$86.33	$88.58
	Change in Distribution Charge		$1.74	$5.07	$5.15	$3.05	$2.25
	% Distribution Increase		2.44%	6.94%	6.59%	3.66%	2.61%
	% Increase of Total Bill		0.65%	1.37%	1.37%	0.81%	0.59%
General Service 50 kW - 1,499 kW (250 kW)	Distribution Charge	$1,461.93	$1,537.98	$1,669.42	$1,785.17	$1,853.01	$1,905.37
	Change in Distribution Charge		$76.05	$131.44	$115.76	$67.84	$52.36
	% Distribution Increase		5.20%	8.55%	6.93%	3.80%	2.83%
	% Increase of Total Bill		1.59%	0.74%	0.65%	0.38%	0.29%
General Service 1,500 kW - 4,999 kW (2,500 kW)	Distribution Charge	$15,941.18	$16,614.68	$18,015.99	$19,263.84	$19,992.90	$20,452.40
	Change in Distribution Charge		$673.50	$1,401.31	$1,247.85	$729.06	$459.50
	% Distribution Increase		4.22%	8.43%	6.93%	3.78%	2.30%
	% Increase of Total Bill		1.53%	0.78%	0.69%	0.40%	0.25%
Large Use (7,500 kW)	Distribution Charge	$48,420.32	$53,922.32	$58,287.22	$62,092.67	$64,292.42	$65,709.17
	Change in Distribution Charge		$5,502.00	$4,364.90	$3,805.45	$2,199.75	$1,416.75
	% Distribution Increase		11.36%	8.09%	6.53%	3.54%	2.20%
	% Increase of Total Bill		2.16%	0.79%	0.68%	0.39%	0.25%
Sentinel Lighting (0.4 kW)	Distribution Charge	$9.53	$10.91	$13.14	$15.31	$17.20	$18.99
	Change in Distribution Charge		$1.38	$2.23	$2.17	$1.89	$1.79
	% Distribution Increase		14.46%	20.46%	16.54%	12.33%	10.44%
	% Increase of Total Bill		7.36%	8.74%	7.83%	6.32%	5.65%
Street Lighting (1 kW)	Distribution Charge	$7.76	$6.99	$7.97	$8.68	$8.98	$9.24
	Change in Distribution Charge		$(0.77)	$0.98	$0.71	$0.30	$0.26
	% Distribution Increase		(9.98)%	14.07%	8.92%	3.46%	2.91%
	% Increase of Total Bill		(1.10)%	3.16%	2.24%	0.96%	0.83%
Unmetered Scattered Load (470 kWh)	Distribution Charge	$17.08	$17.49	$19.55	$21.37	$22.67	$23.82
	Change in Distribution Charge		$0.41	$2.06	$1.82	$1.30	$1.15
	% Distribution Increase		2.42%	11.76%	9.33%	6.10%	5.07%
	% Increase of Total Bill		0.98%	2.36%	2.05%	1.44%	1.26%

Table 11 – UPDATED FOR 2019 ACTUALS – Summary of Bill Impacts

Rate Class		Approved	Proposed				
		2020	2021	2022	2023	2024	2025
Residential (750 kWh)	Distribution Charge	$28.64	$30.62	$32.50	$34.04	$35.03	$35.65
	Change in Distribution Charge		$1.98	$1.88	$1.54	$0.99	$0.62
	% Distribution Increase		6.91%	6.15%	4.74%	2.91%	1.77%
	% Increase of Total Bill		1.53%	1.33%	1.38%	0.69%	0.43%
General Service <50 kW (2,000 kWh)	Distribution Charge	$71.32	$74.21	$79.23	$83.71	$86.76	$89.02
	Change in Distribution Charge		$2.89	$5.02	$4.48	$3.05	$2.26
	% Distribution Increase		4.05%	6.76%	5.65%	3.64%	2.60%
	% Increase of Total Bill		0.69%	1.36%	1.52%	0.80%	0.59%
General Service 50 kW - 1,499 kW (250 kW)	Distribution Charge	$1,461.93	$1,508.85	$1,620.11	$1,788.85	$1,857.00	$1,909.66
	Change in Distribution Charge		$46.93	$111.26	$168.74	$68.15	$52.66
	% Distribution Increase		3.21%	7.37%	10.42%	3.81%	2.84%
	% Increase of Total Bill		2.96%	(1.08)%	1.20%	0.38%	0.29%
General Service 1,500 kW - 4,999 kW (2,500 kW)	Distribution Charge	$15,941.18	$16,483.93	$17,672.63	$19,315.57	$20,048.54	$20,512.79
	Change in Distribution Charge		$542.75	$1,188.70	$1,642.94	$732.97	$464.25
	% Distribution Increase		3.40%	7.21%	9.30%	3.79%	2.32%
	% Increase of Total Bill		2.94%	(1.01)%	1.18%	0.40%	0.25%
Large Use (7,500 kW)	Distribution Charge	$48,420.32	$53,055.32	$56,727.95	$62,069.06	$64,275.56	$65,702.06
	Change in Distribution Charge		$4,635.00	$3,672.63	$5,341.11	$2,206.50	$1,426.50
	% Distribution Increase		9.57%	6.92%	9.42%	3.55%	2.22%
	% Increase of Total Bill		3.46%	(1.19)%	1.38%	0.39%	0.25%
Sentinel Lighting (0.4 kW)	Distribution Charge	$9.53	$11.25	$13.34	$15.38	$17.30	$19.12
	Change in Distribution Charge		$1.72	$2.10	$2.04	$1.91	$1.82
	% Distribution Increase		18.02%	18.64%	15.32%	12.43%	10.53%
	% Increase of Total Bill		8.47%	8.13%	7.62%	6.38%	5.71%
Street Lighting (1 kW)	Distribution Charge	$7.76	$7.46	$8.08	$8.80	$9.11	$9.38
	Change in Distribution Charge		$(0.30)	$0.62	$0.72	$0.31	$0.27
	% Distribution Increase		(3.89)%	8.26%	8.94%	3.55%	3.00%
	% Increase of Total Bill		(0.22)%	1.96%	2.93%	0.99%	0.87%
Unmetered Scattered Load (470 kWh)	Distribution Charge	$17.08	$17.68	$19.38	$21.25	$22.55	$23.70
	Change in Distribution Charge		$0.60	$1.71	$1.86	$1.30	$1.15
	% Distribution Increase		3.54%	9.64%	9.61%	6.13%	5.10%
	% Increase of Total Bill		0.92%	1.96%	2.42%	1.44%	1.26%

UPDATED Hydro Ottawa Limited

Business Plan

2021-2025

May 2020

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1. INTRODUCTION

Hydro Ottawa Limited ("Hydro Ottawa" or "the utility") has prepared a formal Business Plan that serves as the basis for the utility's overall strategy and goals, highlights the intersection between these goals and the proposals set forth in its 2021-2025 Custom Incentive Rate-setting ("Custom IR") application, and speaks to the benefits that will accrue to customers as a result of the plan's execution.

This Business Plan has been prepared in conformance with the requirements set forth in the Ontario Energy Board's ("OEB") *Handbook for Utility Rate Applications*.

2. COMPANY OVERVIEW

Mission

To create long-term value for our shareholder, benefitting our customers and the communities we serve

Organizational Values

Teamwork, Integrity, Excellence, Service

Vision

Hydro Ottawa – a leading partner in a smart energy future

Hydro Ottawa is a regulated electricity distribution company serving approximately 340,000 customers within the City of Ottawa and the Village of Casselman, as of the end of 2019. As the third-largest municipally owned electrical utility in Ontario, the company maintains one of the safest, most reliable, and cost-effective electricity distribution systems in the province. Its service territory stretches 1,116 square kilometres and is comprised of a dense urban core, large areas of suburban development, and a vast rural area that represents 60% of the overall footprint.

Hydro Ottawa and its predecessor utilities have proudly served communities in the National Capital Region for over 100 years. The utility's unique customer base includes residential customers, commercial businesses, farms, and large institutional and industrial customers. As the national seat of government, Ottawa is home to the federal parliament and key institutions within the Government of Canada. Moreover, the city is the second largest in the Province of Ontario and the sixth largest in the country.

The utility is a wholly-owned subsidiary of Hydro Ottawa Holding Inc., which is 100% owned by the City of Ottawa and governed by an independent Board of Directors.

3. INTEGRATED BUSINESS PLANNING & PERFORMANCE MANAGEMENT FRAMEWORK

For more than a decade, the larger corporate enterprise of which Hydro Ottawa is a member has successfully administered an integrated business planning and corporate performance management framework. This framework links the strategic and business planning, budgeting, performance measurement, management reporting, and employee alignment activities into one continuous business and improvement cycle. Applying this framework in whole, Hydro Ottawa is able to chart its course for a five-year period, implement and operate in accordance with annual plans and budgets, and monitor and report performance and progress against these plans and budgets.

In accordance with its charter, Hydro Ottawa's Board of Directors ("the Board") is responsible for developing and approving a business plan which indicates the overarching strategy that the utility intends to pursue. The Board must regularly review the integrity of the business plan. At any time, if the Board is of the opinion that the then-existing business plan is no longer appropriate, the Board – in conjunction with the Chief Executive Officer ("CEO") – must develop a revised business plan. What's more, on an ongoing basis, the Board is likewise responsible for monitoring the utility's implementation of the plan and the progress toward achieving it.

Similarly, the Board is tasked with approving the annual budget, and monitoring its progress and achievement at each regular meeting.

The key components of the integrated planning and performance management framework are as follows:

a. An enterprise strategic plan approved by the holding company Board that sets the course for the enterprise for a five-year period.
b. Annual business plans that are approved at both the holding company and regulated distribution utility levels, which are comprised of a corporate performance scorecard and budget. These elements operationalize the strategic plan in a given year and cascade to employees through individual contribution and performance appraisal systems. The annual business plans are informed by, and draw upon, updated plans for each administrative division within the utility which are prepared by the applicable member of the Executive Management Team.
c. Regular monitoring and reporting of performance and progress against annual plans and budget, including:
    i. Monthly reviews by the Executive Management Team of financials, status of priorities and critical projects, and performance measures and targets as established for each key area of focus in the annual Corporate Performance Scorecard;
    ii. Monthly updates to the Shareholder;
    iii. A quarterly President and CEO Report to the holding company and regulated distribution utility Boards of progress against the Corporate Performance Scorecard, including enterprise risk management reporting;
    iv. Quarterly financial reports to the Shareholder;
    v. Review by the holding company and regulated distribution utility Boards of annual results against the Corporate Performance Scorecard and financial results in April; and

vi. An annual report to the Shareholder in June.

d. As part of the development of the annual plan for the next year, an annual review of the critical issues and opportunities facing the utility by the Executive Management Team, and subsequently by the Board of Directors, to determine whether an adjustment to the five-year plan is required.

In addition, a key input into the process is a set of formal guidelines from the Chief Financial Officer for the preparation of five-year budgets for Hydro Ottawa's subsequent distribution rate period. This guidance is circulated approximately one year in advance of the expected filing date of the rate application. The document lays out a timeline for budget development; identifies constraints and expectations relevant to such matters as compensation, headcount, and capital and operational expenditure levels; and stipulates requirements related to productivity, continuous improvement, cost control, and alignment of spending to the utility's priorities.

A copy of the memorandum setting forth guidelines for 2020-2025 budgets and priorities is included as an attachment below.

4. CUSTOMER NEEDS & PREFERENCES

Providing customers with value for money and facilitating a customer experience that is driven by choice are cornerstones of Hydro Ottawa's business planning. In step with its overall business strategy to put the customer at the centre of everything it does, the utility endeavours to ensure that its capital and operational investment plans are guided and informed by customer needs, preferences, and priorities.

4.1. ONGOING CUSTOMER ENGAGEMENT

Hydro Ottawa avails itself of numerous tools, activities, and interactions to engage customers and to reflect their input in the utility's planning and plans on an ongoing basis. These reflect an evergreen posture on Hydro Ottawa's part to develop a genuine understanding of customers'

interests through a fluid and continuous feedback loop. This helps inform and sharpen the utility's service delivery as a matter of established routine, and embed a customer-centric culture across the organization.

Hydro Ottawa's approach to customer engagement represents a blend of activities that are either aligned with industry best practice or are homegrown, having been formulated and customized internally in order to suit the particular needs of the utility and its customer base. Key channels for interaction include telephone, email, web chat, social media, website, in person, and community events. Focus groups, surveys, and analytics are also important research tools for gleaning broader insights and trends.

The following serve as illustrative – but by no means comprehensive – examples of specific instruments used by Hydro Ottawa to identify customer needs and preferences, and to incorporate them into the utility's plans for providing electricity distribution services:

- **Social media platforms** – Hydro Ottawa uses social media channels to engage in two-way conversations with customers on a daily basis. Channels are monitored during business hours and, in particular, during prolonged power outages in order to answer customer questions or concerns. Recent trends indicate that many customers have a strong preference to use social media to share information or ask questions related to outages, and that they value real-time responses to their inquiries.

- **Transactional surveys** – every week, customers who phoned Hydro Ottawa's call centre during the previous week are automatically invited to rate their experience with the service received. Based upon the survey results, Hydro Ottawa is able to enhance the customer experience and adapt processes in a timely and responsive manner. More recently, Hydro Ottawa added email and web chat features to this survey, in keeping with the utility's commitment to engage customers through the channel of their choice.

- **Annual customer satisfaction survey** – survey questions cover a wide variety of topics, including overall satisfaction with Hydro Ottawa, reliability, customer service, power outages, billing, cost of electricity, and corporate image. Feedback from these surveys is incorporated into Hydro Ottawa's planning process, and ultimately forms the basis of plans which address customer needs as well as service improvements and offerings.

- **Key Accounts program** – customers are categorized as a Key Account based on their size of service, financial impact, and impact on the community and the grid. Hydro Ottawa works proactively with these large business and institutional customers on a range of priorities, including billing, load profile, rates analysis, power quality, energy management, and education and awareness of provincial regulations.

- **Project-specific open houses** – these are hosted by Hydro Ottawa when major distribution system projects have the potential to impact customers and their community. Based on customer feedback, these consultations have resulted in the evaluation of additional design options, the use of less impactful equipment, and/or the scheduling of mutually agreeable timelines for project completion. Between 2016 and 2019, Hydro Ottawa held 35 such open houses.

- **Collaboration with contractors and developers** – this takes the form of routine information sharing and participation in dedicated associations and forums with members of this unique stakeholder group. These engagements offer valuable insights into customer expectations around Hydro Ottawa's communications, processes, standards, specifications, costing, and Conditions of Service.

- **Conditions of Service revisions** – Hydro Ottawa compiles suggested edits to its Conditions of Service ("COS") on an ongoing basis, in response to customer feedback. Prior to the filing of any revised COS, Hydro Ottawa solicits customer comments through

its website and social media accounts. All customers likewise receive notification of the review period through an on-bill message. In addition, contractors, City of Ottawa contacts, and Key Accounts are directly notified of the review period by letter.

- **Engagement with the City of Ottawa** – given the impact of municipal planning, services, and regulations on customer needs, the relationship with the City is a vital one. Accordingly, Hydro Ottawa frequently interacts with numerous divisions across the municipal government. These interactions serve as platforms for discussing critical matters, such as long-term planning, capital programs, permitting, standards, and servicing. In turn, they play a valuable role in enhancing communications and coordination, sharing of lessons learned, identifying opportunities for improvement, and building mutual understanding.

4.2. CUSTOMER CONSULTATION ON THE 2021-2025 RATE APPLICATION

As a complement to, and extension of, the foregoing activities, Hydro Ottawa undertook targeted customer outreach activities to inform the development of the specific plans and proposals set forth in its 2021-2025 rate application. Consisting of a mix of qualitative and quantitative methodologies, this engagement was launched in January 2019 and extended through September 2019.

Phase I of this consultation focused on low-volume customers (residential and small business), seeing as these segments represent approximately 99% of the total customer base. This initial phase focused on gathering general insights on customer priorities, preferences, and needs.

Consistent findings were yielded across low-volume customer classes. To begin, the clear majority of these customers expressed satisfaction with the current service they receive from Hydro Ottawa. In addition, ensuring reliability, maintaining reasonable rates, and investing in technology in order to help reduce future costs constituted the top three priorities for customers. Moreover, these customers generally held favourable views on making proactive investments in

aging infrastructure and grid modernization at the present time, with the understanding that this may lead to near-term costs but will result in future savings. With respect to reliability outcomes, above all customers placed a premium on accelerating restoration times following extreme weather events. Minimizing the number and duration of outages in general was flagged as the next most pressing priority.

Based upon the feedback received during Phase I, Hydro Ottawa undertook a second, more expansive phase of engagement, in which the utility surveyed customers for their detailed feedback on proposed plans for capital and operational investments over the 2021-2025 period. A series of expenditure options was presented – namely, a reference case outlining the utility's proposed course of action, along with scenarios which either accelerated and expanded the proposal, or which scaled back the scope and timing of the proposal. Customers were thus able to express their views on a range of alternative proposals, as well as the respective trade-offs, outcomes, and rate impacts.

For residential and small business customer classes, the response was heavily weighted in support of Hydro Ottawa's proposed plans or spending more than proposed for certain services. Nearly one-half of respondents in both segments (48% and 47%, respectively) identified that Hydro Ottawa should maintain the forecasted annual increase to deliver a program which focuses on the stated priorities. A further 35% of residential and 29% of small business customers expressed support for further improvements in service, even if this entailed additional rate increases. What's more, a majority of respondents called for investments above and beyond the reference case for purposes of renewing the overhead and underground portions of the grid, while more than 75% of customers signalled a willingness to pay more on their monthly bill in order to enable Hydro Ottawa to undertake measures to prepare for the effects of severe weather.

With respect to participants from large customer segments, these voices expressed concern over the rate increases being proposed and were open to potential decreases in service

reliability if this equated to reductions in forecasted bill increases. This feedback was highly valuable, insofar as it emphasized the critical importance of a balanced plan – one which maximizes the impact of investments to match residential customer expectations without exacerbating rate pressures on business customers (and all while relentlessly pursuing efficiency and productivity improvements).

Of note, the number of customers who participated in this engagement exercise – nearly 21,000 in total – was the largest in the history of any Hydro Ottawa rate application. In itself, this result was encouraging and instilled confidence in the quality of the information gleaned and the representativeness of the sample pool of customers. Beyond this, however, Hydro Ottawa was buoyed by the fact that the rate of response (i.e. number of respondents as a percentage of the total customer base) exceeded that which has been observed in any rate filing from an OEB-regulated distributor in recent memory.

5. STRATEGIC CONTEXT

Hydro Ottawa has formulated its corporate vision and objectives against the backdrop of numerous trends and shifts that are unfolding in the operational, business, and policy environments in which the utility carries out its activity.

5.1. OPERATIONAL CHALLENGES

5.1.1. Aging Infrastructure

Foremost among the operational pressures facing the utility is the advanced age of a significant subset of its asset base. Large segments of the system were constructed in the 1960s through the 1980s. With most assets having a lifespan of approximately 50 years, a considerable proportion of the system is approaching or has exceeded the anticipated end of life.

For example, nearly 19% of all assets have reached their expected service life and now pose a higher risk of failure. This includes approximately 51% of stations and 23% of overhead system

assets (i.e. poles, transformers, and switches). Another 12% of the asset population is within 10 years of reaching its end of life.

In the absence of critical system renewal investments, the increased potential of failures posed by these aging assets will impact Hydro Ottawa's ability to maintain grid reliability.

5.1.2. An Expanding Customer Base

Compounding the challenge of replacing aging infrastructure is the sustained growth which the City of Ottawa continues to experience. This trend has translated into a steady expansion in the number of customers served by the utility and the number of new customers requiring connection to Hydro Ottawa's network on an annual basis.

Similar to the patterns observed throughout 2016 to 2020, Hydro Ottawa anticipates a comparable level of growth over the course of the planned 2021-2025 rate term. In fact, the City of Ottawa is projecting an increase of over 16% in the city's population by 2031, relative to 2016 levels. This growth is expected to take several distinct forms: the development of new mixed commercial/residential communities; intensification of development within the urban core of the service territory; continued suburban growth in the east, west, and southern regions; and former rural areas fed by long distribution lines becoming suburban centres. Alongside this development, major infrastructure projects such as the Stage 2 expansion of Ottawa's Light Rail Transit system are also set to overlap with the utility's upcoming rate period.

5.1.3. Extreme Weather Effects

In a 2019 report examining Canada's top climate change risks, the Council of Canadian Academies found that "climate change is very likely to cause significant negative impacts across many natural and human systems in Canada over the next 20 years." The report concluded that adaptation action will need to be pursued through effective partnerships among government, the private sector, communities, and individuals, in order to avoid the worst damages stemming from climate change.

Over the last five years, Hydro Ottawa and its customers experienced firsthand the growing frequency of severe weather events and their adverse impacts on the distribution grid. During a six-month span in 2018 alone, there were three major weather events that affected the Ottawa area (including a multiple-tornado event during the month of September) which caused considerable damage and heavily impacted spending on emergency replacement of assets. This series of events was bookended on either side by historic flooding along the Ottawa River in 2017 and 2019, which resulted in tens of millions of dollars in economic losses and prolonged disruptions to customers in affected areas.

In light of these findings and events, and in view of the rising trend of extreme weather, Hydro Ottawa will be compelled to enhance adaptation and risk mitigation measures within the design, operation, and maintenance of its system, in order to help protect infrastructure, service delivery, and occupational health and safety. To that end, the utility has already commissioned and received a formal distribution system climate risk and vulnerability assessment, and is undertaking a multi-year action plan to implement the recommendations.

5.1.4. Technological Complexity

The operational and informational technology systems that underpin utilities' performance are rapidly evolving and becoming increasingly complex. The business systems and processes supporting frontline operations and back-office functions are steadily migrating towards digital, mobile-friendly, and cloud-based solutions. Core operational systems continue their convergence with enterprise information systems. Automation is on the rise, with the frontier into artificial intelligence likewise being crossed. And while utilities are navigating this shifting terrain, they are simultaneously compelled to mitigate the risk of technologies becoming obsolete – whether as a result of third-party providers discontinuing maintenance services for legacy solutions or existing tools having reached the end of their useful lives (as in the case of first-generation smart meters).

Meanwhile, the implementation of smart grid equipment and devices, alongside the proliferation of distributed energy resources ("DERs"), has fostered a more dynamic ecosystem of transactions, participants, and flows of energy, information, and communications. What's more, a central tenet of the "Smart City" movement is that utilities will enable the connectivity which harnesses the power of data and technology to enhance the quality of life for communities.

Taken together, the aforementioned technological trends and pressures introduce a wide spectrum of both risk and opportunity for Hydro Ottawa.

5.1.5. Cyber Security

The critical nature of the services provided by utilities makes for a double-edged sword. On the one hand, there is widespread recognition of the indispensable role played by electricity distributors in the quality of life that is enjoyed by consumers. Conversely, the essential role played by electricity means that utilities rank among the most high-value targets for malicious actors in cyberspace. This risk is magnified for a distributor like Hydro Ottawa, which serves the capital city of a G7 country and a multitude of customers with unique service quality and data confidentiality needs.

The risks faced by utilities in Ontario in relation to cyber security are set to amplify exponentially over the coming five-year horizon and beyond, in light of the rising complexity of operational and informational technology systems noted in the foregoing section. Further reflection of the shifting risk landscape is the OEB's recent implementation of a cyber security framework for utilities under its jurisdiction, as well as the expansion of the Independent Electricity System Operator's ("IESO") mandate to provide cyber security information services to licensed transmitters and distributors.

5.1.6. Workforce Retirements

Hydro Ottawa has long maintained that its strength and success as a company is derived from the quality of its employees. Like many companies in the electricity sector, though, Hydro

Ottawa faces challenging workforce demographics. For example, over the next 10 years, 34% of the workforce will be eligible for retirement, of which 60% are skilled workers in trades or technical professions. Taken together with the fact that almost one-third of employees have five years or less of service, the picture of the workforce population at Hydro Ottawa is one in which there is less experience in a highly complex and safety-focused operating environment. The ability of the utility to proactively prepare for the impacts of workforce demographics, as well as the impacts of technological and digital transformation on requisite employee skill sets, will be a critical determinant of whether core business objectives and customer needs can be met.

5.2. BUSINESS ENVIRONMENT

5.2.1. State of the Economy

The state of the local, provincial, national, and international economies can have a significant impact on Hydro Ottawa's business through factors such as inflation, customer credit risk, weakening demand for electricity and/or value-added services, and availability of market capital to fund growth. The economic climate can also have an effect on the stability and performance of some of the utility's key business partners. While near- and mid-term indicators in Ottawa, Ontario, and Canada are generally positive, the prospect of economic headwinds and uncertainty lingers, especially in relation to competitiveness and regulatory and tax burdens.

5.2.2. Evolution of the Utility Business Model

It is widely acknowledged across industry, academic, and government circles that the sector is in the midst of a historic transition. In some corners, this transformation is attributed to the confluence of key factors known as the "three Ds" – decentralization, decarbonisation, and digitization. Innovative tools, technologies, and data sets are introducing new options to enhance customers' control, understanding, and supply of energy. In turn, this is cultivating higher customer expectations for leading-edge services and solutions. Moreover, the economics of supply options have evolved significantly. Maturing forms of non-emitting resources are approaching cost parity with conventional generation resources, while the appeal of DERs has also grown.

Against this backdrop of change, the prevailing consensus favours the view that the utility has no choice but to abandon its conventional business model. What ought to replace it, however, remains a subject of contentious debate. It is a question that every utility will be compelled to address and resolve in short order. If an effective and viable response is not forthcoming, the risk emerges of actors and forces beyond the utility's control making the decision instead.

5.2.3. Customer Interest in Choice & Sustainability

As signalled in the foregoing section, the engine that is fueling the transformation unfolding in the sector is the changing role of the customer. Whereas this role has historically been passive in nature, it has become much more influential in the new landscape. The opportunities and expectations for customized service, control, and convenience continue to expand. A prominent example in this regard is the rising level of customer interest in sourcing power from clean sources of energy and the manifestation of this appetite in the steady proliferation of DERs across Ontario.

The shifting sands of customers' needs and choices present an exciting opportunity for offering new products and services to enhance customer value and service. To realize these opportunities, utilities will need to continuously improve the way they do business, with a particular focus on creating a more effortless and engaging customer experience. As the preferences and priorities of customers continue to evolve, Hydro Ottawa must be ready, willing, and able to fulfill them. Maintaining a business strategy that puts the customer at the centre of everything the utility does will be a fundamental prerequisite for success.

5.2.4. Consolidation & Shared Services in the Distribution Sector

The business environment of Ontario's electricity distribution sector is unique, in terms of the number of participating members. Over 60 local distributors provide electricity to the province's 5.2 million customers. For many years, public policy has sought to encourage and incentivize consolidation within the distribution community. What's more, numerous aspects of the sector's evolution and the changing utility business model seem to favour economies of scale in a distributor's operations and activities. It is therefore not altogether surprising that, since the

filing of Hydro Ottawa's last rebasing application in 2015, the sector has witnessed a steady succession of consolidations, along with an uptick in the entry into shared services agreements.

The footprint and dispersion of distribution utilities throughout Eastern Ontario means that Hydro Ottawa remains well-positioned to pursue consolidation opportunities. Similarly, the utility's range of experience with shared services has underscored the value of targeted collaboration and partnership with utility peers, where appropriate. As such, going forward, these options will remain important parts of the utility's toolkit to provide the most cost-effective solutions to customers.

5.2.5. Market Renewal

Hydro Ottawa is a registered participant in the provincial electricity market administered by the IESO. In its capacity as a market participant, the company purchases electricity from the IESO on behalf of the vast majority of its customers. Accordingly, Hydro Ottawa has a direct stake in an efficient and reliable market, which is able to supply customers with power at the lowest possible cost. Since 2016, the IESO has been exploring a series of enhancements to the design and administration of Ontario's markets. Several of these proposals contemplate fundamental changes to the structures and methodologies for determining the wholesale price of electricity. Under the IESO's project management timeline for Market Renewal, the initial group of these proposals is slated to take effect in March 2023, near the mid-point of Hydro Ottawa's next five-year rate term.

For electricity distributors, the reforms emanating from Market Renewal may represent a double-edged sword. On the one hand, they may pose certain administrative challenges, especially from a settlements and billing perspective. Concurrently, however, to the extent that Market Renewal serves as a platform for developing new product and service offerings, the initiative could also open the door to new business and revenue opportunities.

5.3. POLICY & REGULATORY ENVIRONMENT

5.3.1. Shifts in Public Policy & Regulation

Over the course of Hydro Ottawa's 2016-2020 rate period, there were numerous policy and regulatory developments which had profound effects on the utility and the sector at large: establishment and subsequent cancellation of a provincial cap-and-trade program; implementation of numerous electricity rate mitigation and assistance programs; changes to the OEB's customer service rules, including the institution of a moratorium on residential disconnections during winter; adoption of the Ontario Cyber Security Framework; issuance of OEB guidance on corporate governance; cancellation of Ontario's conservation framework; and reforms to the OEB's governance structure.

And with respect to the primary vehicle driving provincial energy policy of late – the Long-Term Energy Plan ("LTEP") – it warrants observation that a total of three LTEPs have been issued over the past seven years. Each iteration of the LTEP left a lasting imprint on the public policy landscape. Assuming the current legislative framework for LTEP development remains in place, two new LTEPs are set to be released over the course of Hydro Ottawa's 2021-2025 rate term.

A practical effect of these recent trends has been a heightened need for electricity distributors to respond quickly to policy and regulatory actions which significantly impact the operations, activities, investments, and structure of the distribution sector. Hydro Ottawa anticipates that this need for readiness and nimbleness in adapting to shifts in public policy direction will endure throughout the utility's forthcoming rate period.

5.3.2. Affordability & Cost Reduction

While in recent years the broader policy landscape has been fluid, one aspect has remained firm – an enduring interest on the part of policymakers and regulators in placing downward pressure on customers' rates and bills. This objective has been pursued in varying forms, whether through rate rebates and mitigation, assistance for customers struggling to pay their bills, dedicated programs for commercial and industrial ratepayers, subsidies for the purchase of

energy efficient equipment, or pilot programs to test alternative pricing structures. Depending upon the future direction and constraints of public policy in this regard, rate-regulated utilities may face challenges, such as barriers or resistance to approval for cost recovery of operational and capital expenditures.

5.3.3. GHG Emissions Reduction & Electrification

Across all levels of government, there is a crystallizing consensus that greenhouse gas ("GHG") emissions ought to be lowered. Where sharp differences in policy prescriptions do exist is in regards to the means for achieving this end. And yet, even in this respect, there are common threads woven by policy actors that are of significant relevance to the electricity distribution sector in Ontario. Foremost among these is growing policy interest in the electrification of various economic sectors, especially transportation. This enthusiasm can be observed in a range of federal government climate change initiatives as well as in the province's projections for a steady uptick in the deployment of electric vehicles. Hydro Ottawa is also in the unique vantage point of having a shareholder, the City of Ottawa, which views electrification as a critical means of supporting its "Energy Evolution" strategy for reducing GHGs and boosting renewable energy use.

With the arc of GHG reduction policy bending in a direction that is increasingly favourable to enhanced electrification, both the implications and opportunities for distributors are numerous. In the former context, localized impacts on distribution infrastructure could be significant, depending upon the scale and pace of electrification. As for the latter, the embrace of electrification is advantageous to distributors, insofar as it bolsters their position to serve as a trusted energy advisor for customers and as an enabler of smart energy solutions.

5.3.4. Policy Action on Utility Revenue & Ratemaking

Looking ahead to the next five-year rate term for Hydro Ottawa, the outlook is decidedly mixed with respect to the revenue and ratemaking models for Ontario distributors. Grounds for optimism, in relation to the prospect of expanded business interests and opportunities, include

provisions of the *Ontario Energy Board Act, 1998* which have relaxed restrictions on permissible business activity for distributors, as well as signals from the regulator that it is open to reducing barriers to new utility business models and examining approaches to remuneration that incent cost-effective innovation. At the same time, however, any conversation around utility remuneration will feature some degree of risk that other actors may seek outcomes that are at odds with the goal of enlarging the playing field in which distributors can compete. What's more, the prospect lingers of policy action on electricity pricing and bill reduction that may have adverse consequences for distributors from a financial viability perspective.

6. STRATEGIC OBJECTIVES & CORPORATE PERFORMANCE GOALS

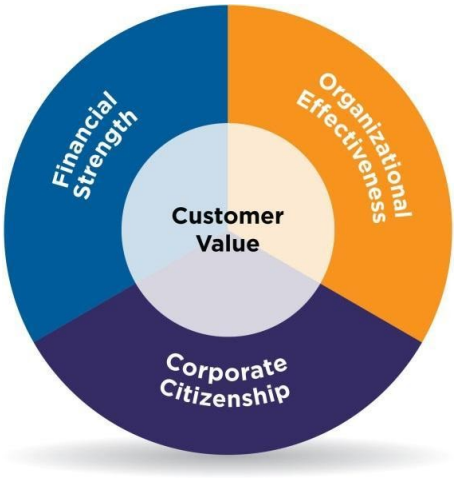
6.1. STRATEGIC OBJECTIVES

Hydro Ottawa's vision is to be a leading partner in a smart energy future and to serve as the trusted energy advisor for customers. To achieve this vision, the utility has organized its business strategy around four critical areas of performance and supporting strategic objectives for several years – as represented in the figure below.

Hydro Ottawa will maintain continuity in its core objectives heading into the 2021-2025 period. Consistent with past years, the renewed strategic objectives are being formally adopted at the holding company level and will cascade across the enterprise. They will therefore serve to guide the business and operations of the regulated distribution utility.

The rationale underlying this approach includes such key factors as the level of success achieved during the preceding five-year rate term, the trajectory of the business and policy landscape in which Hydro Ottawa operates (as described in the preceding section on Strategic Context), and the input received from customers regarding the utility's performance and direction.

Figure 1 – Corporate Strategic Objectives



- **Customer Value:** we will deliver value across the entire customer experience by providing reliable, responsive and innovative services at competitive rates.

- **Organizational Effectiveness:** we will achieve performance excellence by cultivating a culture of innovation and continuous improvement.

- **Financial Strength:** we will create sustainable growth in our business and our earnings by improving productivity and pursuing business growth opportunities that leverage our strengths – our core capabilities, our assets and our people.

- **Corporate Citizenship:** we will contribute to the well-being of the community by acting at all times as a responsible and engaged corporate citizen.

Of these objectives, the most important driver of Hydro Ottawa's business strategy will remain Customer Value, with the utility striving to put the customer at the centre of everything it does.

6.2. CORPORATE PERFORMANCE GOALS

Customer Value, Financial Strength, Organizational Effectiveness, and Corporate Citizenship serve as the overarching four key areas of focus around which Hydro Ottawa anchors and organizes its business activity. With respect to the design and execution of plans to achieve strategic objectives in each of these areas of performance, a critical step is the establishment of a corporate performance scorecard. This scorecard establishes qualitative performance goals and priorities, along with quantitative measures and targets, in each of the four strategic areas of focus. Similar to the adoption of the strategic objectives, the corporate performance goals are established by the holding company, and in turn, are cascaded across the enterprise.

The table below depicts the planned alignment between the strategic objectives and corporate performance goals for Hydro Ottawa's regulated electricity distribution business for the 2021-2025 rate term.

Table 1 – Alignment of Corporate Strategic Objectives & Corporate Performance Goals

5-Year Enterprise Strategic Objectives and Outcomes (2021-2025)		Corporate Performance Goals
Customer Value	**Enterprise Strategic Objective:** **We will deliver value across the entire customer experience** *By providing reliable, responsive and innovative services at competitive rates* **Enterprise Strategic Outcome:** *Customer loyalty*	• *Assist customers in managing their energy consumption and electricity costs* • *Deliver on customer expectations for service quality and responsiveness* • *Maintain overall distribution system reliability*
Organizational Effectiveness	**Enterprise Strategic Objective:** **We will achieve performance excellence** *By cultivating a culture of innovation and continuous improvement* **Enterprise Strategic Outcomes:** *Efficient and effective operations* *Safe and healthy work environment* *Engaged, aligned and prepared workforce*	• *Continue to enhance operational performance and productivity* • *Maintain leading health and safety record* • *Enhance organizational and employee capability*
Financial Strength	**Enterprise Strategic Objective:** **We will create sustainable growth in our business and our earnings** *By improving productivity and pursuing business growth opportunities that leverage our strengths – our core capabilities, our assets and our people* **Enterprise Strategic Outcome:** *Growth in shareholder value*	• *Grow revenues from new sources* • *Enhance / protect revenues from existing business lines*
Corporate Citizenship	**Enterprise Strategic Objective:** **We will contribute to the well-being of the community** *By acting at all times as a responsible and engaged corporate citizen* **Enterprise Strategic Outcomes:** *Leading governance and business practices* *Engaged stakeholders* *Safe, secure and environmentally responsible services* *Positive community impact*	• *Enhance our brand image in the community and the industry* • *Continue to improve our environmental performance and reduce our impact on the environment*

7. CAPITAL & OPERATIONAL PLANS

This business strategy's centre of gravity is the set of plans which will organize and govern Hydro Ottawa's proposed investments in capital and operational programs over the 2021-2025 period.

Capital expenditures relate to items that, once purchased, have lasting benefits over many years. These include the overhead and underground infrastructure (stations, poles, wires) that serve as the backbone of the distribution system, as well as supporting assets and equipment, such as facilities, vehicles, and computer systems. Operating expenditures pertain to recurring expenses that are incurred in the day-to-day management of Hydro Ottawa's activities, like maintenance of assets and equipment, tree trimming, customer billing, workforce training, and employee payroll.

Based upon customer feedback, Hydro Ottawa has crafted capital and operational plans that emphasize the following four core principles:

1. Minimize rate increases
2. Maintain reliability and service quality
3. Address key pressures to the system, including:
    - Aging infrastructure
    - An expanding customer base and continued population growth
    - The effects of severe weather events
4. Make prudent investments in emerging technologies to enhance service offerings and/or reduce operation costs.

7.1. CAPITAL PLAN

Hydro Ottawa's assessments of its capital needs, and its proposed expenditures for meeting them, are captured in the utility's Distribution System Plan ("DSP"). The DSP details how capital investments will be prioritized, paced, and optimized, while minimizing rate impacts for

customers and facilitating continuous improvement and productivity. The DSP is a core deliverable emerging from multiple internal and external planning processes related to capital investment, asset management, regional planning, customer engagement, and business strategy.

The investment proposals set forth in the DSP are organized into four categories – System Access, System Renewal, System Service, and General Plant. Projected expenditures, as well as the breakdown of programs, within each of these categories are outlined in the table below.

Table 2 – AS ORIGINALLY SUBMITTED – Annual Capital Investments ($'000,000s)

Investment Category	2021	2022	2023	2024	2025
System Access	$56.7	$41.0	$37.4	$34.5	$34.0
System Renewal	$43.3	$44.0	$40.2	$39.4	$40.5
System Service	$31.0	$27.4	$24.3	$25.2	$23.9
General Plant	$32.0	$11.7	$7.6	$17.4	$16.9
Capital Contributions	$(41.3)	$(25.2)	$(19.9)	$(19.2)	$(19.3)
TOTAL	**$121.8**	**$98.9**	**$89.6**	**$97.2**	**$96.0**

Table 2 – UPDATED FOR 2019 ACTUALS – Annual Capital Investments ($'000,000s)

Investment Category	2021	2022	2023	2024	2025
System Access	$56.7	$41.0	$37.4	$34.5	$34.0
System Renewal	$43.3	$44.0	$40.2	$39.4	$40.5
System Service	$26.7	$28.3	$24.3	$25.2	$23.9
General Plant	$32.0	$11.7	$7.6	$17.4	$16.9
Capital Contributions	$(39.2)	$(23.5)	$(19.9)	$(19.2)	$(19.3)
TOTAL	**$119.5**	**$101.5**	**$89.6**	**$97.2**	**$96.0**

7.1.1. System Access

This category encompasses those investments that allow Hydro Ottawa to meet its obligation to connect customers to the grid. These expenditures are subdivided into specific programs focused on connecting customers (e.g. new residential and commercial developments, and customer-driven electric generation projects), relocating equipment to accommodate municipal infrastructure needs like road widening, and installing meters.

System Access – Capital Programs

- Plant Relocation & Upgrade
- Residential Subdivision
- Commercial Development
- System Expansion
- Embedded Generation
- Infill Service (Residential & Small Commercial)
- Metering

Major projects expected in this investment category during 2021-2025 include residential and commercial connections consistent with recent historical expenditures, system expansion, plant relocation (especially in relation to Stage 2 of Light Rail Transit in the City of Ottawa), and retrofits of bulk metered buildings to unit metering.

With the City of Ottawa continuing to experience a steady level of growth, and with the utility having recently averaged upwards of 4,000-5,000 new connections every year, System Access expenditures remain crucial to achieving positive outcomes in relation to customer expectations for service quality and responsiveness. Likewise, they will be critical to the success of flagship local infrastructure projects over the 2021-2025 period. There is also a nexus between this category of investment and the environmental benefits that accrue to customers and the community from increased deployment of distributed renewable generation, including net metered projects.

7.1.2. System Renewal

Included under the scope of this category is the replacement and refurbishment of system assets, in order to extend their original service life or replace them on an emergency basis. Of

note, this activity touches the parts of Hydro Ottawa's grid that are either most visible (poles, wires, transformers, and stations) or least visible (underground cable and vaults) to the public. Together, these programs are aimed at alleviating one of the most significant pressures on the system – namely, mitigating the risk of the potential failure of end-of-life assets and equipment. The primacy of System Renewal is underscored by the fact that this grouping represents the largest share of the broader capital funding envelope.

System Renewal – Capital Programs
- Station Assets Renewal
- Overhead Distribution Assets Renewal
- Underground Distribution Assets Renewal
- Corrective Renewal
- Damage to Plant

Planned projects of note under this investment category include renewal of distribution poles, transformers, and stations, emergency replacement of overhead assets following severe weather events, rehabilitation of underground chamber assets, replacement of underground cable, and upgrades of various types of metering equipment that have reached end of life.

Key outcomes associated with System Renewal expenditures are improvements to overall system reliability, as well as reductions in the average duration and frequency of outages.

7.1.3. System Service

The purpose of these infrastructure upgrades and modifications is to enhance reliability and capacity on the grid, and ensure that the system continues to meet operational objectives while addressing future customer needs. Similar to the foregoing categories, System Service is comprised of its own unique set of programs. Expenditures revolve around capacity upgrades that are intended to relieve constraints caused by load growth; system and station enhancements that improve operating characteristics, add redundancy, and strengthen the resilience against severe weather

System Service – Capital Programs
- Capacity Upgrades
- Distribution Enhancements
- Station Enhancements
- Grid Technologies
- Metering

events; and deployment of grid technologies that augment the technological and communication capabilities of the system.

Major station projects in this category will be the development of new stations in the south Nepean and east Leitrim regions of the City of Ottawa, which are needed to accommodate customer load growth and to increase supply capacity in growing suburbs that have already reached the limits of local transformation capacity. Other major projects include upgrades to the functionality of Hydro Ottawa's Supervisory Control and Data Acquisition ("SCADA") system, enhancements to the Outage Management System, the installation of field area network infrastructure to enable greater automation in communications, roll-out of the next phase of the utility's MiGen smart energy project, deployment of cyber security and monitoring equipment at stations, and upgrades to customer meters to enable remote disconnections.

Maintaining current levels of reliability, while targeting those pockets of the system in which reliability performance is below average, are principal objectives driving this basket of investments.

7.1.4. General Plant

Whereas the three system-related categories discussed above relate to investments in the core components of Hydro Ottawa's distribution grid, General Plant covers expenditures on assets that are not part of the system. These include facilities, land, fleet, tools, equipment, information technology hardware and software, and other rolling stock that is used to support essential business activities.

General Plant – Capital Programs

- Buildings - Facilities
- Customer Service
- Enterprise Resource Planning System
- Fleet Replacement
- IT New Initiatives
- IT Life Cycle & Enhancements
- Operation Initiatives
- Tools Replacement
- Facilities Implementation

Successful completion of General Plant projects is a key determinant of the efficiency and effectiveness of the utility's overall business performance. In many instances, the ability to follow through on commitments to customers and to safeguard employee health and safety hinges upon program expenditures in this category.

Key projects planned in this investment category for 2021-2025 include deployment of a digital Customer Relationship Management system enabling a 360-degree view of customer activity, migration of the enterprise resource planning system to a cloud-based platform, adoption of enhanced equipment and software to support crews in the field, replacement of critical IT infrastructure, implementation of cyber security safeguards, and upgrades to the numerous business systems responsible for collecting, processing, and validating incoming meter data.

Similarly, several of these investments will have multi-faceted value streams, insofar as they will enable Hydro Ottawa to achieve multiple performance outcomes at the same time. For example, enhancements to the Customer Care & Billing ("CC&B") system will better position Hydro Ottawa to assist customers in managing their energy needs, offer a more personalized experience, and ensure satisfaction with the utility's services. Beyond this, however, upgraded CC&B functionality will also introduce new options to customers for obtaining value-added products or services (e.g. direct deposit of credits into customers' bank accounts, and a wider range of options for payment methods and bill due dates), while simultaneously opening doors to opportunities for shared services with other utilities and services to third parties. The availability of this solution will expand customer choice and convenience as well as carve out space for growing revenue from new sources.

Finally, certain projects in this portfolio are set to serve as unique illustrations of the best-in-class innovation culture which Hydro Ottawa continuously seeks to foster. Examples include the deployment of artificial intelligence solutions in order to automate a number of business processes and enhance their efficiency and accuracy.

7.2. OPERATIONAL PLAN

Hydro Ottawa's responsibility to manage a safe and reliable distribution system, serve customers in a manner that is responsive to their needs and preferences, and maintain compliance with a broad range of legislative and regulatory requirements compel the utility to incur a level of costs that is proportionate to the magnitude of its operational obligations. These costs are spread across 14 different operations, maintenance and administration ("OM&A") program categories that serve to structure the myriad of activities which are part and parcel of keeping the lights on. Annual OM&A expenditures for the 2021-2025 rate term are outlined in the table below.

Table 3 – Annual OM&A Program Expenditures ($'000,000s)

2021	2022	2023	2024	2025
$93.9	$96.3	$98.7	$101.2	$103.7

The principal cost drivers underlying Hydro Ottawa's forecasted OM&A expenses include costs associated with legislative and regulatory compliance; operational investments needed for safety and reliability; employee compensation and training; ongoing support, maintenance, licensing, and protection of the company's IT systems; fuel; market priced contracts; and inflation.

Of note, during the internal budgeting process, the initial levels of OM&A submitted by the various divisions within the utility resulted in an overall OM&A Compound Annual Growth Rate ("CAGR") of 3.5% over the 2021-2025 period. In step with its commitment to continuous improvement and customer preferences for minimizing rate increases, Hydro Ottawa then applied a custom OM&A escalation factor to contain upward pressure on operational expenses and to embed productivity expectations throughout the 2021-2025 period. This lowered the overall OM&A CAGR to 2.51% and achieved a reduction of $13.1 million in OM&A spending over the course of the rate term.

Moreover, Hydro Ottawa staff levels will not increase between 2021 and 2025, relative to staffing levels from 2019. Similarly, heading into this next Custom IR period, Hydro Ottawa is set to serve a larger number of customers than at the outset of its previous five-year rate plan (~323,000 as of the end of 2015 vs. ~340,000 as of the end of 2019 – an increase of over 5%). Both of these data points attest to the effectiveness of the utility's ongoing productivity and efficiency initiatives.

Hydro Ottawa's total operating costs are reported every year to the OEB and benchmarked against other distribution companies in Ontario. In the last year of publicly available data collected by the OEB, Hydro Ottawa's total operating cost per customer was $260. Consistent with the pattern of recent years, this result compared favourably to the average cost per customer across all electricity distributors in the province ($316).

7.3. INCORPORATING CUSTOMER FEEDBACK & PREFERENCES

Hydro Ottawa has designed its capital and operational plans to reflect the needs and priorities of customers, in both general and specific ways. Examples of how the utility has sought to incorporate the insights gleaned from extensive engagement with customers include the following:

- Certain proposals for capital spending have been deferred, as part of an asset needs rationalization process which was undertaken in order to prioritize the most critical projects for system reliability and maintenance and to identify opportunities for minimizing rate impacts.
- To further support efforts to defer capital spending and lower costs for customers, the use of non-wire alternatives is planned. In the Kanata North area, for example, a mix of conservation, load transfers, and voltage reductions solutions will be deployed to enable the deferral of a transmission-connected substation that had originally been identified as a need through the latest regional planning cycle.

- Critical investments in reliability-related projects are being paced in accordance with customer expectations for an appropriate level of service. One illustration in this regard is the prioritization of the construction of the new Cambrian Municipal Transformer Station in the early years of the rate period. This reflects the imperative to ensure sufficient capacity is available in an area which is forecasted to continue experiencing significant load growth over the next decade.
- A selective portfolio of prudent investments is planned in new technologies and solutions that will enhance the menu of service offerings available to customers and, in many cases, lead to reduced operational costs. These will open up new channels for customers to engage and transact with Hydro Ottawa, and continue the utility's movement to digital and cloud-based platforms which help eliminate the need for costly, on-premise IT infrastructure.
- Several steps are being taken to more formally incorporate climate change risk management into system planning processes and decision-making practices. The range of actions will include augmenting vegetation management practices, developing new anti-cascade standards for utility poles, and investing in greater automation capability for remote isolation and restoration of faulted system components.

Alongside the aforementioned examples, the ongoing implementation of productivity and efficiency initiatives will play a crucial role in minimizing operating costs. Specific examples of productivity are discussed in the ensuing section.

8. PRODUCTIVITY AND CONTINUOUS IMPROVEMENT

Responsibly controlling costs and focusing on cost-effective delivery of outcomes that matter to customers remain core priorities for Hydro Ottawa. Amidst the unique confluence of demands, pressures, and constraints on operations, the utility is placing increased emphasis on incorporating productivity and continuous improvement gains, so as to offset increasing expenditures and boost organizational capacity. Hydro Ottawa is therefore committed to

ensuring that productivity and continuous improvement serve as hallmarks of its 2021-2025 rate plan.

8.1. 2016-2020 INITIATIVES

A retrospective glance at the outcomes and efficiencies derived from productivity initiatives during the preceding five-year rate period demonstrates that there is a firm foundation upon which to build. During the 2016-2020 period, Hydro Ottawa successfully executed a wide spectrum of initiatives which resulted in tangible savings to customers – and at no expense to service quality or system reliability. Headlining this deep pool of initiatives were the following:

- Enhancements to the customer contact centre, giving customers an improved experience through access to more efficient service and a broad range of options for communicating with Hydro Ottawa through the channel of their choice;
- Introduction of new digital tools, such as a mobile application and Smart Speaker skills (a first in the Canadian electric utility sector), to take customer service to the next level of convenience and sophistication;
- Movement away from manual, paper-based processes and adoption of electronic solutions to support core business systems and practices, including the enterprise resource planning platform, field crew scheduling, fleet management, and planned outage communications;
- Consolidation and modernization of administrative and operational facilities; and
- Workforce stabilization and optimization, through such measures as reallocation of vacant positions to trades hiring and reduction of both on-call and overtime costs.

8.2. 2021-2025 INITIATIVES

Whether through harnessing the potential of new technologies and solutions to better serve customers, elevating standards of business performance and excellence, or rationalizing and re-purposing resources, Hydro Ottawa is set to continue strengthening its culture of continuous improvement over the course of its next five-year rate term.

In accordance with internal guidelines for the preparation of plans and budgets for the 2021-2025 period, each administrative division within the utility was mandated to demonstrate productivity savings in a quantitative and/or qualitative fashion, and to identify initiatives dedicated to continuous improvement. This provides assurance that productivity and cost control objectives are firmly integrated into the business planning process.

A survey of the productivity initiatives planned over the next rate plan horizon reveals the following highlights:

- Movement of enterprise resource planning system to a cloud-based solution, thereby enabling greater administrative efficiency, reduced system maintenance costs, and timely access to new functionality;
- Integration of the recent SCADA system upgrade with the existing Outage Management System and a new Distribution Management System, enabling superior functionality and automation, and providing control room operators with line of sight and situational awareness through a single interface;
- Deployment of a digital platform for Customer Relationship Management, enabling a 360-degree view of customer activity across the utility;
- Increased deployment and further innovation in voice-activated digital assistance technology, for use in customer service and experience applications;
- Implementation of robotic process automation capabilities across multiple business units and programs, in order to more efficiently and expeditiously execute highly transactional activities;
- Renegotiation of contracts with external service providers for underground cable locates and vegetation management;
- Replacement of outdated phone lines for advanced metering infrastructure systems with modernized data collection nodes, which offer more extensive communications reach and enhanced resiliency against power interruptions;

- Deployment of a cloud-based platform to optimize the use and value of advanced metering infrastructure data analytics, as a means of driving operational efficiencies across a wide range of core business functions;
- Increase in the number of Alternate Locate Agreements;
- Enhanced productivity and reduced overtime costs for crews, on account of the implementation of seasonal construction schedules which aim to shift work away from the winter season, during which construction is more costly and inefficient due to environmental and operational constraints;
- Rationalizing and right-sizing of the utility's vehicle fleet through analytics of vehicle utilization;
- Achievement of 4% increase in daily available wrench time for crews; and
- Administration of internal programs dedicated to optimizing the lifecycle management and enhancement of IT assets.

8.3. BENCHMARKING

The preparation of this Business Plan was supported by year-over-year comparisons of Hydro Ottawa's costs and outcomes, along with evaluations of the utility's performance against its peers. Tracking and analysis of trends in the achievement of system reliability, customer value, and financial strength outcomes have informed the scope and substance of particular capital and OM&A programs. Similarly, the benchmarking of Hydro Ottawa's expenditures and performance relative to samples of utilities across Ontario, Canada, and the United States has yielded valuable insights into areas in which the utility performs well and those in which there is room for improvement. These findings have been internalized and incorporated into specific work programs, and will serve as important baselines and points of reference against which to measure the utility's progress.

As the implementation of Hydro Ottawa's capital and operational plans unfolds over the 2021-2025 period, the use of internal and external benchmarking will remain a vital tool for monitoring and measuring performance. The utility fully anticipates undertaking additional

benchmarking analysis during the rate term, as a means of supporting its broader performance management and business planning framework, as well as its system and asset management planning processes.

9. ALIGNMENT WITH THE RENEWED REGULATORY FRAMEWORK

The primary objectives animating Hydro Ottawa's corporate vision are wholly consistent with the main performance outcomes promoted under the OEB's Renewed Regulatory Framework ("RRF"). Hydro Ottawa views this broad alignment as a competitive advantage and remains committed to firmly entrenching RRF principles and objectives throughout its operations and business.

Table 4 below illustrates the alignment between the utility's overarching objectives and the key categories of performance outcomes under the RRF. For additional context, the table also shows the congruence of Hydro Ottawa's high-level performance goals and strategic outcomes – which are utilized to measure progress in achieving the strategic objectives – with the RRF's areas of focus.

Table 4 – Alignment of Corporate Strategic Objectives with RRF Performance Outcomes

OEB RRF Performance Outcomes	Key Area of Focus	Corporate Performance Goal	Strategic Outcome
Customer Focus	Customer Value	• Assist customers in managing their energy consumption and electricity costs • Deliver on customer expectations for service quality and responsiveness • Maintain overall distribution system reliability	• Customer loyalty and satisfaction
Operational Effectiveness	Organizational Effectiveness	• Continue to enhance operational performance and productivity • Maintain leading health and safety record • Enhance organizational and employee capability	• Efficient and effective operations • Safe and healthy work environment • Engaged, aligned and prepared workforce
Public Policy Responsiveness	Corporate Citizenship	• Enhance our brand image in the community and the industry • Continue to improve our environmental performance and reduce our impact on the environment	• Leading governance and business practices • Engaged stakeholders • Safe, secure and environmentally responsible services • Positive community impact
Financial Performance	Financial Strength	• Grow revenues from new sources • Enhance / protect revenues from existing business lines	• Growth in shareholder value

9.1. PERFORMANCE MEASUREMENTS

In accordance with the RRF's emphasis on achieving outcomes that provide value to customers, Hydro Ottawa is committing to a robust performance measurement and reporting framework for the upcoming five-year rate period. This framework expands and builds upon the success of the one that was in place for 2016-2020, and will maintain the approach of combining standard OEB performance measures with others that are customized for Hydro Ottawa's unique use.

As displayed in the table below, an integral component of this framework is the set of measures that will form the basis of Hydro Ottawa's 2021-2025 Custom Performance Scorecard. These

measures have been selected based upon a variety of factors and drivers, including responsiveness to customer preferences, alignment with core RRF and corporate strategic objectives, and correlation to key findings from the benchmarking analyses performed in support of this Business Plan.

Table 5 – Custom Performance Scorecard Measures

Outcome	OEB Reporting Category	Hydro Ottawa Custom Measures	New/Existing	Target
Customer Focus	Customer Satisfaction	Contact Centre Satisfaction – Transactional Feedback	New	Maintain
		Number of MyAccount Customers	New	Increase
		Number of Online Billing Accounts	New	Increase
Operational Effectiveness	Safety	All Injury/Illness Frequency Rate	New	Reduce
		Lost Workday Severity Rate	New	Reduce
	System Reliability	Customer Average Interruption Duration Index	Existing	Monitor
		Feeders Experiencing Multiple Sustained Interruptions	Existing	Maintain
		Worst Feeder Analysis – Number of Feeders with Very Poor Performance	Existing	Reduce
		Stations Exceeding Planning Capacity	Existing	≤5%
		Feeders Exceeding Planning Capacity	Existing	≤10%
		Stations Approaching Rated Capacity	Existing	0%
		Feeders Approaching Rated Capacity	Existing	0%
	Cost Control	Productive Time	Existing	Maintain
		Labour Allocation	Modified	Maintain
		3-Year Average Cost per Pole – Wood Pole Replacement	New	Monitor
		3-Year Average Cost per Meter – Underground Cable	New	Monitor
		Average Cost per Kilometer – Vegetation Management	New	Monitor
		Average Cost per Pole – Pole Test and Inspection	New	Monitor
	Asset Efficiency	Technology Infrastructure Cost per Employee	New	Monitor
Public Policy Responsiveness	Environment	Annual Oil Spills & Costs of Remediation	Existing	Reduce
		Non-Hazardous Waste Diversion Rate	New	Maintain
		Percentage of Green Suppliers	New	Maintain
Financial Performance	Financial Metrics	OM&A per Customer	New	Monitor
		Bad Debt as a Percentage of Total Electricity Revenue	New	Monitor
		Cumulative Capital Additions per Investment Category	New	Monitor
		Annual Capital Spending per Investment Category	New	Monitor

Consistent with the prescriptions of the RRF, this proposed reporting regime is intended to equip the OEB, customers, and other stakeholders with the ability to better monitor and understand diverse aspects of Hydro Ottawa's performance, and to demonstrate the utility's accountability in transparently communicating the outcomes achieved under its performance management framework.

10. REVENUE REQUIREMENT & BILL IMPACTS

The Revenue Requirement and Bill Impacts associated with Hydro Ottawa's proposed 2021-2025 capital and operational plans are summarized in the tables below.

Table 6 – AS ORIGINALLY SUBMITTED – Revenue Sufficiency/Deficiency ($'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: Per Approved Settlement Agreement[1] Adjustment per Pole Attachment Decision[2]	$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 Allowance	$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 2020	**$(17,060)**	**$(16,089)**	**$(10,570)**	**$(7,891)**	**$(5,405)**

[1] This refers to the Approved Settlement Agreement governing Hydro Ottawa's 2016-2020 rate term, which was approved by the OEB in 2015.
[2] This refers to an OEB decision from 2016 which authorized Hydro Ottawa to use a utility-specific rate for pole attachments.

Table 6 – UPDATED FOR 2019 ACTUALS – Revenue Sufficiency/Deficiency ($'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: Per Approved Settlement Agreement[3] Adjustment per Pole Attachment Decision[4]	$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 Allowance	$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 2020	**$(18,792)**	**$(13,589)**	**$(11,867)**	**$(7,942)**	**$(5,461)**

[3] This refers to the Approved Settlement Agreement governing Hydro Ottawa's 2016-2020 rate term, which was approved by the OEB in 2015.
[4] This refers to an OEB decision from 2016 which authorized Hydro Ottawa to use a utility-specific rate for pole attachments.

Table 7 – AS ORIGINALLY SUBMITTED – Distribution Bill Impacts by Customer Class

Rate Class	Year-over-Year Distribution % Change					
	2021	2022	2023	2024	2025	Average
Residential	4.57%	7.28%	5.73%	2.88%	1.75%	*4.44%*
GS < 50 kW	2.44%	6.94%	6.59%	3.66%	2.61%	*4.45%*
GS > 50 to 1,499 kW	5.20%	8.55%	6.93%	3.80%	2.83%	*5.46%*
GS > 1,500 to 4,999 kW	4.22%	8.43%	6.93%	3.80%	2.30%	*5.13%*
Large Use	11.36%	8.09%	6.53%	3.54%	2.20%	*6.35%*
Street Lighting	(9.98)%	14.07%	8.92%	3.46%	2.91%	*3.87%*
Sentinel Lighting	14.46%	20.46%	16.54%	12.33%	10.44%	*14.84%*
Unmetered Scattered Load	2.42%	11.76%	9.33%	6.10%	5.07%	*6.93%*

Table 7 – UPDATED FOR 2019 ACTUALS – Distribution Bill Impacts by Customer Class

Rate Class	Year-over-Year Distribution % Change					
	2021	2022	2023	2024	2025	Average
Residential	6.91%	6.15%	4.74%	2.91%	1.77%	*4.49%*
GS < 50 kW	4.05%	6.76%	5.65%	3.64%	2.60%	*4.54%*
GS > 50 to 1,499 kW	3.21%	7.37%	10.42%	3.81%	2.84%	*5.53%*
GS > 1,500 to 4,999 kW	3.40%	7.21%	9.30%	3.79%	2.32%	*5.20%*
Large Use	9.57%	6.92%	9.42%	3.55%	2.22%	*6.34%*
Street Lighting	(3.89)%	8.26%	8.94%	3.55%	3.00%	*3.97%*
Sentinel Lighting	18.02%	18.64%	15.32%	12.43%	10.53%	*14.99%*
Unmetered Scattered Load	3.54%	9.64%	9.61%	6.13%	5.10%	*6.80%*

11. CONCLUSION

The 2021-2025 period represents a unique moment in time for Hydro Ottawa. It follows on the heels of what was, by numerous measures, a highly successful five-year window in which the utility executed its first-ever Custom IR rate plan. With the benefit of the outcomes and knowledge gained over the course of 2016-2020, the utility is poised to enter the next chapter of

its journey towards a smart energy future in a position of strength and with a positive track record.

However, the landscape has shifted appreciably since the OEB last approved a rebasing application from Hydro Ottawa. Despite the robust progress made in replacing aging infrastructure, continued investment to mitigate the risk of asset failure remains a critical priority, with over 19% of assets having reached the end of their useful lives. At the same time, the steady level of growth which the City of Ottawa is experiencing means that expanding the distribution grid and ensuring access for new customers are urgent imperatives as well. Together with the demands posed by more frequent and more acute severe weather events, heightened customer expectations for greater convenience and choice, and the rapid evolution of operational technologies and threats, these pressures present an immensely challenging landscape for Hydro Ottawa to navigate. Against the backdrop of an increasingly complex and fluid policy environment, these pressures are magnified even further.

Accordingly, the utility requires a comprehensive, data-driven, customer-sanctioned roadmap through which it can chart its course for the next five years. Hydro Ottawa is confident that this Business Plan will effectively fulfill this need. The utility welcomes the opportunity to move this strategy forward and to deliver the attendant benefits to its customers and community.

UPDATED ALIGNMENT WITH THE RENEWED REGULATORY FRAMEWORK

1. INTRODUCTION

In 2012, the OEB adopted its current performance-based approach to regulation, through the release of its report entitled *Renewed Regulatory Framework for Electricity Distributors: A Performance Based Approach* (hereafter referred to as the "RRFE Report").[1] This paradigm, which the OEB has since applied to all rate-regulated utilities under its jurisdiction and has captioned as the "Renewed Regulatory Framework" ("RRF"), is intended to serve several key purposes: act as a more consumer-centric approach to utility regulation; better align the interests of customers and utilities; facilitate the achievement of distinct performance outcomes by utilities; and place a greater focus on delivering value for money.[2]

A cornerstone of the RRF is a set of outcomes, against which utilities are measured as a means of gauging the strength of their overall performance in delivering results that are valued by customers. The categories of RRF performance outcomes are as follows: Customer Focus, Operational Effectiveness, Public Policy Responsiveness, and Financial Performance. Complementing these outcome categories are core principles that underpin the RRF, including "the expectation for continuous improvement, robust integrated planning and asset management that paces and prioritizes investments, strong incentives to enhance utility performance, ongoing monitoring of performance against targets, and customer engagement to ensure utility plans are informed by customer expectations."[3] Rounding out the key components of the RRF is a three-pronged policy platform aimed at facilitating the achievement of performance outcomes: availability of three rate-setting methods, the individual selection of which is at the discretion of the utility, based upon its unique needs and circumstances; formalized requirements for distribution system planning and regional planning; and standards to measure utility performance.

[1] Ontario Energy Board, *Report of the Board - Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach* (October 18, 2012).
[2] *Ibid,* page 1.
[3] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 2.

Since the inception of the RRF, Hydro Ottawa has endeavoured to incorporate RRF principles across its business operations, execute its corporate plans and capital investment programs in accordance with RRF objectives, and continually align its interests with those of its customers. In particular, Hydro Ottawa believes that this commitment has been on full display throughout its 2016-2020 rate term.

The establishment of the utility's 2016-2020 rate term was enabled by a finding from the OEB that Hydro Ottawa's 2016-2020 Custom Incentive Rate-setting ("Custom IR") application, and the subsequent settlement proposal prepared by parties to the proceeding, met the expectations of the RRF for a Custom IR.[4]

Moreover, in step with the RRF's emphasis on the achievement of performance outcomes, the utility has closely tracked the achievement of RRF performance outcomes over the course of its rate term. This monitoring has taken the form not only of the Electricity Utility Scorecard that is issued annually for all local distribution companies ("LDCs"), but of additional measures and methods as well. Chief among these has been the preparation and filing of an annual report ("CIR Annual Report") to the OEB and parties to the Approved Settlement Agreement governing Hydro Ottawa's 2016-2020 Custom IR rate plan. These CIR Annual Reports have provided updates on actual capital expenditures by program type (i.e. System Access, System Service and System Renewal, and General Plant) vs. budgeted capital expenditures by program type and appropriate variance analysis. In addition, the CIR Annual Reports have tracked the utility's continuous improvement using a series of Key Performance Indicators ("KPIs") that were incorporated into Hydro Ottawa's 2016-2020 Distribution System Plan ("DSP"). For additional information on these CIR Annual Reports, please see Exhibit 1-1-11: Proposed Annual Reporting - 2021-2025.[5]

[4] Ontario Energy Board, *Decision and Order*, EB-2015-0004 (December 22, 2015), page 1.
[5] These reports are available on Hydro Ottawa's website:
https://hydroottawa.com/about-us/regulatory-affairs/custom-incentive-reports.

In addition, Hydro Ottawa has annually prepared a summary of initiatives and outcomes emanating from the 2016-2020 rate plan which align with the outcome categories enshrined in the RRF. These summaries – which have been pro-actively developed on a voluntary basis – have helped support the fostering of a culture of continuous improvement across the utility. Copies of these summaries for the years 2016, 2017, and 2018 have been appended to this Schedule as Attachments 1-1-10(A), (B), and (C), respectively.

This Schedule outlines how the Application aligns with the hallmark precepts, objectives, and expectations of the RRF. Specific matters that will be addressed are as follows: broader alignment between Hydro Ottawa's corporate strategic objectives and RRF performance outcomes; customer engagement; rate-setting elements, including selection of the Custom IR option; performance measurement, continuous improvement, and benchmarking; and distribution system planning.

2. ALIGNMENT BETWEEN CORPORATE STRATEGY & RRF OUTCOMES

Before highlighting the specific ways in which this Application aligns with essential features of the RRF, Hydro Ottawa wishes to establish some broader context. Namely, it seems appropriate to first draw attention to the more fundamental alignment between the categories of performance outcomes under the RRF and the principal areas of focus in the utility's business strategy.

Hydro Ottawa's vision is to serve as the trusted energy advisor for its customers and as a leading partner in a smart energy future. To achieve this vision, the utility has organized its business strategy around four strategic objectives and areas of performance for several years – as represented in Figure 1 below. Hydro Ottawa will maintain continuity in its core objectives heading into the 2021-2025 period. Consistent with past years, the renewed strategic objectives are being formally adopted at the holding company level and will cascade across the enterprise, thereby guiding the business and operations of the regulated distribution utility.

Figure 1 – Corporate Strategic Objectives

- **Customer Value:** we will deliver value across the entire customer experience by providing reliable, responsive, and innovative services at competitive rates.

- **Organizational Effectiveness:** we will achieve performance excellence by cultivating a culture of innovation and continuous improvement.

- **Financial Strength:** we will create sustainable growth in our business and our earnings by improving productivity and pursuing business growth opportunities that leverage our strengths – our core capabilities, our assets, and our people.

- **Corporate Citizenship:** we will contribute to the well-being of the community by acting at all times as a responsible and engaged corporate citizen.

Of these objectives, the most important driver of Hydro Ottawa's business strategy will remain Customer Value, with the utility striving to put the customer at the centre of everything it does.

The primary objectives animating Hydro Ottawa's corporate vision are wholly consistent with the main performance outcomes promoted under the RRF, as illustrated in Table 1 below. For

additional context, the table also shows the congruence of Hydro Ottawa's high-level performance goals and strategic outcomes – which are utilized to measure progress in achieving the strategic objectives – with the RRF's areas of focus.

Table 1 – Alignment of Hydro Ottawa's Corporate Strategic Objectives with RRF Performance Outcomes

RRF Performance Outcomes	Hydro Ottawa Strategic Objective	Hydro Ottawa Corporate Performance Goal	Hydro Ottawa Strategic Outcome
Customer Focus	Customer Value	• Assist customers in managing their energy consumption and electricity costs • Deliver on customer expectations for service quality and responsiveness • Maintain overall distribution system reliability	• Customer loyalty and satisfaction
Operational Effectiveness	Organizational Effectiveness	• Continue to enhance operational performance and productivity • Maintain leading health and safety record • Enhance organizational and employee capability	• Efficient and effective operations • Safe and healthy work environment • Engaged, aligned, and prepared workforce
Public Policy Responsiveness	Corporate Citizenship	• Enhance our brand image in the community and the industry • Continue to improve our environmental performance and reduce our impact on the environment	• Leading governance and business practices • Engaged stakeholders • Safe, secure and environmentally responsible services • Positive community impact
Financial Performance	Financial Strength	• Grow revenues from new sources • Enhance / protect revenues from existing business lines	• Growth in shareholder value

Hydro Ottawa views this broad alignment as a competitive advantage and as further reinforcement of the imperative – as well as the value – of remaining firmly committed to entrenching RRF principles and objectives throughout its business and operations.

Against the backdrop of this high-level alignment between its corporate objectives and RRF performance outcomes, Hydro Ottawa will focus the subsequent sections of this Schedule on the alignment of this Application with more specific elements of the RRF.

3. CUSTOMER ENGAGEMENT

The OEB's *Handbook for Utility Rate Applications* states the following:

> *"Customer engagement is foundational to the RRF. Enhanced engagement between utilities and their customers provides better alignment between utility plans and customers' needs and expectations...Utilities are expected to demonstrate value for money by delivering genuine benefits to customers and providing services in a manner which is responsive to customer preferences. Customer engagement is expected to inform the development of utility plans, and utilities are expected to demonstrate in their proposals how customer expectations have been integrated into their plans, including the trade-offs between outcomes and costs."*[6]

Providing customers with value for money and facilitating a customer experience that is driven by choice are cornerstones of Hydro Ottawa's business planning. In step with its overall business strategy to put the customer at the centre of everything it does, the utility endeavours to ensure that its capital and operational investment plans are guided and informed by customer needs, preferences, and priorities. In order to identify and learn about customers' expectations, Hydro Ottawa avails itself of numerous tools and interactions to engage customers on an ongoing basis. Moreover, for the purposes of informing the development of the specific plans and proposals set forth in this Application, Hydro Ottawa undertook targeted outreach to customers as well.

[6] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 11.

For more details on the utility's customer engagement activities, and their consistency with RRF expectations for responsiveness to customer priorities and needs, please see Exhibit 1-2-1: Customer Engagement Overview and Exhibit 1-2-2: Customer Engagement on the 2021-2025 Application.

4. RATE-SETTING FRAMEWORK

The OEB has developed and continues to administer a trio of related policies that are intended to facilitate the achievement of the core performance outcomes embedded in the RRF.[7] These policies are rate-setting, planning, and measuring performance. The remainder of this Schedule describes how this Application fulfills the expectations of each of these policies.

4.1. SELECTION OF CUSTOM INCENTIVE RATE-SETTING OPTION

The RRF makes three distinct rate-setting methods available to electricity distributors. The RRFE Report describes them, and their corresponding fitness for the differing circumstances and needs of distributors, as follows: 4th Generation Incentive Rate-setting (suitable for most distributors); Custom Incentive Rate-Setting (suitable for those distributors with large or highly variable capital requirements); and the Annual Incentive Rate-Setting Index (suitable for distributors with limited incremental capital requirements).[8]

In this Application, Hydro Ottawa has opted to avail itself of the Custom IR method. A principal justification for this decision is the sustained need on the horizon for significant levels of capital investment in the utility's distribution system, in order to maintain overall system performance and meet customer preferences – all while safeguarding rates at a reasonable level. This need is the result of several factors, including aging infrastructure, an expanding customer base, continued growth across the City of Ottawa, and the effects of severe weather events. Major capital initiatives that are required over the course of the upcoming rate term include the construction of new distribution stations in growing areas of the city, the connection of

[7] RRFE Report, page 3.
[8] *Ibid.*

thousands of new customers every year, infrastructure upgrades and modifications to enhance reliability and capacity on the grid, replacement of equipment that has reached the end of its useful life, strengthening the grid's ability to withstand severe weather events, support for local infrastructure projects like Ottawa's Light Rail Transit, and renewal of the utility's vehicle fleet. Table 2 below summarizes the projected breakdown of total capital investments during each year of the 2021-2025 period.

Table 2 – AS ORIGINALLY SUBMITTED – 2021-2025 Annual Capital Expenditures ($'000,000s)

Investment Category	2021	2022	2023	2024	2025	Average 2021-2025
System Access	$56.7	$41.0	$37.4	$34.5	$34.0	$40.7
System Renewal	$43.3	$44.0	$40.2	$39.4	$40.5	$41.5
System Service	$31.0	$27.4	$24.3	$25.2	$23.9	$26.4
General Plant	$32.0	$11.7	$7.6	$17.4	$16.9	$17.1
Capital Contributions	$(41.3)	$(25.2)	$(19.9)	$(19.2)	$(19.3)	$(25.0)
TOTAL	**$121.8**	**$98.9**	**$89.6**	**$97.2**	**$96.0**	**$100.7**

Table 2 – UPDATED FOR 2019 ACTUALS – 2021-2025 Annual Capital Expenditures ($'000,000s)

Investment Category	2021	2022	2023	2024	2025	Average 2021-2025
System Access	$56.7	$41.0	$37.4	$34.5	$34.0	$40.7
System Renewal	$43.3	$44.0	$40.2	$39.4	$40.5	$41.5
System Service	$26.7	$28.3	$24.3	$25.2	$23.9	$25.7
General Plant	$32.0	$11.7	$7.6	$17.4	$16.9	$17.1
Capital Contributions	$(39.2)	$(23.5)	$(19.9)	$(19.2)	$(19.3)	$(24.2)
TOTAL	**$119.5**	**$101.5**	**$89.6**	**$97.2**	**$96.0**	**$100.8**

This five-year envelope for capital investment translates into an annual average expenditure requirement of $100.7M. After accounting for 2019 actuals, this figure increases slightly to $100.8M. This figure mirrors (but falls short of) the annual average of capital expenditures budgeted for in Hydro Ottawa's 2016-2020 Custom IR application, which was $107.5M. Of note, this latter figure represents the highest annual average from any multi-year rate term in the utility's history.[9]

The close alignment of the annual averages for capital expenditures from the 2016-2020 and 2021-2025 rate terms is wholly consistent with the direction signalled in Hydro Ottawa's 2016-2020 Custom IR application, which articulated the expectation that a historically high level of annual capital expenditures "will be sustained, if not increased, through the decade from 2020-2030."[10]

While Hydro Ottawa's large, multi-year capital investment needs are one of the main drivers behind the decision to select the Custom IR option, considerations with respect to operational funding were likewise germane. In particular, the requirement to embed productivity gains into the annual rate adjustment mechanism helps to ensure greater convergence between Hydro Ottawa's interests and those of its customers, who wish to see continuous improvement on the utility's part in delivering outcomes in an efficient and cost-effective manner.

Accordingly, Hydro Ottawa maintains that the Custom IR method remains the most suitable rate-setting option for governing the 2021-2025 rate term. The ensuing sub-sections explain in greater detail the specifics of the rate-setting framework that the utility has customized for the purposes of its five-year rate plan.

[9] For additional information on Hydro Ottawa's 2016-2020 capital expenditures, please see UPDATED Exhibit 2-4-1: Capital Expenditure Summary.
[10] Hydro Ottawa Limited, *2016-2020 Custom Incentive Rate-setting Distribution Rate Application*, EB-2015-0004 (April 29, 2015), Exhibit A-2-1, page 10.

4.2. YEAR ONE – STANDARD REBASING

This Application is based on a Custom IR approach for a five-year period, consistent with the OEB's RRF as set out in the *Handbook for Utility Rate Applications*. The first Test Year of the five-year period (2021) is a standard rebasing approach, consistent with the OEB's 4th Generation Incentive Regulation approach.

Hydro Ottawa has developed and submitted a forecast of its base revenue requirement for 2021 in this Application, as well as detailed forecasts of its costs based on its capital and operational plans for 2021.[11] In keeping with the rate adjustment formula used in its 2016-2020 Custom IR rate plan, Hydro Ottawa has assumed the Conference Board of Canada's updated inflation rate of 2.01% for all non-compensation-related costs. The calculated revenue requirement resulting from these projections is detailed in UPDATED Exhibit 6-1-1: Calculation of Revenue Deficiency or Sufficiency.

The forecasted costs in this Application were developed with the benefit of information obtained from several external and internal benchmarking studies (see Exhibit 1-1-12: Benchmarking). These studies helped inform Hydro Ottawa's plans and expenditures. In addition, these plans were developed with the benefit of significant customer engagement including surveys, focus groups, town hall meetings, special studies, and ongoing day-to-day customer interactions. The full extent of Hydro Ottawa's customer engagement is detailed in Exhibit 1-2-1: Customer Engagement Overview and Exhibit 1-2-2: Customer Engagement on the 2021-2025 Application.

4.3. YEARS TWO THROUGH FIVE – RATE FRAMEWORK: CUSTOM PRICE ESCALATION FACTOR

As established by the RRF, under Price Cap Incentive Rate-Setting, rates are adjusted using a formulaic approach in the years following the first year base rates. This formula consists of a two-component Price Cap Index ("PCI"): inflation and productivity. For electricity distributors, the

[11] See UPDATED Exhibit 1-1-9: Business Plan, UPDATED Exhibit 2-4-1: Capital Expenditure Summary, Exhibit 2-4-3: Distribution System Plan, and UPDATED Exhibit 4-1-1: Operations, Maintenance and Administration Summary.

formula includes an industry-specific inflation factor and two factors for productivity. One productivity factor is a fixed value for industry-wide productivity. The other is a stretch factor which is set each year based on the level of efficiency the distributor has achieved, as evaluated by the Pacific Economics Group's ("PEG") econometric model.

Under a Custom IR approach, the annual rate adjustment must be based on a custom index supported by empirical evidence that can be tested. The annual adjustment must include explicit financial incentives for continuous improvement and cost control targets. As noted in the OEB's *Handbook for Utility Rate Applications*, "these incentive elements, including a productivity factor, must be incorporated through a custom index or an explicit revenue reduction over the term of the plan (not built into the cost forecast)."[12]

As a result, Hydro Ottawa is proposing to adopt a **C**ustom **P**rice **E**scalation **F**actor ("CPEF") rate framework for years two through five, which is based on the approach approved by the OEB in the utility's 2016-2020 Custom IR application.[13] This framework is aligned with OEB policy and based on sound ratemaking principles. The CPEF incorporates the OEB's key principles and expectations of a Custom IR application, and thus has been structured in a way that:

- Includes productivity gains as part of the rate adjustment mechanism;
- Constrains operational funding increases going forward at approximately the rate of inflation; and
- Acknowledges the funding requirements to address Hydro Ottawa's significant, multi-year investment needs over the 2021-2025 period.

The OEB has provided specific guidance with respect to Custom IR applications and expectations for the annual rate adjustment index. The *Handbook for Utility Rate Applications* states the following:

[12] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 25.
[13] Ontario Energy Board, *Decision and Order*, EB-2015-0004 (December 22, 2015), page 1.

> *"**Custom IR:** Under this methodology, rates are set for five years considering a five-year forecast of the utility's costs and sales volumes. This method is intended to be customized to fit the specific utility's circumstances, but expected productivity gains will be explicitly included in the rate adjustment mechanism. Utilities adopting this approach will need to demonstrate a high level of competence related to planning and operations.*
>
> ***Index for the Annual Rate Adjustment:** The annual rate adjustment must be based on a custom index supported by empirical evidence (using third party and/or internal resources) that can be tested. Custom IR is not a multi-year cost of service; explicit financial incentives for continuous improvement and cost control targets must be included in the application. These incentive elements, including a productivity factor, must be incorporated through a custom index or an explicit revenue reduction over the term of the plan (not built into the cost forecast).*
>
> *The index must be informed by an analysis of the trade-offs between capital and operating costs, which may be presented through a five-year forecast of operating and capital costs and volumes. If a five-year forecast is provided, it is to be used to inform the derivation of the custom index, not solely to set rates on the basis of multi-year cost of service. An application containing a proposed custom index which lacks the required supporting empirical information may be considered to be incomplete and not processed until that information is provided.*
>
> *It is insufficient to simply adopt the stretch factor that the OEB has established for electricity distribution IRM applications. Given a utility's ability to customize the approach to rate-setting to meet its specific circumstances, the OEB would generally expect the custom index to be higher, and certainly no lower than the OEB-approved X factor for Price Cap IR (productivity and stretch factors) that is used for electricity distributors."*[14]

The CPEF adheres to this guidance and consists of three main components: a custom inflation factor, a two-component productivity factor and a growth factor. Supplementary evidence is supplied in support of each factor below. As previously noted, year one is a traditional rebasing year, with costs allocated and rates set on the basis of a forecast Test Year. Distribution rates in years two through five are adjusted annually by the CPEF, as follows:

[14] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13,2016), pages 25-26.

CPEF = I - X + G

where

"I" is the inflation factor (see section 4.3.1 below)

"X" is the two-component productivity factor (see section 4.3.2 below)

"G" is the growth factor (see section 4.3.3 below)

As referenced above, this approach is consistent with the OEB's RRF guidance on Custom IR applications. This formulaic approach with customization reflects Hydro Ottawa's significantly large, multi-year investments within the 2021-2025 period, while embedding productivity savings for the customer.

4.3.1. "I" Factor: Inflation Factor

In its 2013 report, *Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors*, the OEB established a methodology for determining its annual inflation factor for use in incentive-based rate adjustment mechanisms.[15] The OEB's two-factor inflation factor is based on the weighted sum of the following sub-indices:

- Non-Labour: 70% of the annual percentage change in Canada's Gross Domestic Product Implicit Price Index ("GDP-IPI") Final Domestic Demand ("FDD"), as reported by Statistics Canada; and
- Labour: 30% of the annual percentage in the Average Weekly Earnings ("AWE") for workers in Ontario, as reported by Statistics Canada.

The OEB's inflation factor can be calculated as follows:

[15] Ontario Energy Board, *Report of the Board - Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors*, EB-2010-0379 (November 21, 2013), pages 5-11.

Inflation Factor = 0.70 × ∆GDP-IPI (FDD) + 0.30 × ∆AWE (Ontario)

where

GDP-IPI (FDD) is the annual Implicit Price Index for (national) Gross Domestic Product.

AWE (Ontario) is the annual Average Weekly Earnings for Ontario, all businesses except unclassified, including overtime.

The OEB's inflation factor calculation uses component weights of 30% labour and 70% non-labour. Hydro Ottawa proposes to use an inflation factor consistent with the OEB's approach. However, the utility proposes to use a weighting of the two sub-indices that is more suitable for Hydro Ottawa's historical labour/non-labour split. Hydro Ottawa maintains that a weighting that is more closely aligned with its own labour/non-labour split is more appropriate than the OEB's 70/30 split, as it represents the utility's actual conditions.

After an analysis of both historical and forecast operations, maintenance and administration ("OM&A") expenditure data over the 2016-2020 period, Hydro Ottawa has determined that a unique labour/non-labour weighting of 55.5% labour and 44.5% non-labour is appropriate. Table 3 below provides an overview of Hydro Ottawa's labour and non-labour OM&A components, as a percentage of total OM&A.

Table 3 – Hydro Ottawa's Labour/Non-Labour Split (2016-2020)

	2016	2017	2018	2019	2020	5-Year Total
Labour (55.5% weight)	$72,126,923	$71,938,869	$75,204,872	$75,788,503	$77,366,800	$372,425,968
Non-Labour (44.5% weight)	$54,929,916	$57,241,300	$59,383,744	$61,471,941	$65,067,573	$298,094,474
Labour as a % of Gross OM&A	56.77%	55.69%	55.88%	55.22%	54.32%	55.5% (average)

Hydro Ottawa thus proposes to calculate its inflation factor as follows:

Inflation Factor = 0.445 × ∆GDP-IPI (FDD) + 0.555 × ∆AWE (Ontario)

where

GDP-IPI (FDD) *is the annual Implicit Price Index for (national) Gross Domestic Product.*

AWE (Ontario) *is the annual Average Weekly Earnings for Ontario, all businesses except unclassified, including overtime.*

Hydro Ottawa proposes to use a static inflation factor for the duration of this Application's term, and therefore proposes to derive its inflation factor using an average based on historical and forecast data over the 2017-2025 period. Annual GDP-IPI data and AWE historical and projection data for the 2017-2025 period from the Conference Board of Canada is presented in Tables 4 and 5 below, alongside Hydro Ottawa's adjusted labour/non-labour weighting.[16]

Table 4 – 2017-2025 GDP-IPI (FDD) Index

Year	GDP-IPI	Hydro Ottawa Non-Labour Weighting	Adjusted GDP-IPI
2017	2.50%	44.46%	2.78%
2018	1.67%	44.46%	1.86%
2019	1.19%	44.46%	1.32%
2020	2.33%	44.46%	2.59%
2021	2.11%	44.46%	2.34%
2022	2.10%	44.46%	2.33%
2023	2.07%	44.46%	2.30%
2024	2.07%	44.46%	2.30%
2025	2.07%	44.46%	2.30%

Source: Conference Board of Canada

[16] Note that projection data for GDP-IPI and AWE is available up to 2023 only. Consistent with the inflation indices used in Clearspring Energy Advisors' *Econometric Benchmarking Study of Hydro Ottawa's Total Cost and Reliability* (Attachment 1-1-12(A)), the 2023 inflation rate was applied to 2024 and 2025.

Table 5 – 2017-2025 AWE (Ontario) Index

Year	AWE	Hydro Ottawa Labour Weighting	Adjusted AWE
2017	0.82%	55.54%	0.73%
2018	3.40%	55.54%	3.02%
2019	2.61%	55.54%	2.32%
2020	2.77%	55.54%	2.46%
2021	2.75%	55.54%	2.45%
2022	2.72%	55.54%	2.42%
2023	2.71%	55.54%	2.41%
2024	2.71%	55.54%	2.41%
2025	2.71%	55.54%	2.41%

Source: Conference Board of Canada

Table 6 below presents an annual breakdown of Hydro Ottawa's adjusted weightings for both GDP-IPI and AWE over the 2017-2025 period.

Table 6 – Hydro Ottawa's Labour/Non-Labour Split (2017-2025)

Year	GDP-IPI (Non-Labour)	AWE (Labour)	Average
2017	2.78%	0.73%	1.75%
2018	1.86%	3.02%	2.44%
2019	1.32%	2.32%	1.82%
2020	2.59%	2.46%	2.53%
2021	2.34%	2.45%	2.39%
2022	2.33%	2.42%	2.38%
2023	2.30%	2.41%	2.35%
2024	2.30%	2.41%	2.35%
2025	2.30%	2.41%	2.35%
2017-2025 Average	**2.23%**	**2.29%**	**2.26%**

As shown in Table 6 above, applying Hydro Ottawa's specific labour/non-labour weighting factors to the AWE and GDP-IPI indices, and averaging over the 2017-2025 period, yields an inflation factor of 2.26%. Hydro Ottawa does not intend to update the inflation factor over the course of its 2021-2025 rate term.

4.3.2. "X" Factor: Productivity and Stretch Factors

4.3.2.1. Productivity Factor

There are two components to the X factor: an industry Total Factor Productivity ("TFP") component and a stretch factor component. The productivity component is intended to be an estimate of industry TFP growth in Ontario's electricity distribution sector. In its 2013 report, *Productivity and Benchmarking Research in Support of Incentive Rate Setting in Ontario*, PEG defines TFP growth "as the change in total output quantity minus the change in total input quantity."[17] PEG's analysis yielded a TFP growth factor of -0.33%, and ultimately, PEG recommended a zero TFP factor.[18] In turn, the OEB adopted PEG's recommendation.[19]

More recently, the OEB re-affirmed a zero TFP factor in the context of a Custom IR rate filing from Hydro One Networks Inc. ("HONI"). During this proceeding, separate reports submitted by PEG and another independent third-party expert (Power System Engineering ["PSE"]) both recommended a TFP factor of 0.0%. Of note, PSE had updated Ontario industry TFP research to 2015 and concluded that TFP continues to decline. The OEB ultimately accepted a TFP of 0% in its Decision and Order.[20]

Consistent with the RRFE Report[21] and the foregoing OEB rulings, Hydro Ottawa proposes to adopt the OEB's TFP factor of zero in its CPEF.

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[17] Pacific Economics Group, *Productivity and Benchmarking Research in Support of Incentive Rate Setting in Ontario* (November 2013), page 25.
[18] *Ibid*, pages 51-53.
[19] Ontario Energy Board, *Report of the Board - Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors* (November 21, 2013, corrected December 4, 2013), page 17.
[20] Ontario Energy Board, *Decision and Order*, EB-2017-0049 (March 7, 2019).
[21] RRFE Report, page 17.

4.3.2.2. Stretch Factor

The second component to the X factor is the stretch factor, which is intended to reflect the incremental productivity gains that distributors are expected to achieve under Incentive Regulation. The OEB has concluded that stretch factors play an important role in Incentive Regulation and "promote, recognize and reward distributors for efficiency improvements relative to the expected sector productivity trend."[22]

Under the current methodology, stretch factors are determined based on a distributor's assignment in one of five efficiency assessment rankings. Efficiency assessments are determined using a total cost econometric model developed by PEG, which is updated annually. The PEG model renders a comparison of each distributor's "actual" total costs relative to their predicted costs. Distributors are then placed into one of five cohorts and assigned a corresponding stretch factor based on the percentage difference between actual and predicted costs. Stretch factors range from 0.0% to 0.60%, with lower stretch factors indicating higher efficiency. Since 2015, Hydro Ottawa has been placed in Cohort 4 and assigned a stretch factor of 0.45% in accordance with the PEG model's finding that actual costs have been between 10%-25% above predicted costs.

While Hydro Ottawa acknowledges and accepts the value of total cost benchmarking as a measure of productivity and efficiency, as well as the merit of incorporating a productivity factor into its CPEF, the utility is concerned by some of the inherent limitations in the PEG model. These limitations have induced Hydro Ottawa to submit alternative total cost benchmarking analysis as part of this Application. More detailed rationale in support of the utility's approach is outlined in Attachment 1-1-12(E): PEG Benchmarking Forecast.

The total cost benchmarking study included in this Application as Attachment 1-1-12(A) is econometric in nature, similar to the PEG model. The study has been prepared by Clearspring

[22] Ontario Energy Board, *Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors* (November 21, 2013, corrected December 4, 2013), page 19.

Energy Advisors ("Clearspring"). Clearspring's analysis provides an appropriate and empirical basis for setting Hydro Ottawa's stretch factor. As noted in the report, Clearspring's total cost findings for Hydro Ottawa during the Custom IR period demonstrate a total cost benchmarking score of -7.1% below predicted costs, which corresponds to a stretch factor of 0.30%. However, when normalized for two once-in-a-generation expenditures, the value of this factor decreases to 0.15%, with a total cost benchmarking score of -12.5%. This normalization entails the removal of the expenditures and in-service additions for the Facilities Renewal Program ("FRP") and the Cambrian Municipal Transformer Station ("MTS"). These projects are described in Clearspring's report, as follows:

- **Facilities Renewal Program**: The purpose of this program is to (a) consolidate operations and administrative staff; (b) move Hydro Ottawa's operational centers out of high-traffic residential areas to sites with easy access to major highways within the Ottawa area; (c) replace aging buildings; and (d) upgrade operational centers in order to provide better response to customers. Under the program, two parcels of land were purchased, upon which Hydro Ottawa has constructed two regional campuses – namely, the Eastern Operations and Administrative Campus, and the Southern Operations & Warehouse.

  This program is a "once in a generation" modernization and operational efficiency initiative. Most of the capital additions for the FRP occur in 2019. This large investment worsens the total cost benchmarking scores throughout the entire Custom IR period.

- **Cambrian MTS**[23]: This project consists of two key components: (1) a new municipal transformer station to be constructed by Hydro Ottawa; and (2) upgrades to existing transmission facilities, as well as construction of a segment of new transmission line by Hydro One. These facilities are required to accommodate customer load growth and increase supply capacity in the South Nepean area of Ottawa, which has already reached the limits of local transformation capacity.

  The capital additions for the Cambrian MTS project occur in 2021 and 2022. Therefore, this large investment will worsen the total cost benchmarking scores beginning in 2021 and then throughout the Custom IR period.

[23] The previous name for Cambrian MTS was South Nepean MTS. Clearspring's report retains the original nomenclature of South Nepean MTS.

Projects of this nature do not occur on a regular basis. In the last decade, Hydro Ottawa built only two new transformer stations, neither of which required a transmission investment level of the magnitude of Cambrian MTS.[24]

As noted above, when Clearspring analyzed Hydro Ottawa's total costs in the absence of these two projects, the stretch factor dropped to 0.15%:

> "The 2021 to 2025 average forecasted results show that if the FRP investment was excluded the score becomes -9.9%. This is just above the threshold to move the stretch factor recommendation from 0.3% to 0.15%. If both the FRP and the South Nepean MTS investments are excluded the total cost benchmarking score for 2021 to 2025 averages -12.5%. If these two investments were not forecasted, this would have pushed the stretch factor recommendation to 0.15%."[25]

These two projects represent approximately $180M worth of expenditures incurred in a very short time period (2018-2022). Seeing as the FRP is not of a recurring nature, and a new MTS requiring a major transmission upgrade is a rare investment, it is Hydro Ottawa's position that these projects should be excluded for purposes of determining the utility's stretch factor.

4.3.3. "G" Factor: Growth Factor

Hydro Ottawa's CPEF will include a growth factor to account for the increased costs associated with its substantial and steady customer growth. The inclusion of a growth variable in the CPEF is warranted in order to capture the change in distribution revenue that would naturally occur (in the absence of any rate changes) as a result of an increase in the number of customers over the forecast period. The value of the growth factor is determined based upon Hydro Ottawa's historical and forecast growth in customers for the period 2012-2020. As shown in Tables 7 and

[24] The last two MTS projects to go into service were Ellwood MTS in 2012 and Terry Fox MTS in 2014. For more information on these projects, please see Exhibit B, Tab 7, Schedule 1 in the joint application filed by Hydro Ottawa and HONI in EB-2019-0077. This joint application sought Leave to Construct approval for the South Nepean/Cambrian MTS and the corresponding transmission system upgrades and expansion.

[25] Attachment 1-1-12(A): Econometric Benchmarking Study of Hydro Ottawa's Total Cost and Reliability, page 35.

8 below, customer growth in Ottawa has been substantial and consistent over that period, averaging approximately 1.34% on an annual basis.

Table 7 – Hydro Ottawa Customer Count (2012-2020)

Rate Class	2012	2013	2014	2015	2016	2017	2018	2019	2020[26]
Residential	282,187	287,191	291,759	296,036	299,909	303,571	307,053	311,464	315,887
Small Commercial	23,921	23,972	24,149	24,563	24,689	24,888	24,996	25,080	25,250
Commercial	3,415	3,548	3,617	3,310	3,271	3,305	3,260	3,216	3,189
Large User	11	11	11	10	11	13	11	11	11
TOTAL	**309,534**	**314,722**	**319,536**	**323,919**	**327,880**	**331,777**	**335,320**	**339,771**	**344,325**

Table 8 – Hydro Ottawa Customer Count (2012-2020): Total Change, Total Percentage Change, and Compound Annual Growth Rate ("CAGR")

Hydro Ottawa Customer Growth	
Total Change	34,791
% Change	11.24%
CAGR	**1.34%**

According to data from Statistics Canada's 2011 census, the population in the City of Ottawa increased by 8.8% since 2006, which is a faster growth rate than Ontario (5.7%) and Canada as a whole (5.9%).[27] Moreover, the City's *Official Plan* predicts a population growth rate of 16% between 2016 and 2031.[28] With additional customers comes the requirement for associated expenditures to serve those customers.

[26] In this instance, the customer count for 2020 represents a forecast based on historical trends. This forecast was developed internally at Hydro Ottawa and was utilized as an input in the preparation of the supporting evidence for this Schedule prior to the completion of the load forecast which is appended to this Application as UPDATED Attachment 3-1-1(C).
[27] Statistics Canada, *Focus on Geography Series, 2011 Census* (2012). Statistics Canada Catalogue no. 98-310-XWE2011004. Ottawa, Ontario. Analytical products, 2011 Census.
[28] City of Ottawa, *Official Plan: Volume 1* (May 2003), page 2-3.

Hydro Ottawa's load forecast anticipates modest growth in total energy sales and steady growth in customer count over the 2021-2025 period.[29] While a load forecast generally reflects the expected growth in a utility's customer base and energy sales, a growth factor is intended to capture the relationship between the increasing number of customers and the costs to serve them.

Hydro Ottawa's proposed approach with its CPEF is not without precedent in the context of utility regulation in Canada. The use of a growth factor has been previously employed and approved by regulators in Ontario,[30] Québec,[31] Alberta,[32] and British Columbia.[33]

As an expert witness hired by the OEB in HONI's most recent Custom IR proceeding, PEG noted the correlation between customer growth and operating costs as an important factor and recommended that HONI include a customer growth factor in its custom index.[34]

Similarly, in a report prepared for the Régie de l'énergie ("Régie") in Québec, PEG has affirmed that "the number of customers served drives the costs of customer services (e.g. billing and collection) and some distribution costs (e.g. those of metering and connections)...In econometric research on distribution cost, the customers variable typically has the highest estimated cost elasticity amongst the scale variables modelled."[35] For its part, the Régie has previously established that it will apply a scaling factor of 0.75 to Hydro Québec Distribution's ("Hydro Québec") growth factor as part of Hydro Québec's mécanisme de réglementation incitative

[29] See UPDATED Exhibit 3-1-1: Load Forecast.
[30] Ontario Energy Board, *Decision* (in the matter of a rate application filed by Enbridge Gas Distribution), EB-2007-0615.
[31] Régie de l'énergie, *Décision*, D-2017-043 (April 7, 2017). This decision was in the matter of the establishment of a regulatory incentive mechanism to ensure efficiency gains by Hydro-Québec Distribution and Hydro-Québec TransÉnergie.
[32] Alberta Utilities Commission, *Decision*, 20414-D01-2016 (Errata), (2018-2022 Performance-Based Regulation Plans for Alberta Electric and Gas Distribution Utilities).
[33] British Columbia Utilities Commission, *Decision and Orders*, G-138-14 and G-139-14 (Performance Based Ratemaking Plans for 2014 through 2019 for FortisBC Energy Inc. and FortisBC Inc.).
[34] EB-2017-0049: Pacific Economics Group, *IRM Design for Hydro One Networks, Inc.*, (April 13, 2018), page 48.
[35] Pacific Economics Group, *X Factor Calibration Guidelines for Hydro-Québec Distribution* (May 12, 2019), page 7.

("MRI").[36]

In addition, since the mid-1990s, electric utility FortisBC Inc. ("FortisBC") has generally used an Average Customer Growth Factor ("ACGF") in its approach to operations and maintenance ("O&M") escalation.[37] As approved by the British Columbia Utilities Commission ("BCUC") in Order G-139-14 dated September 15, 2014,[38] FortisBC's current rate plan includes a growth factor of 50% of the ratio of the average number of customers ("AC") one year previous to the average number of customers two years previous, expressed as:

$$ACGF = [1 + ((ACt\text{-}1 - ACt\text{-}2) / ACt\text{-}2) \times P\%)]$$

where

ACT-1 = customer count at time minus 1

ACT-2 = customer count at time minus 2

P = percentage/scaling factor

Hydro Ottawa proposes to employ a scaling factor of 0.35 to determine its growth factor, consistent with the approved approaches for FortisBC and Hydro Québec. The selection of this scaling factor was made by considering the scaling factors used in other jurisdictions and taking into account the substantial growth in population and customers in the Ottawa area.

Using a scaling factor of 0.35 would render a growth factor in the range of 0.39% and 0.43%, depending on the specific historical years chosen for analysis. For example, using the percentage change in customer count between 2017-2018 and plugging it into the ACGF formula described above would result in a growth rate of 0.39%, as follows:

[36] "Mécanisme de réglementation incitative" roughly translates into English as "incentive regulation mechanism."
[37] FortisBC Inc.'s 1996-2004, 2005-2006, 2007-2011 and 2014-2019 rate plans were approved performance-based rate plans that employed formula based O&M escalation factors based on an I-X index multiplied by the average percentage growth of average number of customers.
[38] G-139-14: British Columbia Utilities Commission, *Decision and Order*, *In the Matter of FortisBC Inc. Multi-Year Performance Based Ratemaking Plan for 2014 through 2018 Decision*, (September 15, 2014), page 116.

$$ACGF = [1 + ((333,621 - 329,926) / 329,926) *0.35]$$

$$ACGF = 0.392\%$$

Similarly, use of the percentage change in customer count between 2016-2017 would yield a growth rate of 0.43%:

$$ACGF = [1 + ((329,926 - 325,913) / 325,913) * 0.35]$$

$$ACGF = 0.431\%$$

Unlike FortisBC, which updates its growth factor annually, Hydro Ottawa does not intend to update the growth factor throughout the term of this Application.

Based on the foregoing discussion, and in particular, Hydro Ottawa's consistent customer growth rate since 2012, Hydro Ottawa proposes to employ a conservative growth rate near the lower end of the calculated range of 0.40% in its CPEF. This growth rate would remain unchanged over the course of the 2021-2025 period.

4.3.4. Summary – Custom Price Escalation Factor

Hydro Ottawa proposes to apply a CPEF to its OM&A over the term of this Application. Similar to the escalation formula approved by the OEB in the utility's last Custom IR application,[39] Hydro Ottawa's CPEF consists of three variables:

[39] Hydro Ottawa Limited, *2016-2020 Custom Incentive Rate-Setting Distribution Rate Application*, EB-2015-0004 (April 29, 2015).

CPEF = I - X + G

where

"I" is Hydro Ottawa's custom Inflation Factor (2.26%)

"X" is a two-component productivity factor consisting of the OEB's Total Factor Productivity + Hydro Ottawa's custom Stretch Factor (0.0% +0.15%)

"G" is Hydro Ottawa's customer Growth Factor (0.40%)

= 2.26% - 0.15% + 0.40%

= 2.51%

The result of Hydro Ottawa's CPEF is an escalation of 2.51% per year for years two through five of the 2021-2025 Custom IR term. Year one of the Application term is a traditional rebasing year, with rates set on the basis of a forecast Test Year of $93.9M. Thereafter, each year will be adjusted by the CPEF (2.51%), as shown in Table 9.

Table 9 – 2021 to 2025 Annual OM&A Expenditures ($'000s)

Year	OM&A	Previous Year	Variance	Variance/ CPEF
2021	$93,923	N/A	N/A	N/A
2022	$96,280	$93,923	$2,357	2.51%
2023	$98,697	$96,280	$2,417	2.51%
2024	$101,174	$98,697	$2,477	2.51%
2025	$103,714	$101,174	$2,539	2.51%

This formulaic adjustment is consistent with the OEB's policy framework under the RRF, where rates charged to customers are de-linked from the costs of operating the utility. The CPEF conforms to OEB guidance for the Index for Annual Rate Adjustment under the Custom IR method (as laid out in the *Handbook for Utility Rate Applications*), as it accomplishes all of the

following:

- It is based on a custom index supported by empirical evidence that can be tested;
- Explicit financial incentives for continuous improvement and cost control targets are included in this Application and incorporated through the CPEF;
- The CPEF does not adopt the stretch factor that the OEB has established for electricity incentive regulation mechanism applications;
- The CPEF is higher than the OEB approved index (I-X) used for electricity distributors under Price Cap IR; and
- The application of the CPEF resulted in a reduction of OM&A spending over the 2021-2025 period of $13.1M. These savings will be achieved, in part, through productivity gains as described in Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives.

4.4. EARNINGS SHARING MECHANISM

The OEB has clarified that electricity distributors which are filing Custom IR applications are expected to propose one or more mechanisms to protect customers from excessive utility earnings.[40] In this Application, Hydro Ottawa proposes to include two such mechanisms.

The first is an earnings sharing mechanism ("ESM"). ESMs permit the sharing of utility earnings with customers when earnings rise above or fall below a certain threshold. Under an ESM, earnings may be passed along to customers in the form of rate reductions or rate offsets.

Hydro Ottawa is proposing an asymmetrical ESM such that the utility would only share earnings that exceed a basis point threshold above the utility's return on equity ("ROE"), with no corresponding adjustment if its earnings fall below the basis point threshold.

The proposed ESM formula is as follows:

[40] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 27.

Table 10 – Proposed ESM Formula

#	Threshold	Treatment
1	Under earning	Borne entirely by shareholder
2	0-150 basis points	Fully retained by shareholder
3	Above 150 basis points	50:50 sharing of ratepayer/shareholder

Additional detail on the proposed ESM is set forth in Exhibit 9-2-1: New Deferral and Variance Accounts.

4.5. OFF-RAMP(S)

The second mechanism which Hydro Ottawa proposes to include as a means of protecting customers against excessive utility earnings is an off-ramp. Similar to its 2016-2020 Custom IR application, this Application proposes to apply the OEB's existing policy with respect to off-ramps, wherein a regulatory review may be initiated in the event that an electricity distributor performs outside of an annual ROE dead band of plus or minus 300 basis points.

4.6. Z FACTOR(S)

In its *Handbook for Utility Rate Applications*, the OEB affirmed its policy that "[a]n acceptable adjustment during a Custom IR term is a Z factor mechanism for cost recovery of unforeseen events."[41] In step with this guideline, Hydro Ottawa intends to reserve its right over the course of the 2021-2025 rate term to file a Z factor application in order to recover costs resulting from unforeseen events, decisions, or activities, the results of which cannot be reasonably anticipated or quantified at this juncture and where the costs exceed Hydro Ottawa's materiality threshold. Examples include unforeseen weather events or changes to laws or regulations which would require significant investment to implement.

Please see Exhibit 9-2-1: New Deferral and Variance Accounts for additional information on Z factors.

[41] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 27.

4.7. CAPITAL VARIANCE ACCOUNT

In this Application, Hydro Ottawa proposes to sustain the use of a variance account wherein it will track, on an annual basis, variances in the cumulative revenue requirement arising from variances in the forecasts for the four key categories of capital spending: System Access, System Service and System Renewal, and General Plant.[42] The creation and use of such a variance account was sanctioned as part of the Approved Settlement Agreement governing Hydro Ottawa's 2016-2020 rates. The utility believes that the administration of this capital variance account on an ongoing basis is an effective means of ensuring transparency and accountability in the planning, execution, and reporting of annual capital expenditures. Accordingly, it is proposed to remain in effect for the 2021-2025 period, and to retain the general design of the account that has been utilized during the 2016-2020 rate term, namely:

- Variances will be calculated by reference to the current forecast for each of the four categories in each year;
- Variances and associated revenue requirement impacts will be calculated and tracked on an annual basis;
- In each year of the 2021-2025 Custom IR plan, if Hydro Ottawa adds to rate base less than its forecast cumulative amount in any of the four categories, the corresponding reduction in revenue requirement will be credited to the variance account and any cumulative reduction in revenue requirement in any of the four categories will be disposed of at the end of the term of the Custom IR plan;
- Each year, Hydro Ottawa will estimate the impact of the revenue requirement resulting from the variance in its cumulative capital additions for each of the four capital additions budgets;
- Disposition of any underspending in the four categories, on a cumulative basis, will be at the conclusion of the five-year Custom IR term; and

[42] For its 2016-2020 Custom IR rate plan, Hydro Ottawa was granted approval to merge System Renewal and System Service into one category for purposes of this variance account and annual reporting. This approach reflected Hydro Ottawa's standard operating practice to shift funds between the two categories, as warranted by customer and operational requirements. Hydro Ottawa is planning to maintain this approach during the 2021-2025 rate term, with some modifications, as explained in further detail below.

- If, at the end of the five-year Custom IR plan, there has been overspending in any category, there will be no charge to the customer.

One important modification to the capital variance account that Hydro Ottawa is proposing to introduce for 2021-2025 is the use of a separate sub-account for System Access capital expenditures. The rationale for this proposal is that capital spending in this category is driven by customer requests and is therefore difficult to predict, as the level of required expenditure is outside of Hydro Ottawa's control.

By proposing the calculation of the annual variance on a cumulative basis, Hydro Ottawa's intent is to ensure that if projects are delayed, but are completed as planned at a later time, then the reduction to revenue requirement will only reflect the period of delay and will cease when the projects have been added to rate base.

For additional information on the capital variance account, please see Exhibit 9-2-1: New Deferral and Variance Accounts.

4.8. CCRA PAYMENTS DEFERRAL ACCOUNT

Similar to the Capital Variance Account discussed above, Hydro Ottawa proposes to continue the use of a variance account to record the revenue requirement impact of Connection Cost Recovery Agreement ("CCRA") payments made to HONI commencing in the year in which the facilities to which each CCRA payment relates provides services to Hydro Ottawa customers. In step with the administration of this account over the 2016-2020 rate term, for the 2021-2025 Custom IR plan Hydro Ottawa intends to record depreciation, interest, return, and payment in lieu of taxes components of revenue requirement impact as CCRA-related assets are put into service. The balance will be disposed as part of the Group 2 Accounts and according to the OEB's direction regarding the disposition of Group 2 Accounts.

It is Hydro Ottawa's intent to utilize this account for purposes of new CCRA payments and for true-ups.

For additional information, please see Exhibit 9-2-1: New Deferral and Variance Accounts.

5. PERFORMANCE MEASUREMENT

As described by the OEB, the RRF is fundamentally a "comprehensive performance-based approach to regulation that promotes the achievement of performance outcomes that will benefit existing and future customers."[43] The RRF's four categories of performance outcomes – Customer Focus, Operational Effectiveness, Public Policy Responsiveness, and Financial Performance – serve as the lodestar for the framework and the focal point towards which the other core components gravitate and culminate. Accordingly, another key component in the OEB's basket of RRF implementation policies is measuring utilities' performance and setting expectations for continuous improvement in the delivery of services and benefits to customers.

This Application includes several features that comport with the RRF's emphasis on performance measurement, monitoring, and reporting.

5.1. CUSTOM PERFORMANCE SCORECARD

As detailed above, Hydro Ottawa embedded a robust framework for performance measurement into its 2016-2020 rate plan. This framework represented a blend of OEB performance measures that were – and continue to be – standardized in their application to all rate-regulated distributors (i.e. through the Electricity Utility Scorecard), along with a series of unique KPIs and reporting measures that were customized in their application to Hydro Ottawa. Pursuant to the RRFE Report and the Approved Settlement Agreement governing the utility's 2016-2020 rate term, Hydro Ottawa committed to an annual cycle of reporting on these KPIs, as well as on capital expenditures in each of the four principal categories of spending (System Access, System Renewal and System Service, and General Plant).

[43] RRFE Report, page 55.

In 2016, the OEB formally clarified its expectation that the annual Electricity Utility Scorecard cannot constitute, on its own, an electricity distributor's performance measurement framework. The *Handbook for Utility Rate Applications* confirmed that, while the OEB had already established a standardized scorecard for all distributors, "additional performance metrics should also be proposed so that expected outcomes can be monitored."[44]

For the 2021-2025 rate period, Hydro Ottawa is therefore proposing an extension and expansion of its previous framework for performance measurement and reporting. This subsequent iteration of the framework will build upon the success of the preceding one and maintain the approach of combining standard OEB performance measures with ones that are customized for Hydro Ottawa's unique use. What's more, the framework will incorporate customized enhancements that seek to implement lessons learned and findings from the prior rate plan, to strengthen the linkages between customer priorities and Hydro Ottawa's programs, and to incorporate key results from the benchmarking performed by the utility to compare its performance against that of its peers. Through this framework and Hydro Ottawa's use of a Custom Performance Scorecard, the OEB, customers, and other stakeholders will be equipped with quantitative tools with which to effectively measure the utility's performance in achieving customer-focused outcomes.

For a more detailed description of the proposed performance measurement framework, and the accompanying reporting plan, please see Exhibit 1-1-11: Proposed Annual Reporting - 2021-2025.

5.2. BENCHMARKING

A key tool in the RRF performance measurement toolkit is benchmarking. In its original RRFE Report, the OEB found that "[e]xpanded use of benchmarking will be necessary to support the Board's renewed regulatory framework policies."[45] This finding is affirmed in the *Handbook for*

[44] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 26.
[45] RRFE Report, page 59.

Utility Rate Applications, which conveys the OEB's expectation for utilities "to provide benchmarking analysis which supports their proposed plans and programs and demonstrates continuous improvement."[46]

This Application includes several pieces of benchmarking evidence, which are intended to serve multiple purposes. First and foremost, the inclusion of benchmarking information will assist the OEB in evaluating Hydro Ottawa's patterns of performance and in assessing the proposals set forth in the utility's capital and operational plans. Second, the benchmarking that has either been conducted or commissioned by Hydro Ottawa has helped inform the establishment and incorporation of specific outcomes into the performance measurement framework for the 2021-2025 rate period. It has also influenced the development of the Custom Price Escalation Factor, which is a defining feature of the Custom IR rate-setting framework underpinning this Application (see section 4.3 in this Schedule). Third, the use of such studies and analyses is directed at supporting the achievement of the utility's own corporate strategic objective of Organizational Effectiveness, which is interpreted as the pursuit of performance excellence through the cultivation of a culture of innovation and continuous improvement. Together, these functions will help ensure that Hydro Ottawa remains accountable to the OEB, its customers, and other stakeholders with respect to providing value for money and cost-effective delivery of outcomes.

Consistent with OEB requirements, the benchmarking evidence appended to this Application takes two forms – internal and external. The internal benchmarking primarily relies upon metrics utilized in the annual Electricity Utility Scorecard, the OEB's annual *Yearbook of Electricity Distributors*, and annual PEG Benchmarking Updates to assess Hydro Ottawa's performance and continuous improvement over time. The external benchmarking consists of analysis conducted by Hydro Ottawa, in which the utility's performance is juxtaposed against that of a select subset of the electricity distributor community in Ontario. It also consists of a series of reports commissioned from third-parties, for the purpose of analyzing the utility's performance in

[46] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 18.

a range of categories and measures relative to a comparator group of utilities located either in Ontario, Canada, and/or the United States. These reports are as follows:

- "Econometric Benchmarking Study of Hydro Ottawa's Total Cost and Reliability" – Clearspring Energy Advisors
- "Unit Costs Benchmarking Study" – UMS Group
- "IT Budget Assessment Benchmark" – Gartner Consulting
- "2019 Market Benchmarking" – Mercer Canada

These benchmarking analyses have yielded important insights into Hydro Ottawa's performance and efficiency over the last several years, and into the costs of key programs relative to the utility's peers. In varying measures, the results from these studies have been reflected in different aspects of this Application, whether serving to validate certain proposals and plans or prompting modifications to others, such that the ongoing achievement of efficiencies can be ensured over the course of the 2021-2025 rate period.

For further details, please see Exhibit 1-1-12: Benchmarking.

5.3. PRODUCTIVITY & CONTINUOUS IMPROVEMENT

Productivity and continuous improvement feature prominently in the architecture of the OEB's performance-based approach to utility regulation. The *Handbook for Utility Rate Applications*, for example, states that "a key objective of incentive regulation is to drive productivity improvements within the utilities."[47] Moreover, these themes are embedded in the OEB's description of the second performance outcome category underpinning the RRF, Operational Effectiveness: "continuous improvement in productivity and cost performance is achieved; and utilities deliver on system reliability and quality objectives."[48] What's more, the various rate-setting methods that are made available under the RRF apply a productivity factor to

[47] Ontario Energy Board, *Handbook for Utility Rate Applications*, page 27.
[48] RRFE Report, page 2.

electricity distributors which is derived from industry productivity trends determined by the OEB. These productivity factors are entrenched in the rate adjustment mechanisms governing utility proposals and reflect the OEB's expectation that standard business practice for distributors will involve the achievement of incremental productivity gains.

Responsibly controlling costs and focusing on cost-effective delivery of outcomes that matter to customers remain core priorities for Hydro Ottawa. Amidst the unique confluence of demands, pressures, and constraints on operations, the utility is placing increased emphasis on incorporating productivity and continuous improvement gains, so as to offset increasing expenditures and boost organizational capacity. Hydro Ottawa is therefore committed to ensuring that productivity and continuous improvement serve as hallmarks of its 2021-2025 rate plan.

A retrospective glance at the outcomes and efficiencies derived from productivity initiatives during the preceding five-year rate period demonstrates that there is a firm foundation upon which to build. During the 2016-2020 period, Hydro Ottawa successfully executed a wide spectrum of initiatives which resulted in tangible savings to customers – and at no expense to service quality or system reliability.

Hydro Ottawa is set to continue strengthening its culture of continuous improvement over the course of its next five-year rate term – whether through harnessing the potential of new technologies and solutions to better serve customers, elevating standards of business performance and excellence, or rationalizing and re-purposing resources.

Of note, there are particular controls that Hydro Ottawa has adopted to provide the OEB, customers, and other stakeholders with robust assurance that productivity, cost control, and continuous improvement objectives have been firmly integrated into the utility's business planning process, and the resultant capital and operational plans, for the 2021-2025 rate period. Foremost among these is the design of the Custom IR rate-setting framework that serves as the

basis of this Application. As discussed above, the Custom Price Escalation Factor will embed productivity savings for customers by capping any increases to operational funding at approximately the rate of inflation. Similarly, in preparing their plans and budgets for the five-year rate term, each administrative division within the utility was mandated to demonstrate productivity savings in a quantitative and/or qualitative fashion and to identify initiatives dedicated to continuous improvement.[49] Moreover, Hydro Ottawa will continue to administer a performance management framework that ensures accountability in the monitoring and reporting of corporate productivity against a defined set of targets and metrics.

Along with other measures, the aforementioned internal controls can provide confidence that Hydro Ottawa is well-positioned to continue strengthening its culture of continuous improvement and producing significant savings for customers over the course of its next rate period.

A more detailed examination of Hydro Ottawa's productivity record and culture is included in Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives. This examination is both retrospective and prospective in nature – i.e. surveying the productivity accomplishments of the 2016-2020 rate period as well as identifying the productivity efforts that are planned for 2021-2025.

6. DISTRIBUTION SYSTEM PLANNING

Alongside the availability of various rate-setting options and expectations for performance measurement, the third and final policy that the OEB has adopted to help facilitate achievement of RRF performance outcomes is the requirement for utilities to engage in long-term planning. The RRFE Report affirms that "[a]n integrated approach to planning will provide a foundation for the setting of distribution rates and lead to optimized investments that support the achievement

[49] Please see Attachment 1-1-9(A): Corporate Memorandum - 2020-2025 Priorities and Budget Guidelines. This memorandum was issued by Hydro Ottawa's Chief Financial Officer to members of the executive team in January 2019, regarding the preparation of 2020-2025 priorities and budgets.

of the outcomes identified by the Board."[50] Through the RRF, the OEB has established a firm expectation for distributors to file five-year capital plans to support their rate applications.

In step with RRF requirements, Hydro Ottawa has formulated a consolidated Distribution System Plan ("DSP"), which provides a detailed and comprehensive view of the utility's investment plans and supporting information for the 2021-2025 period. The DSP is a core deliverable emerging from multiple internal and external planning processes related to capital investment, asset management, regional planning, customer engagement, and business strategy. Hydro Ottawa's DSP details the planning process used to identify the risks and opportunities in the systems of assets and translate them into an expenditure plan. In addition, the DSP outlines how capital investments will be prioritized, paced, and optimized, while minimizing rate impacts for customers and facilitating continuous improvement and productivity. The DSP serves as a continuation of Hydro Ottawa's 2016-2020 plan, which focused on the enhancement of system capacity to keep pace with growth and shifts in loads within the service territory, and on the renewal of aged and aging infrastructure at risk of failure.

In preparing the DSP, Hydro Ottawa was guided by the needs and preferences expressed by its customers: (i) keeping distribution rates low; (ii) maintaining reliability; and (iii) investing in new technology. Consultations with customers revealed strong support for making proactive investments in aging infrastructure and grid modernization, with the understanding that this may lead to near-term costs but will result in future savings. What's more, customers confirmed that they place considerable value on accelerated restoration times following extreme weather events and on a reduction in the number and frequency of outages.

The DSP represents the minimum level of investment needed to achieve a balance between pressures on the distribution system and the top priorities of customers – all while avoiding the accumulation of risk and declines in performance over the long-term.

[50] RRFE Report, page 31.

To view the DSP in full, please see Exhibit 2-4-3.

UPDATED AUDITED FINANCIAL STATEMENTS

Appended to this Schedule are the following copies of audited financial statements for Hydro Ottawa:

- Attachment 1-3-1(A): 2017 Audited Financial Statements[1]
- Attachment 1-3-1(B): 2018 Audited Financial Statements
- Attachment 1-3-1(C): 2019 Audited Financial Statements

[1] This Attachment includes 2016 comparatives.

Hydro Ottawa Limited

Financial Statements

December 31, 2019

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Report of Management

Management is responsible for the integrity of the financial data reported by Hydro Ottawa Limited ['the Company']. Fulfilling this responsibility requires the preparation and presentation of financial statements and other data using management's best judgment, estimates and International Financial Reporting Standards as issued by the International Accounting Standards Board.

Management maintains appropriate systems of internal control and corporate-wide policies and procedures, which provide reasonable assurance that the Company's assets are safeguarded and that financial records are relevant and reliable.

The Board of Directors of the Company, with the advice of the Audit Committee of Hydro Ottawa Holding Inc., ensures that management fulfills its responsibility for financial reporting and internal control. At regular meetings, the Audit Committee, including the Chair of the Board of Directors of the Company, reviews internal controls and financial reporting matters with management for Hydro Ottawa Holding Inc. and its subsidiaries. The Chair of the Board of Directors of the Company, as well as the Chief Executive Officer and the Chief Financial Officer, advise the Board of Directors of the Company of any matters of concern raised by the Audit Committee in reviewing the financial affairs of the Company.

On behalf of Management,

Bryce Conrad
President and Chief Executive Officer

Geoff Simpson
Chief Financial Officer

KPMG LLP
150 Elgin Street, Suite 1800
Ottawa ON K2P 2P8
Canada
Telephone 613-212-5764
Fax 613-212-2896

INDEPENDENT AUDITORS' REPORT

To the Shareholder of Hydro Ottawa Limited

Opinion

We have audited the financial statements of Hydro Ottawa Limited (the "Entity"), which comprise:

- the balance sheet as at December 31, 2019
- the statement of income for the year then ended
- the statement of comprehensive income for the year then ended
- the statement of changes in equity for the year then ended
- the statement of cash flows for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies

(Hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements, present fairly, in all material respects, the financial position of the Entity as at December 31, 2019, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS).

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the **"*Auditors' Responsibilities for the Audit of the Financial Statements*"** section of our auditors' report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with International Financial Reporting Standards (IFRS), and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

  The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

Ottawa, Canada

April 16, 2020

Hydro Ottawa Limited

Statement of Income
Year ended December 31, 2019
[in thousands of Canadian dollars]

	2019 $	2018 $
Revenue and other income		
Power recovery revenue [Note 18]	**904,030**	857,383
Distribution revenue [Note 18]	**184,215**	181,050
Conservation and demand management income	**13,018**	24,865
Other revenue [Note 18]	**25,992**	22,112
	1,127,255	1,085,410
Expenses		
Purchased power	**910,152**	864,442
Operating costs [Note 19]	**111,590**	115,768
Depreciation [Notes 7 and 9]	**45,669**	40,148
Amortization [Note 8]	**6,835**	9,508
	1,074,246	1,029,866
Income before the undernoted items	**53,009**	55,544
Financing costs [Note 20]	**22,203**	19,759
Income before income taxes	**30,806**	35,785
Income tax expense [Note 21]	**14,113**	13,318
Net income	**16,693**	22,467
Net movements in regulatory balances, net of tax [Note 6]	**21,007**	14,692
Net income after net movements in regulatory balances	**37,700**	37,159

The accompanying notes are an integral part of these financial statements

Hydro Ottawa Limited

Statement of Comprehensive Income
Year ended December 31, 2019
[in thousands of Canadian dollars]

	2019	2018
	$	$
Net income after net movements in regulatory balances	**37,700**	37,159
Other comprehensive income		
Items that will not be subsequently reclassified to net income		
Actuarial (loss) gain on post-employments benefits, net of tax	**(973)**	674
Net movement in regulatory balances related to other comprehensive income, net of tax	**973**	(674)
Total comprehensive income	**37,700**	37,159

The accompanying notes are an integral part of these financial statements

Hydro Ottawa Limited

Balance Sheet
As at December 31, 2019
[in thousands of Canadian dollars]

	2019	2018
	$	$
Assets		
Current assets		
Accounts receivable [Note 5]	**179,690**	162,814
Income taxes receivable	**1,893**	-
Prepaid expenses	**5,665**	3,928
	187,248	166,742
Non-current assets		
Property, plant and equipment [Note 7]	**1,182,649**	1,112,259
Intangible assets [Note 8]	**71,722**	66,174
Investment properties [Note 9]	**2,259**	2,338
Total assets	**1,443,878**	1,347,513
Regulatory balances [Note 6]	**58,669**	34,667
Total assets and regulatory balances	**1,502,547**	1,382,180
Liabilities and shareholder's equity		
Current liabilities		
Bank indebtedness [Note 10]	**26,323**	27,673
Accounts payable and accrued liabilities [Note 11]	**155,068**	147,854
Income taxes payable	**-**	842
Advances from parent [Note 10]	**-**	47,000
	181,391	223,369
Non-current liabilities		
Deferred revenue [Note 12]	**142,187**	115,769
Employee future benefits [Note 13(b)]	**14,404**	12,367
Customer deposits	**26,888**	26,503
Notes payable [Note 14]	**697,185**	597,185
Deferred income tax liability [Note 21]	**38,059**	25,806
Other liabilities	**401**	571
Total liabilities	**1,100,515**	1,001,570
Shareholder's equity		
Share capital [Note 16]	**167,081**	167,081
Retained earnings	**213,237**	193,837
Total liabilities and shareholder's equity	**1,480,833**	1,362,488
Regulatory balances [Note 6]	**21,714**	19,692
Total liabilities, shareholder's equity and regulatory balances	**1,502,547**	1,382,180

Contingent liabilities, commitments and subsequent event [Notes 23, 24 and 27]

On behalf of the Board:

Director

Director

The accompanying notes are an integral part of these financial statements

Hydro Ottawa Limited

Statement of Changes in Equity
Year ended December 31, 2019
[in thousands of Canadian dollars]

	Share capital $	Accumulated other comprehensive income $	Retained earnings $	Total $
Balance at December 31, 2017	167,081	-	168,578	335,659
Net income after net movements in regulatory balances	-	-	37,159	37,159
Dividends [Note 16]	-	-	(11,900)	(11,900)
Balance at December 31, 2018	167,081	-	193,837	360,918
Net income after net movements in regulatory balances	-	-	37,700	37,700
Dividends [Note 16]	-	-	(18,300)	(18,300)
Balance at December 31, 2019	**167,081**	**-**	**213,237**	**380,318**

The accompanying notes are an integral part of these financial statements

Hydro Ottawa Limited

Statement of Cash Flows
Year ended December 31, 2019
[in thousands of Canadian dollars]

	2019	2018
	$	$
Net inflow (outflow) of cash related to the following activities:		
Operating		
Net income after net movements in regulatory balances	**37,700**	37,159
Adjustments for:		
Depreciation	**45,669**	40,148
Amortization	**6,835**	9,508
Loss (gain) on disposal of capital assets [Notes 7 and 8]	**35**	(256)
Amortization of deferred revenue [Note 18]	**(3,767)**	(2,950)
Employee future benefits	**515**	87
Financing costs	**22,203**	19,759
Income tax expense	**14,113**	13,318
Other	**(236)**	(105)
Capital contributions from customers	**16,540**	12,428
Capital contributions from developers	**13,645**	10,908
Net change in non-cash working capital and other operating balances [Note 22]	**(3,823)**	880
Change in customer deposits	**(773)**	13,751
Financing costs paid	**(24,790)**	(21,823)
Income tax refunded	**1,203**	142
Income tax paid	**(5,012)**	(4,000)
Net movements in regulatory balances	**(21,007)**	(14,692)
	99,050	114,262
Investing		
Acquisition of property, plant and equipment	**(142,376)**	(191,959)
Acquisition of intangible assets	**(7,584)**	(3,393)
Proceeds from disposal of property, plant and equipment, net of disposition costs	**17,560**	573
	(132,400)	(194,779)
Financing		
Issuance of notes payable	**100,000**	30,000
Dividends paid [Note 16]	**(18,300)**	(11,900)
(Repayment of) proceeds from advances from parent	**(47,000)**	47,000
	34,700	65,100
Net change in cash	**1,350**	(15,417)
Bank indebtedness, beginning of year	**(27,673)**	(12,256)
Bank indebtedness, end of year	**(26,323)**	(27,673)

The accompanying notes are an integral part of these financial statements

1. DESCRIPTION OF BUSINESS AND CORPORATE INFORMATION

Hydro Ottawa Limited [the 'Company'] was incorporated on October 3, 2000 pursuant to the *Business Corporations Act* (Ontario) as mandated by the Ontario government's *Electricity Act, 1998.* The Company is a wholly owned subsidiary of Hydro Ottawa Holding Inc., which in turn is wholly owned by the City of Ottawa. The Company is incorporated and domiciled in Canada with the registered head office located at 2711 Hunt Club Road, Ottawa, Ontario, K1G 4G2.

Hydro Ottawa Limited is a regulated electricity distribution company that owns and operates electricity infrastructure in the City of Ottawa and the Village of Casselman and is responsible for the safe, reliable delivery of electricity to homes and businesses in its licensed service area. In addition to billing for distribution services, Hydro Ottawa Limited invoices customers for amounts it is required to pay to other organizations in Ontario's electricity system for providing wholesale generation and transmission services.

2. BASIS OF PRESENTATION

(a) Statement of compliance

These financial statements have been prepared by management on a going-concern basis in accordance with International Financial Reporting Standards ['IFRS'], and have been approved and authorized by the Company's Board of Directors for issue on April 16, 2020.

(b) Basis of measurement

The Company’s financial statements are prepared on a historical cost basis, except for the valuation of other employee future benefits as disclosed in Note 3(k)(ii).

(c) Functional and presentation currency

These financial statements are presented in Canadian dollars, which is the Company’s functional currency.

(d) Use of estimates and judgments

The preparation of financial statements in conformity with IFRS requires management to make estimates, judgments and assumptions that affect the reported amounts of revenue, expenses, assets, liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements.

Due to the inherent uncertainty involved in making such estimates, actual results could differ from estimates recorded in preparing these financial statements, including changes as a result of future decisions made by the Ontario Energy Board ['OEB'] or the Ontario provincial government. Management reviews its estimates and judgments on an ongoing basis using the most current information available. The financial statements have, in management's opinion, been properly prepared using careful judgment within reasonable limits of materiality and within the framework of the significant accounting policies. Significant areas where estimates and judgments are made in the application of IFRS are as follows:

i. Accounts receivable

Accounts receivable, which includes unbilled receivables, are reported based on the amounts expected to be recovered less a loss allowance for expected credit losses. Management utilizes historical loss experience and forward-looking information in conjunction with the aging and arrears status of accounts receivable at year-end in the determination of the allowance.

2. BASIS OF PRESENTATION [CONTINUED]

(d) Use of estimates and judgments [continued]

ii. Regulatory balances

The recognition and measurement of regulatory balances is subject to certain estimates, judgments and assumptions, including assumptions made in the interpretation of the OEB's regulations and decisions. The Company continues to assess the likelihood of recovery of all regulatory debit balances subject to recovery through a future rate filing. The absence of OEB approval is a consideration in this evaluation.

iii. Useful lives of depreciable assets

Depreciation and amortization expense is calculated based on estimates of the useful lives of property, plant and equipment, intangible assets and investment properties. Management estimates the useful lives of the various types of assets using assumptions and estimates of life characteristics of similar assets based on a long history of industry experience.

iv. Impairments of non-financial assets

Non-financial assets are reviewed by management for impairment using the future cash flows method. By their nature, estimates of future cash flows, including estimates of future capital expenditures, revenue, operating expenses, discount rates and market pricing are subject to measurement uncertainty.

v. Employee future benefits

The measurement of employee future benefits involves the use of numerous estimates and assumptions. Actuaries make assumptions for items such as discount rates, future salary increases and mortality rates in the determination of benefits expenses and accrued benefit obligations.

vi. Capital contributions

The timing of the satisfaction of performance obligations for capital contributions from customers is subject to certain estimates and assumptions.

vii. Deferred income taxes

Tax interpretations, regulations and legislation in which the Company operates are subject to change. Deferred income tax assets are assessed by management at the end of each reporting period to determine the likelihood that they will be realized from future taxable income.

3. SIGNIFICANT ACCOUNTING POLICIES

(a) Regulation

The Company is regulated by the OEB under the authority of the *Ontario Energy Board Act, 1998*. The OEB is charged with the responsibilities of approving or setting rates for the transmission and distribution of electricity, and ensuring that distribution companies fulfill obligations to connect and service customers.

3. SIGNIFICANT ACCOUNTING POLICIES [CONTINUED]

(a) Regulation [continued]

For fiscal year ended December 31, 2019, the Company continued to operate under a custom incentive rate-setting application ['Custom IR'] prescribed by the OEB. The Custom IR is one of the rate setting options contained in the *Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach* policy. The Company filed a custom incentive rate-setting application with the OEB on April 29, 2015 seeking approval to change the rates that the Company charges for electricity delivery, retail services, allowances, loss factor and specific services charges for a period of five years, to be effective January 1, 2016 to December 31, 2020. This application requested a revenue requirement to recover costs, and provide a rate of return on a deemed capital structure applied to rate base assets. The key components of the Company's Custom IR framework included the establishment of several regulatory accounts, namely: an asymmetrical earnings sharing mechanism variance account, revenue requirement differential variance account related to capital additions, new facilities deferral account, connection cost recovery agreement deferral account, and the efficiency adjustment mechanism deferral account. An annual IR application is required to set rates each year for 2017 to 2020. 2019 rates were set based on the Company's Year 4 IR annual update.

The Company applies for distribution rates based on estimated costs. Once rates are approved, they are not adjusted as a result of actual costs being different from those that were estimated, other than for certain prescribed costs that are eligible for deferral treatment and are either collected or refunded in future rates.

In January 2014, the International Accounting Standards Board ['IASB'] issued IFRS 14 – *Regulatory Deferral Accounts* ['IFRS 14'], which permits rate-regulated entities to use its existing rate-regulated activities practices if and only if, in its first IFRS financial statements, it recognized regulatory deferral account balances by electing to apply the requirements of IFRS 14.

The Company has determined that certain debit and credit balances arising from rate-regulated activities qualify for the application of regulatory accounting treatment in accordance with IFRS 14 and the accounting principles prescribed by the OEB in the *Accounting Procedures Handbook for Electricity Distributors*. Regulatory debit and credit balances primarily represent costs that have been deferred because it is probable that they will be recovered in future rates, revenues that are required to be returned or collected to/from customers or balances that arise from differences in amounts billed to customers for electricity services and the costs that the Company incurs to purchase these services.

Regulatory balances principally comprise the following:

- Regulatory asset/liability refund account ['RARA'/'RLRA'] consists of balances of regulatory assets or regulatory liabilities approved for disposition by the OEB through temporary additional rates referred to as rate riders.
- Settlement variances relate primarily to the charges the Company incurred for transmission services, commodity, wholesale market operations and global adjustment in comparison to those settled with customers during the year. The nature of the settlement variances is such that the balance can fluctuate between assets and liabilities over time, and they are reported at year-end dates in accordance with rules prescribed by the OEB.
- Lost Revenue Adjustment Mechanism ['LRAM'] account tracks and disposes of lost electricity distribution revenues that result from Conservation and Demand Management ['CDM'] programs.
- Earnings Sharing Mechanism ['ESM'] variance account captures 50% of any regulated earnings above Hydro Ottawa's approved return on equity for years 2016 to 2020.
- Facilities Y Factor captures the revenue requirement impacts arising from capital costs related to the new administrative and operations facilities for years 2019 and 2020 and the return of revenue requirement related to the former facilities.
- Gain on sale of former facilities consist of the after tax gain related to the sale of the former facilities.
- Other Post-employment Benefits deferral account ['OPEB deferral account'] was authorized by the OEB in 2011 to record the adjustment to employee future benefits other than pension relating to the cumulative actuarial gains or losses. This account is adjusted annually to record any changes in the cumulative actuarial gains or losses. No

3. SIGNIFICANT ACCOUNTING POLICIES [CONTINUED]

(a) Regulation [continued]

interest charges are recorded on this account as instructed by the OEB.

- Other Post-employment Benefits cash versus accrual account ['OPEB cash vs accrual] tracks the interest on the differential of the Company's contributions to OPEB versus the accrued OPEB expense recorded in the statement of income.

Other variances and deferred costs include the following:

- the difference between low voltage charges paid to Hydro One Networks Inc. ['HONI'] and those charged to customers.
- the difference between actual amount of gain/loss from disposal of fixed assets and the forecasted gain/loss.
- the difference between the 2014 starting point and current year ending point stretch factor as multiplied by the rate year plan revenue requirement for the relevant rate year, referred to as the Efficiency Adjustment Mechanism ['EAM'].

The Company accrues interest on the regulatory balances as directed by the OEB.

The Company continues to assess the likelihood of recovery of all regulatory debit balances subject to recovery through a future rate filing. The absence of OEB approval is a consideration in this evaluation. If the requirement for a provision becomes more likely than not, the Company will recognize the provision in operating costs for the year.

(b) Revenue recognition

Depending on whether certain criteria are met the Company recognizes revenue from contracts with customers when it transfers control over a product or service to a customer either over time or at a point in time. For revenue from other sources, the Company recognizes revenue over time taking into consideration the facts and circumstances of the arrangement.

Revenue is measured at the consideration received or receivable, excluding sales taxes and other amounts collected on behalf of third parties in the following revenue arrangements.

i. Power recovery

Power recovery revenue represents the flow-through of the cost of power to the consumer as purchased by the Company and is recognized over time as electricity is delivered to the customer, as measured by meter readings or usage estimates. Power recovery revenue is regulated by the OEB and includes charges to customers for the electricity commodity, the transmission of electricity and the administration of the wholesale electricity system. The Company has determined that it acts as a principal in this revenue arrangement and therefore has presented it on a gross basis.

ii. Distribution

The Company charges customers for the delivery of electricity, based on rates established by the OEB. The rates are intended to allow the Company to recover its prudently incurred costs and earn a fair return on invested capital. Distribution revenue is recognized over time as electricity is delivered to the customer, as measured by meter readings or usage estimates.

3. SIGNIFICANT ACCOUNTING POLICIES [CONTINUED]

(b) Revenue recognition [continued]

iii. Other

Other revenue comprises revenue earned under contracts for service work related to distribution operations, pole attachment and duct rentals, capital contributions received from customers amortized to revenue, and other account-related charges such as account set-up and late payment fees. Revenue earned under contracts for service work related to distribution operations is recognized over time as the corresponding costs are recognized proportionately with the degree of completion of the services under contract. Losses on such contracts are fully recognized when they become evident. In certain situations, capital contributions are required from customers to finance additions to property, plant and equipment when the estimated revenue resulting from the addition to property, plant and equipment is less than the cost of providing the service or where special equipment is needed to supply the customers' specific requirements. Since the contributions will provide current and future customers with ongoing access to the supply of electricity, these contributions are classified as deferred revenue and amortized into revenue on a straight-line basis over time [the period a customer will receive services], which is typically equivalent to the rate used for the depreciation of the related property, plant and equipment [service life of the related assets]. All other revenues are recognized over time as services are rendered, except for revenue from certain account-related charges, which is recognized at a point in time.

Capital contributions received from developers to construct or acquire property, plant and equipment for the purpose of connecting future customers to the Company's distribution network are considered out of scope of IFRS 15. Capital contributions received from developers are recognized as deferred revenue and amortized into revenue from other sources at an equivalent rate to that used for the depreciation of the related property, plant and equipment.

Revenue from investment property is considered out of scope of IFRS 15, and accordingly classified as revenue from other sources. Rental income from investment property is recognized as revenue on a straight-line basis over the term of the lease.

(c) Government grant income

CDM income stems from the delivery of provincial government programs that promote conservation. Government grants under CDM programs are recognized when there is reasonable assurance that the grant will be received and all related conditions have been met. Grants under full cost recovery funding are recognized as income on a systematic basis over the period to match the costs they are intended to compensate. CDM performance incentives are recognized when it is probable that future economic benefits will flow to the Company, and the amount can be measured reliably. On March 21, 2019, the Ministry of Ontario announced that the CDM program is to be phased out before the end of 2021.

(d) Interest income and financing costs

Interest income is recognized as it accrues under the effective interest method and comprises interest earned on cash.

Financing costs are calculated using the effective interest rate method and are recognized as an expense unless they are capitalized as part of the cost of a qualifying asset.

3. SIGNIFICANT ACCOUNTING POLICIES [CONTINUED]

(e) Income taxes

The Company is considered to be a Municipal Electric Utility ['MEU'] and is required to make payments in lieu of corporate income taxes [PILS] as contained in the *Electricity Act, 1998*, as all of its share capital is indirectly owned by the City of Ottawa and not more than 10% of its income is derived from activities carried on outside the municipal boundaries of the City of Ottawa. The *Electricity Act, 1998* provides that a MEU that is exempt from tax under the *Income Tax Act* (Canada) ['ITA'] and the *Taxation Act,* Ontario ['TAO'] is required to make, for each taxation year, a PILs payment to the Ontario Electricity Financial Corporation in an amount equal to the tax that it would be liable to pay under the ITA and the TAO if it were not exempt from tax.

The Company follows the liability method for recording income taxes. Under the liability method, current income taxes payable are recorded based on taxable income. Deferred income taxes arising from temporary differences in the accounting and tax basis of assets and liabilities are provided based on substantively enacted tax rates that will be in effect when the differences are expected to reverse.

The Company recognizes regulatory balances for the amounts of future income taxes expected to be refunded to or recovered from customers in future electricity rates as prescribed by the OEB.

(f) Financial instruments

Financial instruments are initially measured at the fair value of the consideration given or received plus transaction costs that are directly attributable to the acquisition or issue of the financial instrument.

The Company's financial assets, upon initial recognition, are classified as amortized cost or fair value [whereby subsequent changes in fair value are recognized either through OCI ['FVOCI'] or through profit and loss ['FVTPL'] as unrealized market adjustments]. Financial assets are classified based on the Company's business model for managing such assets and the contractual terms of the related cash flows.

The Company's financial liabilities, upon initial recognition, are classified as amortized cost or FVTPL. A financial liability is classified as FVTPL if it is classified as held-for-trading, it is a derivative or it is designated as such on initial recognition.

The Company classifies and subsequently measures its financial instruments as follows:

- Cash and accounts receivable are financial assets classified and measured at amortized cost using the effective interest method, less any impairment if applicable.
- Bank indebtedness, accounts payable and accrued liabilities, customer deposits and notes payable are financial liabilities classified and measured at amortized cost using the effective interest rate method.

The fair value of a financial instrument is the amount of consideration that would be agreed upon in an arm's-length transaction between willing parties. The Company's own credit risk and the credit risk of the counterparty are taken into account in determining the fair value of financial assets and liabilities. Financial instruments are classified using a three-level hierarchy. The levels reflect the inputs used to measure the fair values of financial assets and financial liabilities, and are as follows:

- Level 1: inputs are unadjusted quoted prices of identical instruments in active markets;
- Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly; and
- Level 3: inputs for the liabilities that are not based on observable market data [unobservable inputs].

All financial assets except for those classified as FVTPL or FVOCI are subject to review for impairment at least at each reporting date. Impairment losses, if any, are recognized in net income. An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognized.

The Company recognizes loss allowances for expected credit losses ['ECL's] on financial assets measured at amortized cost. The Company measures loss allowances for electricity receivables, unbilled receivables relating to electricity and trade

3. SIGNIFICANT ACCOUNTING POLICIES [CONTINUED]

(f) Financial instruments [continued]

receivables via a simplified approach as permitted by IFRS 9, at an amount equal to lifetime ECL.

When determining whether the credit risk of a financial asset has increased, the Company performs a quantitative and qualitative analysis based on the Company's historical experience and forward-looking information. The Company assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due. The Company considers a financial asset to be in default when the borrower is unlikely to pay its credit obligations to the Company in full, without recourse by the Company to actions such as realizing security.

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets. The gross carrying amount of a financial asset is written off to the extent that there is no realistic prospect of recovery.

(g) Property, plant and equipment

Property, plant and equipment consist principally of electricity distribution infrastructure, buildings and fixtures, land, rolling stock, furniture and equipment, and assets under construction.

Emergency capital spare parts that are expected to be used for more than one year, are considered to be assets under construction and are depreciated only once they are put into service.

Property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses, if any. Self-constructed asset costs comprise all directly attributable expenditures to bring the asset into operation including labour, materials, employee benefits, transportation, contracted services and borrowing costs. Where parts of an item in property, plant and equipment are significant and have different estimated economic useful lives, they are accounted for as separate items [major components] of property, plant and equipment. Certain assets may be acquired or constructed with financial assistance in the form of contributions from customers. Contributions from customers are treated as deferred revenue.

The cost of major inspections and maintenance is recognized in the carrying value of an asset provided that the Company will derive future economic benefits from the expenditure. The carrying amount of a replaced part is derecognized. The costs of day-to-day servicing, repairs, and maintenance, are expensed as incurred.

Depreciation is recorded on a straight-line basis over the estimated service life of each component of property, plant and equipment.

Gains and losses on disposal of retired, sold or otherwise derecognized property, plant and equipment are recognized in income and are calculated as the difference between net proceeds from disposal and the carrying amount of the asset.

The estimated useful lives, residual values and depreciation methods are reviewed at each year-end with the effect of any changes in estimate being accounted for on a prospective basis.

Estimated service lives for property, plant and equipment classes are as follows:

Land and buildings	
Land	Indefinite
Buildings and fixtures	10 to 75 years
Distribution assets	10 to 60 years
Equipment and other	
Furniture and equipment	5 to 40 years
Rolling stock	7 to 15 years

3. SIGNIFICANT ACCOUNTING POLICIES [CONTINUED]

(g) Property, plant and equipment [continued]

Assets under construction and land are not subject to depreciation. Borrowing costs are capitalized as a component of the cost of self-constructed property, plant and equipment assets that take a substantial period of time to get ready for their intended use. The capitalization rate is the Company's weighted average cost of borrowing.

(h) Intangible assets

Intangible assets include land rights, capital contributions, computer software and assets under development.

Intangible assets with finite lives are measured at cost less accumulated amortization and accumulated impairment losses, if any. Intangible assets are amortized on a straight-line basis over the estimated service lives of the related assets.

Intangible assets are derecognized on disposal or when no further future economic benefits are expected from their use. Gains or losses on disposal of intangible assets are recognized in income and are calculated as the difference between net proceeds from disposal and the carrying amount of the asset.

The estimated useful lives and amortization methods are reviewed at each year-end with the effect of any changes in estimate being accounted for on a prospective basis.

Estimated service lives for intangible assets with finite lives are as follows:

Land rights	50 years
Computer software	5 to 13 years
Capital contributions	45 years

Borrowing costs are capitalized as a component of cost of self-constructed intangible assets that take a substantial period of time to get ready for their intended use. The capitalization rate is the Company's weighted average cost of borrowing.

(i) Investment properties

Investment property is land and/or buildings held for purposes other than for use in the Company's operating activities. The Company holds investment property either for potential expansion of the service delivery network or as excess administrative property. Investment properties are measured at cost plus transaction costs, and have estimated service lives ranging between 25 and 50 years. Any gain or loss arising from the sale of an investment property is immediately recognized in income.

(j) Impairment of non-financial assets

At the end of each reporting period, or earlier if required, management uses its judgment to assess whether there is an indication that the carrying amount of a non-financial asset [or cash generating unit, 'CGU'] exceeds its recoverable amount. A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. This assessment involves the consideration of whether any events or changes in circumstances could have affected the recoverability of the carrying amount of a non-financial asset or CGU. Management considers various indicators including, but not limited to, adverse changes in the industry or economic conditions, changes in the degree or method of use of an asset, a lower than expected economic performance of an asset or a significant change in market returns or interest rates. If any indication exists, the Company estimates the asset's recoverable amount, which is the higher of an asset or CGU's fair value less costs of disposal and its value in use. If the carrying value of a non-financial asset exceeds its recoverable amount, the difference is immediately recognized as an impairment loss in profit or loss.

Intangible assets not yet available for use are tested for impairment [within their respective CGUs] at least annually, and whenever there is an indication that the asset may be impaired.

3. SIGNIFICANT ACCOUNTING POLICIES [CONTINUED]

(j) Impairment of non-financial assets [continued]

When determining the recoverable amount, the Company determines its value-in-use by discounting estimated future cash flows to their present value using a discount rate that reflects changes in the time value of money and the risks specific to the asset or the CGU. The discount rate estimated and used by management represents the weighted average cost of capital determined for the CGU being tested.

At the end of a reporting period, if there is any indication that an impairment loss recognized in a prior period no longer exists or has decreased, the loss is reversed up to its recoverable amount. The carrying amount following the reversal must not be higher than the carrying amount that would have prevailed [net of amortization] had the original impairment not been recognized in prior periods.

(k) Employee future benefits

i. Pension plan

The Company provides pension benefits for its employees through the Ontario Municipal Employees Retirement System ['OMERS'] Fund [the 'Fund']. OMERS is a multi-employer pension plan that provides pensions for employees of Ontario municipalities, local boards, public utilities and school boards. The Fund is a defined benefit pension plan, which is financed by equal contributions from participating employers and employees and by the investment earnings of the Fund.

Although the plan is a defined benefit plan, sufficient information is not available to the Company to account for it as such because it is not possible to attribute the fund assets and liabilities between the various employers who contribute to the Fund. As a result, the Company accounts for the plan as a defined contribution plan, and contributions payable as a result of employee service are expensed as incurred as part of operating costs. The Company shares in the actuarial risks of the other participating entities in the plan, and its future contributions may therefore be increased due to actuarial losses relating to the other participating entities. In addition, the Company's contributions could be increased if other entities withdraw from the plan.

ii. Other post-employment benefits

Employee future benefits other than pensions provided by the Company include life insurance and a retirement grant. These plans provide benefits to certain employees when they are no longer providing active service.

Employee future benefits expense is recognized in the period during which the employees render services.

Employee future benefits are recorded on an accrual basis. The accrued benefit obligation and current service costs are calculated using the projected benefit method prorated on service and based on assumptions that reflect management's best estimates. The current service cost for a period is equal to the actuarial present value of benefits attributed to employees' services rendered in the period. Actuarial gains and losses resulting from experience different from that assumed or from changes in actuarial assumptions are recognized in OCI. However, for the Company, these amounts are reclassified to a regulatory debit balance as prescribed by the OEB.

3. SIGNIFICANT ACCOUNTING POLICIES [CONTINUED]

(k) Employee future benefits [continued]

iii. Employee benefits

The Company provides short-term employee benefits, such as: salaries, employment insurance, short-term compensated absences, health and dental care. These benefits are recognized as the related service is rendered and is measured on an undiscounted basis. Short-term employee benefits are recognized as an expense unless they qualify for capitalization as part of the cost of an item of materials and supplies, property, plant and equipment, intangible assets. A liability is recognized in respect of any unpaid short-term employee benefits for services rendered in the reporting period.

The Company recognizes a liability for the expected cost of accumulated non-vested sick leave benefits at the end of the reporting period. The Company presents its non-vested sick leave obligation as a non-current liability since it does not expect to settle all of it sick leave benefits within twelve months.

(l) Customer deposits

Customer deposits are cash collections from customers to guarantee the payment of energy bills and fulfillment of construction obligations. Customer deposits from customers to guarantee the payment of energy bills includes related interest amounts owed to the customers. Deposits estimated to be refundable to customers within the next fiscal year are classified as current liabilities and included in accounts payable and accrued liabilities.

(m) Provisions and contingencies

The Company recognizes provisions when there is a present legal or constructive obligation as a result of a past event, it is probable that an outflow of economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Provisions are remeasured at each balance sheet date.

The evaluation of the likelihood of the contingent events requires judgment by management as to the probability of exposure to potential loss. Actual results could differ from these estimates.

A contingent asset is not recognized in the financial statements. However, a contingent asset is disclosed where an inflow of economic benefits is probable.

(n) Leases

Effective January 1, 2019, the Company has adopted IFRS 16 – *Leases* ['IFRS 16'] as described in Note 4 of these financial statements.

At the inception of a contract, the Company assesses whether the contract is, or contains, a lease based on whether the contract conveys the right to control the use of an identified asset for a period of time, in exchange for consideration.

i. As a lessee

As a lessee, leases are recognized as right-of-use [‘ROU’] assets and a lease liability at the lease commencement date. ROU assets are initially measured at cost, and subsequently carried at cost less accumulated depreciation and impairments, if any. The initial cost of an ROU asset equals the amount of the initial measurement of the corresponding lease liability, plus any initial direct costs incurred to bring the assets into operation. ROU assets are classified within property, plant and equipment in these financial statements.

Lease liabilities are initially measured at the present value of lease payments that are not paid at the commencement

3. SIGNIFICANT ACCOUNTING POLICIES [CONTINUED]

(n) Leases [continued]

i. As a lessee [continued]

date. The lease payments are discounted using the rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate which reflects the Company's ability to borrow money over a similar term, for an asset of similar value to the underlying asset, similar security or in a similar economic environment. Variable lease payments that do not depend on an index or rate are not included in the measurement of the lease liability.

Lease liabilities are subsequently measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Company's estimate of the amount expected to be payable under a residual value guarantee, or if the Company changes its assessment of whether it will exercise a purchase, extension or termination option.

When a lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the ROU asset, or is recorded in profit or loss if the carrying amount of the ROU asset has been reduced to zero. Payments under lease liabilities are apportioned between interest expense and a reduction of the outstanding lease liability.

Where the Company is reasonably certain it will obtain ownership of the ROU asset before the end of the lease term, the asset is depreciated over its useful life on a straight-line basis. Otherwise, depreciation is calculated over the shorter period of the lease term and the asset's useful life. The lease term includes periods covered by an option to extend if the Company is reasonably certain to exercise that option.

Payments related to short-term [12 months or less] and low value leases are recognized as operating expenses over the lease term in the statement of income.

ii. As a lessor

The Company enters into lease agreements as a lessor with respect to certain investment properties. The terms of these lease arrangements do not transfer substantially all the risks and rewards of ownership to the lessee, and therefore have been classified as operating leases. Rental income from operating leases is recognised on a straight-line basis over the term of the applicable lease.

4. NEW ACCOUNTING PRONOUNCEMENTS

On January 1, 2019, the Company adopted IFRS 16 – *Leases* ['IFRS 16'] using the modified retrospective approach, which does not require restatement of prior period financial information, as it recognizes the cumulative impact on the opening balance sheet and applies the standard prospectively. Accordingly, the comparative information continues to be reported under International Accounting Standard 17 – *Leases* ['IAS 17'] and International Financial Reporting Interpretations Committee, Interpretation 4 – *Determining whether an Arrangement contains a Lease* ['IFRIC 4'].

IFRS 16 eliminates the former dual model [on and off balance sheet] and provides greater comparability between companies who lease assets and those who purchase assets with a single on-balance sheet approach. Under IFRS 16, all leases from the lessee's perspective are recognized on the balance sheet, with exemptions for short-term [12 months or less] and low-value leases. Lessor accounting remains substantially unchanged.

4. NEW ACCOUNTING PRONOUNCEMENTS [CONTINUED]

On transition to IFRS 16, the Company elected to use a practical expedient permitting the Company to not apply IFRS 16 to contracts that were not previously identified as containing a lease applying IAS 17 and IFRIC 4. The Company applied the definition of a lease under IFRS 16 to contracts entered into or changed on or after January 1, 2019. Additionally, the Company elected to use the practical expedient for short-term [12 months or less] and low-value leases.

The adoption of IFRS 16 by the Company did not result in the recognition of any new ROU assets or lease liabilities.

5. ACCOUNTS RECEIVABLE

	2019	2018
	$	$
Receivables from contracts with customers		
Electricity receivable	**58,218**	59,933
Unbilled receivables related to electricity	**78,417**	80,180
Other receivables	**32,184**	15,571
Amounts due from related party [Note 25]	**10,380**	7,995
Less: loss allowance [Note 17(c)]	**(1,981)**	(2,368)
	177,218	161,311
Receivables from other sources		
Conservation and demand management	**2,472**	1,503
	179,690	162,814

Hydro Ottawa Limited

Notes to the Financial Statements
Year ended December 31, 2019
[in thousands of Canadian dollars]

6. REGULATORY BALANCES

Information about the Company's regulatory balances is as follows:

	Remaining recovery/ reversal [years]	2018 $	Balances arising in the year $	Recovery/ reversal $	Other movements[1] $	**2019 $**
Regulatory debit balances						
RARA	1	392	125	4	-	**521**
Settlement variances	1-5	2,003	4,203	-	(1,265)	**4,941**
Facilities Y Factor	1	-	2,592	-	-	**2,592**
OPEB cash versus accrual	1-5	6	1,522	-	(278)	**1,250**
LRAM	1-5	3,100	1,436	-	-	**4,536**
Loss on asset disposal	1-5	1,383	2,218	-	-	**3,601**
Regulatory asset for deferred income taxes	[2]	25,806	12,253	-	-	**38,059**
Other variances and deferred costs	1-5	1,977	1,192	-	-	**3,169**
		34,667	25,541	4	(1,543)	**58,669**
Regulatory credit balances						
RLRA	1	1,623	8,179	(8,051)	-	**1,751**
Settlement variances	1-5	13,437	(1,787)	-	(897)	**10,753**
ESM	1-5	3,387	387	-	-	**3,774**
Gain on sale of former facilities	1	-	2,152	-	-	**2,152**
OPEB deferral account	1-5	272	12	-	(278)	**6**
Other variance and deferred costs	1-5	973	2,673	-	(368)	**3,278**
		19,692	11,616	(8,051)	(1,543)	**21,714**

Hydro Ottawa Limited

Notes to the Financial Statements
Year ended December 31, 2019
[in thousands of Canadian dollars]

6. REGULATORY BALANCES [CONTINUED]

	Remaining recovery/ reversal [years]	2017 $	Balances arising in the year $	Recovery/ reversal $	Other movements[1] $	2018 $
Regulatory debit balances						
RARA	1	-	437	196	(241)	392
Settlement variances	1-5	2,508	(505)	-	-	2,003
OPEB deferral account	1-5	782	-	-	(782)	-
LRAM	1-5	2,571	529	-	-	3,100
OPEB cash vs accrual	1-5	-	6	-	-	6
Regulatory asset for deferred income taxes	[2]	16,797	9,009	-	-	25,806
Loss on asset disposal	1-5	907	476	-	-	1,383
Other variances and deferred costs	1-5	1,464	513	-	-	1,977
		25,029	10,465	196	(1,023)	34,667
Regulatory credit balances						
RLRA	1	1,464	13,214	(13,056)	-	1,622
Settlement variances	1-5	20,761	(7,325)	-	-	13,436
ESM	1-5	1,385	2,002	-	-	3,387
OPEB deferral account	1-5	-	1,054	-	(782)	272
Other variances and deferred costs	1-5	899	76	-	-	975
		24,509	9,021	(13,056)	(782)	19,692

[1] Other movements represent reclassifications of balances
[2] The balance is being reversed through timing differences in the recognition of deferred income tax assets [Note 3(e)]

The following regulatory balances include accrued interest which is presented in net movements in regulatory balances:

– The RARA/RLRA includes accrued interest revenue of $105 [2018 – interest costs of $145].

– Settlement variances include accrued interest revenue of $26 [2018 – interest costs of $52].

– Other variance and deferred costs include accrued interest costs of $80 [2018 – interest revenue of $36]

Details and descriptions pertaining to the regulatory debt and credit balances are disclosed in Note 3(a) of these financial statements.

7. PROPERTY, PLANT AND EQUIPMENT

	Land and buildings $	Distribution assets $	Equipment and other $	Assets under construction $	Total $
Cost					
Balance at December 31, 2017	86,445	898,833	35,428	69,094	1,089,800
Additions, net of transfers	3,628	110,378	4,997	69,940	188,943
Disposals	-	(563)	(337)	-	(900)
Balance at December 31,2018	90,073	1,008,648	40,088	139,034	1,277,843
Additions, net transfers	78,147	130,865	16,624	(92,111)	133,525
Disposals	(21,647)	(5,260)	(4,228)	-	(31,135)
Balance at December 31, 2019	**146,573**	**1,134,253**	**52,484**	**46,923**	**1,380,233**
Accumulated depreciation					
Balance at December 31, 2017	(10,412)	(104,624)	(11,101)	-	(126,137)
Depreciation	(2,527)	(33,221)	(4,282)	-	(40,030)
Disposals	-	383	200	-	583
Balance at December 31,2018	(12,939)	(137,462)	(15,183)	-	(165,584)
Depreciation	(3,891)	(36,358)	(5,296)	-	(45,545)
Disposals	7,096	2,530	3,919	-	13,545
Balance at December 31, 2019	**(9,734)**	**(171,290)**	**(16,560)**	**-**	**(197,584)**
Net book value					
At December 31, 2018	77,134	871,186	24,905	139,034	1,112,259
At December 31, 2019	**136,839**	**962,963**	**35,924**	**46,923**	**1,182,649**

During the year, the Company capitalized borrowing costs of $2,353 [2018 – $2,423] to property, plant and equipment. The average annual interest rate for 2019 was 3.4% [2018 – 3.4%].

In 2019, the Company sold two facilities [including land and building] inherited from pre-amalgamation utilities [i.e. prior to October 3, 2000] for total cash proceeds of $16,000. In addition, on December 20, 2019, the Company sold vacant land to 2725163 Ontario Inc. [a newly formed company under common control by Hydro Ottawa Holding Inc.] for cash proceeds of $1,827.

During the year, the Company recognized a loss on disposal of property, plant and equipment of $30 [2018 – gain on disposal of $256], which includes a gain on sale of vacant land to 2725163 Ontario Inc. of $1,759.

8. INTANGIBLE ASSETS

	Land rights $	Computer software $	Capital contributions $	Assets under development $	Total $
Cost					
Balance at December 31, 2017	2,294	64,972	20,776	11,688	99,730
Additions, net of transfers	(5)	1,657	2,200	(517)	3,335
Balance at December 31, 2018	2,289	66,629	22,976	11,171	103,065
Additions, net transfers	438	1,921	11,710	(1,681)	12,388
Disposals	-	(1,947)	-	-	(1,947)
Balance at December 31, 2019	**2,727**	**66,603**	**34,686**	**9,490**	**113,506**
Accumulated amortization					
Balance at December 31, 2017	(216)	(26,088)	(1,079)	-	(27,383)
Amortization	(59)	(8,972)	(477)	-	(9,508)
Balance at December 31, 2018	(275)	(35,060)	(1,556)	-	(36,891)
Amortization	(65)	(6,143)	(627)	-	(6,835)
Disposals	-	1,942	-	-	1,942
Balance at December 31, 2019	**(340)**	**(39,261)**	**(2,183)**	**-**	**(41,784)**
Net book value					
At December 31, 2018	2,014	31,569	21,420	11,171	66,174
At December 31, 2019	**2,387**	**27,342**	**32,503**	**9,490**	**71,722**

The Company is party to various Connection and Cost Recovery Agreements ['Capital contributions'] with Hydro One Networks Inc. ['HONI']. These agreements govern the construction by HONI of new or modified transformer stations for the purpose of serving the Company's customers, including anticipated electricity load growth. All terms and conditions of CCRAs follow the *Transmission System Code* [the 'Code'] issued by the OEB.

After conducting a review of the useful lives of its intangible assets, management determined that the useful life of two key computer software programs needed to be extended to align with the Company's IT replacement strategy. The impact of this change in estimate is a reduction in amortization expense of approximately $2,200 in the current year.

During the year, the Company capitalized borrowing costs of $278 [2018 – $73] to intangible assets. The average annual interest rate for 2019 was 3.4% [2018 – 3.4%].

During the year, the Company recognized a loss on disposal of intangible assets of $5 [2018 – $nil]

9. INVESTMENT PROPERTIES

	2019	2018
	$	$
Net book value, beginning of year	**2,338**	2,456
Additions	**45**	-
Depreciation	**(124)**	(118)
Net book value, end of year	**2,259**	2,338

The fair value of investment properties is $5,461, which is based on the latest Municipal Property Assessment Corporation valuation dated May 16, 2019.

10. CREDIT FACILITY

The Company has access to a $90,000 [December 31, 2018 – $90,000] revolving demand credit facility and a $400 [December 31, 2018 – $400] commercial card facility available from Hydro Ottawa Holding Inc. As at December 31, 2019, the Company has drawn $26,323 [December 31, 2018 – $27,673] in bank indebtedness and $nil [December 31, 2018 – $47,000] in bankers acceptances against this credit facility. The rate of interest is based on the rate applicable to Hydro Ottawa Holding Inc.'s outstanding bankers' acceptances drawn on that date. Otherwise, the rate of interest is based on the Bank of Canada's 'Bankers Acceptances 1 month' rate.

11. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

	2019	2018
	$	$
Purchased power payable	**88,494**	74,747
Trade accounts payable and accrued liabilities	**30,709**	39,298
Customer deposits	**18,899**	20,057
Customer credit balances	**11,739**	10,964
Due to related parties [Note 25]	**5,227**	2,788
	155,068	147,854

In 2019, the Company conducted a true-up calculation in connection with one of its cost recovery agreements with HONI as described in Note 23. As a result, the Company has determined that it is obligated to make up a shortfall and accordingly set-up a provision of $2,200, which is included in accounts payable and accrued liabilities.

12. DEFERRED REVENUE

	2019	2018
	$	$
Capital contributions from customers	**76,380**	61,888
Capital contributions from developers	**65,807**	53,881
	142,187	115,769

13. EMPLOYEE FUTURE BENEFITS

(a) Pension plans

The Company's participating employer contributions under OMERS for the year ended December 31, 2019 amounted to $5,721 [2018 – $5,905].

(b) Other employee future benefits

Employee future benefits are calculated using an annual compensation rate increase of 2.0% [2018 – 2.0%] and a discount rate of 3.1% [2018 – 3.9%] to calculate the liabilities. The valuations also include several other economic and demographic assumptions including mortality rates. The mortality assumption is based on the *Canadian Pensioners' Mortality* report published by the Canadian Institute of Actuaries in February 2014.

Information about the Company's employee future benefits other than pension plans is as follows:

	2019	2018
	$	$
Defined benefit obligation, beginning of year	**12,367**	13,334
Current service costs	**305**	338
Past service costs	**70**	-
Interest on accrued benefit obligation	**857**	398
Benefit payments	**(717)**	(649)
Actuarial loss (gain)	**1,522**	(1,054)
Defined benefit obligation, end of year	**14,404**	12,367

An actuarial valuation was performed as at December 31, 2019. As a result of this exercise, the Company increased the accumulated liability by $2,037 [December 31, 2018 – decreased by $967 based on an actuarial extrapolation].

Significant changes in actuarial assumptions related to discount rates, future health and dental costs, mortality rates and retirement age may affect the valuation of the defined benefit obligation.

14. NOTES PAYABLE

The Company currently has the following promissory notes and grid promissory notes payable to Hydro Ottawa Holding Inc.:

	2019	2018
	$	$
4.97% promissory note, due December 19, 2036	**50,000**	50,000
4.14% for the first five years [3.99% thereafter] promissory note, issued May 14, 2013 and due May 14, 2043	**107,185**	107,185
2.72% for the first five years [2.61% thereafter] promissory note, issued February 9, 2015 and due February 3, 2025	**138,667**	138,667
3.77% for the first five years [3.64% thereafter] promissory note, issued February 9, 2015 and due February 2, 2045	**121,333**	121,333
2.72% for the first five years [2.61% thereafter] promissory note, issued June 25, 2015 and due June 25, 2025	**15,999**	15,999
3.77% for the first five years [3.64% thereafter] promissory note, issued June 25, 2015 and due June 25, 2045	**14,001**	14,001
2.66% promissory note, due October 16, 2029	**87,500**	-
3.21% promissory note, due October 16, 2049	**162,500**	-
3.72% grid promissory note, due on demand, repaid during the year	**-**	60,000
4.12% grid promissory note, due on demand, repaid during the year	**-**	60,000
4.41% grid promissory note, due on demand, repaid during the year	**-**	30,000
	697,185	597,185

On October 17, 2019, the Company repaid all outstanding advances on the grid promissory note to Hydro Ottawa Holding Inc. It then issued two new promissory notes on the same date in the amount of $87,500 [10-year] and $162,500 [30-year] to Hydro Ottawa Holding Inc.

The grid promissory note facility bears fixed-rate interest based on the cost of long-term debt for Ontario's Regulated Utilities in accordance with the OEB`s cost of capital calculations.

15. CAPITAL DISCLOSURES

The Company’s main objectives when managing capital are to:

- Ensure continued access to funding to maintain and improve the operations and infrastructure of the Company;
- Ensure compliance with covenants related to the credit facilities and senior unsecured debentures entered into by its parent company, Hydro Ottawa Holding Inc.; and
- Align Hydro Ottawa Limited's capital structure with the debt to equity structure recommended by the OEB.

15. CAPITAL DISCLOSURES [CONTINUED]

The Company's capital consists of the following:

	2019	2018
	$	$
Bank indebtedness	**26,323**	27,673
Notes payable	**697,185**	597,185
Total debt	**723,508**	624,858
Shareholder's equity	**380,318**	360,918
Total capital	**1,103,826**	985,776
Debt capitalization ratio	**65.55 %**	63.39 %

The Company is in compliance with all financial covenants and limitations associated with its credit facilities and its long-term debt.

The Company is deemed by the OEB to have a capital structure that is funded by 56% long-term debt, 4% short-term debt and 40% equity. The OEB uses this deemed structure only as a basis for setting distribution rates. As such, the Company's actual capital structure may differ from the OEB deemed structure.

The Company met its capital management objectives, which have not changed during the year.

16. SHARE CAPITAL

(a) Authorized

Unlimited number of voting first preferred shares, redeemable at one dollar per share
Unlimited number of non-voting second preferred shares, redeemable at ten dollars per share
Unlimited number of non-voting third preferred shares, redeemable at one hundred dollars per share
Unlimited number of voting fourth preferred shares [ten votes per share], redeemable at one hundred dollars per share
Unlimited number of voting Class A common shares
Unlimited number of non-voting Class B common shares
Unlimited number of non-voting Class C common shares, redeemable at the price at which such shares are issued

The above shares are without nominal or par value.

Holders of second preferred shares, fourth preferred shares and common shares are entitled to receive dividends as and when declared by the Board of Directors at their discretion.

16. SHARE CAPITAL [CONTINUED]

(b) Issued

	2019	2018
	$	$
154,789,001 Class A common shares	**167,081**	167,081

Any invitation to the public to subscribe for shares of the Company is prohibited by shareholder resolution.

On April 16, 2019, the Board of Directors declared a $12,300 dividend on the common shares of the Company outstanding on December 31, 2018. The dividend was paid to the sole shareholder, Hydro Ottawa Holding Inc. on April 23, 2019 [2018 – April 19, 2018, the Board of Directors declared a $11,900 dividend which was paid on April 26, 2018].

On September 23, 2019, the Board of Directors declared a $6,000 dividend on the common shares of the Company outstanding on June 30, 2019. The dividend was paid to the sole shareholder, Hydro Ottawa Holding Inc. on September 30, 2019.

17. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

(a) Fair value disclosures

The carrying values of the Company's financial instruments, except for notes payable, approximates fair value because of the short maturity and nature of the instruments. The fair value measurement of the financial instrument for which the fair value has been disclosed is included in Level 2 of the fair value hierarchy [Note 3(f)].

The Company has estimated the fair value of the notes payable as at December 31, 2019 as amounting to $754,161 [December 31, 2018 – $600,195]. The fair value has been determined based on discounting all future payments of interest and the principal repayment on January 1, 2020, at the estimated interest rate of 2.9% [2018 – 3.7%] that would be available to the Company on December 31, 2019.

(b) Market risk

The Company is exposed to market risk, which is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market prices are comprised of three types of risks: interest rate risk, foreign exchange risk and commodity price risk.

(i) Interest rate risk

The Company is exposed to interest rate risk on its borrowings. The Company mitigates exposure to interest rate risk by fixing interest rates on its notes payable with its parent company. Under Hydro Ottawa Holding Inc.'s credit facilities, any advances on its operating line would expose the Company to fluctuations in short term interest rates related to prime rate loans and bankers' acceptances as all short-term financing requirements are obtained through its parent company, which passes on its borrowing costs. The interest rate risk is deemed to be low due to the immaterial cost of its short-term borrowings. For the most part, the borrowing requirements are for a very short duration as the advances serve to bridge gaps between the cash outflow related to the monthly power bill and the inflows related to the settlements with customers and, as such, there is very limited exposure to interest rate risk.

A sensitivity analysis was conducted to examine the impact of a change in the prime rate on the Company’s advances from Hydro Ottawa Holding Inc. A variation of 1% [100 basis points], with all other variables held constant, would increase or decrease the annual interest expense by approximately $446.

17. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT [CONTINUED]

(b) Market risk [continued]

The Company is also exposed to fluctuations in interest rates as its regulated rate of return is derived using a complex formulaic approach which is in part based on the forecast for long-term Government of Canada bond yields. This rate of return is approved by the OEB as part of the approval of distribution rates.

(ii) Foreign exchange risk

As at December 31, 2019, the Company has limited exposure to fluctuations in foreign currency exchange rates. The Company does purchase a small proportion of goods and services that are denominated in foreign currencies, predominately the US dollar. The impact of the fluctuation of foreign currencies on the gains or losses of accounts payable denoted in foreign currencies is not material.

(iii) Commodity price risk

The Company does not have commodity price risk due to the flow-through nature of power purchases.

(c) Credit risk

Credit risk is the risk that a counterparty will default on its obligations, causing a financial loss to the Company. Concentration of credit risk associated with accounts receivable is limited due to the large number of customers the Company services. The Company has approximately 340,000 customers, the majority of which are residential. As a result, the Company did not earn a significant amount of revenue and does not have a significant receivable from any individual customer.

The Company performs ongoing credit evaluations of its customers and requires collateral to support non-residential customer accounts receivable on specific accounts to mitigate significant losses in accordance with OEB legislation. As at December 31, 2019, the Company held security deposits related to power recovery and distribution sales in the amount of $14,713 [December 31, 2018 – $16,009] with respect to these customers.

The Company monitors and limits its exposure to credit risk on a continuous basis.

The Company applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade and other receivables. The expected loss rates for trade receivables are based on the payment profiles of sales over a period of 12 months before December 31, 2019 or December 31, 2018 respectively and the corresponding historical credit losses experienced within this period and other information. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables.

17. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT [CONTINUED]

(c) Credit risk [continued]

On that basis, the loss allowance as at December 31, 2019 and December 31, 2018 was determined as follows for trade and other receivables.

	Gross carrying amount	Weighted average loss rate	Loss allowance	Net carrying amount
	$		$	$
December 31, 2019				
Outstanding for 30 days or less	93,502	0.00 %	-	93,502
Outstanding for more than 30 days but not more than 120 days	7,360	6.89 %	507	6,853
Outstanding for more than 120 days	2,392	56.06 %	1,341	1,051
Unbilled receivables related to electricity	78,417	0.17 %	133	78,284
	181,671		**1,981**	**179,690**
December 31, 2018				
Outstanding for 30 days or less	73,286	0.00 %	-	73,286
Outstanding for more than 30 days but not more than 120 days	7,585	9.70 %	736	6,849
Outstanding for more than 120 days	4,131	35.85 %	1,481	2,650
Unbilled receivables related to electricity	80,180	0.19 %	151	80,029
	165,182		2,368	162,814

The following table reconciles the opening and closing loss allowance for trade and other receivables:

	2019	2018
	$	$
Loss allowance, beginning of year	**2,368**	2,371
Net remeasurement of loss allowance	**887**	1,694
Write-offs	**(1,496)**	(2,023)
Recoveries of amounts previously written-off	**222**	326
Loss allowance, end of year	**1,981**	2,368

17. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT [CONTINUED]

(c) Credit risk [continued]

Impairment losses on trade and other receivables are presented as net impairment losses within the statement of income. When a receivable is deemed to be uncollectible, it is written off and the expected loss allowance is adjusted accordingly. Subsequent recoveries of receivables previously provisioned or written off result in a reduction of impairment losses included in operating costs in the statement of income.

As at December 31, 2019, there were no significant concentrations of credit risk with respect to any class of financial assets or counterparties and the Company's maximum exposure to credit risk is equal to the carrying value of accounts receivable less customer deposits held.

(d) Liquidity risk

Liquidity risk is the risk that the Company will not meet its financial obligations as they come due. The Company's parent, Hydro Ottawa Holding Inc., manages all the financing and investing activities for the Company. The Company has access to credit facilities with Hydro Ottawa Holding Inc. [Note 10]. These credit facilities are available to the Company to help meet its financial obligations as they come due.

Liquidity risks associated with financial commitments are as follow:

	2019		
	Due within one year $	Due between one and five years $	Due after five years $
Bank indebtedness	**26,323**	**-**	**-**
Accounts payable and accrued liabilities	**153,062**	**-**	**-**
Notes payable			
4.97% promissory note, due December 19, 2036	**-**	**-**	**50,000**
4.14% for the first five years [3.99% thereafter] promissory note, due May 14, 2043	**-**	**-**	**107,185**
2.72% for the first five years [2.61% thereafter] promissory note, due February 3, 2025	**-**	**-**	**138,667**
3.77% for the first five years [3.64% thereafter] promissory note, due February 2, 2045	**-**	**-**	**121,333**
2.72% for the first five years [2.61% thereafter] promissory note, due June 25, 2025	**-**	**-**	**15,999**
3.77% for the first five years [3.64% thereafter] promissory note, due June 25, 2045	**-**	**-**	**14,001**
2.66% promissory note, due October 16, 2029	**-**	**-**	**87,500**
3.21% promissory note, due October 16, 2049	**-**	**-**	**162,500**
Interest to be paid on notes payable	**23,919**	**93,093**	**347,578**
	203,304	**93,093**	**1,044,763**

Account payable and accrued liabilities in the above table exclude $2,006 of accrued interest which is included in interest to be paid on notes payable.

18. REVENUE FROM CONTRACTS WITH CUSTOMERS AND OTHER SOURCES

The Company's revenue breakdown is as follows:

	2019	2018
	$	$
Revenue from contracts with customers		
Power recovery and distribution		
Residential service [1]	**357,161**	339,947
General service [2]	**658,205**	628,599
Large users [3]	**72,879**	69,887
Other		
Service work related to distribution operations	**9,854**	6,510
Pole attachment and duct rentals	**4,454**	4,440
Capital contributions from customers amortized to revenue	**2,048**	1,555
Account-related charges	**3,048**	3,303
Shared service agreements and miscellaneous	**4,049**	4,005
	1,111,698	1,058,246
Revenue from other sources		
Other		
Investment property rentals	**820**	904
Capital contributions from developers amortized to revenue	**1,719**	1,395
	1,114,237	1,060,545

[1] Residential service means a service that is for domestic or household purposes, including single family or individually metered multifamily units and seasonal occupancy.
[2] General service means a service supplied to premises other than those receiving Residential Service and Large Users and typically includes small businesses and bulk-metered multi-unit residential establishments. This service is provided to customers with a monthly peak demand of less than 5,000 kW averaged over a twelve-month period.
[3] Large users means a service provided to a customer with a monthly peak demand of 5,000 kW or greater averaged over a twelve-month period.

Hydro Ottawa Limited

Notes to the Financial Statements
Year ended December 31, 2019
[in thousands of Canadian dollars]

19. OPERATING COSTS

	2019 $	2018 $
Salaries, wages and benefits	**74,856**	77,285
Contracted services - distribution system maintenance	**11,300**	10,828
Contracted services - customer owned plant	**15,669**	19,340
Other electricity distribution costs	**9,570**	8,331
Other general and administrative expenses	**30,797**	31,728
Loss (gain) on disposals of property, plant and equipment	**35**	(256)
Capital recovery	**(30,637)**	(31,488)
	111,590	115,768

20. FINANCING COSTS

	2019 $	2018 $
Long-term interest	**22,732**	21,374
Short-term interest and fees	**2,102**	881
Less: capitalized borrowing costs	**(2,631)**	(2,496)
	22,203	19,759

21. INCOME TAXES

Income tax expense recognized in net income comprises the following:

	2019 $	2018 $
Current tax expense		
Current income tax expense	**1,311**	4,689
Deferred tax expense		
Origination and reversal of temporary differences	**12,802**	8,629
Income tax expense recognized in net income	**14,113**	13,318

Income tax expense recognized in other comprehensive income comprises the following:

	2019 $	2018 $
Income tax effect of actuarial (loss) gain on defined benefit obligations	**(549)**	380

21. INCOME TAXES [CONTINUED]

The provision for income taxes differs from the amount that would have been recorded using the combined Canadian federal and Ontario statutory income tax rates. A reconciliation between the statutory and effective tax rates is provided as follows:

	2019	2018
	$	$
Federal and Ontario statutory income tax rate	**26.50 %**	26.50 %
Income before income taxes	**51,813**	50,477
Income taxes at statutory rate	**13,730**	13,376
Increase (decrease) in income taxes resulting from:		
Permanent differences	**(62)**	48
Other	**445**	(106)
	14,113	13,318
Effective income tax rate	**27.24 %**	26.38 %

The Company, as a rate-regulated enterprise, can recognize deferred income tax assets and liabilities and related regulatory balances for the amount of deferred income taxes expected to be refunded to, or recovered from, customers in future electricity rates.

Significant components of the Company's deferred income liability are as follows:

	2019	2018
	$	$
Property, plant and equipment and intangible assets	**(43,874)**	(30,602)
Employee future benefits	**5,193**	4,459
Other temporary differences	**622**	337
	(38,059)	(25,806)

Movements in the deferred income tax (liability) asset during the year were as follows:

	2019	2018
	$	$
Deferred tax, beginning of year	**(25,806)**	(16,797)
Recognized in net income	**(12,802)**	(8,629)
Recognized in OCI related to employee future benefits	**549**	(380)
Deferred tax, end of year	**(38,059)**	(25,806)

The Company's regulatory deferral account debit balance for the amounts of deferred income taxes expected to be refunded/ (collected) to/from customers in future electricity rates is $38,059 [2018 – $25,806].

22. CHANGES IN NON-CASH WORKING CAPITAL AND OTHER OPERATING BALANCES

	2019	2018
	$	$
Accounts receivable	**(16,876)**	16,306
Prepaid expenses	**(1,737)**	(756)
Accounts payable and accrued liabilities	**10,957**	(2,971)
Net change in accruals related to property, plant and equipment	**8,633**	2,829
Net change in accruals related to intangible assets	**(4,800)**	58
Customer deposits in accounts receivable	**-**	(14,586)
	(3,823)	880

23. CONTINGENT LIABILITIES

Purchasers of electricity in Ontario including the Company, through the Independent Electricity System Operator ['IESO'], are required to provide security to mitigate the risk of their default based on their expected activity in the market. The IESO could draw on these guarantees if the Company fails to make a payment required by a default notice issued by the IESO. A prudential support obligation is calculated based upon a default protection amount and the distributor's trading limit less a reduction for the distributor's credit rating. As at December 31, 2019, the Company had drawn standby letters of credit in the amount of $10,000 [December 31, 2018 – $10,000] against its credit facility to cover its prudential support obligation.

The Company participates with other electrical utilities in Ontario in an agreement to exchange reciprocal contracts of indemnity through the Municipal Electrical Association Reciprocal Insurance Exchange. The Company is liable for additional assessments to the extent premiums collected and reserves established are not sufficient to cover the cost of claims and costs incurred. If any additional assessments were required in the future, their cost would be charged to income in the year during which they occur.

The Company is party to connection and cost recovery agreements with HONI as described in Note 8. Each of the Company's CCRAs has a term of 25 years. To the extent that the cost of the project is not recoverable from future transformation connection revenues, the Company is obligated to pay a capital contribution equal to the difference between these revenues and the construction costs allocated to the Company. These agreements require periodic reviews whereby a comparison of actual to forecasted load is conducted, and a true-up calculation performed. When a true-up calculation shows the Company’s actual load for the past period and updated load forecast for the future period are lower than the initial load, the Company is obligated to make up this shortfall. When the Company's actual load and updated load forecast are higher than the initial load, the Company is entitled to a rebate. True-up calculations are made in years 5 and 10 and in year 15 if the difference between the actual incremental load and initial load at the end of year 10 is greater than 20%.

Various lawsuits have been filed against the Company for incidents that arose in the ordinary course of business. In the opinion of management, the outcomes of the lawsuits, now pending, are neither determinable nor material. Should any loss result from the resolution of these claims, such losses would be claimed through the Company’s insurance carrier, with any unrecoverable amounts charged to income in the year of resolution.

24. COMMITMENTS

The Company has $122,564 in total open commitments for 2020 to 2026. This includes commitments relating to a call centre service agreement, construction projects, facilities, and overhead and underground services.

25. RELATED PARTY TRANSACTIONS

Transactions with related parties occur in the normal course of business, and are transacted at the amount of consideration determined and agreed to by the related parties. Trade amounts due from and to related parties are non-interest bearing, result from normal operations and are due within one year.

(a) Transactions with ultimate shareholder and its subsidiaries

During the year, the Company earned revenue from the sale of electricity to the City of Ottawa and its subsidiaries, which is billed at prices and terms approved by the OEB, and earned other revenue totaling $455 [2018 – $387]. The Company also received $4,268 [2018 – $3,580] in contributions relating to the upgrade and/or expansion of the Company's existing electricity distribution infrastructure.

The Company incurred $2,855 [2018 – $2,433] in property taxes and $1,002 [2018 – $2,711] in conservation and demand management rebate costs, and purchased $794 [2018 – $634] in fuel, permits and other services during the year, which is included in operating costs. The Company also incurred $504 [2018 – $269] in building permit costs and development charges, which are included in property, plant and equipment.

At December 31, 2019, the Company's accounts receivable and customer deposits include $8,873 [December 31, 2018 – $7,473] and $1,053 [December 31, 2018 – $652], respectively, while the Company's accounts payable and accrued liabilities include $125 [December 31, 2018 – $54] due to the City of Ottawa and its subsidiaries.

(b) Transactions with parent

During the year, the Company earned revenue of $1,209 [2018 – $1,242] relating to the provision of administrative and corporate services and interest charges.

The Company incurred $3,074 [2018 – $3,315] in operating costs related to the purchase of administrative and corporate support services that includes compensation for certain key management personnel, and $2,088 [2018 – $881] in short-term financing costs. The Company also purchased power of $20 [2018 – $38].

At December 31, 2019, the Company's accounts payable and accrued liabilities include $2,291 [December 31, 2018 – $414] due in respect of the transactions described.

The Company incurred $22,732 [2018 – $21,374] in financing costs during the year on its notes payable to Hydro Ottawa Holding Inc. described in Note 14 of these financial statements.

(c) Transactions with other related parties

During the year, the Company earned revenue from the sale of electricity to other related parties, which is billed at prices and terms approved by the OEB, and earned other revenue of $3,652 [2018 – $3,012]. The Company also received $4,019 [2018 – $691] in contributions relating to the upgrade and/or expansion of the Company's existing electricity distribution infrastructure. During the year, the Company purchased power of $4,942 [2018 – $6,566], and incurred $534 [2018 – $362] in operating costs.

In 2019, the Company sold vacant land to a related party for cash proceeds of $1,827, as described in Note 7.

At December 31, 2019, the Company's accounts receivable include $454 [December 31, 2018 – $522] due in respect of the transactions above while accounts payable and accrued liabilities include $2,811 [December 31, 2018 – $2,320] due to other related parties.

26. COMPARATIVE FIGURES

In certain instances, the 2018 information presented for comparative purposes has been reclassified to conform to the financial statement presentation adopted for the current year.

27. SUBSEQUENT EVENT

Subsequent to December 31, 2019 the COVID-19 outbreak was declared a pandemic by the World Health Organization. This has resulted in governments worldwide, including the Canadian and Ontario governments, enacting emergency measures to combat the spread of the virus. These measures, which include the implementation of travel bans, self-quarantine periods and social distancing, have caused material disruption to businesses globally and in Ontario resulting in an economic slowdown. Governments and central banks have reacted with significant monetary and fiscal interventions designed to stabilize economic conditions however the success of these interventions is not currently determinable. The current challenging economic climate is having an adverse impact on cash flows, working capital levels and/or debt balances, which may also have a direct impact on the Company's operating results and financial position in the short term, and into the future. The situation is dynamic and the ultimate duration and magnitude of the impact on the economy and the financial effect on our business is not known at this time.