SCHEDULE LIST / TABLE OF CONTENTS

Operating Expenses

2026 Cost of Service Checklist

Hydro Ottawa Inc.

EB-2024-0115

Date: ORIGINAL

Filing Requirement Page # Reference		Evidence Reference, Notes (Note: if requirement is not applicable, please provide reasons)
GENERAL REQUIREMENTS		
Ch1, p4	Confidential Information - Practice Direction has been followed	Yes
Ch1, p5	Certification by a senior officer that the application and any evidence filed in support of the application does not include any personal information unless it is filed in accordance with Rule 9A of the OEB's Rules (and the Practice Direction Confidential Filings, as applicable).	Attachment 1-1-4(C)
Ch1, p5	Certification by a senior officer that the evidence filed (including the models and appendices) is accurate, consistent and complete to the best of their knowledge	Attachment 1-1-4(C)
Ch1, p5	Certification by the Chief Executive Officer, or Chief Financial Officer, or equivalent, that the distributor has the appropriate processes and internal controls for the preparation, review, verification and oversight of all deferral and variance accounts, regardless of whether the accounts are proposed for disposition	Attachment 1-1-4(C)
Ch2, p2	A letter from the governing body (e.g., Board of Directors) certifying that it is aware of and approves the submission of the application	Attachment 1-1-4(B)
2	COS checklist filed and statement identifying all deviations from Filing Requirements	Schedule 1-2-2
2 & 3	Chapter 2 appendices in live Excel format; PDF and Excel copy of current tariff sheet	Hydro Ottawa confirms the Chapter 2 appencies are filed in live Microsoft Excel format, and that PDF and Excel copies of the tariff sheets are included.
3	If distributor updates/amends an OEB model, reference made in corresponding exhibit re: what was updated/amended	Yes
3	Regulated entity shown separately from parent company or any other affiliates	Yes
4	If applicable, if cost of service filed earlier than scheduled, justify why an early rebasing is required by demonstrating why and how distributor cannot adequately manage resources and financial needs during IRM period	Hydro Ottawa is not filing earlier than scheduled
4 & 5	If applicable, late applications filed after the commencement of the rate year for which the application is intended to set rates is converted to the following rate year	Hydro Ottawa is not filing after the commencement of the rate year for which the applicable is intended to set rates (2026)
5	All of the following exhibits filed: Application Overview and Administrative Documents, Rate Base and Capital (including DSP), Customer and Load Forecast, Operating Expenses, Cost of Capital and Capital Structure, Revenue Requirement and Revenue Deficiency/Sufficiency, Cost Allocation, Rate Design, Deferral and Variance Accounts	Yes
5	General requirements applicable throughout application: -written evidence included before data schedules -avg. of opening and closing fiscal year balances used for items in rate base (unless alternative method justified) -debt + equity = total rate base -data for test year, bridge year, three most recent historicals (or as many needed to provide actuals back to last OEB-approved), most recent OEB-approved test	Yes
6	Documents must include page numbers and be provided in text searchable and bookmarked PDF format	Yes
6	Links within Excel models are broken and models named so that they can be identified (e.g. RRWF instead of Attachment A)	Yes
7	Materiality threshold: Explanation/justification and/or supporting evidence for material amounts pertaining to CAPEX, capital variances, rate base variances, OM&A, and DVAs; additional details below the threshold if necessary	Yes
EXHIBIT 1 - APPLICATION OVERVIEW AND ADMINISTRATIVE DOCUMENTS		
Table of Contents		
7	Table of Contents listing major sections and subsections of the application	Schedule 1-1-1
Application Summary and Business Plan		
7	Distributor with less than 30k customers: Business and/or Strategic Plan. If no Business or Strategic plan: key planning assumptions, description of material factors (internal and external) that may affect the operation of the utility and major goals of the distributor in the test year and remaining years of the five-year term. Distributor with 30k or more customers: Business Plan underpinning application - can be augmented by plain language summary of distributor's goals that informed the application if this is not otherwise in the Business Plan. Also provide Strategic Plan, if available.	Schedule 1-2-3

7-9	Brief, plain language summary of the application which includes the main requests with section references and rationale behind each request. Must include: -Revenue requirement (service revenue requirement requested for test year, increase/decrease ($ and %) from most recent approved, main drivers of revenue requirement changes -Load forecast summary (load and customer growth (% change in kWh, kW and change in customer #s from last OEB-approved)) -Rate base and DSP (major drivers of DSP and cost trends, rate base requested, change in rate base from last OEB-approved ($ and %), CAPEX for test year, change in CAPEX from last OEB-approved ($ and %) -OM&A (OM&A requested for test and change from last OEB-approved ($ and %), drivers and cost trends) -Cost of capital (table showing proposed capital structure and parameters resulting in WACC, statement confirming use of OEB's cost of capital parameters, summary of deviations from OEB methodology) -Cost allocation and rate design (proposed new customer classes and/or customer definition changes, new proposed charges, significant changes proposed to rev. cost ratios and fixed/variable split, mitigation plans) -DVAs (total disposition ($) including split between customer classes and between RPP and non-RPP (if applicable), disposition period(s), new DVAs and requested discontinuation of DVAs) -Bill Impacts ($ and %) for residential customer at 750kWh, and typical customers for all other classes (based on commodity rates on TOU with regulatory charges held constant; bill impacts to be used for Notice (Sub-total A) for residential customer at 750kWh and GS<50 at 2000kWh as well as a typical consumer for a distributor's service area for all customer classes, and bill impacts based on alternative consumption profiles and customer groups as appropriate	Schedule 1-2-1
Administration		
9	Primary contact information (name, address, phone, email)	Schedule 1-1-4
9	Identification of legal (or other) representation	Schedule 1-1-4
9	Applicant's internet address for viewing of application and any social media accounts, with addresses, used by the applicant to communicate with customers	Schedule 1-1-4
9	Statement identifying where notice should be published and why	Schedule 1-1-4
9	Form of hearing requested and why	Schedule 1-1-4
9	Requested effective date	Schedule 1-1-4
10	Statement identifying and describing any changes to methodologies used vs previous applications	Schedule 1-1-4
10	Identification of OEB directions from any previous OEB Decisions and/or Orders, including commitments made as part of approved settlements. Indication of how these are being addressed in the current application	Schedule 1-1-4
10	Reference to Conditions of Service - provide reference to website and confirm version is current; identify if there are changes to Conditions of Service (a) since last CoS application and/or (b) as a result of the current application. Confirmation that there are no rates and charges linked in the Conditions of Service that are not in the distributor's Tariff of Rates and Charges must be provided	Schedule 1-1-4
10	Description of the corporate and utility organizational structure showing the main units and executive and senior management positions within the organization; corporate entities relationship chart, showing the extent to which the parent company is represented on the distributor company's Board of Directors; description of the reporting relationships between distributor and management of the parent company. Also include any planned changes in corporate or operational structure, including any changes in legal organization and control	Schedule 1-6-1
10	List of approvals requested (and relevant section of legislation). All approvals including accounting orders, new rate classes, revised specific service charges or retail service charges which the distributor is seeking, must be documented.	Schedule 1-1-4; Attachment 1-1-4(A)
Distribution System Overview		
10	Description of Service Area - general description and map showing where distributor operates and communities served	Schedule 1-2-2
Customer Engagement		
11	Provide information regarding its customer engagement activities, activities that occur on an on-going basis, and specific activities pertaining to application. **May** use Appendix 2-AC to assist in listing customer engagement activities	Attachment 1-4-1(A)
11	Ongoing Customer Engagement - Describe methods used to communicate and engage with each customer class regularly, summarize pertinent feedback received through regular customer communications, and explain how feedback informs operations and rate application, where applicable	Schedule 1-4-1
11 & 12	Application-Specific Customer Engagement - Explain customer engagement process specific to application (tailor customer engagement activities to distributor's circumstances and the proposals in application). Demonstrate how customer needs and priorities were factored into the decision-making process	Schedule 1-4-2
12	Customer engagement with customers who would be affected by proposals related to new rate classes, changes in to existing rate classes and change in charges such as RSCs, Specific Service Charges, standby rates, and unmetered-load customers	Hydro Ottawa informed affected Standby Customers of the intent to request final standby rates. Schedule 7-1-3
12	All responses to matters raised in letters of comment filed on public record	No letters of comment filed.
Performance Measurement		
12	Link to most recent scorecard	Schedule 1-3-3
12	Identification of performance improvement targets	Schedule 1-3-3
12	OEB approved benchmarking model for the test year showing efficiency assessment, discussion on how the results obtained from the OEB approved forecasing model and Activity and Program-based Benchmarking (APB) have informed the distributor's business plan and application	Attachment 1-3-3(G)
12 & 13	Distributors **may** wish to provide table showing respective OEB-approved IRM increases for each of the last historical years from last rebasing, and assigned cohort as per the OEB approved model	Attachment 1-3-3(A); did not provide IRM increases

13	Activity and Performance-based Benchmarking (APB) results - at least provide the following unit cost variance analysis: - Year-over-year Historical Actuals (for most recent APB results) - Forecast Bridge Year vs Historical Actuals, to extent possible - Test Year vs Historical Actuals, to extent possible - An explanation of significant change (greater than 20% from previous year or five-year average) - A plan to drive down unit costs if five-year average is 25% greater than industry five-year average	Attachment 1-3-3(B)
13	Explain variances in cost performance, whether changes in unit costs are within distributor's control, and discuss relevant actions planned or underway. Discuss econometric results to extent possible	Attachment 1-3-3(B)
Facilitating Innovation		
13 & 14	Distributors are encouraged to include a description of the ways their approach to innovation has shaped the application. Could include explanations of approach to innovation or keeping up with innovation in their business more generally; of specific projects or technologies for enhancing the provision of distribution services; and of enabling characteristics or constraints in their ability to undertake innovative solutions. Explain how innovative alternatives have been considered in place of traditional investments	Schedule 1-3-4
14	Explain how innovative alternatives have been considered in place of traditional investments. Include information about the costs, expected benefits and associated risks of innovative alternatives. An innovative approach the OEB has emphasized is for distributors to consider the use of non-wires solutions (NWSs) to address distribution system needs	Schedule 1-3-4
Financial Information		
15	Audited Financial Statements (excluding operations of affiliated companies that are not rate regulated) for two most recent historical years (i.e. one year's statements must be filed, covering two years of historical actuals); if most recent finals n/a, draft financial statements filed and finals, along with summary of main changes if there are any, provided as soon as they are available. Alternatively, if distributor publishes financial statement on its website, a link may be provided	Schedule 1-5-1
15	A detailed reconciliation of the financial results shown in the audited financial statements with the regulatory financial results filed in the application, including a reconciliation of the fixed assets in order to, as one example, separate non□distribution businesses. This must include the identification of any deviations that are being proposed between the audited financial statements and the regulatory financial results, including the identification of any prior OEB approvals for such deviations.	Schedule 1-5-1
15	Annual Report and MD&A for most recent year of distributor and parent company, as available and applicable. If an Annual Information Form is filed publicly, a link should be provided	Schedule 1-5-2
15	Rating Agency Reports, if available; Prospectuses, information circulars etc. for recent and planned public debt and/or equity offerings	Schedule 1-5-3
15	Any change in tax status	No change in tax status
15	Description of existing accounting orders and departures from these orders, as well as any departures from the USoA	Schedule 1-5-5
15	Accounting Standards used for financial statements and when adopted	Schedule 1-5-6
15	If distributor conducting non-distribution businesses, confirmation that accounting treatment used has segregated these activities from rate regulated activities	Schedule 1-5-7; Schedule 1-5-8
Distributor Consolidation		
16	Information filed on the extent to which the distributor has investigated opportunities for consolidation or collaboration/partnerships with other distributors (contained within a dedicated section of the application); conclusions from investigations, including future plans	Schedule 1-3-5
16	If distributor has become party to a proposed or approved MAADs transaction since last rebasing, disclosure of this information in current application	Hydro Ottawa has not become a party to a proposed or approved MAADs.
A distributor filing an application to rebase following a consolidation must:		
16	Identify any incentives that formed part of the consolidation transaction if the incentive represents costs that are being proposed to remain or enter rate base and/or revenue requirement - list the exhibits in which incentives are discussed	Hydro Ottawa has not been part of a consolidation.
16	Specify whether and which commitments made to shareholders are to be funded through rates	Hydro Ottawa has not been part of a consolidation.
16	Detail of realized and projected savings as a result of consolidation compared to what was in the approved consolidation application and explanation of the nature of these savings (e.g. one-time, ongoing etc.)	Hydro Ottawa has not been part of a consolidation.
16	Detail of efficacy of any rate plan confirmed as part of MAADs	Hydro Ottawa has not been part of a MAADs.
16	Identify approved ACM or ICM from a previous Price Cap IR application it proposes be incorporated into rate base	Hydro Ottawa does not have an approved ACM or ICM from a previous Price Cap IR Application
Distributor rebasing for the first time following a consolidation that approved under the 2024 MAADs handbook must provide: (Distributors that Deferred Rebasing for Five Years or Less)		
17	Achieved efficiencies and savings associated with the various activities where efficiencies were expected (as documented in the consolidation application)	Hydro Ottawa has not been part of a consolidation.
17	A qualitative discussion on enhanced reliability and service quality as a consolidated distributor	Hydro Ottawa has not been part of a consolidation.
17	A qualitative discussion on enhanced reliability and service quality on a rate zone basis	Hydro Ottawa has not been part of a consolidation.
17	Total transaction and transition costs, and whether those have been recovered over the term of the deferred rebasing period through the savings achieved	Hydro Ottawa has not been part of a consolidation.
17	A discussion on any obstacles encountered since consolidation and how the distributor managed those obstacles. If applicable, a discussion of how obstacles affected the consolidated entity from reaching its targets should also be included	Hydro Ottawa has not been part of a consolidation.
Distributor rebasing for the first time following a consolidation that approved under the 2024 MAADs handbook must provide: (Distributors that Deferred Rebasing for More than Five Years)		
17	Updates to information filed as part of mid-term report based on achieved results, including for any period not covered by the initial mid-term report	Hydro Ottawa has not been part of a consolidation.

17	An updated version of the revenue requirement analysis provided in the consolidation application based on information known at the time of the filing, and a comparison and discussion of the consolidation application forecasts versus those filed in the post-consolidation rebasing application.	Hydro Ottawa has not been part of a consolidation.
Impacts of COVID-19 Pandemic		
17 & 18	Distributors generally expected to reflect the impacts of the COVID-19 pandemic in their applications, including applicable forecast information. This includes, but is not limited to, the distributor's load forecast, capital forecast, and OM&A forecast in the applicable sections of the application	Schedule 1-2-4, Schedule 1-2-5, Schedule 4-1-1, Schedule 4-1-2, Schedule 2-5-1, Schedule 2-5-5
EXHIBIT 2 - RATE BASE AND CAPITAL		
Rate Base		
18	Indication of whether capital expenditures are equivalent to in-service additions, and if so, variance explanations only required once. If not, specify whether variance explanations are on CAPEX or in-service additions basis	Schedule 2-1-1 for in-service additions, Schedule 2-5-5 for capital expenditures (CAPEX)
18	For rate base, opening and closing balances for each year, and the average of the opening and closing balances for gross assets and accumulated depreciation (discussion of methodology if applicant uses an alternative method); working capital allowance	Schedule 2-1-1
18	Table showing components of the last OEB-approved rate base, the proposed test year rate base and the variances	Schedule 2-1-1
Fixed Asset Continuity Schedule		
18	Completed Appendix 2-BA for each year - in Excel format	Attachment 2-2-1(A),(B)
18 & 19	Continuity statements and year-over-year variance analysis must be provided (year end balance, including capitalized interest during construction and overhead costs). Explanations provided where there is a year-over-year variance greater than the applicable materiality threshold If applicable, explanation for any restatement (e.g. due to change in accounting standards) and reconciliation to original statements Year over year variance analysis; explanation where variance greater than materiality threshold. The following comparisons must be provided: Hist. OEB-Approved vs Hist. Actual (for the most recent historical OEB-approved year) Hist. Act. vs. preceding Hist. Act. (for the relevant number of years) Hist. Act. vs. Bridge Bridge vs. Test	Schedule 2-1-1, Schedule 2-2-1, Schedule 2-5-5
19	Opening and closing balances of gross assets and accumulated depreciation correspond to fixed asset continuity statements. If not, an explanation and reconciliation must be provided (e.g. CWIP, ARO). Reconciliation must be between net book value balances reported on Appendix 2-BA and balances included in rate base calculation	Schedule 2-2-1
19	Distributor may include in-service balances previously recorded in DVAs, such as renewable generation/smart grid related accounts, in its opening test year property, plant and equipment balances, if these costs have not been previously reviewed and approved for disposition, and if disposition is being requested in this application. In this situation, the distributor must clearly show in its evidence (e.g. Appendix 2-BA) that the addition was included in the opening test year balances and must reconcile the closing bridge year and opening test year figures. Distributors must provide the same reconciliation for accumulated depreciation	Hydro Ottawa does not have in service additions previously recorded in a DVA that is included in opening rate base. However 2026's opening rate base is higher than 2025's closing approved rate base. See Schedule 2-1-1 for details.
19	Summary of approved and actual costs for any ICM(s) and/ or ACM approved in previous IRM applications	Hydro Ottawa does not have an approved ACM or ICM from a previous Price Cap IR Application
19	Continuity statements must reconcile to calculated depreciation expenses and presented by asset account	Schedule 2-2-1
19	All asset disposals clearly identified in the Chapter 2 Appendices for all historical, bridge and test years	Attachment 2-2-1(A),(B)
Depreciation, Amortization and Depletion		
20	Explanations for any useful lives of an asset that are proposed that are not within the ranges contained in the Kinectrics Report	No proposed changes to financial useful lives included in 2026-2030 Application
20	Depreciation, amortization and depletion details by asset group for historical, bridge and test years. Include asset amount and rate of depreciation/amortization. Must complete Appendix 2-C which must agree to accumulated depreciation in Appendix 2-BA under rate base	Attachment 2-7-1(B),(C)
20	Identification of any Asset Retirement Obligations and associated depreciation or accretion expense - includes the basis for and calculation of these amounts	Hydro Ottawa does not have any Asset Retirement Obligations on its books
20	Identification of historical depreciation practice and proposal for test year. Variances from half year rule must be documented and supporting rationale provided	Schedule 2-7-1
20	Copy of depreciation/amortization policy if available. If not, equivalent written description; summary of changes to depreciation/amortization policy since last CoS	Schedule 2-7-1
21	If filing under MIFRS, explanation of any deviations from the practice of depreciating significant parts or components of PP&E separately	No deviations from prior applications
21	If no changes have been made to depreciation policy or service lives since last rebasing, a statement confirming that this is the case is required. For any depreciation expense policy or asset service lives changes since its last rebasing application: - identification of the changes and detailed explanation for the causes of the changes -use of Kinectrics study or another study to justify changes in useful life - list detailing all asset service lives tied to USoA and reconcile this list to the USoA, detail differences in asset service lives and the TULs from Kinectrics and explain differences outside of minimum and maximum TUL range from Kinectrics; Appendix 2-BB if there have been changes in asset service lives since last rebasing	Schedule 2-7-1
Allowance for Working Capital		
21	Working Capital - 7.5% allowance or Lead/Lag Study. If previously ordered by OEB as part of last rate application to file Lead/Lag Study, must comply.	Schedule 2-3-1
21&22	If Lead/Lag Study conducted - leads and lags measured in days, dollar-weighted and reflects the distributor's actual billing and settlement processing timelines and considers relevant changes to operating environment	Hydro Ottawa is proposing to use the OEB default 7.5 allowance.

22	Cost of Power must be determined by split between RPP and non-RPP Class A and Class B customers based on actual data, use most current RPP (TOU) price. Calculation must include the impact of the most up to date Ontario Electricity Rebate. Distributors must complete Appendix 2-Z - Commodity Expense.	The split between RPP and non-RPP Class A and B are based on the most recent actual data (for year end 2023). Schedule 2-3-1, Section 4.1
22	Use most recent approved UTRs, Smart Metering Entity Charge and regulatory charges	UTR based on 2025 Approved rates; Smart Meter Entity and Regulatory charges based on 2025 Decision and Order, Schedule 2-3-1, Section 4.2 to 4.5
Distribution System Plan		
22	DSP filed as a stand-alone, self-sufficient element within Exhibit 2	Schedules 2-5-1 through 2-5-9
Policy Options for the Funding of Capital		
22&23	Distributor may propose ACM capital project coming into service during Price Cap IR (a discrete project documented in DSP) - provide information on need and prudence. For projects with an expected capital cost of $2 million or more, excluding general plant investments, includes documentation of the consideration of NWSs to meet the identified system need that will be addressed by the project(s) as articulated in the OEB's Benefit-Cost Analysis Framework for Addressing Electricity System Needs (BCA Framework) to assess the economic feasibility of NWSs.	N/A - Not proposing ACM as part of this application.
23	Identification that distributor is proposing ACM treatment for these future projects and provide the preliminary cost information, and ACM/ICM materiality threshold calculations - ACM Report provides further details on information required	Hydro Ottawa is not applying for an ACM in this application
23	Complete Capital Module Applicable to ACM and ICM	Hydro Ottawa is not applying for an ACM or ICM in this application
Addition of Previously Approved ACM and ICM Project Assets to Rate Base		
24	Distributor with previously approved ACM(s) and/or ICM(s) - schedule of ACM/ICM amounts proposed to be incorporated into rate base (i.e. PP&E and associated depreciation). Comparison of actual capital spending with OEB-approved amount and explanation for variances	Hydro Ottawa does not have an approved ACM or ICM from a previous Price Cap IR Application
24	Balances in Account 1508 sub-accounts; rate of interest prescribed by the OEB for DVAs for the respective quarterly period as published on the OEB's website	Hydro Ottawa does not have an approved ACM or ICM from a previous Price Cap IR Application
24	True-up calculation if material, comparing the recalculated revenue requirement based on actual capital spending relating to the OEB-approved ACM/ICM project(s) to the rate rider revenues collected in the same period; assumptions used in the calculation noted (e.g., half-year rule).	Hydro Ottawa does not have an approved ACM or ICM from a previous Price Cap IR Application
24	Accelerated capital cost allowance (CCA) should not be reflected in the ACM/ICM revenue requirement associated with these projects. Distributors should include the impact of the CCA rule change associated with the ACM/ICM project(s) in Account 1592 - PILs and Tax Variances – CCA Changes sub-account for CCA changes	Hydro Ottawa does not have an approved ACM or ICM from a previous Price Cap IR Application
Capitalization		
25	Capitalization Policy: provide policy including changes since last rebasing application. Confirm if no changes made to capitalization policy since last rebasing application.	Attachment 2-6-1(A)
25	Overhead Costs: complete Appendix 2-D	Attachment 2-6-2(A)
25	Burden Rates: identification of burden rates; if burden rates were changed since last rebasing, identification of the burden rates prior to the c	Attachment 2-6-2(A)
Costs of Eligible Investments for the Connection of Qualifying Generation Facilities		
26	See Appendix A	N/A - Hydro Ottawa is not seeking approval to recover the rate component of costs for Eligible Investments for the Connection of Qualifying Generation Facilities
General & Administrative Matters		
Ch5, p2	Use of terminology and formats set out in Ch. 5	Schedules 2-5-1 through 2-5-9
Investment Categories		
Ch5, pp 2, 3 & 4	Investment projects and programs grouped into one of four investment categories (i.e. system access, system renewal, system service, gen	Schedules 2-5-1 through 2-5-9
Distribution System Plan		
Ch5, p5	If a distributor's application uses alternative section headings and/or arranges the information in a different order, table provided that cross-references the headings/subheadings used in the application to the section headings/subheadings indicated in Ch. 5	Schedule 2-5-1
Ch5, p5	DSP duration minimum of 10 years, comprising of a historical and forecast period. The historical period is the first five years of the DSP duration, consisting of five historical years, ending with the bridge year. For distributors that have not filed a DSP within the past five years, the historical period is from the test year of a distributor's last cost or service application to the bridge year. The forecast period is the last five years of the DSP duration, consisting of five forecast years, beginning with the test year of the current cost of service application..	Schedule 2-5-5
Distribution System Plan Overview		
Ch5, p5	High-level overview of information filed in DSP which includes capital investment highlights and changes since last DSP; objectives distributor plans to achieve through DSP, which will be used as a baseline comparison in the performance measurement section below.	Schedule 2-5-1
Coordinated Planning with Third Parties		
Ch5, p5&6	The distributor must demonstrate that it has coordinated planning with third parties where appropriate. Explanation of whether consultations affected distributor's DSP, and if so, how; for consultations that affected DSP - overview of consultation and relevant material supporting the effects the consultation had on the DSP.	Schedule 2-5-2
Ch5, p6	Overview of consultation should include: purpose, outcome, whether the distributor initiated the consultation or was invited to participate in it, and the other participants in the consultation process	Schedule 2-5-2
Ch5, p6	A distributor should file the most recent regional plan. In the absence of a regional plan, the distributor should file a Regional Planning Status Letter from the transmitter.	Schedule 2-5-2(A)
Ch5, p6	Identification of any inconsistencies between DSP and any current Regional Plan. If there are any inconsistencies, explanation of the reasons why, particularly where a proposed investment in their DSP is different from the recommended optimal investment identified in the Regional Plan	Schedule 2-5-2

Ch5, p6 & OEB Letter, Jan. 11, 2022	Telecommunications Entities: See January 11, 2022 letter for further guidance to the regulation that requires distributors to consult with any telecommunications entity that operates within its service area when preparing a capital plan for submission to the OEB, for the purpose of facilitating the provision of telecommunications services, and include the following information in its capital plan: -number of consultations conducted and a summary of the manner in which the distributor determined with whom to consult; a summary of the results of the consultation; and a statement as to whether the results of the consultations are reflected in the capital plan and, if so, a summary as to how.	Schedule 2-5-2
Ch5, p6&7	REG: -confirmation if there are REG investments in region -if there REG investments proposed in DSP, demonstration of coordination with IESO, other distributors/transmitters (as applicable), and that investments proposed are consistent with Regional Infrastructure Plan - IESO letter in relation to REG investments	Schedule 2-5-2
Performance Measurement for Continuous Improvement		
Ch5, p7	Distribution System Plan: Summary of objectives for continuous improvement set out in last DSP and discussion on whether these objectives achieved. For objectives not achieved, explanation of how this affects current DSP and if applicable, improvements implemented to achieve the objectives in Section 5.2.1.	Schedule 2-5-3
Ch5, p7	Service Quality and Reliability: -5 historical years of SQRs; explanations for material changes in service quality and reliability and whether and how DSP addresses these issues -for reliability, any declining 5 year SAIDI/SAIFI trends explained -if reliability targets established in last DSP, any under-performance explained	Schedule 2-5-3
Ch5, p7	Completed Appendix 2-G; confirmation that the data is consistent with scorecard, or explanation of any inconsistencies	Attachment 2-5-3(A)
Ch5, p7&8	Summary of performance for historical period using methods and measures (metrics/targets) identified and how performance has trended over the period. Summary must include historical period data on: -all interruptions -all interruptions excluding loss of supply -all interruptions excluding major events and loss of supply for: SAIFI, SAIDI	Schedule 2-5-3
Ch5, p8	Summary of major events that occurred since last cost of service	Schedule 2-5-3
Ch5, p8	For each cause of interruption for last five historical years: number of interruptions that occurred as a result of the cause of interruption, number of customer interruptions that occurred as a result of interruption, number of customer-hours of interruptions that occurred as a result of the cause of interruption	Schedule 2-5-3
Ch5, p8	Distributor Specific Reliability Targets: -if establishing performance expectations based on something other than historical performance, evidence provided of capital and operational plan and other factors that justify the reliability performance the distributors plan to deliver -summary of any feedback from customers regarding reliability on distributors' system -distributors that use SAIDI and SAIFI performance benchmarks that are different than the historical average - evidence provided to support reasonableness of benchmarks	Hydro Ottawa is not proposing distributor specific reliability targets.
Planning Process		
Ch5, p9	Overview of planning process that has informed five-year capital expenditure plan; flowchart accompanied by explanatory text **may** be helpful	Schedule 2-5-4
Ch5, p9	Summary of important changes in distributor's AM process since last DSP	Schedule 2-5-4
Ch5, p9	Process: -provide processes used to identify, select, prioritize (including reprioritization over 5 year term), optimize, and pace execution of investments -demonstration that distributor has considered correlation between plan and customer's feedback and needs -demonstration that distributor has considered potential risks of proceeding/not proceeding with individual capital expenditures -demonstrate how it undertake grid optimization using an approach that considers the distributor’s whole system -consideration, where applicable, of assessing the use of distribution rate-funded NWSs, cost-effective implementation of distribution improvements affecting reliability, and meeting customer needs as acceptable costs to customers, and other innovative technologies -demonstration that distributor has a planning process for future capacity needs, which must include, among other aspects, increased adoption of electric vehicles	Schedule 2-5-4 through 2-5-9
Ch5, p10	Data -identification, description and summary of data used in processes above to identify, select, prioritize, optimize and pace investments over DSP	Schedule 2-5-4
Overview of Assets Managed		
Ch5, p10	Overview of service area (e.g. system configuration, urban/rural etc.) to support capital expenditures over forecast period; asset information (e.g. capacity, utilization, condition, failures/performance, asset risks, demographics) by major asset type that may help explain the specific need for the capital expenditure and demonstration of consideration of economic alternatives	Schedule 2-5-4
Ch5, p10	Statement as to whether distributor has had any transmission or high voltage assets deemed previously by the OEB as distribution assets, and whether there are any such assets that the distributor is asking the OEB to deem as distribution assets in the current application	Hydro Ottawa does not have any such assets

Ch5, p10&11	Description of whether distributor is a host and/or embedded distributor; identification of any embedded and/or host distributors; partially embedded status identified (including % of total load supplied through host); if host distributor, identification of whether there is a separate embedded class or if any embedded distributors are included in other classes	Schedule 2-5-4
Asset Lifestyle Optimization Policies and Practices		
Ch5, p11	Demonstration that distributor has carried out cost-effective system O&M activities to sustain as asset to the end of its service life (and can include references to the Distribution System Code)	Schedule 2-5-4
Ch5, p11	Explanation of processes and tools used to forecast, prioritize and optimize system renewal spending and how distributor intends to operate within budget envelopes	Schedule 2-5-4 through 2-5-7
Ch5, p11	Demonstration of consideration of potential risks of proceeding/not proceeding with individual capital expenditures	Schedule 2-5-6 through 2-5-9
Ch5, p11	Demonstration that the distributor has considered the future capacity requirements of the asset such that it does not need to be replaced prematurely due to capacity constraints	Schedule 2-5-4
Ch5, p11	Summary of important changes to the distributor's asset life optimization policies, processes, and tools since last DSP	Schedule 2-5-4
System Capability Assessment for REG and DER		
Ch5, p11	Provide list of restricted feeders by name, the feeder designation, the reason for the restriction, number of connected customers, and explain if there are plans to improve the distribution system's ability to connect distributed energy resources	Schedule 2-5-4
Ch5, p11&12	If a distributor has incurred or expects to incur costs to accommodate and connect renewable generation facilities that will be the responsibility of the distributor under the DSC, refer to Appendix A	Schedule 2-5-4
Non-Wires Solutions to Address System Needs		
Ch5, p12	Description of how distributor has taken NWSs into consideration in its planning process	
Ch5, p12	Explanation of proposed activity in the context of the DSP, including providing details on the system need that is being addressed, infrastructure investments that are being avoided or deferred as a result of NWS, and the prioritization of proposed NWS activity relative to other system investments in the DSP	
Ch5, p12&13	Evidence why the proposed NWS is the preferred approach (alone or in combination with an infrastructure solution) to meeting a system need, including an assessment of the projected benefits to customers relative to cost impacts, following the requirements of the BCA Framework.	
Ch5, p13	Demonstration that distributor has meaningfully explored contracting services from non-utility owned distributed energy resources for any rate funded, distributor-owned NWS proposal	
Capital Expenditure Summary		
Ch5, p13	Provide capital expenditure plan that sets out proposed expenditures on distribution system and general plant over a five-year planning period, including investment and asset-related operating and maintenance expenditures	Schedule 2-5-5; Schedules 2-5-6 through 2-5-9
Ch5, p13	Provide a snapshot of a distributor's capital expenditures over a 10-year period, including five historical years and five forecast years	Schedule 2-5-5
Ch5, p13	The entire cost of individual projects or programs allocated to one of the four investment categories based on the primary driver of the investment	Schedule 2-5-5
Ch5, p13	Completed Appendices 2-AA and 2-AB	Attachment 2-5-5(A),(B)
Ch5, p13&14	Analysis of distributor's capital expenditure performance for the DSPs historical period - should include explanation of variances by investment or category, including actuals v. OEB-approved/planned amounts for the applicant's last OEB-approved CoS or Custom IR application and DSP - explanation of variances between planned and actual volume of work completed and explanation of variances in a given year that are much higher or lower than the historical trend	Schedule 2-5-5
Ch5, p14	Analysis of distributor's capital expenditure performance for the DSPs forecast period; for investments that have a lifecycle >1yr, the proposed accounting treatment, including the treatment of the cost of funds for CWIP	Schedule 2-5-5, Attachment 2-6-1(A)
Ch5, p14	Analysis of capital expenditures in DSP forecast period v. historical	Schedule 2-5-5
Ch5, p14	Summary of any important modifications to typical capital programs since the last DSP	Schedule 2-5-5
Ch5, p14	Description of the impacts of capital expenditures on O&M for each year or statement that the capital plans did not impact O&M costs	Schedule 2-5-5
Ch5, p14	Statement that there are no expenditures for non-distribution activities in the applicant's budget	Schedule 2-5-5
Justifying Capital Expenditures		
Ch5, p14	Context on how overall capital expenditures over 5 years will achieve distributor's objectives; comment on lumpy investment years and rate impacts of capital investments in long term	Schedule 2-5-1 through 2-5-9
Material Investments		
For each project that meets materiality threshold set in Ch 2A or deemed by applicant to be distinct for any other reason, guidelines are:		
Ch5, p15	General information on the project/program - Need, scope, volume of work expected to be completed, key project timings (incl. key factors that affect timing), total expenditures (inc. contributions and economic evaluation as per DSC, as applicable), comparative historical expenditures, priority, alternatives considered, benefit-cost analysis (BCA) of recommended alternative, description of the innovative nature of investment if applicable. -Where an investment within the five year forecast period involves a Leave to Construct approval, provide summary of the evidence (as available), for that investment consistent with Chapter 4 of the filing requirements	Schedule 2-5-6 through 2-5-9

Ch5, p15&16	Evaluation criteria and information requirements for each project/program - Demonstration of need, and may include the need to address safety, cyber security, grid innovation, environmental, statutory/regulatory obligations - Where investment substantially exceeds materiality - business case justifying expenditure, alternatives (including NWSs,if applicable), benefits for customers, impact on distributor costs -If a distributor is requesting funding for an NWS, additional guidance on evidentiary requirements is provided in the NWS Guidelines	Schedule 2-5-6 through 2-5-9
Ch5, p16	Explanation of how innovative project is expected to benefit customers, such as improved reliability, enhanced customer services, efficient use of electricity, load management, greater efficiency through grid optimization, lower rates (long-term or short-term), enhanced customer choice, or any other benefit consistent with the OEB's mandate	Schedule 2-5-6 through 2-5-9
Benefit-Cost Analysis Framework		
The BCA Framework is mandatory when the projected capital cost of the proposed solution to an electricity system need (either NWS or traditional infrastructure) exceeds $2 million (excluding general plant investments)		N/A - not applicable to applications filed in 2025
Ch5, p17	Conduct pre-assessment to identify whether there is a reasonable expectation that an NWS may be a viable approach to meeting an identified need. Should the pre-assessment conclude that an NWS is a viable approach, a distributor should proceed with completing a BCA. The BCA should be filed along with the pre-assessment results	
Ch5, p17	BCAs are to be prepared for each specific system need	N/A - not applicable to applications filed in 2025
Ch5, p17&18	Distribution Service Test (DST) A distributor looking to file a BCA **must** employ the mandatory distribution service BCA and consider the mandatory quantitative/qualitative impacts to benefit/costs as outlined in the BCA Framework, and **must** include the Excel-based quantitative output template, BCA Data Filing Submission Template. The BCA **may** include the permitted DST qualitative impacts as applicable.	N/A - not applicable to applications filed in 2025
Ch5, p18&19	Energy System Test (EST) Distributors **are encouraged** to do an optional EST particularly if they believe an NWS offers significant benefits beyond those of distribution service. When an EST is conducted, the mandatory EST quantitative/qualitative impacts should be included, including the DST impacts as outlined in the BCA Framework.	N/A - not applicable to applications filed in 2025
Appendix A (if applicable)		
Ch5, Appendix A	Information on the capability of distribution system to accommodate REG investments, including a summary of the distributor's load and renewable energy generation connection forecast by feeder/substation (where applicable); information identifying specific network locations where constraints are expected to emerge due to forecast changes in load and/or connected renewable generation capacity	Schedule 2-5-4
Ch5, Appendix A	In relation to renewable or other distributed energy generation connections, the information that must be considered by a distributor and documented in an application (where applicable), includes: applications from renewable generators > 10 kW, number and MW of REG connections for forecast period, information from IESO and any other information about the potential for renewable generation in distributor's service area, capacity of Dx to connect REG, connection constraints	Schedule 2-5-1, 2-5-4
EXHIBIT 3 - CUSTOMER AND LOAD FORECAST		
Load Forecasts		
26	Weather normal load forecast provided	Attachment 3-1-1(B)
26	Table outlining any factors that influence the load forecast in distributor's service territory (e.g. demographics, customer composition etc.)	Attachment 3-1-1(B)
26	Explanation of the causes, assumptions and adjustments for the volume forecast, including all economic assumptions and data sources used (e.g. housing outlook & forecasts, other variables used in forecasting volumes)	Attachment 3-1-1(B)
26	Explanation of weather normalization methodology	Attachment 3-1-1(B)
26	Completed Appendix 2-IB; the customer and load forecast for the test year entered on RRWF, Tab 10	Attachment 3-1-1(A)
27 & 28	Multivariate Regression Model -rationale to support change if the proposed model's methodology differs from the methodology used in the most recent load forecast; discussion of modelling approaches considered and alternative models tested -statistics should include, but not limited to, the regression equations coefficients and intercepts (e.g. t-stats, model statistics including R2, adjusted R2, F-stat, root-mean-squared-error and Durbin-Watson statistic), including explanation for any resulting non-intuitive relationships -explanation of weather normalization methodology (including if monthly HDD and/or CDD are used they are based on either: 10 year avg. or proposed alternative approach with supporting evidence -definitions of HDD and CDD including: climatological measurement points and why appropriate as well as identification of base degrees -sources of data for endogenous and exogenous variables. Where a variable has been constructed, explanation of the variable data used and source. Where a distributor has constructed the demand variable to model billed consumption on a class-specific basis, a full explanation of the approach used to pro-rate or interpolate non-interval data (i.e. if billing data are not based on calendar monthly readings as obtained from interval or smart meters) must be provided, including an explanation of why the constructed demand series is suitable for modelling -any binary variables used must be explained and justified - the use of binary variables should be limited and overlap with other variables should be avoided -explanation of any specific adjustments made (e.g. to adjust for loss or gain of major customers or load, significant re-classifications of customers, etc.). Note locally purchased generation should be included in the total for purchased power -description of how CDM and NWS impacts and other exogenous factors have been accounted for in the historical period, and how CDM and NWS impacts, including any targets or forecasts in the bridge and test years, are factored into the test year load forecast -data and regression model and statistics used in customer and load forecast in Excel format	Schedule 3-1-1, Attachment 3-1-1(C)

28	NAC Model -rationale to support NAC methodology if the model use differs from the method used in the most recent load forecast -data supporting calculation of NAC values for each rate class -description of how CDM and NWS impacts and other exogenous factors have been accounted for in historical period and how CDM and NWS impacts, including any targets or forecasts in the bridge and test years, are factored into test year forecast -discussion of weather normalization assumptions used	The multivariate regression model was used
Incorporating CDM and NWS Impacts in the Load Forecast for Distributors		
28	Refer to NWS Guidelines for guidance, including supporting evidence required regarding incorporating historical and forecast impact of CDM and NWS acitivities in load forecast	Schedule 3-1-1
Accuracy of Load Forecast and Variance Analyses		
28	Completed Appendix 2-IB (2-IA provides further instructions for filling out 2-IB)	Attachment 3-1-1(A)
29	For customer/connection counts: -identification as to whether customer/connection count is shown in year end or average format -year-over-year variances in changes of customer/connection counts with explanation for changes in the definition of, or major changes made in the composition of each customer class -explanations of bridge and test year forecasts by rate class -for last rebasing, variance analysis between last OEB-approved and actuals with explanations for material differences	Schedule 3-1-1; Attachment 3-1-1(A), Schedule 3-1-2
29	For consumption and demand: -explanation and details to support how kWh are converted to kW for applicable demand-billed classes -year-over-year variances in consumption (kWh) and demand (kW or kVA - the latter for demand billed rate classes) by rate class and for system consumption overall (kWh) with explanations for material changes in the definition of or major changes over time (comparison done for both historical actuals against each other and historical weather-normalized actuals over time) -explanations of the bridge and test year forecasts by rate class (and how these vary from or are trending from both historical actuals and from weather-normalized actuals) -for last rebasing variance analysis between the last OEB-approved and the actual results with explanations for material differences	Schedule 3-1-2
29	All data and equations used to determine customers/connections, demand and load forecasts provided in Excel format	Attachment 3-1-1(C),Attachment 3-1-2(A)
EXHIBIT 4 - OPERATING EXPENSES		
Overview		
29&30	Brief explanation (quantitative and qualitative) of test year OM&A levels, how the distributor develops and receives approval of their OM&A budget, cost drivers and significant changes relative to historical and bridge years, trends in costs and relevant metrics including OM&A per customer (and its components) for the historical, bridge and test years, inflation rate assumed (if proposing different rate than IPI - provide explanation supporting proposal), business environment changes	Schedule 4-1-1, Schedule 4-1-2
OM&A Summary and Cost Driver Tables		
Inclusion of the following tables in evidence and all OM&A appendices filed:		
30	Summary of recoverable OM&A expenses; Appendix 2-JA	Attachment 4-1-2(A)
30	Recoverable OM&A cost drivers; Appendix 2-JB	Attachment 4-1-2(D)
30	OM&A programs table - Appendix 2-JC **or** OM&A by USoA Table - Appendix 2-JD	Attachment 4-1-2(B)
30	Recoverable OM&A Cost per customer and per FTE; Appendix 2-L	Attachment 4-1-2(C)
30	Distributors with 30k or more customers: present OM&A by program; Appendix 2-JC filed to provide OM&A details and variance analysis on a program basis. For each program, provide a definition of the USoA accounts included	Attachment 4-1-2(B)
30	Only distributors with less than 30k customers: option to file OM&A by program or USoA. If USoA chosen, 2-JD filed instead of 2-JC	Hydro Ottawa has more than 30k customers
30	For all distributors, the table provided (2-JC or 2-JD) must reflect the entire OM&A amount proposed to be recovered through rates. Information provided for bridge and test years.	Attachment 4-1-2(B)
30	Appendix 2-JB populated to provide information on the cost drivers of OM&A expenses; 2-JA broken down into major categories	Attachment 4-1-2(D)(A)
31	Identification of change in OM&A in test year in relation to change in capitalized overhead	Attachment 2-6-2(A)
OM&A Variance Analysis		
31	Re: 2-JC or 2-JD - variance analysis between: -Test Year vs Historical OEB approved -Historical OEB-Approved vs Historical Actuals (for the most recent historical OEB-approved year) -Test Year vs most recent Historical Actuals	Schedule 4-1-2
31	If OM&A expense detailed on USoA basis, variance analysis and explanation broken down by the five major OM&A categories as per 2-JA	OM&A Expense detailed by JC program
31	For all distributors, the variance analysis includes explanation of whether the change was within the distributor's control or not - distributors encouraged to provide explanations for costs above the threshold which have impacted historical trend	Schedule 4-1-1; Schedule 4-1-2
Workforce Planning and Employee Compensation		
31	Completed Appendix 2-K; information on labour and compensation includes total amount, whether expensed or capitalized	Attachment 4-1-3(D)
31	If there are three or fewer employees in any category, aggregate with the category to which it is most closely related. This higher level of aggregation must be continued, if required, to ensure that no category contains three or fewer employees.	There are no categories with fewer than three employees
31	Description of proposed workforce plans, including compensation strategy and any changes from previous plan	Attachment 4-1-3(A)(B)(C)

31&32	Discussion of the outcomes of previous plans and how those outcomes have impacted their proposed plans including an explanation of the reasons for all material changes to FTEs and compensation. Explanation for all years includes: - Variances with an explanation of contributing factors, inflation rates used for forecasts, and the plan for any new employees - basis for performance pay, eligible employee groups, goals, measures, and review process for pay-for-performance plans - relevant studies (e.g. compensation benchmarking)	Schedule 4-1-3; Attachments 4-1-3(A-F)
32	Details of employee benefit programs including pensions, OPEBs, and other costs charged to OM&A. A breakdown of the pension and OPEBs amounts included in OM&A and capital provided for the last OEB-approved rebasing application, and for historical, bridge and test years	Attachment 4-1-3(A)
32	Most recent actuarial report; tax section of evidence agrees with this analysis	Attachment 4-1-3(F)
32	For virtual distributors - Appendix K completed in relation to the employees of the affiliates who are doing the work of the regulated distributor. Provide the status of pension funding and all assumptions used in the analysis	Hydro Ottawa is not a virtual distributor
32	Indication if pension and OPEBs to be recovered using cash or accrual method. If cash method, sufficient supporting rationale and evidence for adopting cash method. If proposing to change the basis in which pension and OPEB costs are included in OM&A from last rebasing, quantification of impact of transition provided	Attachment 4-1-3(A)
Shared Services and Corporate Cost Allocation		
32	Identification of all shared services among affiliates; identification of the extent to which the applicant is a "virtual utility" and justification of proposed shared services and cost allocation	Schedule 4-2-1
33	For shared services among affiliated entities: type of service provided or received, pricing methodology	Schedule 4-2-1
33	Allocation methodology for corporate services, list of shared services, list of costs and allocators and how the allocator was derived, any third party review of cost allocation methodology	Schedule 4-2-1
33	Completed Appendix 2-N for service provided or received for historical actuals, bridge and test; including reconciliation with revenue included in Other Revenue	Schedule 4-2-1(A)
33	Shared Service and Corporate Cost Variance analysis - test year vs last OEB approved and test year vs most recent actual	Schedule 4-2-1
33	Identification of any Board of Director costs for affiliates included in LDC costs	Schedule 4-2-1 Shared Services and Corporate Cost Allocation confirms no Board of Directors-related costs for affiliated entities included in its costs.
Non-Affiliate Services, Regulatory One-Time Costs		
33&34	Purchases of Non-Affiliated Services - copy of procurement policy (including information on signing authority, tendering process, non-affiliate service purchase compliance)	Attachment 4-2-2(A)
34	For material transactions not in compliance with procurement policy, or that were undertaken pursuant to exceptions contemplated within the policy, an explanation as to why as well as a summary of the nature and cost of the product, and a description of the specific methodology used for selecting the vendor	
34	Information supporting the incremental costs associated with the preparation and review of the current application	Schedule 4-2-2
34	Identification of one-time costs in historical, bridge, test; explanation of cost recovery in test year. If no recovery of one-time costs is being proposed in the test year and subsequent IRM term, an explanation must be provided	Schedule 4-2-3
34	Completed Appendix 2-M, ongoing regulatory costs be included in the administration cost of Operations, Maintenance&Administration (OM&A) expense and material change be reported in Appendix 2-JB OM&A Cost Drivers.	Attachment 4-2-3(A)
LEAP, Charitable and Political Donations		
34	LEAP - the greater of 0.12% of forecasted service revenue requirement or $2,000 should be included in OM&A and recovered from all rate classes. If proposing LEAP funding higher than 0.12%, details of demographics provided	Schedule 4-2-5
35	For any charitable contributions claimed for recovery, detailed information provided	Schedule 4-2-6
35	Confirmation that no political contributions have been included for recovery	Schedule 4-2-6
Cost of Non-Wires Solution and Conservation and Demand Management		
36	Statement confirming that no costs for dedicated CDM staff to support IESO programs funded under the 2021-2024 CDM Framework are included in the revenue requirement	CDM staff were approved as part of Hydro Ottawa's 2021-2025 Application - details are available in Schedule 1-4-1
36	Distributor should generally not include any forecast costs associated with partnership in the IESO's Local Initiative Program (LIP) within its revenue requirement; distributor can seek to recover partnership costs at a future date through the LIP deferral account. If distributor plans to partner with the IESO for the LIP at the time of its cost of service application, description of proposed approach to partnership, including a forecast of LIP costs	No forecast costs associated with partnership in the IESO's Local Initiative Program have been included within Hydro Ottawa's revenue requirement
Funding Options for Non-Wires Solutions		
36	If NWSs included in COS where NWSs expected to come into service during Price Cap IR term, identification of if costs of such NWSs included in the revenue requirement, or if the distributor intends to propose treatment similar to an ACM for these future NWSs.	N/A - no ICM/ACM - NWS are discussed in Schedule 1-3-1 and Schedule 2-5-8
36	If the latter as noted above, supporting rationale provided (e.g., the preliminary cost information and ACM/ICM materiality threshold calculations to show that a similar capital project would qualify for ACM treatment based on the forecasted information at the time of the DSP and cost of service application)	N/A - no ICM/ACM
EXHIBIT 5 - COST OF CAPITAL AND CAPITAL STRUCTURE		
Capital Structure		
37	Use of most recent parameters issued by the OEB, subject to update if new parameters available prior to OEB decision. Alternatively - distributor specific cost of capital with supporting evidence and justification	Schedule 5-1-1
37	Completed Appendix 2-OA for last OEB approved and test years	Attachment 5-1-1(A)

37	Completed Appendix 2-OB for historical, bridge and test years with respect to long-term debt, short-term debt, preference shares, and common equity	Attachment 5-1-1(B)
37	Explanation for any material changes in capital structure or material differences between actual and deemed capital structure including: retirement of debt or preference shares and buy-back of common shares; short-term debt, long-term debt, preference shares and common share offerings	Schedule 5-1-1
Cost of Capital (Return on Equity and Cost of Debt)		
The following provided for each year:		
38	Calculation of cost for each capital component	Attachment 5-1-1(A)
38	Profit or loss on redemption of debt, if applicable	No profit or loss on redemption of debt has occurred or is expected to occur during the 2021-2025 rate term.
38	Copies of current promissory notes or other debt arrangements with affiliates	Attachment 5-1-1(C)-(M)
38	Explanation of debt rate for each existing debt instrument including an explanation on how the debt rate was determined and is in compliance with the policies documented in the 2009 Report or applicant's proposed approach	Schedule 5-1-1
38	Forecast of new debt in bridge and test year - details including estimate of rate and other pertinent information (e.g. affiliated debt or third party?)	Schedule 5-1-1
38	If proposing any rate that is different from the OEB guidelines, a justification of the proposed rate(s), including key assumptions	Hydro Ottawa is not proposing a rate different from OEB guidelines
38	Historical return on equity achieved	Schedule 5-1-1
38	Overview of financing strategy	Schedule 5-1-1
Not-for-Profit Corporations		
38	Requested capital structure and cost of capital (including the proposed cost of long-term and short-term debt and proposed return on equity)	This section (Not-for-Profit Corporations) is not applicable to Hydro Ottawa
38	Statement as to whether the revenues derived from the return on equity component of the cost of capital is to be used to fund reserves or will be used for other purposes	This section (Not-for-Profit Corporations) is not applicable to Hydro Ottawa
38	If the revenues derived from the return on equity component will be used to fund reserves, specifications for each proposed reserve fund and a description of the governance (policies, procedures, sign-off authority, etc.) that will be applied	This section (Not-for-Profit Corporations) is not applicable to Hydro Ottawa
39	If the revenues derived from the return on equity component will be used for other purposes, statement as to whether these revenues will be used for non-distribution activities (in the situation where the excess revenues are greater than the amounts needed to fund distribution activities); rationale provided supporting the use of the revenues in this manner. Also, governance (policies, procedures, sign-off authority, etc.) that will be applied to the funding of non-distribution activities provided	This section (Not-for-Profit Corporations) is not applicable to Hydro Ottawa
39	If there are approved reserves from previous OEB decisions provide the following: -the limits of any capital and/or operating reserves as approved by the OEB, and identifying the decisions establishing these reserve accounts and their limits -the current balances of any established capital and/or operating reserves	This section (Not-for-Profit Corporations) is not applicable to Hydro Ottawa
EXHIBIT 6 - REVENUE REQUIREMENT AND REVENUE DEFICIENCY OR SUFFICIENCY		
39	The following information must be provided in this exhibit (with cross references to where in the application further details can be found for each) excluding energy costs and revenues and unregulated costs and revenues: -determination of net income, statement of rate base, actual return on rate base, indicated rate of return, requested rate of return, deficiency or sufficiency in revenue, gross deficiency or sufficiency in revenue	Schedule 6-1-1; Attachment 6-1-1(A)-(E)
39	Revenue deficiency or sufficiency calculations net of electricity price differentials captured in the Retail Settlement Variance Accounts (RSVAs) and also net of any cost associated with low voltage (LV) charges or DVA balances of distribution expenditures/revenues being tracked through approved deferral and variance accounts for certain distribution assets (e.g. ICM and ACM capital projects) and for which disposition is not being sought in the application.	Schedule 6-1-1
40	Summary of drivers for test year deficiency/sufficiency, how much each driver contributes; references in application evidence mapped to drivers	Schedule 6-1-1
40	Impacts of any changes in methodologies on deficiency/sufficiency and on individual cost drivers contributing to it	Schedule 6-1-1
Revenue Requirement Work Form		
40	Completed RRWF. Revenue requirement, def/sufficiency, data entered in RRWF must correspond with other exhibits	Attachment 6-1-1(A)-(E)
40	If the enhanced RRWF cannot reflect a distributor's proposed rates accurately, the distributor must file its rate generator model	Attachment 6-1-1(A)-(E) reflect proposed rates accurately
40&41	For revenues - calculation of bridge year forecast of revenues at existing rates; calculation of test year forecasted revenues at each of existing rates and proposed rates	Schedule 6-1-1; Schedule 8-1-3
Income Tax or PILs		
41	Must provide detailed calculations of income tax or PILS. Must include a completed Excel version of the PILs model available on the OEB's website, including derivation of adjustments for historical, bridge and test years. Regulatory assets and liabilities must excluded from PILs calculations when they were created and when they were disposed, regardless of the actual tax treatment accorded those amounts.	Attachment 6-2-1(B)
41	Supporting schedules and calculations identifying reconciling items	Attachment 6-2-1(B)
41	Most recent federal and provincial tax returns	Attachment 6-2-1(A)
41	Financial Statements included with tax returns if different from those filed with application	The financial statements included with the tax returns are the same as those filed with the application
41	Calculation of tax credits; redact where required (filing of unredacted versions is not required)	Schedule 6-2-1
42	Supporting schedules, calculations and explanations for other additions and deductions	Attachment 6-2-1(B)

42	Completion of the integrity checks in the PILs Model	Attachment 6-2-1(B)
42	Accelerated CCA - full revenue requirement impact recorded in Account 1592 and the balance sought for review and disposition, method used in calculating the revenue requirement impact recorded in Account 1592, detailed calculations by year for the full revenue requirement impact recorded in Account 1592 in Excel format	Accelerated CCA included in modified PILS model for Test Years 2026 and 2027. No more Accelerated CCA after for Test Years 2028, 2029 and 2030. See Schedule 6-2-1 and Schedule 9-1-4.
42&43	May propose a mechanism to smooth the tax impacts over the five-year IRM term.	Schedule 6-1-1; Schedule 9-1-4
Other Taxes		
43	Account 6105 is not an OM&A account and should be excluded from all OM&A totals. Applicant should provide an explanation of how these tax amounts are derived.	Schedule 1-3-1
Non-recoverable and Disallowed Expenses		
43	Exclude from regulatory tax calculation any non-recoverable or disallowed expenses	Schedule 6-2-1
Other Revenue		
43	Completed Appendix 2-H, including the breakdown of each account showing the components of each	Attachment 6-3-1(A)
43&44	For each other distribution revenue account: -comparison of actual revenues for historical years to forecast revenue for bridge and test year, including explanations for significant variances year-over-year -revenue from any new proposed specific service charges, changes to rates, or new rules for applying existing specific service charges (incl. any credits to customers) -revenue from affiliate transactions, shared services, or corporate cost allocation. For each affiliate transaction identification of service, the nature of service provided, accounts used to record revenue, and costs to provide service -revenue from affiliate transactions recorded in Account 4375 -expenses from affiliate transactions recorded in Account 4380	Schedule 6-3-1 to Schedule 6-3-5; Attachment 6-3-1(A)
44	Balances recorded in Account 4375 and Account 4380 reconcile to the balances recorded in Appendix 2-N – Shared Services and Corporate Allocation for the three historical years, the bridge year and the test year. Any differences must be reconciled	Schedule 6-3-5
44	Revenue related to microFIT recorded as revenue offset in Account 4235 and not included as part of base revenue requirement	Schedule 6-3-4
44	Transfer pricing and allocation of cost methods do not result in cross-subsidization between regulated and non-regulated lines of business and compliance with article 340 of APH; explanations for any deviations	Schedule 6-3-5 and Schedule 4-2-1
44	Identification of any discrete customer groups that may be materially impacted by changes to other rates and charges.	Schedule 1-2-1
44	Revenues or costs (including interest) associated with deferral and variance accounts not included in other revenues.	Schedule 6-3-1
EXHIBIT 7 - COST ALLOCATION		
Cost Allocation Study Requirements		
45	Completed cost allocation study using the OEB-approved methodology or the distributor's study and model reflecting forecasted test year loads and costs and supported by appropriate explanations and live Excel spreadsheets; sheets 11 and 13 of the RRWF complete	Attachment 7-1-1(A) to Attachment 7-1-1(E)
45	Description of weighting factors, rationale for use of default values (if applicable)	Schedule 7-1-1
45	If distributor is choosing to use the same weightings as its previous rebasing application, a reference to the previous application provided	Weighting have been updated
45&46		Weighting have been updated
Load Profiles and Demand Allocators		
46	Update all classes' load profiles and update demand allocators	Attachment 7-1-1(G)
46	Discussion of how load profiles have been normalized for weather and any notable events impacting usage patterns	Attachment 7-1-1(G)
46	If multivariate regression model is used, the following provided: -statistics and statistical tests related to regression equation(s) coefficients and intercept, results of tests for autocorrelation and multicollinearity -explanation of the weather-normalization methodology including: relationship between demand and Heating and/or Cooling requirements, determination of normal weather: the hourly for daily Heating and/or Cooling required -sources of data used for both endogenous and exogenous variables. Where a variable has been constructed, explanation of the variable, data used and the source of the data provided -explanation of any specific adjustments made (e.g. to address gaps in historical meter data)	Multivariate regression was not used. See Attachmant 7-1-1(G) for a description of the method followed. Demand profiles were based on the load forecast, which was a result of a multivariate regression model. Data is available in Excel format as Attachment 3-1-1(C) (the statistics and results from this model that were used).
47	Data and regression model and statistics used in the weather normalization of load profiles provided in Excel format (includes showing the derivation of any constructed variables)	Regression modelling not used. See Attachment 7-1-1(G) for a description of the method followed. Excel Attachment 3-1-1(C)
47	Demand Allocators: spreadsheet and a description with calculations to show how demand allocators are derived from the historical weather normal or weather actual load profiles	Attachment 7-1-1(G)
47	Historical Average: Where the annual demand allocators are based on weather actual load profiles, at least three, and ideally five years of historical data should be used to perform weather normalization. Where the annual demand allocators are based on weather normalized load profiles, fewer years may be used	Attachment 7-1-1(G)

47&48	Host Distributor only - evidence of consultation with embedded Dx - statement regarding embedded Dx support for approach to allocation of costs - if embedded Dx is separate class - class in cost allocation study and RRWF - if new embedded Dx class - rationale and supporting evidence (cost of serving, load served, asset ownership information, distribution charges levied); include in cost allocation study and RRWF - if embedded Dx billed as GS customer - include with the GS class in cost allocation model and the RRWF. Provide cost of serving, load served, asset ownership information, distribution charges levied, appropriateness of rates for the GS class recovering costs of providing low voltage dx services to embedded distributor(s). Completed Appendix 2-Q - Cost of Serving Embedded Distributors	Hydro Ottawa is not a host distributor
48	microFIT - if the applicant believes that it has unique circumstances which would justify a different rate than the generic rate, documentation to support rate must be provided	Schedule 8-4-2
49	Standby Rates - distributors with interim standby rates to request approval for final standby rates and provide evidence confirming that they have advised all affected customers of the proposal. A distributor that seeks to establish new standby rates or seeks chaneges to it's standby charges, including a change in the methodology on which these rates are based, must provide full documentation supporting its proposal, and confirm that all affected customers have been notified of the proposed change(s).	Schedule 7-1-3
49	If new customer class or changing definition of existing classes, rationale and restatement of revenue requirement from previous cost of service	Hydro Ottawa is not proposing a new customer class
49	If eliminating or combining customer classes, rationale and restatement of revenue requirement from previous cost of service	Hydro Ottawa is not eliminating or combining customer classes
Class Revenue Requirements		
50	To support a proposal to rebalance rates, information on the revenue by class that would apply if all rates were changed by a uniform percentage provided. Ratios compared with the ratios that will result from the rates being proposed by the distributor.	Hydro Ottawa is not proposing to rebalance rates.
Revenue to Cost Ratios		
50&51	If R:C ratios outside dead band - cost allocation proposal to bring them within the OEB-approved ranges provided. In making any such adjustments, potential mitigation measures addressed if the impact of the adjustments on the rates of any particular class or classes is significant.	Schedule 7-1-1
51	If distributor proposes to continue rebalancing rates after the cost of service test year, the ratios proposed for subsequent year(s) must be provided	Schedule 7-1-1
51	If Cost Allocation Model other than OEB model used - exclude LV and exclude DVA balances and that revenues exclude rate riders, rate adders and the Smart Metering Entity Charge. Distributor must also ensure that information relevant to customer charge unit costs, microFIT unit costs and revenue is consistent with the output from the OEB's model	OEB Cost Allocation Model used
EXHIBIT 8 - RATE DESIGN		
51	Monthly fixed charges - 2 decimal places; variable charges - 4 decimal places; if departing from this approach, explanation provided as to why necessary and appropriate	Schedule 8-1-2; Attachment 6-1-1(A)-(E)
Fixed Variable Proportion		
51&52	The following is to be provided in relation to the fixed/variable proportion of proposed rates: -Current F/V for each rate class with supporting info -Proposed F/V for each rate class with explanation for any changes from current proportions -Table comparing current and proposed monthly fixed charges with the floor and ceiling as in cost allocation study Analysis must be net of rate adders, funding adders, and rate riders	Schedule 8-1-2
RTSRs		
52	Completed RTSR Model in Excel	Schedule 8-1-2(A)
52	RTSR information consistent with working capital allowance calculation; explanation for any differences	Schedule 8-1-2(A), Schedule 2-3-1
Retail Service Charges		
52	Distributors should note that the current retail service rates and charges were established on a generic basis and should refer to the most recent rate order for the current approved rates.	Schedule 8-4-3
Regulatory Charges		
53	If applying for a rate other than the generic rate set by the OEB, distributors must provide justification as to why their specific circumstances would warrant a different rate, in addition to a detailed derivation of their proposed rate	Schedule 8-3-2
Specific Service Charges		
53	If requesting new specific service charge or a change to the level of an existing charge, description of the purpose of charge, or reason for change to an existing charge; calculations to support charges	Schedule 8-4-1; Attachment 8-4-1(A)
53	Identification in the Application Summary all proposed changes that will have an impact on customers, including changes to other rates and charges that may affect a discrete group; identification of specific customers or customer groups impacted by each proposal	Schedule 1-2-1
53	Calculation of charge includes: direct labour, labour rate, burden rate, incidental, other	Attachment 8-4-1(A)
54	Identification of any rates and charges in Conditions of Service that do not appear on tariff sheet. Explain nature of costs, provide schedule outlining revenues or capital contributions recovered from these rates from last OEB-approved year to most recent actuals and the revenue or capital contributions forecasted for the bridge and test years. A proposal and explanation as to whether these charges should be included on tariff sheet	Schedule 6-3-5
54	Revenue from SSCs corresponds with Operating Revenue evidence	Schedule 6-3-5
Wireline Pole Attachment Charge		

54	Under the new regulation (Part VI.1: O. Reg. 842/21, (Electricity Infrastructure (Part VI.1 of the Act)), OEB is to establish a generic, province-wide pole attachment charge for 2022. The Regulation further requires the OEB to set the charge for 2023 and subsequent years by adjusting the prior year's charge for inflation. The Regulation provides that the annual pole attachment charge will be established by order without a hearing. A distributor is required to update the charge as per that order.	Schedule 8-4-1
Low Voltage Service Rates		
If the distributor is fully or partially embedded, information on the following must be provided:		
55	Forecast LV Cost	Schedule 8-2-1; Schedule 2-3-1
55	Actual LV Cost for the last three historical years along with bridge and test year forecasts; year-over-year variances and explanations for substantive changes in costs over time up to and including test year forecast	Schedule 8-2-1
55	Support for forecast LV, e.g. Hydro One Sub-Transmission charges	Schedule 2-3-1
55	Allocation of forecasted LV cost to customer classes (typically proportional to Tx connection revenue)	Attachment 8-2-1(A)
55	Proposed LV rates by customer class	Attachment 8-2-1(A)
Smart Meter Entity Charge		
55	Current OEB-approved smart metering charge (SMC) until the OEB approves any updated SMC	Schedule 8-2-2
Loss Factors		
55	Proposed SFLF and Total Loss Factor for test year	Attachment 8-2-3; Attachment 8-2-3(A)
56	Statement as to whether LDC is embedded including whether fully or partially	Schedule 8-2-3
56	Study of losses if required by previous decision	Attachment 8-2-3(B)
56	3-5 years of historical loss factor data - Completed Appendix 2-R	Attachment 8-2-3(A)
56	If proposed distribution loss factor >5% or is showing an increasing trend, explanation for level of losses, details of actions taken to reduce losses in the previous five years, and actions planned to reduce losses going forward	Proposed loss factor <5%
56	Explanation of SFLF if not standard	Standard SFLF was used and it is based on calculation in Appendix 2-R
56	Reconciliation between the application and RRR filing	Schedule 8-2-3
Tariff of Rates and Charges		
56	Current and proposed Tariff of Rates and Charges - **must be filed in Excel format and PDF format** Explanation and support of each change in the appropriate section of the application	Attachment 8-5-1(A),(B), Schedule 8-4-2
56	Completed Bill Impacts Model	Attachment 8-5-1(C)
56	Explanation of changes to terms and conditions of service if changes affect application of rates and rationale behind those changes	Schedule 8-4-2
56	Proposed tariffs must include applicable regulatory charges, and any other generic rates as ordered by the OEB	Attachment 8-5-1(A),(B)
Revenue Reconciliation		
56	Calculations of revenue per class under current and proposed rates; reconciliation of rate class revenue and other revenue to total revenue requirement (i.e. breakout volumes, rates and revenues by rate component etc.)	Schedule 8-1-3
57	Completed RRWF - Sheet 13 (table reconciling base revenue requirement against revenues recovered through proposed rates)	Attachment 6-1-1(A)-(E)
Bill Impact Information		
57	Completed Tariff Schedule and Bill Impacts Model. Bill impacts must identify existing rates, proposed changes to rates, and detailed bill impacts (including % change in distribution excluding pass through costs - Sub-Total A, % change in distribution - Sub-Total B, % change in delivery - Sub-Total C, and $ change in total bill)	Attachment 8-5-1(A)
57	Impact of changes resulting from the as-filed application on representative samples of end-users (i.e. volume, % rate change and revenue). Commodity and regulatory charges held constant	Attachment 8-5-1(A),(C)
57	Bill impacts provided for typical customers and consumption levels. Must provide residential 750 kWh and GS<50 2,000 kWh. Bill impacts must be provided for a range of consumption levels relevant to the service territory for each class	Attachment 8-5-1(A),(C)
57	If applicable, for certain classes where one or more customers have unique consumption and demand patterns, the distributor must show a typical impact and provide an explanation	No customers identified with unique consumption or demand patterns.
Rate Mitigation		
58	Mitigation plan if total bill increase for any customer class is >10% including: specification of class and magnitude of increase, description of mitigation measures, justification for mitigation measure including reasons if no mitigation proposed, other relevant information. The Tariff Schedule and Bill Impacts Model must reflect any mitigation plan proposed.	Schedule 8-5-2
Rate Harmonization Mitigation Issues		
58	If part of a MAADs transaction, and rate harmonization plan not yet approved by the OEB, a rate harmonization plan must be filed	No MAAD, rate harmonization not applicable
58	Plan includes a detailed explanation and justification for the implementation plan, and an impact analysis	No MAAD, rate harmonization not applicable
58	If impact of COS increases and harmonization effects result in total bill increases for any customer class exceeding 10%, discussionion of proposed measures to mitigate increases in its mitigation plan, or justification provided as to why mitigation is not required	No MAAD, rate harmonization not applicable
58	Migration plan that includes fully harmonizing rates that is to be accomplished over more than one year must be supported by a detailed plan for accomplishing this during the subsequent Price Cap IR period	No MAAD, rate harmonization not applicable
EXHIBIT 9 - DEFERRAL AND VARIANCE ACCOUNTS		
58&59	Summary table showing all active DVAs not disposed of yet, showing principal and interest/carrying charges, total balance for each account, whether account being proposed for disposition and whether the account is proposed to be continued or discontinued	Schedule 9-1-1; Schedule 9-1-3

59	In a separate section under the summary table: - For any account identified in the summary table as not being proposed for disposition, provide an explanation as to why it is not being proposed for disposition - For any Group 2 account identified in the summary table that are proposed to be discontinued, provide an explanation as to why it is being discontinued	Schedule 9-1-1; Schedule 9-1-3; Schedule 9-3-1
59	If applicable, description of DVAs that were used differently than as described in the APH, relevant accounting order or other OEB document	Schedule 9-1-3
59	Completed DVA continuity schedule for period from last disposition to present - live Excel format. Continuity schedule must show separate itemization of opening balances, annual adjustments, transactions, dispositions, interest and closing balances for all active DVAs. The opening principal amounts and interest amounts for Group 1 and 2 balances, shown in the DVA Continuity Schedule, must reconcile with the last applicable approved closing balances.	Attachment 9-3-1(A)
59	Explanation if account balances in continuity schedule differs from trial balance reported through RRR and documented in AFS - included in tab Appendix A of DVA schedule. This includes all Account 1508 sub-accounts. A reconciliation of all the Account 1508 sub-accounts to the Account 1508 control account reported in the RRR is to be provided in the DVA continuity schedule	Attachment 9-3-1(A)
59&60	Statement whether any adjustments made to DVA balances previously approved by OEB on final basis - the OEB expects that no adjustment will be made to any deferral and variance account balances previously approved by the OEB on a final basis. If any adjustments have been made, explanation for the nature and the amount of the adjustment(s), and appropriate supporting documentation, under a section titled “Adjustments to Deferral and Variance Accounts”	Schedule 9-1-1
60	Confirmation of use of interest rates established by the OEB by month or by quarter for each year; most recently published rate used for future periods	Schedule 9-1-1
Disposition of Deferral and Variance Accounts		
60	Refer to DVA Continuity Schedule Instructions for instructions on completing the DVA Continuity Schedule, annual updates and discussions on default treatments and expectations for DVAs	Attachment 9-3-1(A)
60	Provide confirmation that a distributor is allocating DVAs using an approved allocator. If proposing to allocate a DVA which the OEB has not established an allocator, proposed allocation based on cost driver must be provided with justification; indication of proposed billing determinants, including charge type for recovery purposes and included in cont. schedule	Attachment 9-3-1(A)
60	Propose rate riders that dispose of the balances. If the distributor is proposing an alternative recovery period other than one year, explanation provided	Balances are proposed to be disposed of in 2026
60	Provide support (e.g., explanations, calculations) on how each material Group 2 balance is determined. For utility-specific Group 2 accounts that are not material, provide a brief explanation of the account balance and the relevant accounting order	Schedule 9-1-3; Schedule 9-3-1
Disposition of Accounts 1588 and 1589		
61	If a distributor has not implemented OEB’s February 21, 2019 accounting guidance, indication that this is the case	Hydro Ottawa has implemented the OEB’s February 21, 2019 accounting guidance
61	Indication of the year in which Account 1588 and Account 1589 balances were last approved for disposition, and whether the balances were approved on an interim or final basis. If the balances were last disposed on an interim basis, indicate the year in which balances were last disposed on a final basis	Schedule 9-3-1
61	If requesting final disposition of balances for the first time following implementation of the accounting guidance, confirmation that accounting guidance has been implemented fully effective January 1, 2019	Hydro Ottawa has requested final disposition of Accounts 1588 & 1589 in previous applications, subsequent to the implementation of the accounting guidance
60 & 61	In order to request for final disposition of historical balances as part of the current application, confirmation that these balances have been considered in the context of the accounting guidance and provide a summary of the review performed. Discussion on the results of the review, any systemic issues noted, and whether any material adjustments to those balances have been recorded. Summary and description of each adjustment made to the historical balances provided	Schedule 9-1-2
61	Commodity Accounts Analysis Workform (Formerly GA Analysis Workform) (in live Excel format) for each year that has not previously been approved by the OEB for disposition. If the distributor is adjusting the Account 1589 balance that was previously approved on an interim basis, the Commodity Account Analysis Workform must be completed from the year after the distributor last received final disposition for Account 1589	Attachment 9-3-1(B)
61	As described in Note 5 in the Commodity Accounts Analysis Workform, reconciliation of any discrepancy between the actual and expected balance by quantifying differences (e.g. true-ups between estimated and actual costs and/or revenues). Any remaining unexplained discrepancy between the actual and expected balance that is greater than +/- 1% of the total annual IESO GA charges will be considered material and warrant further investigation.	Schedule 9-1-2; Schedule 9-3-1; Attachment 9-3-1(B)
62	Completed reasonability test for the balance in Account 1588. The reasonability test is included in the Commodity Accounts Analysis Workform.	Attachment 9-3-1(B)
Disposition of Account 1580, Sub-account CBR Class B Variance		
62	Proposed disposition of Account 1580 sub-account CBR Class B in accordance with the CBR Accounting Guidance. Must be disposed over one year. - Account 1580 sub-account CBR Class A is not to be disposed through rates proceedings but rather follow the OEB’s accounting guidance - Refer to DVA Continuity Schedule Instructions for further details on the treatment of CBR related sub-accounts	The disposition of Group 1 accounts, including sub-account 1508 CBR Class A will be provided at a later stage in this application
Disposition of Account 1595		
62	Distributors are expected to request disposition of residual balances in Account 1595 Sub-accounts for each vintage year once, on a final basis	Schedule 9-3-1, details on the disposition of Group 1 accounts, including sub-account 1595 for vintage year(s) will be provided at a later stage in this application
63	Explanation for any material residual balances being proposed for disposition, including quantifying significant drivers of the residual balance	There are no material residual 1595 balance being proposed for disposition

Disposition of Retail Service Charges Related Accounts		
63	If there is a balance in 1518 or 1548, distributor must: - confirm variances are incremental costs of providing retail services - state whether Article 490 of APH has been followed; explanation if not followed	Nil balance for accounts 1518 & 1548
63	If the balances in Account 1518, Account 1548, or Account 1508 Sub-account Retail Service Charges Incremental Revenue are material, the distributor must identify drivers for the balance(s) and provide schedule identifying all revenues and expenses listed by USoA that are incorporated into the variances	Nil balance for accounts 1518 & 1548
63&64	The OEB established a new variance account for electricity distributors that no longer used the RCVAs. The balance in the account, as well as in Accounts 1518 and 1548, would be disposed to ratepayers in a future rate application, and the account subsequently closed. Distributors that have not yet done so in a COS application may forecast balances up to the end of the incentive rate-setting period and the OEB may consider disposing of the forecast amounts	Schedule 9-1-3; Schedule 9-3-1; Attachment 9-1-3(A)
Disposition of Account 1592, Sub-account CCA Changes		
64	Provide full revenue requirement impact recorded in Account 1592, Sub-account CCA Changes and the balance sought for review and disposition	Schedule 9-1-4
64	Calculations for accelerated CCA differences per year, based on actual capital additions. Calculations include: underpreciated capital cost continuity schedules for each year itemized by CCA class, calculated PILs/tax differences, grossed-up PILs/tax differences, other applicable information	Schedule 9-1-4; Attachment 9-1-4(A)
64	Confirmation that Account 1592 amounts related to ICM/ACM have been included in the account, if applicable	Hydro Ottawa used Custom IR Framework
64	Reconciliation of these amounts to the amounts presented in Account 1592 sub-account CCA changes in the DVA continuity schedule	Schedule 9-1-4; Attachment 9-3-1(A)
64	If a distributor does not have a balance in this sub-account, the distributor must explain why	Balance exists sub-account as detailed in Schedule 9-1-4
Disposition of Account 1509 Impacts Arising from the COVID-19 Emergency		
65	If requesting disposition of any amounts related to the COVID-19 Account, the following, at a minimum is to be provided: -Discussion regarding the interactions between the COVID-19 Account and other existing generic or utility-specific accounts, including a determination that there is no double-counting between multiple ratemaking mechanisms -Calculation showing that the distributor passes the ROE-based means tests, including limitations on recoveries when various ROE thresholds are reached, and that the appropriate recovery rates for each sub-account have been applied -Supporting calculations for the annual amounts recorded in each of the sub-accounts, including the methodology used to measure incremental costs and savings, as applicable - Discussion of causation, materiality, prudence of any amounts recorded in the sub-accounts, including all identified savings and cost reductions -Discussion of whether the distributor would be able to reasonably forecast any further entries in the account, up to the effective date of the new rates, so that the account may be disposed in its entirety in the current proceeding (and whether the distributor would be amenable to such an approach) -Statement confirming proposed discontinuation of the COVID-19 Account, effective the same date as the new rates. If this is not the case, supporting rationale provided	Hydro Ottawa has not recorded amounts into the COVID 19 account
Disposition of Account 1508, Sub-account Pole Attachment Revenue Variance		
66	A table showing the calculation of the account balance, the annual balance broken down customer type, if applicable and: -the number of poles used in the calculation -the pole attachment charge incorporated in rates -the updated charge May also foecast the balance to the effective date of its new rates	Schedule 9-1-3
66&67	Distributors requesting disposition of any amounts recorded in the GOCA Variance Account are to file, at a minimum, the following information: -A statement confirming that distributor has reflected the GOCA impact in the locate costs of the test year's revenue requirement - The proposed disposition of the GOCA Variance account under Account 1508 Sub-Account GOCA Variance Account and discontinuance of the account after the rebasing application - Rationale needs to be provided if the distributor proposes to continue the GOCA Variance account in the rate term	Schedule 9-1-1, Schedule 9-1-3, Schedule 9-3-1
Disposition of Account 1511 Incremental Cloud Computing Implementation Costs		
67	Distributors requesting disposition of any amounts recorded in the Cloud Computing Implementation Account are to file, at a minimum, the following information: -A discussion and supporting explanation for the annual amounts recorded in the account, including the methodology used to measure incremental costs and offsetting savings, as applicable. If there are no offsetting savings, explanation should be provided - A list of the cloud solution(s), actualor forecast amount(s), type(s) of expenditure, adn nature of costs -A list of costs requested by projects (each with the business purpose of the projects) and a statement for each project regarding whether the cost associated for each project is material -A discussion of whether the distributor would be able to reasonably forecase any futher entries in the account, up to the effective data of new rates, so that the account may be disposed in its entirety in the current proceeding (and whether the distributor would be amenable to such an approach) - A statement confirming that the distributor proposes discontinuation of the Cloud Computing Implementation Account, effective the same date as the new rates	Schedule 9-1-3, Hydro Ottawa is not requesting disposition of Account 1511
Disposition of Distributor-Specific Accounts		

68	For any material, distributor-specific accounts requested for disposition (e.g., Account 1508 sub-accounts), supporting evidence showing how the annual balance is derived and relevant accounting order should be provided. For distributor-specific accounts requested for disposition that are not material, provide a brief explanation for the account balance and the relevant accounting order.	Schedule 9-1-3; Schedule 9-3-1
Establishment of New Deferral and Variance Accounts		
68	If new DVA - evidence provided which demonstrates that the requested DVA meets the following criteria: causation, materiality, prudence; include draft accounting order with description of the mechanics of the account, provide examples of general journal entries and the proposed account duration	Schedule 9-2-1
Lost Revenue Adjustment Mechanism Variance Account		
69	In preparing claims related to disposition of outstanding LRAMVA balances, distributors may seek to claim savings from Conservation First Framework (CFF) programs, and from programs they delivered through the Local Program Fund that was part of the Interim Framework. Distributors should provide sufficient supporting documentation on project savings to support their claim	Attachment 9-1-5(A)
Disposition of LRAMVA		
69	Disposition sought of all outstanding LRAMVA balances related to previously established LRAMVA thresholds, if possible	Schedule 9-1-5
Distributors with zero balance in the LRAMVA (including those with LRAM-eligible amounts previously approved on a prospective basis):		
70	Indicate this fact in its application and advise that it is not requesting any disposition	N/A - Hydro Ottawa does not have a zero balance in the LRAMVA
Distributors with non-zero balance in the LRAMVA:		
70	A distributor that does not have a confirmed zero balance in the LRAMVA should seek disposition as part of its application, with supporting information, or provide a rationale for not doing so.	Schedule 9-3-1
Continuing Use of the LRAMVA for New NWS Activities		
70	Indication of whether distributor is requesting an LRAMVA for one or more activities related to distribution rate-funded NWS activities or LIP activities if this request has not been addressed in a previous application	N/A - Hydro Ottawa is not proposing an LRAMVA for activities related to distribution rate-funded NWS activities or LIP activities
Appendix A Cost of Eligible Investments for the Connection of Qualifying Generation Facilities		
Appendix A	If applicable, proposal to divide the costs of eligible investments between the distributor’s ratepayers and all Ontario ratepayers per O.Reg. 330/09	Hydro Ottawa does not have such costs
Appendix A	For distributors that are already receiving rate protection as a result of a previous application the new (current) cost of service application should include an update to include the actual costs incurred for the investments as well as a depreciation adjustment to calculate a new capital amount for input into Appendices 2-FA through 2-FC. This would generate a new up-to-date rate protection amount for the test year and beyond, which will be subject to the materiality threshold	Hydro Ottawa does not have such costs

GLOSSARY

ACA - Asset Condition Assessment

AFUDC - Allowance for Funds Used During Construction

ADMS - Advanced Distribution Management System

AED – Automated External Defibrillators

AIFR - All Injury Frequency Rate

AFT - Affordability Fund Trust

AGM - Annual General Meeting

AI - Artificial Intelligence

AMC - Asset Management Council

AMI - Advanced Metering Infrastructure

AMPs - Asset Management Plans

AMRP - Asset Management Risk Procedure

AMS - Asset Management System

AODA - Accessibility for Ontarians with Disabilities Act

AON - Account Overdue Notice

APB - Activity and Program Based Benchmarking

APH - Accounting Procedures Handbook

Approved Settlement Agreement - Hydro Ottawa 2021-2025 Custom Incentive Rate-Setting Approved Settlement, EB-2019-0261 (September 18, 2020)

APA - Arrears Payment Arrangement

ARC - Affiliate Relationships Code for Electricity Transmitters and Distributors

ASHP - Air Source Heat Pump

AWE - Average Weekly Earnings

BCA Framework - Benefit-Cost Analysis Framework

BCM - Business Continuity Management

BCR - Benefit to Cost Ratio

BESS - Battery Energy Storage System

BEV - Battery Electric Vehicle

BOMA - Building Owners and Managers Association

BTM DER - Behind the Meter Distributed Energy Resource

B&V - Black & Veatch Management Consulting, LCC

C&I - Commercial and Industrial

C&I Rate Design - Commercial and Industrial Rate Design

CA Study - Cost Allocation Study

CAD - Canadian Dollar

CAGR - Compound Annual Growth Rate

CAIDI - Customer Average Interruption Duration Index

CanMAG - Canadian Mutual Assistance Group

CAPEX - Capital Expenditures

CBR - Capacity Based Recovery

CC&B - Customer Care & Billing

CCA - Capital Cost Allowance

CCC - Consumers Council of Canada

CCD - Cooling Degree Day

CDH - Cooling Degree Hours

CCO - Chief Customer Officer

CCRA - Connection and Cost Recovery Agreement

CDM - Conservation and Demand Management

CDP - Community Design Plans

CEA - Canadian Electricity Association

CEAP - COVID-19 Energy Assistance Program

CEATI - Centre for Energy Advancement through Technological Innovation

CEDO - Chief Electricity Distribution Officer

CEITC - Clean Energy Investment Tax Credit

CEMO - Corporate Energy Management Office

CEO - Chief Executive Officer

CER - Canada Energy Regulator

CFF - Conservation First Framework

CFO - Chief Financial Officer

CGAPP - Canadian Generally Accepted Accounting Principles

CHRO - Chief Human Resource Officer

CIA - Connection Impact Assessment

CIR - Custom Incentive Rate-Setting

CIS - Customer Information System

CITO - Chief Information and Technology Officer

City - City of Ottawa

CLD - Coalition of Large Distributors

CMI - Customer Minutes Interrupted

CMIP5 - Coupled Model Intercomparison Project Phase 5

CMIP6 - Coupled Model Intercomparison Project Phase 6

C&I - Commercial & Industrial

COS - Conditions of Service

COSWG - Conditions of Service Working Group

CP - Coincident Peak

CP&G - Corporate Planning & Governance

CPEF - Custom Price Escalation Factor

CPI - Consumer Price Index

CPP - Canada Pension Plan

CROF - Custom Revenue OM&A Factor

CRM - Customer Relationship Management

CRVA - Climate Risk and Vulnerability Assessment

CSA - Canadian Standards Association

CSR - Customer Service Representative

CSRM - Customer-Specific Reliability Measures

Custom IR - Custom Incentive Rate-Setting

CVPM - Customer Value Performance Metrics

CWIP - Construction-Work-in-Progress

Cx - Customer Experience

DA - Distribution Automation

Dashboard - Electricity Utility Performance Dashboard

DBRS - Dominion Bond Rating Service Inc.

DDI - Due Diligence Inspections

DR - Demand Response

DER - Distributed Energy Resource

DERCP - Distributed Energy Resources Connection Procedure

DERM - Distributed Energy Resource Management

DESN - Dual Element Supply Network

DFR - Dielectric Frequency Response

DGA - Dissolved Gas Analysis

DMS - Distribution Management System

DND - Department of National Defence

DRC - Distributed Resource Coalition

DS - Distribution Station

DSC - Distribution System Code

DSP - Distribution System Plan

DSO - Distribution System Operator

DST - Distribution Service Test

DVA - Deferral and Variance Account

EAM - Efficiency Adjustment Mechanism

EAM - Enterprise Asset Management

EC - Electricity Canada

ECA - Electrical Contractors Association

ECA Ottawa - Electrical Contractors Association of Ottawa

ECCC - Environment and Climate Change Canada

ED - Environmental Defence

EDA - Electricity Distributors Association

eDSM - Electricity Demand-Side Management

EDDVAR - Electricity Distributors’ Deferral and Variance Account Review

EEI - Edison Electric Institute

EFA - Emergency Financial Assistance

EFT - Electronic Funds Transfer

Electricity Act - Electricity Act, 1998

EMT - Executive Management Team

EMV - Evaluation, Measurement, and Verification

Enbridge - Enbridge Inc.

ENDM - Ministry of Energy, Northern Development and Mines

Energy Probe - Energy Probe Research Foundation

EOL - End of Life

EPP - Energy Performance Program

EPRF - Energy Probe Research Foundation

ERF - Energy Resource Facility

EPR - Ethylene Propylene Rubber

ERM - Enterprise Risk Management

ERMS - Enterprise Risk Management System

ERP - Enterprise Resource Planning

ERP - Ethylene Propylene Rubber

ESA - Electrical Safety Authority

ESB - Enterprise Service Bus

EST - Energy System Test

ES&C - Electricity Safety and Conservation

ESG - Environmental, Social and Governance

ESM - Earnings Sharing Mechanism

ETR - Estimated Time of Restoration

EV - Electric Vehicle

EWRB - Energy and Water Reporting and Benchmarking

FAN - Field Area Network

FAWG - Financial Assistance Working Group

FCI - Fault Circuit Indicator

FCR - First Contact Resolution

FDD - Final Domestic Demand

FEMI - Feeders Experiencing Multiple Interruptions

FERC - Federal Energy Regulatory Commission

FES - Fall Economic Statement

FIT - Feed in Tariff

FLI - Feed Loader Index

FLISR - Fault Location, Isolation and Service Restoration

FPI - Feeder Performance Index

FRED - Federal Reserve Economic Data

FTE - Full-Time Equivalent

GA - Global Adjustment

GAAP - Generally Accepted Accounting Principles

GEA - Green Energy Act

GOBHA - Greater Home Builder's Association

GOCA - Getting Ontario Connected Act

GOES - Grain Orientated Electric Steel

GDP-IPI - Implicit Price Index for Gross Domestic Product

GHG - Greenhouse Gas

GIS - Geographic Information System

GMRC - Governance and Management Resources Committee

GOHBA - Greater Ottawa Home Builders' Association

GPS - Global Positioning System

GS - General Service

GWh - Gigawatt-Hour

Handbook - Handbook for Utility Rate Applications

HAP - Home Assistance Program

HCI - Hydroelectric Contract Initiative

HDD - Heating Degree Day

HDH - Heating Degree Hours

HI - Asset Health Index

HESOP - Hydroelectric Standard Offer Program

HLR - Hourly labour rate

HOCC - Hydro Ottawa Capital Corporation

HOEP - Hourly Ontario Energy Price

HOESI - Hydro Ottawa Energy Services Inc.

HR - High Rise

HR - Human Resources

HST - Harmonized Sales Tax

HVAC - Heating, Ventilation and Air Conditioning

HVDS - High Voltage Distribution Station

Hydro One - Hydro One Networks Inc.

Hydro Ottawa - Hydro Ottawa Limited

IAS - International Accounting Standard

IaaS - Infrastructure-as-a-Service

IASB - International Accounting Standards Board

IBEW - International Brotherhood of Electrical Workers

ICC - Incident Command Centre

ICD - Institute of Corporate Directors

ICE - Internal Combustion Engine

ICI - Industrial Conservation Initiative

ICSRS - Information Classification & Scheme and Retention Schedule

IDAMS - International Distribution Asset Management Study

IDF - Intensity-Duration-Frequency

IEEE - Institute of Electrical and Electronics Engineers

IESO - Independent Electricity System Operator

IF - Interim Framework

IFRS - International Financial Reporting Standards

IM - Information Management

Innovative - Innovative Research Group

IoT - Internet of Things

IR - Infra-Red

IRC - Investment Review Committee

IRM - Incentive Regulation Mechanism

IRRP - Integrated Regional Resource Plan

IT - Information Technology

ITA - Income Tax Act

ITIC - Information Technology Industry Council

ITOM - IT Operations Management

IVR - Interactive Voice Response

JDE - J.D. Edwards

JHSC - Joint Health and Safety Committee

KAM - Key Account Management

KNR+ - Kanata North Retrofit

KPI - Key Performance Indicators

KRI - Key Risk Indicators

kV - Kilovolt

kW - Kilowatt

kWh - Kilowatt-hours

LAC - Locate Alliance Consortium

LAN - Local Area Network

LAPS - Local Achievable Potential Study

LAP - Local Achievable Study

LC - Large Commercial

LDC - Local Distribution Company

LDEV - Light-Duty Electric Vehicles

LEAP - Low-Income Energy Assistance Program

LEAP EFA - Low-Income Energy Assistance Program Financial Assistance

LEED - Leadership in Energy and Environmental Design

LIP - Local Initiatives Program

LLR - Landlord Reversion

LMI - Labour Market Insights

LoS - Loss of Supply

LPC - Late Payment Charge

LPSS - Lodestar Profiling and Settlement Software

LR - Low Rise

LRAM - Lost Revenue Adjustment Mechanism

LRAMVA - Lost Revenue Adjustment Mechanism Variance Account

LRT - Light Rail Transit

LTC - Leave to Construct

LTE - Long-Term Evolution

LTD - Long-Term Disability

LTLT - Long Term Load Transfer

LTR - Limited Time Rating

LV - Low Voltage

LWDSR - Lost Workday Severity Rate

M&R - Maintenance and Reliability

MAA - Merger, Amalgamation, Acquisition

MED - Major Event Day

MD&A - Management Discussion and Analysis

MDM/R - Meter Data Management/Repository

MDS - Meter Data Services

MECP - Ministry of the Environment, Conservation and Parks

Mercer - Mercer Canada

MHL - MyHydroLink

MicroFIT - Micro Feed in Tariff

MIFRS - Modified International Financial Reporting Standards

MILP - Mixed Integer Linear Programming

MIMO - Move-in/Move-out

MIP - Material Investment Plan

MOE - Ministry of Energy

MOL - Ministry of Labour

MPAC - Municipal Property Assessment Corporation

MRP - Market Renewal Program

MTS - Municipal Transformer Station

MURB - Multi-Unit Residential Building

MUSH - Municipalities, Universities, Schools and Hospitals

MVA - Mega Volt Ampere

MW - Megawatt

MWM - Mobile Workforce Management

MWh - Megawatt-hour

MyAccount - Hydro Ottawa's web-based customer service portal

NAICS - North American Industry Classification System

NAMAG - North Atlantic Mutual Assistance Group

NCP - Non-Coincident Peak

NCR - National Capital Region

NCTA - National Cyber Threat Assessment

NEER - New Experimental Experience Rating

NERC - North American Electric Reliability Corporation

NPCC - Northeast Power Coordinating Council

NIST - National Institute of Standards and Technology

NOC - National Occupational Classification

NRAL - National Renewable Energy Laboratory

NRC - National Research Council

NRCan - Natural Resources Canada

NREL - National Renewable Energy Laboratory

NWS - Non-Wires Solutions

NYISO - New York Independent System Operator

O&M - Operations and Maintenance

ODERA - Ottawa DER Accelerator Project

ODS - Operational Data Store

OEA - Ontario Energy Association

OEB - Ontario Energy Board

OEL - Ontario Electrical League

OER - Ontario Electricity Rebate

OESP - Ontario Electricity Support Program

OH - Overhead

OHSAS - Occupational Health and Safety Assessment Series

OHSE - Occupational Health, Safety and Environment

OM&A - Operations, Maintenance and Administration

OMERS - Ontario Municipal Employees Retirement System

OMERS SC Board - OMERS Sponsors Corporation Board of Directors

OnMAG - Ontario Mutual Assistance Program

OMS - Outage Management System

OOTB - Out-of-the-Box

OPEB - Other Post-Employment Benefits

OPS - Operations

ORCGA - Ontario Regional Common Ground Alliance

ORTAC - Ontario Resource and Transmission Assessment Criteria

OT - Operational Technology

OTN - Optical Transport Network

PA - Predictive Analytics

PBR - Performance Based Regulation

P&C - Protection and Control

PCBs - Polychlorinated Biphenyls

PCI - Price Cap Index

PCR - Preliminary Consultation Report

PCT - Power Cable Technician

PD - Partial Discharge

PEG - Pacific Economics Group

PHEV - Plug-in Hybrid Electric Vehicle

PIEVC - Public Infrastructure Engineering Vulnerability Committee

PILC - Paper Insulated Lead Cable

PILS - Payments in Lieu of Taxes

PILS Tax Model - Income Tax/PILS Workform

PLM - Power Line Maintainer

PLS - Pole Line Systems

PLT - Power Line Technician

PLTE - Private Long-Term Evolution

PMBOK - Project Management Body of Knowledge

PMI - Project Management Institute

PMO - Program Management Office

POAM - Performance Outcomes Accountability Mechanism

PP - Pollution Probe

PPA - Power Purchase Agreement

PPE - Personal Protective Equipment

PP&E - Property, Plant and Equipment

PSWHA - Public Service Work on Highways Act

PSPC - Public Services and Procurement Canada

PSUI-CDM - Process and Systems Upgrade Initiative

PV - Photovoltaic

Q.C.H - Queensway-Carleton Hospital

RASCI - Responsible, Accountable, Supporting, Consulted, and Informed

RAP - Redesign Action Plan

RARA - Regulatory Asset Refund Account

RCI - Revenue Cap Index

RCP - Representative Concentration Pathway

RCVA - Retail Cost Variance Account

REG - Renewable Energy Generation

Régie - Régie de l'énergie

RESOP - Renewable Energy Standard Offer Program

RFI - Request for Information

RFP - Request for Proposal

RFPQ - Request for Pre-Qualification

RFQ - Request for Qualifications / Request for Quotations

RFSA - Request for Supply Arrangements

RFSO - Request for Standing Offers

RFx - Collectively referred to various procurement vehicles such as RFI, RFP, RFQ, etc.

RIP - Regional Infrastructure Plan

RLRA - Regulatory Liability Refund Account

ROE - Return on Equity

ROW - Right-of-Way

RPO - Recovery Point Objective

RPP - Regulated Price Plan

RPPAG - Regional Planning Process Advisory Group's

RRF - Renewed Regulatory Framework for Electricity Distributors

RRR - Reporting and Record Keeping Requirements

RRRP - Rural or Remote Electricity Rate Protection

RRWF - Revenue Requirement Work Form

RSCs - Retail Service Charges

RSI - Risk Sciences International

RMS - Root Mean Square

RSVA - Retail Settlement Variance Account

RTO - Recovery Time Objective

RTU - Remote Terminal Unit

RTSR - Retail Transmission Service Rate

SaaS - Software-as-a-Service

SAIDI - System Average Interruption Duration Index

SAIFI - System Average Interruption Frequency Index

SAMP - Strategic Asset Management Plan

SARFI - System Average Root Mean Square Variation Frequency Index

SAN - Storage Area Network

SC - Service Charge

SCADA - Supervisory Control and Data Acquisition

SEC - School Energy Coalition

SHEU - Survey of Household Energy

SCIEU - Survey of Commercial and Institutional Energy Use

SD - Standard Deviation

SDHI - Short Duration-High Intensity

SE - Standard Error

SEO - Search Engine Optimization

SESC - Smart Energy Steering Committee

SF6 - Sulfur Hexafluoride

Scorecard - Electricity Distributor Scorecard

SIA - System Impact Assessment

SIP - Session Initiation Protocol

S/L - Street Lights

SLA - Service Level Agreement

SLI - Station Load Index

SMC - Smart Metering Charge

SME - Smart Metering Entity

S&P - Standard & Poor's

SQR - Service Quality Requirement

SR - System Renewal

SR&ED - Scientific Research and Experimental Development

SS - System Service

SSC - Specific Service Charge

SSO - Single Sign-On

SSS Charge - Standard Supply Service Administrative Charge

Stantec - Stantec Consulting Ltd.

STEM - Science, Technology, Engineering, Math

SUB - Substations

SUV - Sport Utility Vehicle

System O&M - System Operations & Maintenance

Tiered - Tiered RPP

TIM - Testing, Inspection and Maintenance

TDA - Training Delivery Agent

TFP - Total Factor Productivity

THESL - Toronto Hydro Electric System Limited

TMP - Transportation Master Plan (City of Ottawa)

TOC - Transformer Ownership Credit

TOGAF - The Open Group Architecture Framework

TOU - Time of Use

TS - Transmission Station

TUL - Typical Useful Life

TWA - Triangulated Weighted Average

UCC - Undepreciated Capital Cost

UG - Underground

UI/UX - User Interface/User Experience

ULO - Ultra-Low Overnight

ULS - Underground Line System

UP - UtilityPULSE

USF - Utilities Standard Forum

USL - Unmetered Scattered Load

USD - United States Dollar

USofA - Uniform System of Accounts

UTRs - Uniform Transmission Rates

VASH - Vulnerability Assessment and System Hardening

VECC - Vulnerable Energy Consumers Coalition

VLA - Vented lead-acid (batteries)

VRLA - Valve-regulated lead-acid (batteries)

VLF - Very Low Frequency

VOC - Voice of the Customer

Vol. R - Volumetric Rate

VR - Virtual Reality

WACC - Weighted Average Cost of Capital

WCA - Working Capital Allowance

WAHSP - Weighted Average Hourly Spot Price

WMC - Wholesale Market Charge

WMS - Wholesale Market Service

WSIB - Workplace Safety and Insurance Board

XFMR - Transformer

XLPE - Cross Linked Polyethylene

Yearbook - Electricity Distributor Yearbook

YMPE - Yearly Maximum Pensionable Earnings

ZEB - Zero Emissions Bus

ZEVIP - Zero Emission Vehicle Infrastructure Program

ADMINISTRATION

1. INTRODUCTION

In accordance with the Ontario Energy Board's (OEB) *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications - 2025 Edition for 2026 Rate Applications*, dated December 9, 2024, (Filing Requirements), this Schedule provides information relating to the administration of this Application.

2. PRIMARY CONTACT INFORMATION

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4. INTERNET ADDRESS & SOCIAL MEDIA ACCOUNTS

Hydro Ottawa Limited's (Hydro Ottawa) main webpage: www.hydroottawa.com
Hydro Ottawa Twitter: www.x.com/hydroottawa
Hydro Ottawa Facebook: www.facebook.com/hydroottawa
Hydro Ottawa Instagram: www.instagram.com/hydroottawa
Hydro Ottawa Youtube: www.youtube.com/hydroottawalimited
Hydro Ottawa Bluesky: https://bsky.app/profile/hydroottawa.bsky.social

Regulatory documents will be available on the *Active Applications* page of the Regulatory Affairs section of the Hydro Ottawa website:
https://hydroottawa.com/en/about-us/regulatory-affairs/active-applications

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 total 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, distributors with 30,000 or more customers and a distribution base revenue requirement of more than $200 million must use a materiality threshold of $1M. Hydro Ottawa's service revenue requirement for 2026 is above $200M, and thus the materiality threshold for this Application is $1M.

Hydro Ottawa notes that the $1M materiality threshold will apply to the utility for any future Z-factor application(s).

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 Municipality of Casselman. *Le Droit* is the French language newspaper serving Ottawa and the surrounding region, including the Municipality of Casselman.

As per the OEB's letter dated March 28, 2024, Hydro Ottawa notes that the utility has already given notice to existing standby customers on the proposed changes to standby rates. As mentioned in Schedule 7-1-3 - Standby, these customers were informed via email in January 2025 of Hydro Ottawa's plans to seek final approval for interim standby rates and to propose adjustments to the current standby rate design, effective January 1, 2026.

8. BILL IMPACTS

Tables 1 and 2 below 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.

Table 1 - Residential Bill Impact

Residential (750 kWh)	2026	2027	2028	2029	2030
Change in Distribution Charge ($)	$ 6.08	$ 3.79	$ 3.31	$ 2.72	$ 2.74
Change in Distribution Charge (%)	17.62%	9.34%	7.46%	5.70%	5.44%
Total Bill % change	6.05%	2.73%	2.33%	1.88%	1.85%

Table 2 - General Service <50 kW Bill Impact

General Service < 50 kW (2000 kWh)	2026	2027	2028	2029	2030
Change in Distribution Charge ($)	$ 14.57	$ 8.42	$ 7.50	$ 6.62	$ 5.80
Change in Distribution Charge (%)	16.96%	8.38%	6.89%	5.69%	4.71%
Total Bill % change	4.94%	2.35%	2.05%	1.77%	1.53%

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 requests approval of the proposed distribution rates and other charges set forth in this Application effective January 1, 2026. Where the case might be that the OEB's Decision and Order approving these rates and other charges is released after this proposed effective date, Hydro Ottawa is requesting that the 2025 distribution rates and charges remain effective on an interim basis as of January 1, 2026 until the actual rates that are effective January 1, 2026 can be billed. In addition, Hydro Ottawa is requesting an account to recover the difference between the interim rates and the actual rates effective January 1, 2026.

11. CHANGES TO METHODOLOGIES USED IN PREVIOUS APPLICATIONS

The following methodology changes were applied in this Application, as compared to Hydro Ottawa's 2021-2025 Custom IR Application:[1]

- A custom revenue cap index applied to operations, maintenance and administration (OM&A), termed a Customer Revenue OM&A Factor (CROF)[2] to be approved in this Application and applied in setting OM&A approvals for the years 2027 to 2030 through annual application updates, which includes:
  - A modified X-factor in the CROF that accounts for built-in productivity savings within the OM&A forecast.
  - A modified growth factor in the CROF that accounts for increases in customer count and system capacity forecasts, weighted according to the OEB's cost allocation model.

[1] Hydro Ottawa Limited, *2021-2025 Custom Incentive Rate-Setting Approved Settlement Proposal*, EB-2019-0261 (September 18, 2020).
[2] See Schedule 1-3-1 - Rate Setting Framework for details on the CROF.

- Certain Uniform System of Accounts (USofAs) entries have been reclassified to provide a more accurate representation of the regulatory accounting of certain transactions.[3]
- Updates to Load Forecast calculations include:[4]
  - Using monthly averages, rather than month-end averages, to calculate customer and connection numbers used in the revenue Load Forecost.
  - Adjustments to base load forecast for electrification and rate reclassification
- The Dibblee and Maple Grove Operations Centres have been reclassified to the System Renewal Investment Category (previously General Plant) to align with current regulatory reporting requirements.[5]
- Updates have been made to the cost allocation methodology, as follows:
  - Cost allocation methodology now relies on an in-house cost allocation study to determine primary and secondary asset and customer count splits and demand allocators.[6]
  - Cost allocation models for each Test Year (2026-2030) have been submitted to reflect the impact of increasing electrification on the revenue load forecast.[7]
  - Capital meter costs for GS 1,500-4,999 kW and Large Use customer classes are weighted by the number of meters, rather than by the number of customers, as was the case in the 2021-2025 Application.[8]
- The Rate Design methodology for standby rates incorporates the following changes:
  - Standby volumetric charges are applied only to Billed Backup demand exceeding 500 kW, charged at fifty percent of the distribution variable rate.
  - Backup overrun adjustment charges are billed using Hydro Ottawa's distribution variable rate of the applicable class.[9]

[3] See Schedule 1-5-1 - Audited Financial Statements and Reconciliation for the updated USofA summary.
[4] See Schedule 3-1-1 - Revenue Load and Customer Forecast for details on changes to calculations in the Load Forecast.
[5] See Schedule 2-5-5 - Capital Expenditure Plan for details.
[6] See respectively Attachment 7-1-1 (F) - Primary/Secondary Cost Study and Attachment 7-1-1(G) - 2026 Demand Allocators .
[7] See Excel Attachments 7-1-1(A) through 7-1-1(E) for the 2026-2030 Cost Allocation Models.
[8] See Schedule 7-1-1 - Cost Allocation for details.
[9] See Schedule 7-1-3 - Standby Service Charge for details on Standby rate design.

- Other Rate Design methodological changes include:
  - Hydro Ottawa is proposing to apply the fixed monthly charge on a rate per day basis, applicable to all rate classes.[10]
  - Proposed Low Voltage rates are calculated based on OEB's Retail Transmission Service Rate Model.[11]
  - A cost-based approach is used to calculate a utility-specific Standard Supply Service (SSS) charge, rather than adopting OEB's generic SSS amount.[12]
- The 2026-2027 revenue requirement includes a contribution from current ratepayers to address the intergenerational effects of temporary depreciation and capital cost allowance differences.[13]
- Disposition of the 2021-2023 Lost Revenue Adjustment Mechanism Variance Account (LRAMVA) balance, which includes an estimate of energy savings derived from electricity conservation and demand-side management programs administered by the IESO within Hydro Ottawa's service territory.[14]

12. OEB DIRECTIVES 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

[10] See Schedule 8-1-2 - Fixed/Variable Proportion for details on charging fixed charges on a rate per day basis.
[11] See Schedule 8-2-1 - Retail Transmission and Low Voltage Service Rates for details on Low Voltage rates.
[12] See Schedule 8-3-2 - Standard Supply Service Charge for details on this approach.
[13] See Schedule 9-1-4 - Account 1592 PILS and Tax Variance and Schedule 6-1-1 Revenue Requirement and Revenue Deficiency or Sufficiency for details on this update to address intergenerational equity.
[14] See Schedule 9-1-5 - Lost Revenue Adjustment Mechanism Variance Account for details on this disposition.

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 Incentive Rate-setting applications when warranted."[15]

As an outcome of Hydro Ottawa's 2021-2025 Approved Settlement Agreement,[16] the utility agreed to develop in-house demand profiles by customer class as input to the next rebasing application.

This has been developed as part of this Application. Please see Attachment 7-1-1(G) - 2026 Demand Allocators.

12.2. DIRECTIVE #2

On August 21, 2014, amendments to the *Distribution System Code* (DSC) came into force which required 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.[17] The deadline for distributors to comply with this DSC provision was August 21, 2020. Hydro Ottawa has confirmed this deadline was achieved.

12.3. DIRECTIVE #3

In the 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.[18] 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

[15] Ontario Energy Board, Letter re: *Issuance of New Cost Allocation Policy for Street Lighting Rate Class* (June 12, 2015), page 4.
[16] Hydro Ottawa Limited, *2021-2025 Custom Incentive Rate-Setting Approved Settlement Proposal*, EB-2019-0261 (September 18, 2020).
[17] Ontario Energy Board, *Notice of Amendment to a Code: Amendments to the Distribution System Code*, EB-2013-0311 (May 21, 2014).
[18] Ontario Energy Board, *Decision and Rate Order*, EB-2018-0044 (December 13, 2018), page 15.

"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 '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."[19] There is no update to this matter.

12.4. DIRECTIVE #4

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 (RSCs). In accordance with this decision, Hydro Ottawa stopped using its approved distributor-specific RSCs and implemented the generic RSCs effective May 1, 2019. Hydro Ottawa is not seeking distributor specific RSCs as part of this Application. See Schedule 8-4-3 - Retail Service Charges for current 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.[20] 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. Hydro Ottawa continued to use this Sub-Account to record amounts until December 31, 2020. Balances in these 1508 Incremental Sub-Accounts are proposed to be disposed of in this Application. For additional details, please see Schedule 9-1-3 - Group 2 Accounts.

12.5. DIRECTIVE #5

In its Decision rendered in EB-2019-0077 on October 17, 2019, the OEB approved an application submitted by Hydro One Networks Inc. (Hydro One) and Hydro Ottawa, pursuant to section 92 of the *Ontario Energy Board Act*, *1998*, seeking leave to construct the Power South

[19] Ontario Energy Board, *Decision and Rate Order*, EB-2019-0046 (December 17, 2019), page 13.
[20] Ibid., Schedule B, page 1.

Nepean Project.[21] 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 Hydro One. The leave granted was 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, licenses, certificates and rights required to construct the proposed facilities."[22]

By way of its 2021-2025 Custom IR Application, Hydro Ottawa informed 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 was subsequently revised to Q2 2022. In addition, the name of the station has been changed from South Nepean Municipal Transformer Station (MTS) to Cambrian MTS. In Q2, 2022, the Cambrian substation was energized and loaded in advance of the peak loading season for the neighbouring stations in the south Nepean area.

12.6. DIRECTIVE #6

As an outcome of the 2021-2025 Approved Settlement Agreement, Hydro Ottawa has agreed to complete an analysis of its distribution assets to produce an updated split of certain asset classes to primary and secondary components. The asset classes to be investigated are Poles, Towers and Fixtures (Uniform System of Accounts (USofA) 1830), Overhead Conductors and Devices (USofA 1835), Underground Conduits (USofA 1840) and Underground Conductors and Devices (USofA 1845). The results of this cost study, combined with a reassessment of customer class composition (primary, secondary, transformer owned) will serve as input to the demand profile study, described above as Directive #1, and mandated for Hydro Ottawa's next rebasing application. Hydro Ottawa confirms that this study has been completed and is available

[21] Ontario Energy Board, *Decision and Order*, EB-2019-0077 (October 17, 2019).
[22] Ibid., Schedule B.

in this Application as Attachment 7-1-1(F) - Primary/Secondary Cost Study. Results of this study have been incorporated in the proposed cost allocation models, included as Excel Attachments 7-1-1(A) through (F).

12.7. DIRECTIVE #7

As part of the 2021-2025 Approved Settlement Agreement, Hydro Ottawa agreed to meaningfully consider the goals of the City of Ottawa's Energy Evolution plan with a view to pursuing cost efficiencies, reduced emissions, and enhanced energy outcomes for consumers in the City of Ottawa. The utility will consider these elements in its next Distribution System Plan and Business Plan.

Schedule 2-5-2 - Coordinated Planning with Third Parties provides an overview of how Hydro Ottawa coordinates with the City of Ottawa in regards to Distribution System Planning for this Application. The targets from the Energy Evolution initiative were considered in the Decarbonization study, which is summarized in Section 9.4.2.1 of Schedule 2-5-4 - Asset Management Process. Furthermore, as result of this engagement, Hydro Ottawa is proposing to remove the Net-Metering Service Charge as part of this Application. See Schedule 6-3-4 - Other Operating Revenue for details.

12.8. DIRECTIVE #8

As outlined in the 2021-2025 Approved Settlement Agreement, between 2021 and 2025 Hydro Ottawa shall endeavour to maintain its five-year average total system losses[23] below the target of 3.02% set out by the OEB in EB-2005-0381 through cost-effective measures.

In addition, Hydro Ottawa prepared a plan to reduce distribution losses as much as possible through cost-effective measures and filed the plan with the OEB in December 2022. In 2022-2025, Hydro Ottawa shall implement as many of the cost-effective measures as set out in its plan as possible (e.g. any changes to planning and procurement processes to better mitigate

[23] "Total System Losses" is as defined in: Hydro Ottawa Limited, *2021-2025 Custom Incentive Rate-Setting Approved Settlement Agreement*, EB-2019-0261 (September 18, 202), page 22.

losses, investments that can be made within current budgets, operational measures, etc.). All other cost-effective measures will be incorporated into the utility's next rebasing application and Distribution System Plan.

Finally, as described in Hydro Ottawa's response to undertaking JT 3.10 in EB-2019-0261, a pilot of Grid Edge Volt/VAr Control (VVC) solution was completed in 2020. A full analysis of the pilot has been completed, including an economic use case. The System Loss Plan will inform decisions on future deployment of the VVC devices. If further study identifies potential suitable locations for cost-effective and impactful deployment of these units Hydro Ottawa will consider proceeding in a subset of locations with an estimated investment of up to $1M over the five-year test period. The cost of these investments will be accommodated within the overall approved capital budget.

Hydro Ottawa has appended the System Loss Plan to this Application as Attachment 8-2-3(B) - Hydro Ottawa System Losses Plan. An update on the measures proposed in the plan are included in Schedule 8-2-3 - Loss Adjustment Factors.

12.9. DIRECTIVE #9

In its Decision rendered in EB-2019-0261 on January 7, 2021, the OEB stated that any Hydro Ottawa future Custom IR application needs to be justified. In addition, the OEB needs to be satisfied that other rate-setting options have been considered. Hydro Ottawa has considered all rate-setting options and has concluded that a Custom IR approach is the only suitable method to execute its investments quickly and cost-effectively over the 2026-2030 rate period. Details are available in Schedule 1-3-1 - Rate Setting Framework.

12.10. DIRECTIVE #10

In its Decision rendered in EB-2019-0261 on January 7, 2021, the OEB stated that "Hydro Ottawa's efforts and achievements with respect to productivity improvements in its capital programs and projects, undertaken during the 2021-2025 term, should be reported as part of

Hydro Ottawa's next rebasing Application."[24] In this Application, details on Hydro Ottawa's efforts and achievements with respect to productivity improvements can be found in Schedule 1-3-4 - Facilitating Innovation and Continuous Improvement.

13. CONDITIONS OF SERVICE

The current version of Hydro Ottawa's Conditions of Service (Version 9) is publicly available on the Hydro Ottawa website here: 's website:
https://www.hydroottawa.com/en/about-us/policies/conditions-service

Subsequent to the filing of Hydro Ottawa's last rebasing Application, the Conditions of Service have been subject to two comprehensive revisions. Specifically, Version 8 came into effect on December 1, 2021, and Version 9 on January 16, 2023. In addition, subsequent updates were made to Appendices in 2024 and 2025 to comply with OEB code amendments.[25]

Updates to Version 8 and 9 include minor administrative modifications and clarifications to ensure compliance with evolving codes and regulations. Other more substantial modifications to the Conditions of Service are detailed in Table 3 below.

[24] Ontario Energy Board, *Decision and Order*, EB-2019-0261 (January 7, 2021).
[25] Appendix E: Contracts and Applications for Connecting Distributed Energy Resources and Electric Vehicles was updated as of May 27, 2024 as per the OEB's *Notice of Amendments to a Code to Facilitate Connection of Electric Charging Vehicle Infrastructure*, EB-2019-0207 (February 16, 2024) ; Appendix B: Economic Evaluation for Distribution System Expansion/Enhancement was updated as of March 3, 2025 as per the OEB's *Notice of Amendments to Facilitate the Connection of Housing Developments and Residential Customers*, EB-2024-0092 (December 23, 2024). .

1 **Table 3 - Summary of Major Changes to Hydro Ottawa's Conditions of Service**

Section	Subject	Details	Implementation Date
1.1	Identification of Distributor, Service Area and Servicing Obligations	Revised language to clarify expectations on lead times.	December 1, 2021
1.7	Distributor Rights and Responsibilities	Added clarification that Hydro Ottawa is responsible to provide access to valid meter information as required by the Retail Settlement Code.	December 1, 2021
1.7	Distributor Rights and Responsibilities	Added a paragraph describing the customer's responsibilities when seeking to be designated as a Critical Care customer.	December 1, 2021
2.1.1	Supply Point	Added clarity that coach houses will not be provided with a second supply point.	December 1, 2021
2.1.4	Upgrades	Reference to ECG0006 was added to item (j) to clarify that the DER installation will be required to meet Hydro Ottawa's protection standards for generators.	December 1, 2021
2.1.6	Easements	Added specificity on Hydro Ottawa's position for properties with existing Hydro Ottawa properties or structures.	December 1, 2021
2.5.6.9	Energy Resource Facility Payments	Language updated to clarify requirements around assigning a FIT/MicroFIT contract.	December 1, 2021
3.1	Residential	Maximum residential service updated from 400A to 600A.	December 1, 2021
G-1.5	Minor Upgrades	Specified that socket-mounted transfer switches are considered to be a minor update.	December 1, 2021

Section	Subject	Details	Implementation Date
G-3.2	Vault Access Fees	Added a paragraph to indicate the process for scheduling a field visit.	December 1, 2021
G-3.9	Inspection and Testing Support	Section added to provide clarity on request responses on medium voltage equipment.	December 1, 2021
Appendix G G-0:8	General Notes and Guidelines when Using Appendix G	Language updated to reflect Hydro Ottawa's practice of providing one Customer Layout per 12-month period free of charge to the customer for secondary infill or service upgrades for residential or commercial properties. Clarified language to include that additional charges may apply for completing the work, revisions, or extra layouts within the same period.	January 16, 2023

Hydro Ottawa anticipates that approval of this Application will result in the following modifications to Hydro Ottawa's Conditions of Service:

- The residential and small commercial net metering charge will be eliminated, as detailed in Schedule 6-3-5 - Other Income & Deductions.
- Charges for residential electrical isolations/re-energizations will be removed,[26] as detailed in Schedule 6-3-5 - Other Income & Deductions.
- Monthly fixed charges will be calculated on a daily basis for all rate classes, as detailed in Schedule 8-1-1 - Fixed/Variable Proportion.

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.

[26] Currently, per Hydro Ottawa's Conditions of Service **one** free non-electrical Isolation/Re-energization is provided.

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 Schedule 1-6-1 - Corporate Structure and Governance.

In 2024, Hydro Ottawa's parent company, Hydro Ottawa Holding Inc., along with Hydro Ottawa Capital Corporation, and Hydro Ottawa Limited sought approval for an internal corporate reorganization. This reorganization involved Hydro Ottawa Capital Corporation acquiring 100% of the shares in the issued and outstanding capital of Hydro Ottawa Limited from Hydro Ottawa Holding Inc.. The Ontario Energy Board issued a Decision and Order approving the internal corporate reorganization on July 2, 2024, and confirmed that the reorganization met the "no harm" test.[27] The transactions relating to the reorganization closed on October 1, 2024.

15. 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 Attachment 1-1-4(A) - OEB Appendix 2-A - List of Request Approvals and clearly documented throughout applicable sections of this Application:

1. Approval of 2026-2030 revenue requirement, as detailed in Schedule 6-1-1 - Calculation of Revenue Deficiency or Sufficiency;
2. Approval of 2026 distribution rates and charges, effective January 1, 2026, as outlined in Schedule 8-5-1 - Bill Impacts and Tariff of Rates and Charges;
3. Approval of the Custom IR rate-setting formula and related elements for 2027-2030 distribution rates and charges, as described in Schedule 1-3-1 - Rate Setting Framework;

[27] Ontario Energy Board, *Decision and Order RE: Hydro Ottawa Holding Inc., Hydro Ottawa Capital Corporation, and Hydro Ottawa Limited, Application for approval for Hydro Ottawa Capital Corporation to acquire 100% of the shares in the issued and outstanding capital of Hydro Ottawa Limited from Hydro Ottawa Holding Inc.*, EB-2024-0164.

4. Approvals related to deferral and variance accounts, as thus proposed throughout Exhibit 9. In particular:
    a. Approval of the continuation of certain existing deferral and variance accounts, as set out in Schedule 9-1-1 - Summary of Current Deferral and Variance Accounts;
    b. Approval of the discontinuance of certain existing deferral and variance accounts, as proposed in Schedule 9-1-1 - Summary of Current Deferral and Variance Accounts and Schedule 9-1-3 - Group 2 Accounts;
    c. Approval of new and/or modified deferral and variance accounts, as proposed in Schedule 9-2-1 - New Deferral and Variance Accounts and Schedule 1-3-1 - Rate Setting Framework; and
    d. Disposition of balances in existing deferral and variance accounts, as detailed in Schedule 9-3-1 - Disposition of Deferral and Variance Accounts.
5. Approval of annual reporting for the 2026-2030 rate term, as proposed in Schedule 1-3-2 - Proposed Annual Reporting - 2026-2030;
6. Approval of the 2026 opening rate base as proposed in Schedule 2-1-1 - Rate Base Overview;
7. Approval of the finalization of existing interim standby rates, as detailed in Schedule 7-1-3 - Standby Service Charge;
8. Approval of changes to the standby rate design, effective January 1, 2026, as proposed in Schedule 7-1-3 - Standby Service Charge;
9. Approval of the distributor-specific Standard Supply Service Administrative Charge, as outlined in Schedule 8-3-2 - Standard Supply Service Charge;
10. Approval of continuation of distributor-specific and generic OEB Specific Service Charges, as proposed in Schedule 8-4-1 - Specific Service Charges;
11. Approval of revised loss factors, as detailed in Schedule 8-2-3 - Loss Adjustment Factors;
12. Approval of the removal of the Net Metering service charge, as detailed in Schedule 6-3-5 - Other Income & Deductions.

13. Approval for Hydro Ottawa to maintain the option of using the existing and any future updates to the Non-Wires Solutions for Electricity Distributors Guidelines throughout the 2026-2030 period, as detailed in Schedule 1-3-1 - Rate Setting Framework.
14. Approval of other items or amounts that may be requested by Hydro Ottawa in the course of the proceeding, and any such other relief or entitlements that the OEB may grant.

16. POLICY CONSULTATIONS AND COMPLIANCE AMENDMENTS CURRENTLY UNDERWAY

As noted in the OEB's letter dated December 9, 2024, there are a number of policy consultations currently underway that may affect 2026 rate applications. These include the following:

- **Electric Vehicle Charger Discount Electricity Rate**
    - The OEB is currently considering an Electric Vehicle Charger Discount Electricity Rate (EVC Rate) in response to direction from the Minister of Energy to the OEB to consider rate design options for EV charging. The EVC Rate would reduce the retail transmission service rates (RTSRs) that participating EV charging stations would otherwise pay, starting in 2026. Once it is finalized, it is expected that the EVC Rate will be incorporated into the RTSR model. Further guidance will be provided to distributors once the EVC Rate is finalized.

- **Vulnerability Assessment and System Hardening (VASH)**
    - On June 27, 2024, the OEB launched the VASH project in response to the Minister of Energy's 2023 Letter of Direction. The VASH project is being launched to address the following three electricity distributor activities identified in the Letter of Direction:
        - Incorporate climate resiliency into their asset and investment planning activities.
        - Engage in a regular assessment of the vulnerabilities in their distribution system and operations in the event of severe weather.

    - Prioritize value for customers when investing in system enhancements for resilience purposes.

- **Capital Allocation Model (CAM)**
    - On November 21, 2024, the OEB initiated a capacity allocation model working group (CAMAG) to establish an overall framework designed to provide a fair and sustainable model for allocating infrastructure costs among developers, ratepayers and distributors involved in high growth residential developments.

Furthermore, several new compliance requirements and expectations have emerged that, due to their recent implementation, are not yet reflected in the financial projections of this application. These include:

- **Version 2.0 of the Ontario Cyber Security Standard**
    - Effective December 16, 2024, the OEB issued version 2.0 of the Ontario Cyber Security Standard that includes a new requirement for distributors to conduct an independent security assessment. The OEB will divide utilities into three groups, with the first group of submissions due on January 30, 2026. The OEB has not yet announced the groups. The cost of the third-party assessment is unknown at the time of filing this Application.

- **Distribution System Code Amendments to Facilitate the Connection of Housing Developments and Residential Customers:**
    - Effective December 23, 2024 with mandatory compliance by March 3, 2025, the DSC was amended to allow for a connection horizon of up to 15 years for qualifying housing developments, and a 40-year revenue horizon for all residential customers. These changes lower the capital contribution required for a new connection, thus increasing the upfront costs that distributors are required to pay to fund an expansion project. These increased upfront costs must be financed through a distributor's capital budget. The

financial impacts of these changes are unknown at the time of filing this Application and could have a significant impact.

- **Ministry of Energy and Electrification - new Electricity conservation and demand-side management procurement initiative (eDSM)**
    - In January 2025 the Ministry of Energy announced an enduring eDSM Framework[28] expected to operate through 2036. Within this new model, LDCs are expected to hold a larger role, and be provided with provincial funding to raise awareness of and increase uptake of eDSM programming. The eDSM framework includes funding that LDCs can access to deliver local eDSM programs that address distribution system needs while also increasing opportunities for customer engagement. Refer to Section 9.2 of Schedule 2-5-4 - Asset Management Process.

[28] Ministry of Energy and Electrification, *IESO Directive, New 12-year Demand Side Management (DSM) Framework* (November 7, 2024); and Ministry of Energy and Electrification, *Electricity Conservation and Demand-Side Management Procurement Initiative* (December 19, 2024).

Attachment 1-1-4(A) - OEB Appendix 2-A - List of Requested Approvals

(Refer to the attachment in Excel format)

BOARD CERTIFICATION

The Hydro Ottawa Limited Board of Directors certifies that it is aware of and approves the submission of Hydro Ottawa's 2026-2030 Custom Incentive Rate-setting Application.

This certification is provided pursuant to the Ontario Energy Board's *Chapter 2, Filing Requirements for Electricity Distribution Rate Applications*, as dated on December 9, 2024.

Bernard J Ashe

Bernie Ashe
Chair, Board of Directors
Hydro Ottawa Limited

Apr 03/25

Date

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 evidence filed in support of Hydro Ottawa's 2026-2030 Custom Incentive Rate-setting Application is accurate, consistent, and complete.

I furthermore attest that Hydro Ottawa has processes and internal controls in place for the preparation, review, verification and oversight of account balances being disposed.

As per 9A of the Rules of Practice and Procedure and Chapter 1 of the Ontario Energy Board's Filing Requirements, I certify that any evidence filed in support of this Application does not include any personal information.

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 dated on December 9, 2024.

Signed by:
Geoff Simpson
43DC885CE33E43E...

Geoff Simpson
Chief Financial Officer
Hydro Ottawa Limited

2025-04-14

Date

APPLICATION SUMMARY

1. INTRODUCTION

This Schedule summarizes Hydro Ottawa Limited's 2026-2030 Custom Incentive Rate-setting (Custom IR) Application, in accordance with section 2.1.2 of the Ontario Energy Board's (OEB's) *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications - 2025 Edition for 2026 Rate Applications,* dated December 9, 2024. In addition, this Schedule summarizes the changes proposed in this Application that will have a material impact on customers of Hydro Ottawa Limited (henceforth in the Application referred to as 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.

This Schedule is organized into the following sections:

2. Revenue Requirement
3. Revenue Load Forecast Summary
4. Rate Base and Distribution System Plan Summary
5. Operations, Maintenance and Administration Expense Summary
6. Cost of Capital Summary
7. Cost Allocation and Rate Design Summary
8. Deferral and Variance Accounts Summary
9. Bill Impacts Summary

In this Application, when the years 2021-2025 are referred to as a combination of Historical and Bridge Years, this is a total of Historical Years 2021-2023 based on Actuals, and Bridge Years of 2024 and 2025 forecast.

2. REVENUE REQUIREMENT

As presented in Table 1 below, Hydro Ottawa's Service Revenue Requirement is $309.9M for the 2026 Test Year.

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

	OEB-Approved	Test Year	Change		Drivers
	2025	2026	$	%	
Return on Rate Base	$ 79,365	$ 91,549	$ 12,184	15%	$97.1M increase in average net fixed assets driven mainly by increased volume and complexity of non-discretionary growth, increased renewal work due to aging equipment and failures, major storms, and inflationary pressures.
Distribution Expenses (not including amortization)	$ 104,927	$ 140,010	$ 35,083	33%	Increase in distribution operations expenses, cloud and information technology including cyber security Headcount growth and increases in compensation Inflationary increases
Amortization	$ 62,125	$ 67,205	$ 5,080	8%	Capital addition and increase in forecast capital additions to meet customer needs and grid modernization
Payment in Lieu of Taxes	$ 7,283	$ 6,638	$ (645)	(9)%	Changes in capital additions and the associated CCA deductions available.
Other Expenses - PILS	$ (3,658)	$ 4,590	$ 8,248	(225)%	2025 included capital stretch factor 2026 includes a proposed PILS capital contribution
Service Revenue Requirement	**$ 250,042**	**$ 309,992**	**$ 59,950**	**24%**	

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

3. REVENUE LOAD FORECAST SUMMARY

Hydro Ottawa's forecasted energy sales for the 2026 Test Year are 7,443,105 MWh. This is 322,836 MWh (4.5%) higher than the 2021 OEB-approved MWh forecast.

Hydro Ottawa's demand sales forecast for the 2026 Test Year is 9,627,788 kW.[1] This is 88,934 kW (0.9%) higher than the 2021 OEB-approved kW forecast.

The utility's forecasted monthly average number of customers for the 2026 Test Year is 377,521, representing an increase of 9.4% over the 2021 OEB-approved number.

Table 2 provides a high-level summary of Hydro Ottawa's load forecast for the 2026-2030 Custom IR term.

Table 2 – Revenue Load Forecast Summary

Year	Total Sales (MWh)	Total Sales Demand (kW)	Average Customers
2026	7,443,105	9,627,788	377,521
2027	7,467,438	9,637,812	381,118
2028	7,538,443	9,743,200	384,796
2029	7,587,713	9,863,219	388,582
2030	7,636,647	9,933,131	392,422

Hydro Ottawa has provided a detailed five-year, class-specific, and weather-normalized revenue load forecast and customer connection forecast for each rate class in Schedule 3-1-1 - Revenue Load and Customer Forecast. This forecast incorporates future electricity demand-side management (eDSM) programs that were enacted in 2025 as well as the impacts of electrification.

4. RATE BASE AND DISTRIBUTION SYSTEM PLAN SUMMARY

4.1. DISTRIBUTION SYSTEM PLAN

Hydro Ottawa's 2026-2030 DSP outlines an increase in capital investments compared to the previous five-year period, driven by the necessity to modernize and expand the grid to meet

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

evolving community needs and address climate change; this plan, refined through customer feedback and system analysis, prioritizes four investment priorities:

- Growth & Electrification - Powering a Growing Community
- Renewing Deteriorating Infrastructure
- Grid Modernization - Enabling the Energy Transition
- Enhancing Resilience

These priorities, supported by focuses on managing rising costs and investing in the workforce, aim to ensure a reliable and resilient electricity system for the City of Ottawa and Municipality of Casselman, reflecting Hydro Ottawa's commitment to balancing affordability with long-term grid sustainability and security. Table 3 below summarizes the major drivers underlying Hydro Ottawa’s capital investment program for the 2026-2030 rate period.

1 **Table 3 – 2026-2030 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
	Mandated Service Obligation	Regulatory requirement to maintain distribution license under the OEB's Distribution System Code or requirement as per Hydro Ottawa's Conditions of Service
System Renewal	Failure	Asset no longer meets functional requirement
	Failure Risk	Asset is at risk to no longer meet functional requirements
	High Performance Risk	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
	Functional Obsolescence	Asset is functionally obsolete with no spare parts, tools, and/or software to continue operation
System Service	Capacity Constraints	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 Efficiency	Requirements to improve both resource efficiency and power delivery reliability through strategic automation that minimizes manual intervention and streamlines data workflows.
	Observability	Requirements for improved system operability and visibility
	Resilience	Requirements for improved system resilience during major events.
General Plant	System Investment Support	Capital contributions to Hydro One for connection projects Requirement for fleet/vehicle acquisition
	Business Operations Support	Requirements for IT software and systems

Table 4 provides a summary of the total capital expenditures that are planned for 2026-2030. For further details, please see Schedule 2-4-1 - Capital Expenditure Summary, Schedule 2-5-1 - Distribution System Plan and Schedule 2-5-5 - Capital Expenditure Plan.

Table 4 – Summary of 2026-2030 Capital Expenditures ($'000,000s)

	Test Years					Average
Investment Category	**2026**	**2027**	**2028**	**2029**	**2030**	**2026-2030**
System Access	$ 86.2	$ 78.7	$ 66.2	$ 67.0	$ 71.5	$ 73.9
System Renewal	$ 85.3	$ 83.4	$ 80.7	$ 86.9	$ 95.3	$ 86.3
System Service	$ 99.3	$ 125.3	$ 76.1	$ 85.9	$ 86.9	$ 94.7
General Plant	$ 38.3	$ 23.6	$ 33.0	$ 27.9	$ 11.0	$ 26.8
Total Capital Expenditures	**$ 309.1**	**$ 311.0**	**$ 256.0**	**$ 267.7**	**$ 264.8**	**$ 281.7**
Capital Contributions	$ 50.9	$ 50.6	$ 38.4	$ 32.2	$ 41.1	$ 42.6
Net Capital Expenditures	**$ 258.2**	**$ 260.4**	**$ 217.5**	**$ 235.5**	**$ 223.7**	**$ 239.1**

Table 5 below provides a summary of the change in capital expenditures between the 2026-2030 Test Year proposals and OEB-Approved expenditures for the 2021-2025 period.

Table 5 – 2021-2025 OEB-Approved Capital Expenditures vs. 2026-2030 Proposed Capital Expenditures ($'000,000s)

	OEB-Approved	Test Years	Change	
	2021-2025	**2026-2030**	**$**	**%**
Capital Expenditures	$498	$1,195	$698	140%

4.2. RATE BASE SUMMARY

Table 6 below details the proposed changes in rate base for 2026. Hydro Ottawa's 2026 Test Year rate base is projected to be $115.7M, or 8% higher than the 2025 OEB-Approved amount.

The increase is attributable to both planned capital additions in 2026 and the inclusion of in-service additions for the 2021-2025 period that exceeded OEB-Approved amounts.

Full details on Hydro Ottawa's proposed rate base for 2026-2030 can be found in Schedule 2-1-1 - Rate Base Overview.

Table 6 – 2025 OEB-Approved Rate Base vs. 2026 Test Year Rate Base ($'000s)

	OEB-Approved	Test Year	Change	
	2025	2026	$	%
Rate Base	$1,416,727	$1,532,457	$115,730	8%

5. OPERATIONS, MAINTENANCE, AND ADMINISTRATION EXPENSE SUMMARY

Hydro Ottawa is seeking approval for $140M in OM&A funding in the 2026 test year. This level of funding is necessary to enable the utility to address the maintenance needs of the distribution system, prepare the system to accommodate emerging needs resulting from customer growth, evolving customer expectations and the energy transition, and proactively adapt to quickly evolving technological advancements and cyber security needs. This request accounts for several factors: rising prices driven by inflationary increases, the need for additional workforce required to execute both the capital program outlined in the Distribution System Plan (DSP) and support ongoing maintenance programs, and the need to fund enhanced testing and asset inspection programs to maintain system health and reliability, especially given constrained levels of renewal investment relative to the condition needs of the assets. Furthermore, the increased funding necessary to address storm-related costs such as vegetation management, and the growing need for investment in IT costs, including cyber security and cloud computing infrastructure, are also factored into this request.

Hydro Ottawa's proposed rate framework includes a Custom Revenue OM&A Factor (CROF) of 5.18% for 2027-2030, designed to adjust operational, maintenance, and administrative funding.

The CROF is calculated using three components: an inflation factor, a productivity/stretch factor, and a growth factor. The inflation factor, initially set at 2.10%, will be updated annually based on the OEB's standard methodology, which considers both labour and non-labour indices. The stretch factor, intended to reflect Hydro Ottawa's incremental efficiency gains, is adjusted to 0.15%, which are not adequately captured by the current benchmarking model. Finally, the growth factor, calculated as 3.23%, accounts for increases in customer count (1.005% CAGR) and system capacity (5.054% CAGR), weighted according to the OEB's cost allocation model. This comprehensive approach aims to ensure Hydro Ottawa receives sufficient funding to manage its expanding operations and infrastructure while maintaining efficiency and reliability. For more information on the CROF, please see Schedule 1-3-1: Rate Setting Framework.

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

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

	Year	OM&A ($)	Variance ($)	Variance (%)
OEB Approved	2021	$ 90,600		
Historical Years	2021	$ 84,737	$ (5,863)	(6.47%)
	2022	$ 100,536	$ 15,798	18.64%
	2023	$ 112,778	$ 12,242	12.18%
Bridge Years	2024	$ 115,320	$ 2,543	2.25%
	2025	$ 118,922	$ 3,602	3.12%
Test Years	2026	$ 140,010	$ 21,088	17.73%
	2027	$ 147,263	$ 7,253	5.18%
	2028	$ 154,891	$ 7,628	5.18%
	2029	$ 162,914	$ 8,023	5.18%
	2030	$ 171,353	$ 8,439	5.18%

Table 11 presents the difference in OM&A expenses for the 2026 Test Year compared to the last year of OM&A expenditures approved by the OEB (2025 Bridge Year), both in dollar amount and percentage.

Table 11 – 2025 OEB-Approved OM&A vs. 2026 Test Year OM&A ($'000s)

	OEB-Approved	Test	Change	
	2025	2026	$	%
OM&A	$104,927	$140,010	$35,083	33.4%

For more information on OM&A, please see Schedule 4-1-1 - Operations, Maintenance and Administration Summary and Schedule 4-1-2- Operations, Maintenance and Administration Program Costs.

5.1. COST DRIVERS & TRENDS

Table 12 below shows the overall cost drivers for OM&A. Detailed explanations for each item are provided in Schedule 4-1-2 - Operations, Maintenance and Administration Costs.

Table 12 – Summary of Overall OM&A Cost Drivers ($'000,000s)

	Historical Years			Bridge Years		Test Year
Cost Driver	2021	2022	2023	2024	2025	2026
OPENING BALANCE	**$ 91**	**$ 85**	**$ 101**	**$ 113**	**$ 115**	**$ 119**
Inflation		$ 3	$ 4	$ 5	$ 4	$ 4
COVID Impact	$ (6)	$ 2				
Labour Costs				$ 4		$ 6
Proactive Distribution Maintenance						$ 5
New IT Programs		$ 1				$ 6
Major Weather Events		$ 8	$ 8			
Labour Strike			$ 6			
Other Costs		$ 2	$ (6)	$ (7)	-	$ 1
Total Change	$ (6)	$ 16	$ 12	$ 3	$ 4	$ 21
CLOSING BALANCE	**$ 85**	**$ 101**	**$ 113**	**$ 115**	**$ 119**	**$ 140**

5.2. COMPENSATION

Over the course of two successive five-year rate plans, Hydro Ottawa has sought to keep its permanent positions relatively static. Looking ahead to the 2026-2030 term, there is a critical need for growth of the workforce and the addition of new and enhanced skill sets. The growth is necessary to meet business growth needs and ensure safe and efficient work. This includes:

- Maintaining and enhancing the reliability of the electricity distribution system;
- Executing its comprehensive asset management plan and planned infrastructure renewal;
- Addressing increased workload demands, evolving skill requirements, and emerging business priorities;
- Responding to increasing legislative and regulatory requirements;
- Addressing customer growth and nurture an evolving customer relationship;
- Continuing to manage the effects of the demographic shifts in the workforce; and
- Leveraging technological advancements in an ever-changing business landscape.

Table 13 below shows the total compensation included in OM&A for each of the Historical, Bridge, and Test Years.

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

	Year	Compensation	Previous Year	Variance ($)	Variance (%)
Historical	2021	$ 72,044			
	2022	$ 76,542	$ 72,044	$ 4,498	6%
	2023	$ 71,066	$ 76,542	$ (5,476)	(7)%
Bridge	2024	$ 84,830	$ 71,066	$ 13,764	19%
	2025	$ 90,806	$ 84,830	$ 5,976	7%
Test	2026	$ 104,433	$ 90,806	$ 13,627	15%

For more information on Hydro Ottawa's compensation costs, including a comparison of 2026 Test Year compensation costs with Historical and Bridge Year costs for the 2021-2025 period, please see Schedule 4-1-3(A) - Employee Compensation Strategy.

6. COST OF CAPITAL SUMMARY

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 – 2026-2030 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
2026	4%	3.91%	56%	3.96%	40%	9.00%	5.97%
2027	4%	3.91%	56%	3.96%	40%	9.00%	5.97%
2028	4%	3.91%	56%	3.96%	40%	9.00%	5.97%
2029	4%	3.91%	56%	3.96%	40%	9.00%	5.97%
2030	4%	3.91%	56%	3.96%	40%	9.00%	5.97%

Hydro Ottawa is using the OEB's cost of capital methodology for its capital components. The short-term debt component uses the 3.91% rate as a placeholder and as outlined in the OEB's Cost of Capital and Other Matters decision and order.[2] Hydro Ottawa is proposing to update its revenue requirement for 2026-2030, based on the deemed short-term debt rate for 2026 to be set by the OEB in the fall of 2025, and that this rate be locked in for the five-year term covered by this Application. Hydro Ottawa proposes a long-term debt rate for 2026 of 3.96%, calculated as the weighted average rate of existing embedded debt and forecast debt planned to be issued from 2025-2026 applied throughout the 2026-2030 rate cycle, as described in Schedule 5-1-1 - Cost of Capital and Capital Structure. Hydro Ottawa has proposed a 9.00% return on equity (ROE) parameter for the purpose of calculating revenue requirement for the full five-year period

[2] Ontario Energy Board, *Decision and Order, Generic Proceeding - Cost of Capital and Other Matters*, EB-2024-0063, (March 27, 2025).

covered by this Application. Hydro Ottawa will update its revenue requirement for 2026-2030, based on the ROE for 2026 to be set by the OEB in the fall of 2025.

7. COST ALLOCATION AND RATE DESIGN SUMMARY

7.1. COST ALLOCATION

The primary purpose of a cost allocation model is to determine the proportions of total revenue requirements that are the responsibility of each rate class.[3] Hydro Ottawa has completed a cost allocation model for each of the test years 2026-2030 using the OEB's Cost Allocation Model.[4] As discussed in Schedule 3-1-1 - Revenue Load and Customer Forecast, the proportion of revenue requirement allocated to each rate class varies over the five test years.

Hydro Ottawa completed a cost allocation study to support input to the cost allocation in two key areas:[5]

- The appropriate split between primary, secondary and services assets; and
- The appropriate customer count and non-coincident peak (NCP) split between primary and secondary for the Residential and GS <50 kW customer classes.

The study's process and results are detailed in Attachment 7-1-1 (F) - Primary/Secondary Cost Study. The impact of each of the cost study components on the proposed 2026 revenue requirement is described in detail in Attachments 7-1-1(F) - Primary/Secondary Cost Study and 7-1-1(G) - 2026 Demand Allocators. The results have been incorporated into the cost models in Attachments 7-1-1(A) - OEB Workform - 2026 Cost Allocation Model to 7-1-1(E) - OEB Workform - 2030 Cost Allocation Model.

[3] Please see Attachment 7-1-1(B): Cost Allocation Report.
[4] Hydro Ottawa has used the 2026 version of the OEB Cost Allocation Model, released on February 5, 2025.
[5] As agreed in: Hydro Ottawa Limited, *2021-2025 Custom Incentive Rate-Setting Approved Settlement Agreement*, EB-2019-0261 (September 18, 2020), page 27.

The resulting revenue-to-cost ratios for each rate class were determined using the total revenues over costs for the Test Years, pursuant to the OEB's policies for cost allocation by electricity distributors.[6]

7.2. RATE DESIGN

Results from Hydro Ottawa's cost allocation study, as well as the revenue and cost ratios from the five cost allocation models were used to calculate Hydro Ottawa's 2026-2030 proposed fixed and variable charge. As noted in Schedule 7-1-1- Cost Allocation, some rate classes' Revenue-to-Costs ratios were outside the OEB's upper/lower band. Therefore Hydro Ottawa is proposing rate mitigation on the Sentinel rate class, which would otherwise face a 10% total bill impact. Other rate classes are being brought within their band by the end of the five year rate period. Specifically, Hydro Ottawa adjusted Revenue-to-Cost ratios for GS <50 kW, Large Use, and Street Lighting customer classes to bring them within the specified ranges over the Test Years. For further details, refer to Schedule 8-5-2 - Rate Mitigation and Schedule 7-1-1 - Cost Allocation.

As of January 1, 2020, Residential distribution rates are fully fixed, in compliance with the policy adopted by the OEB in 2015.[7] 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). In addition, effective January 1, 2026, Hydro Ottawa is requesting to bill approved monthly fixed charges to a rate per day basis, applicable to all rate classes. For more information on the mechanics of this proposed change, refer to Schedule 8-1-2 - Fixed/Variable Proportion.

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[6] Ontario Energy Board, *Report of the Board - Review of Electricity Distribution Cost Allocation Policy*, EB-2010-0219 (March 31, 2011).
[7] Ontario Energy Board, *Board Policy - A New Distribution Rate Design for Residential Electricity Customers*, EB-2012-0410 (April 2, 2015).

7.3. STANDBY RATES AND RATE STRUCTURE

For this Application, Hydro Ottawa is requesting approval to finalize the existing interim standby rates, which are valid until December 31, 2025. Effective January 1, 2026, Hydro Ottawa is proposing the following changes to the standby rate design:

1. The 2025 approved Standby monthly fixed service charge continued for the 2026-2030 rate period;
2. Standby volumetric charges only applied to Billed Backup demand above 500 kW charged at fifty percent of the distribution variable rate;
3. Backup Overrun Adjustment charges are billed using Hydro Ottawa's distribution variable rate of the applicable class;

These changes are intended to encourage more strategic development of DERs and enable Hydro Ottawa to accommodate them effectively in grid development plans. Furthermore, through the 2026-2030 period, Hydro Ottawa is exploring non-wire alternatives to address system capacity needs. As such, Hydro Ottawa is exploring incentives for non-wires solutions where there is a benefit to the distribution grid.

8. DEFERRAL AND VARIANCE ACCOUNTS SUMMARY

Hydro Ottawa proposes to dispose of Group 2 deferral accounts, including the Lost Revenue Adjustment Mechanism (LRAM) Account. The total net deferral and variance (DVA) balance proposed for disposition is $(4,610,795). Hydro Ottawa is proposing that the Rate Riders for Group 2 Accounts (excluding LRAM) be disposed of over one year. The LRAM variance will also be disposed of over one year for most rate classes, except for GS 50 to 1,499 kW, where the LRAM balance is proposed for disposition in 2027. No Group 1 Accounts are being requested for disposition at this time.

Hydro Ottawa is proposing continuation of existing accounts as well as modifications to the following DVAs as outlined below.

Proposed the continuance/modified of the following 1508 variance accounts:

- Symmetrical System Access Capital Additions Differential Account - exclude capital additions related to the sub-account System Access Plant Relocations and Growth Capital Development Additions (modified)
- Existing asymmetrical System Renewal/System Service (SR/SS) Capital Additions Differential Account (asymmetric) to exclude new SR/SS sub-account (modified)
- Asymmetrical General Plant (excluding CCRA) Capital Additions Differential Account (continuance)
- Earnings Sharing Mechanism Variance Account - with deadband (modified)

Hydro Ottawa is proposing the following new deferral and variance accounts:

- Symmetrical Non-wires Solutions Variance Account
- Symmetrical Large Load Variance Account
- Tariff Impact Deferral Account

In addition Hydro Ottawa is requesting to maintain the ability to apply for a Z-factor Account and make use of Account 1595 (2026)

In addition, Hydro Ottawa is requesting that the following deferral and variance accounts be discontinued:

- 1508 Sub-Account - Pole Attachment Charge Revenues Variance Account
- 1508 Sub-Account - Green Button Initiative Costs
- 1508 Sub-Account - Ultra-Low Overnight (ULO) Implementation Costs
- 1508 Sub-Account - RCVA Retail Incremental Revenue
- 1508 Sub-Account - STR Incremental Revenue
- 1508 Sub-Account - Impacts Arising from COVID-19 Emergency

- 1508 Sub-Account - Incremental Cloud Computing Implementation Costs

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

9. BILL IMPACTS SUMMARY

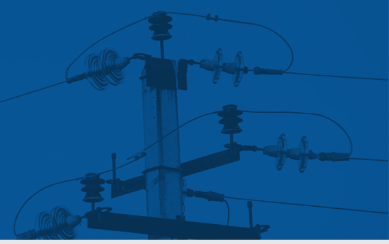
In developing its capital and OM&A budgets for the 2026-2030 period, Hydro Ottawa was careful to have due regard for the impacts that bill increases may have on customers. The utility's objective was to keep the total bill impacts for each of its customer classes as reasonable as possible.

Table 15 below provides a summary of the total bill impacts for typical customers in all classes. Further details regarding Hydro Ottawa's proposed bill impacts are available in Schedule 8-5-1 - Bill Impacts and Tariff of Rates and Charges.

1 **Table 15 – Summary of Bill Impacts**

Rate Class		Approved	Proposed				
		2025	2026	2027	2028	2029	2030
Residential (750 kWh)	Distribution Charge	$34.51	$40.59	$44.38	$47.69	$50.41	$53.15
	Change in Distribution Charge		$6.08	$3.79	$3.31	$2.72	$2.74
	% Distribution Increase		17.62%	9.34%	7.46%	5.70%	5.44%
	% Increase of Total Bill		6.05%	2.73%	2.33%	1.88%	1.85%
General Service <50 kW (2000 kWh)	Distribution Charge	$85.93	$100.50	$108.92	$116.42	$123.04	$128.84
	Change in Distribution Charge		$14.57	$8.42	$7.50	$6.62	$5.80
	% Distribution Increase		16.96%	8.38%	6.89%	5.69%	4.71%
	% Increase of Total Bill		4.94%	2.35%	2.05%	1.77%	1.53%
General Service 50 kW - 1,499 kW (185 kW)	Distribution Charge	$1,366.91	$1,673.88	$1,835.23	$1,966.69	$2,079.17	$2,192.43
	Change in Distribution Charge		$306.97	$161.36	$131.46	$112.48	$113.26
	% Distribution Increase		22.46%	9.64%	7.16%	5.72%	5.45%
	% Increase of Total Bill		0.40%	1.36%	1.09%	0.92%	0.92%
General Service 1,500 kW - 4,999 kW (1,925 kW)	Distribution Charge	$16,219.02	$18,031.03	$20,584.54	$22,143.40	$23,428.53	$24,549.08
	Change in Distribution Charge		$1,812.00	$2,553.51	$1,558.87	$1,285.13	$1,120.54
	% Distribution Increase		11.17%	14.16%	7.57%	5.80%	4.78%
	% Increase of Total Bill		(0.93)%	1.88%	1.12%	0.92%	0.79%
Large Use (7,500 kW)	Distribution Charge	$61,692.18	$69,467.43	$81,506.43	$89,100.93	$94,642.68	$102,371.43
	Change in Distribution Charge		$7,775.25	$12,039.00	$7,594.50	$5,541.75	$7,728.75
	% Distribution Increase		12.60%	17.33%	9.32%	6.22%	8.17%
	% Increase of Total Bill		(1.03)%	2.06%	1.27%	0.92%	1.27%
Sentinel Lighting (0.4 kW)	Distribution Charge	$20.19	$21.91	$24.10	$25.89	$27.37	$28.86
	Change in Distribution Charge		$1.72	$2.19	$1.79	$1.48	$1.49
	% Distribution Increase		8.51%	9.97%	7.45%	5.73%	5.43%
	% Increase of Total Bill		9.23%	6.15%	4.77%	3.78%	3.65%
Street Lighting (50kW)	Distribution Charge	$928.89	$983.59	$732.56	$766.04	$782.25	$789.60
	Change in Distribution Charge		$54.70	($251.03)	$33.48	$16.21	$7.36
	% Distribution Increase		5.89%	(25.52)%	4.57%	2.12%	0.94%
	% Increase of Total Bill		(0.21)%	(7.55)%	1.09%	0.52%	0.24%
Unmetered Scattered Load (470 kWh)	Distribution Charge	$22.98	$25.80	$28.49	$30.47	$32.23	$33.72
	Change in Distribution Charge		$2.82	$2.70	$1.97	$1.76	$1.49
	% Distribution Increase		12.27%	10.46%	6.92%	5.78%	4.64%
	% Increase of Total Bill		5.14%	3.10%	2.22%	1.94%	1.29%

Understanding Hydro Ottawa's 2026–2030 investment plan



About Hydro Ottawa

Hydro Ottawa is the third largest municipally-owned electricity distributor in Ontario. We distribute electricity to approximately 364,000 customers, serving a population of more than one million people in the city of Ottawa and the village of Casselman. We are a private company wholly-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. For more than 100 years, Hydro Ottawa has operated a large, complex distribution network, consisting of more than 6,000 kilometres of primary lines and cable, 49,027 poles, 38,946 transformers, and 92 substations.

Our five-year business plan

Hydro Ottawa is seeking approval from the Ontario Energy Board (OEB) for the distribution rate framework that will set rates for the 2026–2030 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 they charge customers.

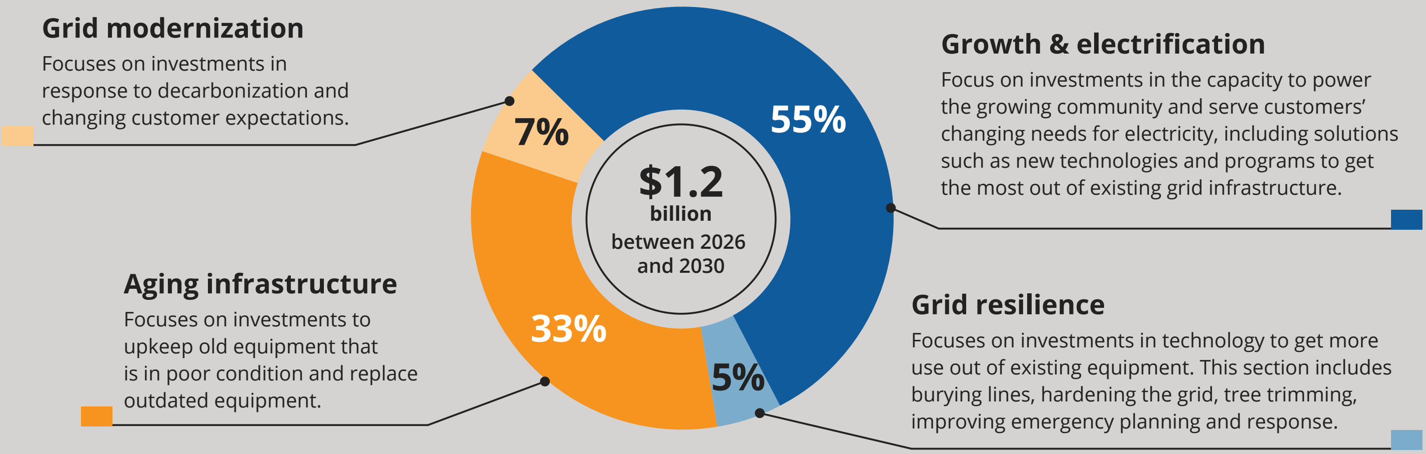
Hydro Ottawa's five-year 2026–2030 investment plan totals an estimated $1.2B and is made up of four capital investment categories — growth & electrification, aging infrastructure, grid modernization, and grid resilience. Capital expenditures are assets that have lasting benefits over many years (e.g. poles, wires, transformers). Our operational budget for 2026–2030 is separate and is not included in the $1.2B breakdown you see on the next page.

What informs Hydro Ottawa's 2026–2030 investment 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, environmental, technical, and operational needs.
- **Customer feedback** collected throughout multiple consultations on the application and through ongoing customer engagement. Customers will also have opportunities to provide feedback through the OEB's public process.

Hydro Ottawa's five-year 2026–2030 investment plan



What is Hydro Ottawa's 2026–2030 investment plan about?

Hydro Ottawa's plan involves significant investment in our infrastructure to support the energy transition. Key elements include boosting the capacity of substations, transformers, and both overhead and underground lines; expanding and enhancing connections with provincial transmission lines to handle larger electricity deliveries; and preparing to commission a new substation annually to meet the demand of a growing service territory and customer base.

Hydro Ottawa plans to deploy new technologies such as large-scale batteries for energy storage, replace aging assets that are at higher risk for failure, and bolster grid resilience to ensure reliable service amid more frequent severe weather events.

Hydro Ottawa's 2026–2030 investment plan also considers many existing and emerging challenges related to delivering safe, reliable and clean electricity while keeping rates in mind.

Here are the key challenges that the plan addresses:

- Enabling the energy transition and reducing emissions
- Maintaining and replacing aging assets
- Responding to rising costs
- Adapting to how customers use electricity
- Powering a growing and diverse community
- Responding and adapting to an increasing number of extreme weather events
- Continue to strengthen and respond to cybersecurity attacks/threats
- Addressing workforce challenges and employee safety

How customers helped inform our 2026–2030 plan

At Hydro Ottawa, we strive to put our customers at the centre of everything we do. We're committed to working with them to understand their needs and preferences. All while operating efficiently and cost-effectively.

In preparing our 2026–2030 investment plan, we gave all customers the opportunity to have their say in shaping Ottawa's energy future. During our preliminary rate application engagements in early 2024, we learned more about our customers' priorities and expectations for the services we provide through virtual focus groups and online surveys. Customers listed reliable service, storm hardening our grid, increasing grid capacity, and ensuring reasonable rates as priority areas for us to focus on.

With this input, we developed a plan emphasizing four key areas of capital investment:

1. Growth and electrification;
2. Replacing aging infrastructure;
3. Modernizing our grid; and
4. Improving grid resilience.

Between September 16 – October 6, 2024, 21,000 customers provided feedback on our 2026–2030 investment plan via our online survey.

The majority of customer feedback expressed support for Hydro Ottawa's proposed plan or even spending a bit more to improve service based on the priorities above. Hydro Ottawa received social permission to proceed from 85 per cent of residential customers, 83 per cent of small business customers, and 94 per cent of GS>50 customers.

Breaking down your bill

Electricity distributors like Hydro Ottawa are funded through the distribution rates paid by customers.

While Hydro Ottawa is responsible for collecting payment for the entire electricity bill, we only retain a portion of the delivery charge, representing around 26 per cent of a typical residential bill. The remaining 74 per cent of the bill goes to generation companies, transmission companies, the federal and provincial governments, and regulatory agencies.

Typical residential bill

Sample Hydro Ottawa monthly bill
(based on consumption of 750kWh as Jan.1, 2026

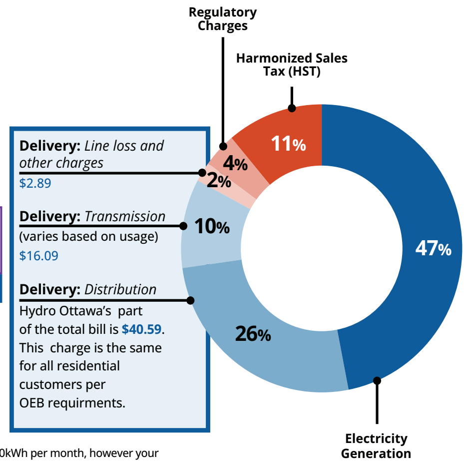
Account Number:
000000000

Meter Number:
00000000

Your Electricity Charges

Electricity	
TOU* – Off-Peak @ 7.6 c/kWh	$36.48
TOU* – Mid-Peak @ 12.2 c/kWh	$16.47
TOU* – On-Peak @ 15.8 c/kWh	$21.33
Delivery	$59.56
Regulatory Charges	$6.16
Total Electricity Charges	**$140.00**
HST	$18.20
Ontario Electricity Rebate	($18.34)
Total Amount	**$139.86**

*Time-of-use rates

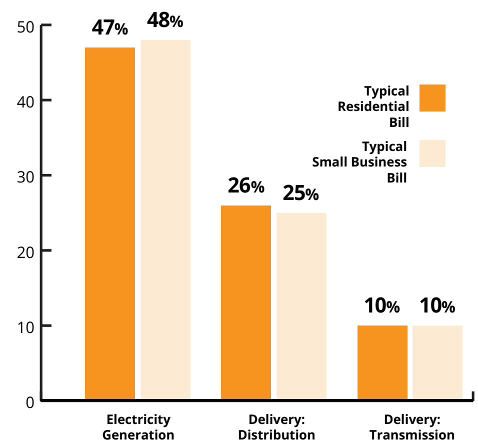


Note: The sample bill above uses an average consumption level of 750kWh per month, however your usage may vary above or below this assumed level. These types of variations would mostly impact your electricty (On, Mid and Off-Peak) charges. Diagram excludes Ontario Electricty Rebate and may not total 100% due to rounding.

Typical small business bill

	Typical Small Business Bill
TOU* – Off-Peak @ 8.7 c/kWh	97.28
TOU* – Mid-Peak @ 12.2 c/kWh	43.92
TOU* – On-Peak @ 18.2 c/kWh	56.88
Delivery	**148.12**
Regulatory Charges	13.91
Total Electricity Charges	**$360.11**
HST	46.81
Ontario Electricity Rebate	(47.17)
Total Amount	**$359.75**

*Time-of-use rates



What are the bill impacts for ratepayers?

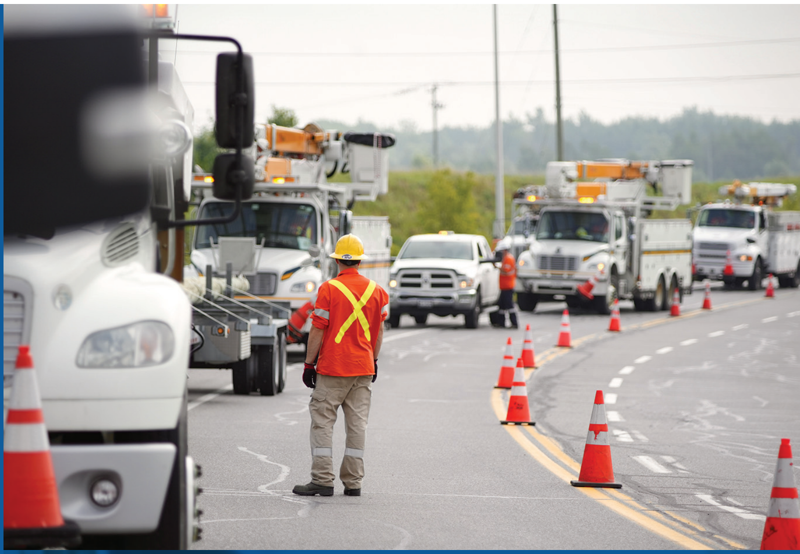
In order to proceed with our proposed investment plan, we're seeking approval from the OEB to change our distribution rates. The expected impacts on the distribution portion of customer bills over the five-year period are shown in the table below:

		Proposed				
Rate class		**2026**	**2027**	**2028**	**2029**	**2030**
Residential (750 kWh)	Change in distribution charge	$6.08	$3.79	$3.31	$2.72	$2.74
	Distribution increase (%)	17.62%	9.34%	7.46%	5.70%	5.44%
	Increase of total bill (%)	6.05%	2.73%	2.33%	1.88%	1.85%
General Service <50 kW (2000 kWh)	Change in distribution charge	$14.57	$8.42	$7.50	$6.62	$5.80
	Distribution increase (%)	16.96%	8.38%	6.89%	5.69%	4.71%
	Increase of total bill (%)	4.94%	2.35%	2.05%	1.77%	1.53%

Have your say

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

Learn more about how you can participate in the rate setting process at oeb.ca/participate. To view our active applications, please visit hydroottawa.com/active-applications.



DISTRIBUTION SYSTEM OVERVIEW

1. INTRODUCTION

Hydro Ottawa, incorporated under the Ontario Business Corporations Act, holds Electricity License No. ED-2002-0556 from the OEB. Serving over 364,000 customers across the City of Ottawa and the Municipality of Casselman, it ranks among Ontario's largest Local Distribution Customers (LDCs) by customer count and geographic size.

Established in November 2000 following municipal amalgamations in the Ottawa region, Hydro Ottawa expanded its service territory in April 2002 through the acquisition of Casselman Hydro Inc. These two service areas are non-contiguous, separated by Hydro One Network Inc.'s (Hydro One) territory. A detailed map of Hydro Ottawa's service territory is provided in Attachment 1-2-2(A) - Distribution System Map.

Hydro Ottawa, like most other LDCs in Ontario, operates under the regulatory oversight of the OEB. However, its expansive service territory creates a unique operating environment. Encompassing 1,116 square kilometers - 662 km^2 rural and 454 km^2 urban as of the end of 2023 - Hydro Ottawa operates within one of the largest service territories in the province, ranking fifth in geographic size behind Hydro One, Algoma Power Inc., Alectra Utilities Corporation and ERTH Power Corporation. Hydro Ottawa's diverse territory includes the densely populated urban core of Ottawa, with its mix of residential, commercial, and government customers, rapidly growing suburban areas with expanding residential and commercial developments, and distinct rural communities. This unique blend of urban and rural landscapes presents Hydro Ottawa with a diverse set of challenges and opportunities in delivering reliable and efficient electricity service.

Hydro Ottawa serves a diverse customer base of 364,334 customers, categorized as follows: 335,548 residential; 25,700 small commercial; 3,076 commercial and 10 Large Users.[1] Hydro Ottawa is one of the largest LDCs in Ontario in terms of customer count, ranking fourth largest behind Hydro One, Alectra Utilities Corporation, and Toronto Hydro Electric-System Limited in this category. Serving within the City of Ottawa and Municipality of Casselman, Hydro Ottawa provides service to, among others, a significant number of institutional customers, such as the Canadian Parliament Buildings, many federal government facilities and campuses, four hospitals, and three post-secondary educational institutions.

The City of Ottawa and its surrounding areas have experienced significant growth in recent years, including the highest growth rate (8.9%) among large municipalities between 2016 and 2021 according to the Statistics Canada national censuses. During this period, the City's population surpassed 1 million, making it the fourth-largest city in Canada.

This rapid growth is projected to continue in the coming years. The City of Ottawa's Official Plan anticipates a 15% population increase between 2021 and 2031, with total growth of 33% over the full term of the Plan (2021-2046). This expansion will take several forms, including the development of new mixed-use commercial and residential communities, intensification of urban core development, and ongoing suburban growth in the east, west, and southern regions. Additionally, Ottawa has committed to building 151,000 new homes by 2031 to meet provincial housing targets, equating to approximately 15,100 new units annually. This surge in development will coincide with major infrastructure projects, such as the planned expansion of Ottawa's Light Rail Transit system, which is expected to intersect with Hydro Ottawa's upcoming rate period.

[1] As of the end of 2023.

2. HOST VS. EMBEDDED DISTRIBUTOR

As noted above, Hydro Ottawa's service area is surrounded by the service territory of Hydro One. There are no licensed distributors embedded within Hydro Ottawa's service area. Hydro Ottawa's load is primarily delivered through transmission connection points. However, there are a number of delivery points embedded in the Hydro One distribution system. Further information on connections to Hydro One's network are available in Sections 6.1 and 6.2.2 of Schedule 2-5-4 - Asset Management Process.

3. HIGH VOLTAGE DISTRIBUTION ASSETS

The following list of substations includes all of Hydro Ottawa's assets that operate at or above 50kV and form part of the distribution system.[2]

- Bridlewood MS (2 substations)
- Cambrian MTS
- Centrepointe DS
- Cyrville MTS
- Ellwood MTS
- Epworth DS
- Fallowfield MS
- Kanata MTS
- Limebank MS
- Manordale DS
- Marchwood MTS
- Merivale MTS
- Moulton MS
- Richmond South DS

[2] "DS" means distribution station; "MS" means municipal station, and "MTS" means municipal transformer station. This terminology is historical, often based on past ownership arrangements.

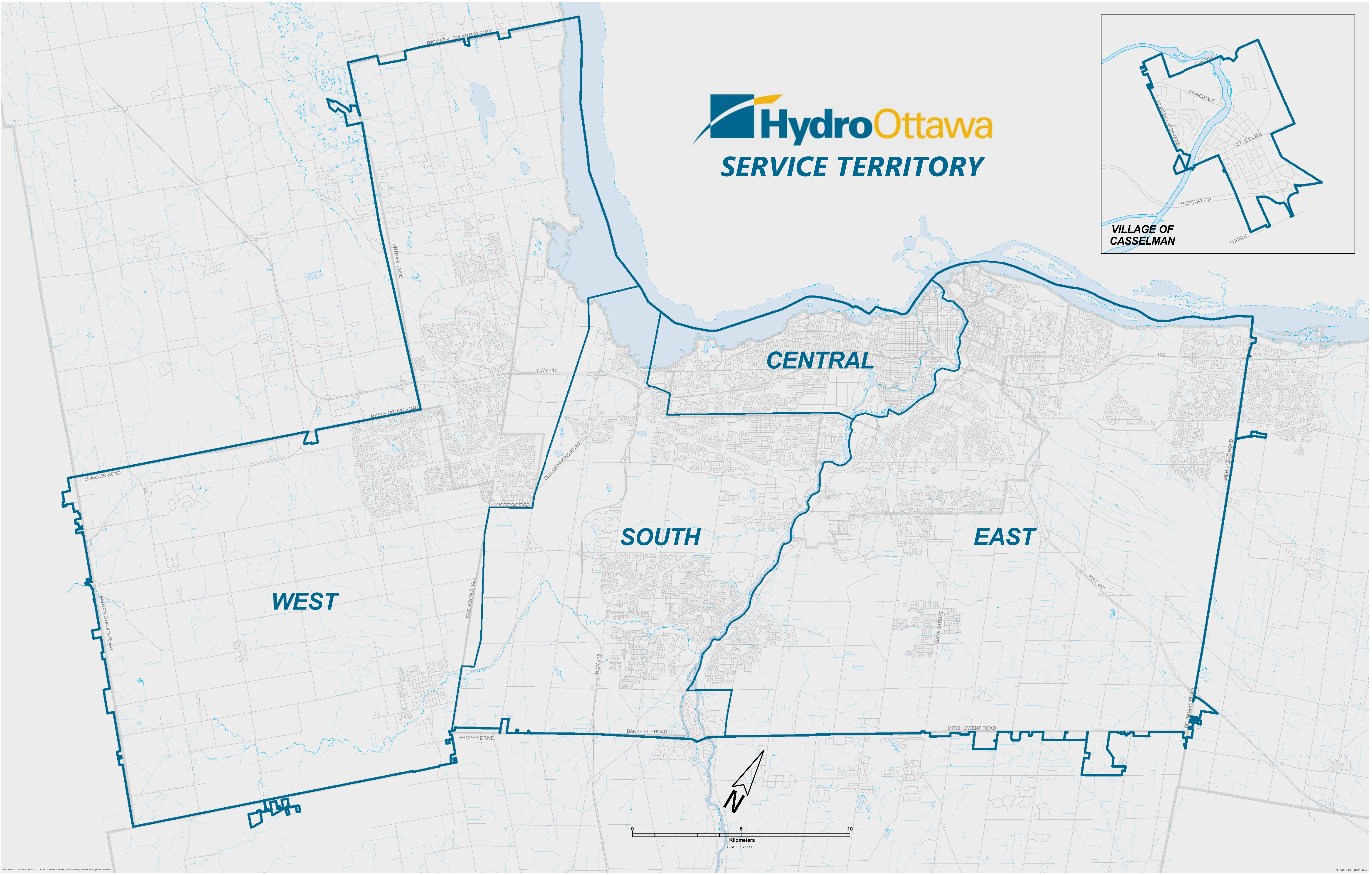
- Terry Fox MTS
- Uplands MTS

Over the 2026-2030 period, the following substations >50kV will be added to Hydro Ottawa's distribution network:

- Bronson MTS[3]
- Greenbank MTS
- Hydro Road MTS
- Mer Bleue MTS
- New Kanata North MTS
- Piperville MTS

A complete list of Hydro Ottawa and Hydro One owned stations that supply Hydro Ottawa customers is available Attachment 2-5-4(G) - Hydro Ottawa Stations Table.

[3] Bronson MTS will be constructed during the 2026-2030 period; however, it is planned to be energized in 2031.


HydroOttawa
SERVICE TERRITORY
CENTRAL
SOUTH
EAST
WEST
VILLAGE OF
CASSELMAN
HWY 417
MAPLE GROVE ROAD
McARTON ROAD
HUNTMAR DRIVE
OLD RICHMOND ROAD
HOPE SIDE RD
EAGLESON ROAD
ASHTON STATION ROAD
HWY 416
BANKFIELD ROAD
BROPHY DRIVE
MITCH OWENS ROAD
BANK STREET
BOUNDARY ROAD
MER BLEUE ROAD
174
THOMAS A. DOLAN PARKWAY
PRINCIPALE
ST. ISIDORE
HIGHWAY 417
AURELE
Kilometers
SCALE 1:75,000
B. WILSON - MAY 2023

Hydro Ottawa Limited

Business Plan

2026-2030

Table of Contents

1. INTRODUCTION

Hydro Ottawa Limited ("Hydro Ottawa" or "the utility") presents its 2026-2030 Business Plan, which articulates the utility's overall strategy and priorities, highlights the capital and operational investments required to run the business effectively and meet customer needs, and outlines the benefits that will accrue to customers as a result of the plan's execution.

The formulation of this Business Plan follows on the heels of a series of five-year rate cycles during which Hydro Ottawa has invested in core distribution infrastructure and business assets, and strengthened its organizational posture and resilience. An examination of achievements in recent years reveals a lengthy roster of outcomes that comport with customer expectations for quality and value-added service: consistent reliability performance; timely outage restoration; new system capacity to accommodate local growth; greater choice and convenience in service delivery; efficiency and consistency in completing service requests; more online and digital service offerings and communication channels; and the maintenance of infrastructure in safe working order. What's more, these results were achieved against a backdrop of extraordinary challenges and pressures. These include severe weather events of historic magnitude, ranging from floods to tornadoes to the worst storm in Ottawa's history (the 2022 Derecho); the global COVID-19 pandemic and its attendant impacts on supply chains and inflation; and an 84-day labour strike. In short, Hydro Ottawa has shown itself capable of maintaining an elevated standard of service and operational excellence, all while navigating and adapting to a fluid and unpredictable operating environment.

This recent experience is a fitting preface for the upcoming rate period. Over the course of 2026 to 2030, Hydro Ottawa will execute an ambitious plan for investing in its grid, its tools and technologies, and its workforce. This plan is aimed at meeting the evolving needs and preferences of customers, and preparing both the distribution system and the utility itself for a future state defined by a paradigm shift in demand and performance.

The cornerstone of this plan is a capital investment program of unprecedented scope and scale, averaging $240 million per year. Many of the investment drivers from preceding rate terms remain operative: maintaining service reliability; replacing deteriorating infrastructure; meeting the increased demand of a growing community; modernizing grid operations; and delivering a best-in-class customer experience. However, there are also emerging and evolving drivers which are posing transformational challenges for Hydro Ottawa's planning and operations, and shifting the business landscape in a dramatic fashion.

In particular, the structural movement occurring across the global energy sector, in which renewable energy-based systems are replacing fossil fuel-based energy systems, is accelerating rapidly. This "energy transition" is being driven by numerous factors – such as cost-competitiveness of non-emitting resources, technological innovation, public policy goals, and evolving consumer and investor preferences – and is playing out in Hydro Ottawa's service territory in various ways.

For example, the local municipal public transit system is in the midst of a wholesale shift towards an electrically-powered Light Rail Transit network and bus fleet. In addition, the utility is currently fielding the highest number of large load requests in its history, primarily on account of major businesses and institutions seeking to decarbonize their energy footprint by fuel-switching to electricity. Meanwhile, residential and commercial customers are adopting electrified technologies – such as electric vehicles (EVs), solar generation, storage systems and heat pumps – at a steadily rising rate. The combined effect of these developments is an upward pressure on electricity demand, a pressing need for expanded system capacity, and emerging requirements for tools, programs, and human capital resources to fulfill customer expectations (especially for uninterrupted service) in an increasingly electrified environment.

In addition, there is a heightened imperative to address the effects of climate change and increase the resilience of the critical infrastructure for which Hydro Ottawa is responsible. In recent years, the utility has experienced a historic series of extreme weather events causing tremendous levels of damage to its distribution system and impacting upwards of 50% or more of its customer base at a time. Foremost among these was the May 2022 Derecho storm, which featured the highest wind speeds ever recorded in the Ottawa area (190 km/h) and was one of the most expensive natural disasters in Canadian history.[1] Having experienced first-hand the devastating impacts of more frequent and intense severe weather events, and as the distribution provider to the city that has become the weather alert capital of Canada,[2] Hydro Ottawa must take the necessary steps to further strengthen its distribution grid and enhance its ability to prepare for, withstand, recover from and adapt to climate-related challenges.

While the specific scope of this Business Plan is limited to the 2026-2030 period, the investments and activities contemplated herein, along with Hydro Ottawa's overall business posture, are oriented towards a long-term horizon. The transformations occurring in the company's business environment mean that Hydro Ottawa must undertake the necessary level and breadth of investment now in order to be able to deliver value to customers in the years and decades to come, as a more electrified way of life comes to fruition, demand and use patterns shift, customers become more empowered, localized electricity markets take root, and grid operations assume a more dynamic, automated and decentralized profile.

The proposals and the priorities set forth in this Business Plan are the product of a robust planning process, encompassing core elements of the company's integrated business planning and performance management framework, asset management framework and customer engagement program. In step with its overall strategy to put the customer at the centre of everything it does, the utility has ensured that its 2026-2030 capital and operational investment plans have been guided and informed by customer feedback. This was achieved through direct

[1] Insurance Bureau of Canada, *"Derecho storm ranks 6th largest"* (June 15, 2022). Available: https://www.ibc.ca/news-insights/news/derecho-storm-ranks-6th-largest.
[2] CBC News, *"Ottawa has more weather alerts than before — and more than other cities"* (August 10, 2024). Available: https://www.cbc.ca/news/canada/ottawa/ottawa-weather-alert-warning-watch-amount-stats-1.7288074.

engagement with customers to better understand their needs, preferences and priorities. Such engagement took many forms through a variety of channels, platforms and forums, and was conducted on an evergreen basis as part of regular business activity over the course of the preceding five-year rate term, as well as by means of targeted surveys that were administered to customers in the lead-up to the filing of this application.

Accordingly, Hydro Ottawa is confident that this plan appropriately balances the twin imperatives of investing in essential infrastructure in order to achieve service levels and performance outcomes which are valued by customers, while minimizing impacts on rates. Consistent with the utility's high standard of excellence, this Business Plan incorporates several mechanisms which will hold Hydro Ottawa accountable for delivering on its commitments, including regular and transparent performance reporting, as well as meaningful performance incentives that will offer special inducement for the company to cost-effectively execute on its plans and align its interests with those of its customers.

2. CORPORATE OVERVIEW

2.1. COMPANY DESCRIPTION

Hydro Ottawa is a regulated electricity distribution company serving approximately 364,000 customers within the City of Ottawa and the Village of Casselman. 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 comprises a dense urban core, large areas of suburban development and a vast rural area that represents 60% of the overall footprint. The utility is a subsidiary of Hydro Ottawa Holding Inc., which is 100% owned by the City of Ottawa and governed by an independent Board of Directors.[3]

[3] More specifically, the utility is wholly-owned by Hydro Ottawa Capital Corporation, which is one of two subsidiary holding companies under Hydro Ottawa Holding Inc. Please see Schedule 1-6-1 Corporate Structure and Governance for more information.

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 is the second largest in the Province of Ontario and the fourth largest in the country.

Hydro Ottawa takes great pride in its legacy of performance excellence and innovation. For many years, the utility has consistently delivered on one of the top priority outcomes valued by customers, by achieving best-in-class levels of system reliability relative to its sector peers. Hydro Ottawa has also blazed many trails as an industry leader: at the provincial level, through such milestones as being the first municipally-owned utility to implement a Supervisory Control and Data Acquisition (SCADA) system, and maintaining one of the highest e-billing rate among all electricity distributors in Ontario; and at the national level, through pioneering actions such as the issuance of green bonds and certification against the ISO 55001 standard for asset management excellence (a first in the municipal utility domain in both instances).

2.2. STRATEGIC OBJECTIVES

Hydro Ottawa puts customers at the centre of everything it does. The utility believes that a sharp focus on the value it provides to customers will generate positive results in all areas of performance. Over the course of successive multi-year planning cycles, the company has reoriented its activities around the customer and customer centrality will continue to drive its business strategy moving forward.

To achieve its mission of creating value for its shareholder, customers and communities, and its vision of becoming a leading partner in a smart energy future, Hydro Ottawa's parent company has organized its business strategy around eight objectives, represented in Figure 1 below.

These objectives cascade across the enterprise and therefore serve to guide the business and operations of the regulated distribution utility.

Figure 1 - Hydro Ottawa's Strategic Objectives

Based on the success achieved during the preceding five-year term, the trajectory of the utility's business and operating environments, and the input received from customers regarding its performance and direction, Hydro Ottawa will maintain continuity in these strategic objectives heading into the 2026-2030 period.

As noted in the table below, the strategic objectives align well with the four core performance outcomes established by the Ontario Energy Board (OEB) for electricity distributors under the Renewed Regulatory Framework (RRF).

Table 1 - Alignment between Hydro Ottawa Strategic Objectives and OEB RRF Performance Outcomes

RRF Performance Outcomes	Corporate Strategic Objectives
Financial Performance	Continue to grow and diversify our revenue sources
	Become the partner of first choice for signature green energy and carbon reduction projects in our community
Customer Focus	Continue to provide best-in-class customer service
	Leverage and promote distributed energy resources
Operational Effectiveness	Accelerate digital transformation to ensure sustainable business practices
	Ensure organizational capacity, culture and leadership to deliver
Public Policy Responsiveness	Achieve net-zero operations by 2030
	Grow our social license to operate

3. STRATEGIC CONTEXT

Hydro Ottawa has formulated its Business Plan against the backdrop of numerous trends and shifts that are unfolding in the operating, business and policy environments in which the utility carries out its activity.

3.1. MACROECONOMIC PRESSURES

The state of the local, provincial, national and international economies has a significant impact on Hydro Ottawa's business. For example, uncertainty or volatility in financial markets may constrain the utility's access to capital. The economic climate can also affect the stability and performance of key business partners.

The conditions in which Hydro Ottawa has prepared this Business Plan are characterized by a unique confluence of challenges and pressures. During the utility's current rate term, inflation in Canada reached its highest levels in 40 years. In response, the Bank of Canada pursued an aggressive monetary policy campaign, in which it increased interest rates 10 times over a one-and-a-half year period. While there has recently been a return to stability in inflation and interest rates, their effects continue to linger and intermingle with the residual economic impacts of COVID-19 and the disruptions in global supply chains which the pandemic produced.[4]

Customer sensitivity to price increases and rising costs have been at the forefront of considerations for Hydro Ottawa in its planning for the 2026-2030 period. The utility is conscious of the imperatives to control its costs, embed productivity and continuous improvement across its operations and minimize rate impacts. Amidst economic uncertainty, Hydro Ottawa is discharging its responsibility to manage its resources prudently and prioritize investments that will deliver value for money for customers.

3.2. DETERIORATING INFRASTRUCTURE

Hydro Ottawa owns and operates a large, complex distribution network consisting of approximately 50,000 poles, 38,700 transformers, 4,800 kilometres of overhead lines, 7,900 km[5] of underground cable, and more than 80 substations. Among the most significant operational pressures facing the utility is the advanced age and degraded condition of a significant subset of its asset base.

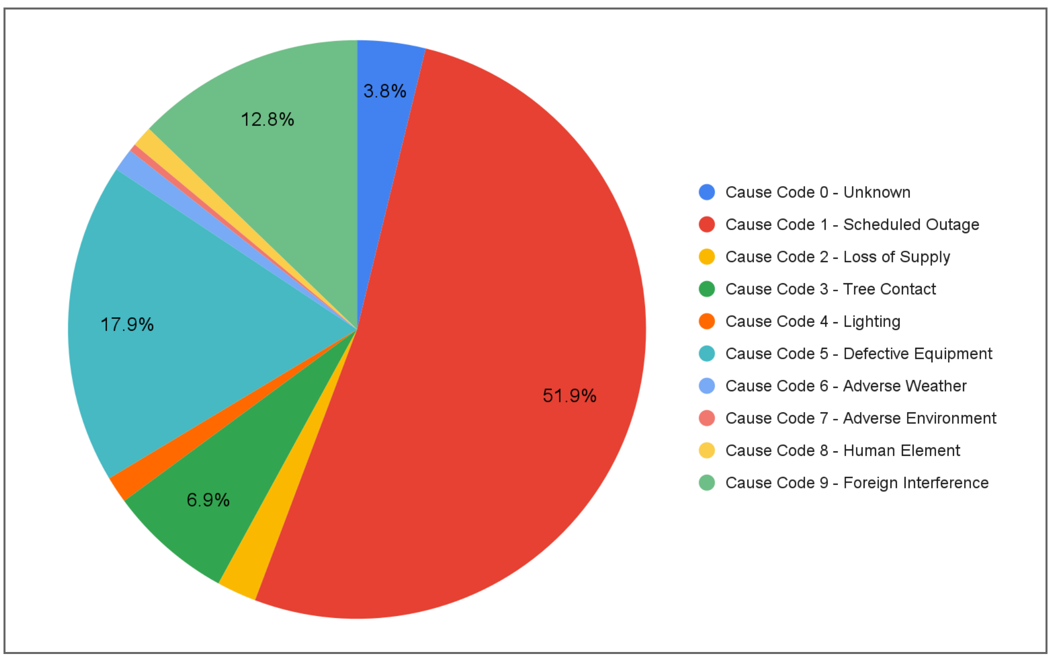
As it concerns asset age, large segments of the system were constructed in the 1960s through the 1980s. With most assets having a lifespan of approximately 50 years, a considerable

[4] Schedule 1-2-5 - Impacts of Inflationary Pressure offers more detailed information and analysis regarding inflation-driven cost increases during the 2021-2025 period, as well as projected impacts on expenditures for the 2026-2030 rate term.
[5] The km shown in this section include both primary and secondary circuits, for information on the calculation of secondary lines, refer to Attachment 1-3-3(A) - PEG Benchmarking Analysis

proportion of the system has reached or exceeded its typical useful life (54% of all assets). From a condition profile perspective, approximately 6% of the utility's assets are in poor or very poor condition, and are in known need of replacement or refurbishment. Together, these figures signal that there are high risks of asset failure which Hydro Ottawa must address, along with accompanying safety and environmental risks which also require mitigation.

As shown in the graph below, in recent years defective equipment has been the leading cause of non-scheduled outages. This underscores the need for regular inspection and replacement of infrastructure that is aging, in poor condition, or performing poorly.

Figure 2 - Leading Causes of Outages (2019-2023)



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

3.3. A GROWING COMMUNITY

The City of Ottawa and the surrounding area has experienced significant growth in recent years. According to Statistics Canada, Ottawa had the highest growth rate (8.9%) among large municipalities in between the 2016 and 2021 national censuses – a period in which the City's population surpassed 1 million people, making it the fourth-largest city in the country.

As outlined in the table below, 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.

Table 2 - Annual Increases in Customer Connections[6]

	2016	2017	2018	2019	2020	2021	2022	2023
New Customers	3,970	3,897	3,543	4,451	6,576	6,968	5,586	5,496

A comparable level of growth for Ottawa is anticipated over the coming years. For example, according to the City's Official Plan, its population is expected to increase by 15% from 2021 to 2031. Population growth over the full term of the Official Plan (2021-2046) is expected to be 33%. This growth is expected to take several distinct forms: the development of new mixed commercial/residential communities; intensification of development within the urban core; and continued suburban growth in the east, west, and southern regions.

In addition, as part of the municipal housing targets established pursuant to the province-wide goal of building 1.5 million new homes by 2031, Ottawa has pledged 151,000 new homes, equating to 15,100 new units on an annual basis.

[6] The figures in this table are based on customer counts as of year-end (i.e. December 31).

Alongside this development, major electrification-driven infrastructure projects such as the City's migration to zero-emission buses for its transit fleet, The Ottawa Hospital's New Civic Campus, and the expansion of Government of Canada facilities are also set to overlap with Hydro Ottawa's upcoming rate period.

3.4. EXTREME WEATHER

As outlined in the table below, Hydro Ottawa has experienced an exceptional number and pattern of severe weather events in recent years.[7]

Table 3 - Historical Weather Events & Impacts

Year	Severe Weather Event	Description, Impacts & Customers Affected
2017	Freezing rain & heavy snow (January)	• 19,130 customers (6% of customer base)
	Flooding (May)	• 1-in-100-year flood levels for Ottawa River
	Thunderstorm (September)	• 11,391 customers (3% of customer base)
2018	Freezing rain (April)	• 55,101 customers (17% of customer base)
	High winds (May)	• 63,869 customers (19% of customer base)
	Tornadoes (September)	• 216,000 customers (65% of customer base) • Class EF-2 and EF-3 tornadoes; 260 km/h winds • 90% of customers restored within 2.5 days
2019	Flash storm (April)	• 44,511 customers (13% of customer base) • Loss of supply and substation flooding
	Flooding (May)	• 1-in-1000-year flood • Highest water levels on record for Ottawa River
	Lightning (July)	• 70,069 customers (21% of customer base) • Four separate loss of supply outages
	High winds (November)	• 14,228 customers (4% of customer base)

[7] Additional information regarding recent Major Event Days experienced by Hydro Ottawa is available in Section 4 of Schedule 2-5-3 - Performance Measures for Continuous Improvement.

2021	Lightning (June)	• 17,441 customers (5% of customer base) • Lightning and loss of supply
2022	Derecho (May)	• 180,946 customers on event day (52% of customer base) • Highest wind speeds on record in Ottawa • Severity of wind speeds greatly exceeded forecast • 6th costliest natural disaster in Canada's history • $24 million in restoration costs for Hydro Ottawa • 90% of customers restored within seven days
	Bomb cyclone (December)	• 67,710 customers (19% of customer base) • Intense freezing rain and snow; loss of supply
2023	Ice storm and freezing rain (April)	• 163,448 customers (45% of customer base) • 90% of customers restored within two days
	Lightning (June)	• 15,413 customers (4.25% of customer base) • Loss of supply
	Lightning, hail and wind (July)	• 37,821 customers (10.4% of customer base) • >6,000 total lightning strikes during month of July 2023 (8 times as many as July 2022)

The impacts of the May 2022 Derecho storm, in particular, cannot be overstated. The Derecho triggered over 1,000 individual system outages, affected more than half of Hydro Ottawa's total customer base, with the most adversely impacted customers without power for two weeks. The storm resulted in costs equivalent to four years' worth of emergency repairs, necessitated re-organization and re-prioritization of the utility's capital program, and had effects on physical infrastructure and the local tree canopy which lingered for months and years afterwards, respectively.[8]

Hydro Ottawa has implemented numerous measures and lessons learned based on the experiences, impacts, and damages associated with the Derecho and other recent events.

[8] Please see Attachment 2-1-1(A) - Derecho May 2022 After Storm Report for more information on the impacts associated with this event.

However, additional investments are required in order to further increase the resilience of distribution infrastructure, harden assets, reconfigure segments of the local grid, enhance adaptation and risk mitigation measures, and better protect service delivery and occupational health and safety in anticipation of the severe weather patterns and climate change effects which are expected to amplify in the future.

3.5. ENERGY TRANSITION & ELECTRIFICATION

Ontario's energy sector, in step with larger trends unfolding across the globe, is in the midst of a historic transformation. This is known as the "energy transition," which the OEB defines as *"a global shift away from using fossil fuels to a more sustainable, renewable energy future that includes more innovation and customer choice."*[9]

There are numerous drivers underlying the energy transition: the falling costs and more favourable economics of renewable energy resources; technological innovation; and evolving expectations of consumers, communities and investors. Public policy direction is likewise a major factor. The Government of Canada, the provincial government and the City of Ottawa[10] have all adopted targets for reducing greenhouse gas (GHG) emissions and recognized the essential role that a clean electricity grid will play in decarbonizing other sectors of the economy. A key implication of the energy transition is increased demand for electricity in the future, as the shift towards greater electrification accelerates. The Independent Electricity System Operator (IESO) is projecting total demand in Ontario to increase 75% by 2050 and is planning a series of competitive long-term procurements over the coming years to obtain the necessary supply and capacity to meet this demand.[11]

[9] OEB, "Welcome to the Energy Transition Project Hub." Available: https://engagewithus.oeb.ca/hub-page/energy-transition-hub.
[10] More information on the City's Energy Evolution strategy is available at the following link: https://ottawa.ca/en/living-ottawa/environment-conservation-and-climate/reducing-greenhouse-gas-emissions/strategies-and-action-plans/energy-evolution.
[11] IESO, "2025 Annual Planning Outlook: Demand Forecast Information Session" (October 16, 2024). Available: https://ieso.ca/-/media/Files/IESO/Document-Library/engage/apo/APO-20241016-presentation-demand-forecast.pdf

Hydro Ottawa has already started to experience and observe many of the trends associated with the energy transition in its own service territory. These include major projects underway at the City of Ottawa to electrify public transit (whether Light Rail Transit or phase-out of the diesel bus fleet) and install heat pumps at municipal facilities; connection and service requests from commercial and institutional customers seeking to fuel-switch to electricity for thermal energy purposes at their large campuses; or the installation of EV chargers and heat pumps by a growing number of residential and commercial customers. Moreover, these shifts are already translating into major incremental investment needs. At present, Hydro Ottawa is on course to construct an average of one new substation every year over the coming years (compared to the utility's past average of one every five years), with customer electrification serving as a principal driver for several of these projects.

What's more, these trends and the corresponding infrastructure needs are set to persist for years and decades to come – well beyond the limited timeframe of the 2026-2030 rate term. Hydro Ottawa commissioned a formal study examining the impacts on the grid of high levels of electrification in the transportation and building sectors in the utility's service territory, looking out to 2050. Across multiple scenarios, modelling every hour of the year and each substation in Hydro Ottawa's network, the study projected a significant increase in peak demand, ranging from two times to four times greater than the 2022 reference point.[12]

In short, the transformation underway represents a historic challenge and it is incumbent upon Hydro Ottawa to support and work alongside its customers, and invest in building, maintaining and operating a grid that will meet the needs of the future.[13]

[12] See Attachment 2-5-4(F) - Decarbonization Study.
[13] For more information on how electrification and electrification-driven large load requests from customers have influenced Hydro Ottawa's forecast electricity demand, please see Section 9 of Schedule 2-5-4 - Asset Management Process and Schedule 3-1-1 - Revenue Load and Customer Forecast.

3.6. TECHNOLOGICAL INNOVATION & CYBER SECURITY

The operational technology (OT) and informational technology (IT) systems that underpin utilities' performance are continuing to evolve rapidly and become increasingly complex. The business systems supporting frontline operations and back-office functions are steadily migrating towards digital, mobile-friendly and cloud-based solutions. Automation is on the rise and the enormous potential for artificial intelligence (AI) to optimize system operations, integrate variable energy resources into the grid and accelerate the energy transition is only just starting to be tapped. 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).

In addition, advancements in technology are fostering a more dynamic operating environment, characterized by bidirectional flows with an expanding number of interactions and participants enabled by an integrated digital ecosystem. This is occurring at both the local and bulk level of the grid. For example, from 2019 to 2023, the number of distributed energy resources (DERs) connected to Hydro Ottawa's system increased by over 25%.[14] In 2024, the IESO successfully concluded the single largest procurement of battery storage resources in Canada, securing almost 1,800 MW of capacity. Both of these developments attest not only to growing customer and market appetite for new services and avenues for participation in the electric power system, but to the increasingly sophisticated and flexible technological solutions making such opportunities possible. Against this backdrop, there is rising interest in the implementation of a Distribution System Operator (DSO) model. The implementation of a DSO model, in which local markets, generation and demand response programs are managed at the distribution level.

[14] See Section 9 of Schedule 2-5-4 - Asset Management Process for more information.

Similarly, the foregoing shifts are unfolding in an economic, social and cultural context in which the use of, and reliance on, technology by consumers and businesses continues to trend inexorably upwards. More and more, customer preferences, communications and transactions are becoming "digital by default", meaning digital services and platforms are viewed as more efficient, convenient, cost-effective, and conducive to control and curated choice. In turn, by harnessing advanced digital solutions, utilities can build greater customer intelligence and gain a 360-degree view of the customer, enabling them to tailor services and offerings to meet individual needs and priorities. This further transforms the customer experience, builds stronger relationships and drives long-term loyalty.

However, technological acceleration is not without its challenges or drawbacks. An increased reliance on complex digital infrastructure and its multiplying points of interconnection creates a much more acute risk landscape, with heightened exposure to cyber security threats. This magnifies what is already a hazardous cyber domain for Hydro Ottawa, which is a high-risk target on account of its service to the capital city of a G7 country and a multitude of customers with unique service quality and data confidentiality needs.

Against this backdrop, utilities like Hydro Ottawa shoulder the two-fold responsibility of ensuring their customer service offerings and business operations are unlocking the full spectrum of benefits made available by innovative technology, while simultaneously mitigating the security risks which are inherent in these tools and solutions.

3.7. WORKFORCE CHALLENGES

Hydro Ottawa's strength and success as a company is derived from the quality of its employees. Like many companies in the electricity sector, however, Hydro Ottawa is facing challenging workforce pressures and demographics.

In recent years, the company has experienced a large wave of retirements, with many of these individuals being long-standing employees and skilled workers in trades or technical professions. While Hydro Ottawa has successfully planned for this shift, it has had the effect of lowering the average employee age and term of service. In addition, demographics are such that there still remains a large portion of the workforce which is eligible for retirement by 2030.

Over the course of two successive five-year rate plans, Hydro Ottawa has sought to keep its total headcount relatively static. This has been achieved through various means, including boosting productivity and efficiency (especially through technology and automation), redistributing vacancies from support functions to positions in the skilled trades, increasing the use of temporary positions and accessing contracted services.

This retrospective context is essential to understanding the prospective outlook for Hydro Ottawa for the remainder of its current five-year rate plan and looking ahead to the 2026-2030 term. In short, there is an acute need for new positions and new skills.

The historic levels of capital investment required in the years ahead, along with the changes in grid planning and operation which are occurring in the context of the energy transition, mean that the occupational structure of the sector and the mix of skills required will shift considerably. Workforce levels and competencies will need to be commensurate with the realities and needs of an increasingly electrified, decarbonized and digitized future, in which customer expectations for reliable service and minimal outages will be magnified. Along with a significant addition of staffing resources, this will necessitate training and upskilling for current employees, in order to adapt to an evolving business landscape and ensure that work is performed safely and efficiently. These pressures are further compounded by an intensely competitive labour market.

The circumstances facing Hydro Ottawa are similar across the provincial and national electricity sector. According to Electricity Human Resources Canada, approximately 28,000 new employees will be needed in the sector by 2028, equivalent to 25% of the current labour force: 57% to replace retiring employees and 43% to meet demand for expansion of the electricity system.[15]

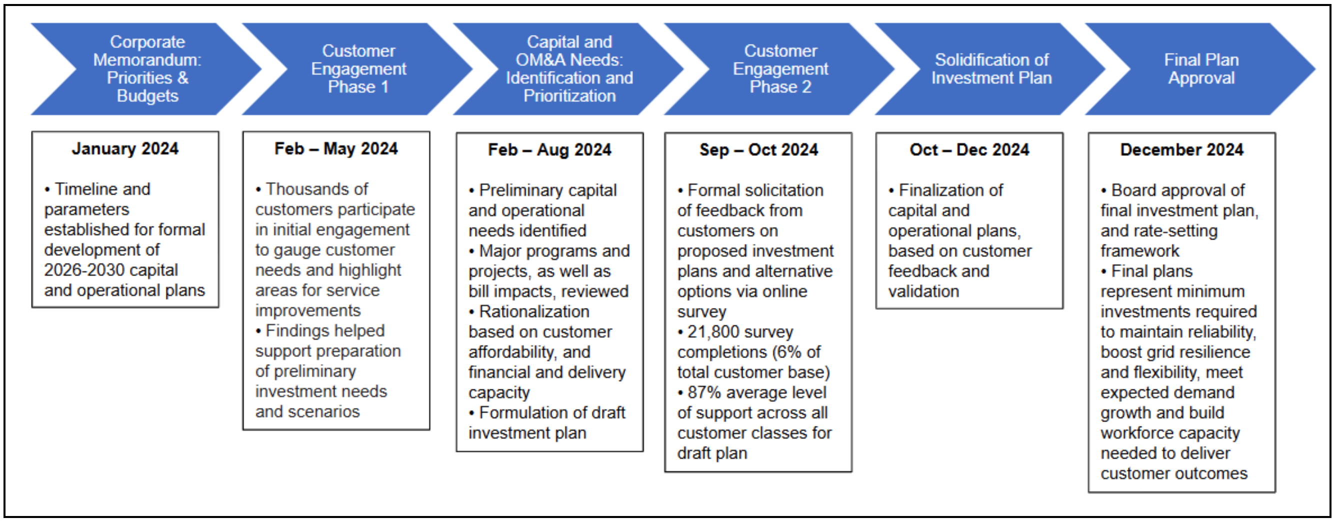
The ability of the utility to successfully plan, grow and develop its workforce will therefore be a critical determinant of whether core business objectives and customer needs can be met over the coming five-year rate period and beyond.

4. PLANNING & CUSTOMER ENGAGEMENT

The preceding section serves as the backdrop against which Hydro Ottawa developed its investment plans for the 2026-2030 rate period. These plans are the result of an integrated business planning and customer engagement process, which was aimed at balancing the achievement of outcomes valued by customers with impacts on rates.

[15] Electricity Human Resources Canada, *Electricity in Demand: Labour Market Insights - 2023-2028* (2023).

Figure 3 - Business Planning & Customer Engagement Process for 2026-2030 Investment Plans



At a high-level, the key stages in this process were as follows:

- **Corporate budgeting and priority-setting guidelines:** in the context of preparing for a five-year rebasing application, a key tool in Hydro Ottawa's business planning process is a set of formal guidelines from the Chief Financial Officer for the preparation of five-year budgets for the subsequent distribution rate period. This guidance is circulated well in advance of the expected filing date of the rate application.[16]

  The document serves a number of purposes: laying out a timeline for the development of preliminary capital and operational budgets, as well as for the finalization of spending plans based on customer input; outlining considerations for capital investments and operational expenditures; identifying expectations with

[16] Please see Attachment 1-2-3(A) - Corporate Memorandum - 2024-2030 Priorities and Budget Guidelines for a copy of this memorandum.

respect to such matters as inflation, compensation and headcount; stipulating requirements related to productivity, continuous improvement and cost control; and directing the alignment of spending with customer interests and outcomes, the utility's strategic objectives, and OEB policy and direction.

The process mapped out in the Corporate Memorandum attests to the rigour, discipline and customer-oriented focus which serve as hallmarks of Hydro Ottawa's business planning activities.

- **Phase 1 customer engagement:** in early 2024, Hydro Ottawa undertook an initial engagement seeking input from customers on their needs and priorities regarding electricity distribution service. This engagement took the form of exploratory focus groups and in-depth interviews, and benefited from the participation of thousands of customers. This engagement was also informed by insights gathered from the many channels, interactions, platforms, forums, tools and activities maintained by Hydro Ottawa for the collection of customer input on a continuous basis. These mechanisms reflect an abiding posture on the utility's part to develop a genuine understanding of customers' interests through a fluid and ongoing feedback loop.[17]

  Key insights from this exercise included the identification of reliability, resilience and reasonable rates as top priorities, as well as general satisfaction on customers' part with the service they receive from the utility. Residential and small business customers signalled quicker restoration following severe weather events as a major priority, while larger customers placed a bigger emphasis on reducing the number of outages. Commercial and key account customers also expressed the need for capacity to be available for future demand and were more supportive of the utility

[17] Additional information is available in Schedule 1-4-1 - Customer Engagement Ongoing.

investing in new technologies to support their energy consumption decisions based on data analytics.

- **Identification and prioritization of capital and operational needs:** subsequent to the issuance and parameters of the aforementioned guidelines, and informed by the results of preliminary customer engagement, internal subject matter experts at Hydro Ottawa prepared the capital and operational expenditures required over the 2026-2030 rate period to deliver reliable service, replace aging infrastructure, meet growing demand, enhance system resilience, modernize grid operations and run the business effectively.

Numerous processes and inputs influenced this effort. Foremost among these was Hydro Ottawa's mature asset management process, which assesses the condition and health, as well as future risks, of the utility's distribution assets and systems. In addition, Hydro Ottawa took into account independently-validated load and customer forecasts, special studies (including those examining a range of decarbonization scenarios and grid hardening options), and both internal and external benchmarking comparing the utility's historical performance and cost trends against industry peers. Alternative approaches were examined for viability and potential customer benefits, including the use of non-wire solutions (NWS) to address system needs in a variety of different contexts. Major project and program proposals, along with preliminary estimates of cost and price impacts for customers, were also reviewed by the utility's executive leadership.

As noted in the aforementioned guidelines, affordability was established at the outset as an overarching strategic consideration for Hydro Ottawa's capital and operational plans. In this context, affordability encompassed both ability and willingness to pay from a customer perspective, as well as financial ratios (liquidity and debt to equity) and the capacity to deliver from a utility perspective. In light of affordability and financial capacity constraints which emerged from the preliminary needs assessment, Hydro Ottawa rationalized certain spending proposals in order to prioritize the most critical expenditures for system investment and operational efficiency, and minimize rate impacts for customers.

- **Phase 2 customer engagement:** with a draft investment plan for 2026-2030 in hand, the utility initiated a second round of customer feedback, seeking input on how customer priorities were understood and translated into spending levels, and on the balance achieved between expected services and corresponding rates. A formal engagement was launched in September 2024, consisting of a detailed online survey which was made available and promoted to all residential, small business and commercial customers.

  The survey focused on four spending categories while five key investment areas confronting Hydro Ottawa over the coming five-year period:

  - **Replacing aging infrastructure** – sustaining system reliability and minimizing extended outages through a proactive asset replacement strategy.
  - **Metering renewal** – upgrading existing meters and their data management platform, while deploying grid-edge devices to support grid modernization.
  - **Grid modernization** – optimizing planning and operations in order to enhance reliability, enable adaptive flexibility, fortify resilience and security, empower customers, integrate more renewable resources and promote sustainability.
  - **Preparing for growth and electrification** – strategically planning investments to support the anticipated growth in electricity demand.

- ○ **Grid resilience** – strengthening the ability of the distribution network to withstand, adapt to, and recover from disruptions.

For each of these, customers were requested to consider three options (proposed draft plan, accelerated pace, slower pace) and select the one which best reflected their views and preferences for aligning costs with benefits. Accompanying the breakdown of options was a description of expected outcomes by 2030 and beyond. A built-in calculator enabled respondents to understand the impact of the various scenarios on their bills and to adjust their preferences until an optimal balance had been achieved. 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.

On balance, customers across all classes signalled substantial levels of support for Hydro Ottawa's proposals and the attendant rate impacts. Together, positive responses – whether in favour of accelerated spending, partial to the draft plan "as is", or simply affirmative of the necessity for investment consistent with the utility's approach – reached an average threshold of 87% within the participant pool. The significance of these results is bolstered by the fact that, with nearly 22,000 Respondents (7% of total customer base), there was once again an expanded number of participants compared to Hydro Ottawa's previous five-year rebasing application (i.e. number of respondents as a percentage of the total customer base) and exceeds those which have been observed in recent rate filings from the utility's large distributor peers in the province.

- **Solidification of investment plan:** overall, the feedback yielded from the customer consultation process validated the scope and direction of the utility's proposals, and offered important insights which helped finalize the investment plan as presented in this application.

- **Final approval:** in December 2024, Hydro Ottawa's Board of Directors formally approved the investment plans and rate-setting framework for the 2026-2030 period, marking the culmination of the utility's iterative and comprehensive business planning process.

5. CAPITAL & OPERATIONAL INVESTMENT PLAN

The rigorous and comprehensive asset management, capital expenditure and business planning processes undertaken by Hydro Ottawa, along with the input provided by customers on expectations and priorities for reliable and cost-effective service, have resulted in a plan which will anchor the utility's activities over the 2026-2030 rate term and position the utility to meet customer needs, while minimizing impacts on rates. This plan serves as a responsible and prudent response to core imperatives confronting the utility: expanding grid capacity to meet increased demand; upgrading or replacing deteriorating infrastructure at risk of failure; enhancing grid resilience; modernizing the grid; and building a skilled, sustainable workforce. What's more, this plan encompasses foundational investments which will ensure Hydro Ottawa is prepared to adapt its system and operations over the long-term to a range of potential shifts, pressures and uncertainties in its environment, including greater electrification, DER proliferation, technological complexity and evolution in the business model for electricity distribution.

This envelope of investments likewise represents a concerted effort to manage an array of latent risks in the utility's operating environment. These include, but are not limited to, the prospects of existing infrastructure becoming strained or overloaded, and thus more prone to longer and more frequent outages; greater vulnerability to extreme weather effects; delays in, or barriers to, connecting customers to the grid (and the associated economic impacts); reduced capacity to support housing and commercial development; inefficiencies in system operations; and higher levels of cyber security exposure. While many of these risk factors are more immediate in scope, there are other risks which may only materialize in the long-term – for example, in a scenario in which Hydro Ottawa has not adequately invested in the infrastructure, informational and operational systems, and human capital that will be necessary to support an increasingly electrified economy and way of life.

Hydro Ottawa's proposed investments are organized into capital plans and operational programs, which together will serve as the means by which the utility will achieve service levels and performance outcomes that are valued by customers, and fulfill its fundamental obligations as a licensed electricity distributor.

5.1. CAPITAL PLANS

Capital expenditures relate to physical items that, after being placed into service, have lasting benefits over many years. These include the overhead and underground infrastructure that serve as the backbone of the distribution system (poles, wires, transformers, stations); IT and OT hardware and software; and supporting assets and equipment, such as facilities, vehicles and tools.

Hydro Ottawa's assessments of its capital needs, and its proposed expenditures for meeting them, are captured in the utility's 2026-2030 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, as stipulated by OEB requirements: System Access, System Renewal, System Service, and General Plant.

Projected expenditures are outlined in the table below.

Table 4 - 2026-2030 Annual Capital Expenditures ($'000 000s)

Investment Category	Test Years					Total
	2026	2027	2028	2029	2030	2026-2030
System Access	$86	$79	$66	$67	$71	$369
System Renewal	$85	$83	$81	$87	$95	$432
System Service	$99	$125	$76	$86	$87	$473
General Plant	$38	$24	$33	$28	$11	$134
TOTAL CAPITAL EXPENDITURES	**$309**	**$311**	**$256**	**$268**	**$265**	**$1,409**
Capital Contributions	$(51)	$(51)	$(38)	$(32)	$(41)	$(213)
NET CAPITAL EXPENDITURES	**$258**	**$260**	**$218**	**$235**	**$224**	**$1,195**

Across this proposed investment envelope, there are four strategic investment priorities which will drive Hydro Ottawa's capital program over the 2026-2030 period:

1. **Growth & Electrification - Powering the Growing Community:** expanding grid capacity to serve a growing community and ensure a reliable, resilient electricity system capable of meeting increasing demand driven by new customer connections and DERs.

2. **Renewing Deteriorating Infrastructure:** mitigating risk by strategically upgrading or replacing deteriorating infrastructure, prioritizing assets with the greatest impact on system reliability and safety based on condition assessments.

3. **Grid Modernization - Enabling the Energy Transition:** modernizing the grid through strategic technology adoption and infrastructure upgrades to enable the

energy transition, facilitate customer participation, and optimize DER integration, thereby enhancing grid capabilities and efficiency.

4. **Enhancing Grid Resilience:** enhancing grid resilience by proactively upgrading infrastructure and implementing measures to protect against increasingly frequent and intense severe weather events and cyber threats.

The 2026-2030 capital program is set to be the largest five-year program in Hydro Ottawa's history. At the same time, it represents the minimum level of investment that is required in order to deliver outcomes and service levels that are valued by customers over the upcoming rate term, and to position both the grid and the utility itself to be able to meet the needs of the future over a long-term horizon. Through its investment plans, the utility will:

- Invest in the reliability of its distribution grid, with the goal of maintaining current levels of reliability where performance is strong, while enhancing reliability in those pockets of the system in which performance is below average;
- Replace distribution infrastructure at the greatest risk of failure;
- Increase the resilience of its distribution system through targeted investments, such as the hardening of overhead infrastructure and equipment, cost-effective undergrounding and implementation of anti-cascading measures;
- Expand and increase the capacity of its distribution system in order to connect new residential and commercial customers (including those customers whose needs are driven by electrification measures);
- Relocate or upgrade existing assets and equipment in order to accommodate the development of municipal or other public infrastructure;
- Implement grid modernization technologies and strategies which will improve the resilience of distribution infrastructure and operations;

- Implement the next phases of its Advanced Distribution Management System project, which involves the integration of core operational systems, and the optimization of grid operations and performance through innovative technologies;
- Begin deploying next-generation smart meters and sensors, and leverage the enriched data to deliver value-added services to customers;
- Deploy advanced communications infrastructure to maximize visibility and control over grid assets and equipment;
- Integrate NWS into distribution system planning and operations, investing in utility-owned battery energy storage, and evaluating and deploying Non-Wires Customer Solutions;
- Embed productivity, continuous improvement and innovation across its capital investment and expenditure plans; and
- Minimize rate impacts for customers through prioritization and pacing of investments.

5.1.1. System Access

This capital expenditure 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 facilitating customer access, expanding the system and upgrading infrastructure, relocating equipment to accommodate municipal infrastructure needs like road widening, and enabling the integration of customer-owned generation.

As a licensed electricity distributor, Hydro Ottawa's fundamental mandate is to provide reliable, safe and efficient access to its system while supporting the growth and development of its customer base. With the City of Ottawa continuing to witness a high level of growth, and with the utility having averaged approximately 6,000 new connections every year during the 2021-2023 period, System Access expenditures remain crucial to achieving positive outcomes in relation to customer expectations for service quality and responsiveness. As discussed further below, the experience of recent years with respect to customer connection volumes, complexity and costs, as well as the planning, resourcing and execution implications of third-party-driven projects, has underscored the importance of recognizing the challenging dynamics of the operating environment and ensuring adequate funding levels to manage them.[18]

Over the 2026-2030 rate term, Hydro Ottawa anticipates a sustained high pace of residential connections and subdivision projects, with significant activity in suburban areas of the service territory which continue to experience high levels of growth, such as Kanata, Orleans and Barrhaven. This is consistent with recent trends as well as municipal housing targets, driven by provincial policy mandates, which are contemplating over 15,000 new units on an annual basis through 2031. The utility is also projecting comparable growth and development patterns on the commercial side, with indicators for local economic development remaining robust.

Not only is the volume of commercial connections on the rise, their complexity is likewise amplifying. Hydro Ottawa is receiving a growing number of service requests from customers interested in electric cooling and heating systems, EV charging infrastructure, and other electrified technologies, which can present challenges in terms of sizing and configuring the necessary infrastructure to enable their use, and of integrating these areas of load into the broader distribution network. Average customer electrical service sizes are growing, while intensification is driving the need to increase voltage levels in existing urban communities.

Moreover, as outlined in Figure 4 below, Hydro Ottawa is presently managing the highest number of large load requests in its history, with the corresponding level of potential growth through 2040 equivalent to 30% of the utility's current system peak.[19] Several of these requests involve major infrastructure projects whose construction and electrical infrastructure connections

[18] Of note, System Access represented almost 50% of the total variance in capital expenditures for the 2021-2025 rate term. Additional information is available in Schedule 2-5-5 - Capital Expenditure Plan.
[19] For more context on the information presented in Figure 4, see Section 9 in Schedule 2-5-4 - Asset Management Process.

are set to be completed and placed into service during the 2026-2030 rate term, and whose scale and complexity mean that an exceptional level and form of support from Hydro Ottawa is essential in order to ensure their success. These projects include the new Civic Campus for The Ottawa Hospital, which is one of the largest infrastructure projects in Ottawa’s history; the electrification of Ottawa’s public bus fleet; and large-scale campus developments by multiple departments and agencies of the Government of Canada. These projects underscore the evolving nature of distribution system expansion that is necessary to meet the city’s growing energy needs. What’s more, the number of such projects is expected to continue rising as Ottawa’s growth accelerates due to ongoing development, urban intensification and net-zero public policy objectives.

Figure 4 - Large Load Connections, Commitments, Requests & Inquiries

The evolving sustainable energy landscape is likewise reflected in Hydro Ottawa's planned investments in generation connections. These investments in upgrading infrastructure, improving grid access for DERs and streamlining connection processes will provide a range of benefits, including facilitating self-supply and cost-saving options for interested customers; reducing peak demand, line losses and infrastructure strain; improving load management and enhancing grid stability; and lowering emissions through reduced consumption of fossil fuels. In addition, they serve as further impetus for the grid modernization initiatives that are contemplated by Hydro Ottawa (see section 5.1.3. below), as greater proliferation of DERs presents expanded opportunities for load shifting and demand response, which in turn gives rise to the need for enhanced monitoring and control capabilities for the utility.

Finally, whether in conjunction with the planned investments already discussed or in relation to other needs, Hydro Ottawa's proposed System Access expenditures also encompass a portfolio of investments in infrastructure upgrades and plant relocation. These can involve upgrading the capacity of transformers, reconductoring distribution lines, expanding stations and moving existing equipment in order to accommodate third-party capital projects such as widening of municipal roads or rehabilitation of public infrastructure. In addition, the System Access envelope includes discrete investments in the installation of meters into multi-unit buildings or the retrofits of bulk metered buildings to unit metering.

Hydro Ottawa's proposed investments in System Access are summarized in the table below.

Table 5 - 2026-2030 System Access Expenditures ($'000 000s)

Capital Program	Historical/ Bridge Years	Test Years	Variance
	2021-2025	2026-2030	
Plant Relocation	$45	$35	$(10)
System Expansion	$89	$108	$19
Customer Connections	$157	$221	$64
Generation Connections	$1	$4	$4
Metering	$2	$2	-
Total Capital Expenditures	**$293**	**$369**	**$77**
Capital Contributions	$(158)	$(196)	$(38)
Net Capital Expenditures	**$134**	**$173**	**$39**

5.1.2. System Renewal

Included under the scope of this category is the replacement and refurbishment of system assets, whether on a planned or emergency basis. 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 degraded assets and equipment. By investing in asset renewal, Hydro Ottawa can proactively mitigate failure risks, maintain the reliability of its network, ensure a safe power supply for customers, and avoid accumulating a backlog of equipment in poor condition that will require more capital investment in the future. Furthermore, a portion of the investments planned under System Renewal are essential to the utility's plans for modernizing its grid and enabling new opportunities for customers to manage demand and reduce costs.

Hydro Ottawa's proposed System Renewal investments have been formulated against the backdrop of a step change in the utility's asset management process. Through the implementation of predictive analytics, enhanced testing, inspection and maintenance programs, and a more robust asset condition assessment framework, the utility has transitioned to a more risk-based, data-driven approach to asset planning. This has yielded more accurate and comprehensive insights into asset health and condition, which have subsequently helped to optimize decisions around system renewal and better balance them against customer affordability considerations.[20]

While a sizeable share of Hydro Ottawa's distribution asset portfolio presents challenges and concerns in terms of its condition and age, the pressures are particularly acute in the station asset class. Almost 60% of the utility's station asset fleet has reached its typical useful life, with 13% of station assets being in a poor or very poor condition. Renewal of core assets – transformers, switchgear, breakers, relays and other equipment – is therefore imperative to mitigating the reliability and safety risks associated with the increased potential for in-service failures. A major initiative within the stations renewal program is the planned decommissioning of five 4-kilovolt (kV) stations, whose limitations in meeting the growing demand for electrification and increased capacity needs have been identified through rigorous risk assessments.

Hydro Ottawa is likewise proposing a proactive approach to management and renewal of its overhead (OH) infrastructure. The utility is planning to replace poles at a rate which will keep pace with long-term risks associated with pole degradation, while shifting, on a targeted basis, to a more aggressive inspection cycle (i.e. from 10 years to 5 years), in order to mitigate the risks inherent in a growing proportion of poles which have reached or exceeded their typical useful life. This effort will also yield environmental benefits, with accompanying reductions in the risk of oil releases from overhead transformers.

With respect to underground (UG) distribution infrastructure, reductions in reliability risk levels are expected through a measured approach to renewing assets that are in a deteriorated condition. Addressing major concerns across all types of underground assets (cable,

[20] For more information on these and other enhancements to Hydro Ottawa's asset management framework, see Section 4 of Schedule 2-5-4 - Asset Management Process.

transformers, switchgear, vaults) will help reduce customer interruptions due to unanticipated equipment failures.

A noteworthy element of Hydro Ottawa's asset renewal plans for the upcoming rate term is the replacement of end-of-life, first-generation smart meters. A key investment driver is the functional obsolescence of the aging metering fleet, which presents risks to enhancing customer service, ensuring billing accuracy, safeguarding data security and privacy, detecting and responding to outages promptly, and complying with Measurement Canada regulations. To address these risks, the utility has developed a phased plan for deploying Advanced Metering Infrastructure (AMI) 2.0 technology, which will guide investments in upgraded meters, communications infrastructure and data management systems, with the goal of enhancing monitoring and control capabilities.

Equally significant is the foundational role that AMI will play in enabling grid modernization over the course of 2026-2030 and beyond. AMI is a critical linchpin for optimizing grid planning and operations, enriching load analysis and forecasting, fostering interoperability with other utility systems through near real-time exchange of high-resolution data and streamlined communications, advancing automated outage detection and response, integrating DERs, and offering customers value-added features such as personalized energy-saving recommendations. The scalable and flexible nature of AMI 2.0 will ensure that Hydro Ottawa can adapt to future technologies and energy management strategies (including the potential implementation of DSOs across Ontario), avoid costly retrofits and maximize long-term cost savings.

Other System Renewal investments supporting grid modernization include increasing the proportion of digital electromechanical relays in stations and replacing manual overhead switches with remote controllable equipment.

In addition to the foregoing categories and consistent with historical trends, Hydro Ottawa is prudently budgeting for the reactive replacement of assets in critical or emergency condition. This involves immediate repairs following equipment failure, planned repair in the event of an imminent risk, or unplanned replacement of damaged assets caused by a third party.

Table 6 summarizes the utility's proposed investments in renewing its infrastructure.

Table 6 - 2026-2030 System Renewal Expenditures ($'000 000s)

Capital Program	Historical/ Bridge Years	Test Years	Variance
	2021-2025	2026-2030	
Stations & Buildings Infrastructure Renewal	$31	$108	$76
OH Distribution Asset Renewal	$43	$68	$25
UG Distribution Assets Renewal	$63	$103	$40
Corrective Renewal	$83	$67	$(16)
Metering Renewal	$12	$86	$75
Total Capital Expenditures	**$232**	**$432**	**$199**
Capital Contributions	-	-	-
Net Capital Expenditures	**$232**	**$432**	**$199**

5.1.3. System Service

The purpose of these infrastructure investments is to enhance reliability and capacity on the grid, and ensure that the system continues to meet operational objectives while addressing future customer needs, including in relation to electrification and grid resilience. Expenditures include capacity upgrades that are intended to relieve constraints caused by load growth; system and station enhancements that improve operating characteristics, add redundancy, and strengthen resilience against severe weather events; NWS (such as battery storage) to support peak demand in capacity constrained areas until upgrades are completed to alleviate constraints; and deployment of grid technologies that augment the operational and communication capabilities of the system. With System Service encompassing many investments that are responsive to major pressures and change drivers in Hydro Ottawa's business environment (e.g. electrification-related demand growth and climate change), it is notable that this category represents the largest share of the utility's capital plan for 2026-2030.

Over 70% of the proposed expenditures in this category are intended to boost station and feeder capacity, whether through the construction of new infrastructure or upgrades to existing assets and equipment. Foremost among these is the series of substation projects which together represent a historic level of investment in the utility's grid. Whereas Hydro Ottawa has typically only averaged the development of one new station every few years, the utility is on course to execute four greenfield station projects and three station upgrades during the 2026-2030 rate term. For half of these projects, the main driver is large load requests triggered by customer electrification objectives. These projects, driven by immediate and near-term needs, are aligned with the findings set forth in the study commissioned by Hydro Ottawa examining the impact on the local grid associated with electrification projections through 2050, which signalled a significant increase in peak demand under multiple scenarios.

In order to leverage the new capacity set to be introduced into the system through the new stations, a dedicated program of distribution feeder integration is required. In addition to the installation of new lines, transformers and other equipment, this will involve elimination of undersized conductor sections in existing feeders. Together, these actions will help reduce the risks of existing infrastructure becoming overloaded, new customer growth becoming restricted, and Hydro Ottawa not being able to deliver on its service obligations.

Of note, new infrastructure is not the only tool being utilized to address capacity constraints. Hydro Ottawa is proposing to add 24.5 MW of capacity through utility-owned storage solutions and an additional 20-30 MW from Non-Wires Customer Solutions, which will help mitigate immediate capacity constraints, provide flexibility during peak demand periods, and benefit customers interested in adopting DERs and participating in demand-side management programs. On the utility side, the solutions will consist of four separate battery energy storage systems (BESS) deployed in regions which are expected to exceed their ratings by the early 2030s as a result of electrification. These BESS resources will support local growth and maintain reliability during contingency conditions. On the customer side, Hydro Ottawa has and will continue to explore collaborating with the IESO to develop and implement a portfolio of programs in targeted areas where there is overlap between local distribution system and bulk system needs, building on province-wide incentive offers available within IESO's Electricity Demand-Side Management (eDSM) Framework, where applicable. These programs will be monitored and considered for application in other parts of the utility's service territory. The inclusion of NWS in the mix of plans to increase system capacity attests to Hydro Ottawa's commitment to adapting its planning and operations, and to leveraging the optimal means available for delivering reliable, cost-effective service to customers.

Nested alongside investments focused on building additional capacity is a program portfolio concentrated on targeted reliability enhancements for distribution infrastructure and stations. These enhancements seek to ensure that the system is equipped to integrate new devices and capabilities which can optimize operational efficiency, and to better withstand the effects of severe weather. As it relates to the former, automated switches, fault circuit indicators, and monitoring and control boxes will provide real-time data on system conditions, thus enabling proactive maintenance and faster responses to disruptions. With respect to the latter, in light of Hydro Ottawa's first-hand experience with the rising frequency and intensity of severe weather events, especially the 2022 Derecho which devastated large segments of the local network, the utility is planning a series of actions to improve system resilience through strategic and phased undergrounding of overhead lines, storm hardening of existing infrastructure, feeder reconfiguration, and station egress undergrounding and line relocation. These actions have been informed by customer feedback as well as an independent assessment of the resilience of the utility's grid, accompanied by the identification of resilience investments with positive business cases.[21] Mitigating the impacts of climate change is a fundamental imperative for Hydro Ottawa, its customers and shareholder, and investments to address this challenge will be prioritized accordingly.

The final basket of initiatives housed within the System Service category is aimed at fortifying the cornerstones of Hydro Ottawa's grid modernization strategy. During the 2021-2025 rate period, the utility initiated the development of a comprehensive Advanced Distribution Management System (ADMS), comprising a suite of operational features and tools which elevate grid performance, efficiency and flexibility; optimize functions that automate outage identification; and position the grid for expanded integration of DERs. ADMS is the backbone of the utility's grid modernization architecture and much of the next five years will focus on enhancing this platform. Planned upgrades include the application of superior cyber security protections; development of a centralized hub for both real-time and historical operational data, with advanced analytics and reporting tools; and the adoption of a dedicated DER management system, which will enable seamless integration of distributed generation, storage, EVs and other resources. What's more, any long-term transition towards a DSO model in the province will only be made possible through the capabilities afforded by ADMS.

With two-way communication capabilities being an essential prerequisite for grid modernization, a suite of targeted enhancements are likewise needed for the communications infrastructure connecting grid-edge devices with central monitoring and control systems. Fiber optic coverage will be expanded and upgraded, greater redundancy and resilience will be achieved through deployment of wireless technologies, a centralized solution for managing intelligent grid devices will be implemented, and new security protections will be adopted to mitigate threats to mission-critical infrastructure.

[21] Additional detail is available in Attachment 2-5-4(D) - Resilience Investment Business Case Report. Of note, Hydro Ottawa's approach to resilience investments aligns with the methodology referenced in the OEB's *Vulnerability Assessment - Draft Report* issued in December 2024 (EB-2024-0199).

Outlined in the table below are Hydro Ottawa's proposed investments in System Service programs.

Table 7 - 2026-2030 System Service Expenditures ($'000 000s)

Capital Program	Historical/ Bridge Years	Test Years	Variance
	2021-2025	2026-2030	
Capacity Upgrades	$108	$347	$239
Stations Enhancements	$3	$3	$0
Distribution Enhancements	$28	$93	$65
Grid Technologies	$21	$6	$(14)
Control and Optimization	-	$4	$4
Field Area Network	$2	$21	$19
Total Capital Expenditures	**$161**	**$473**	**$312**
Capital Contributions	-	$(4)	$(4)
Net Capital Expenditures	**$161**	**$469**	**$308**

5.1.4. General Plant

Whereas the three capital categories discussed above relate to investments in Hydro Ottawa's distribution system, General Plant covers expenditures on physical assets that are not part of the grid.[22] These include facilities, land, fleet, information technology hardware and software, and other rolling stock that is used to support essential business activities (including the construction of distribution infrastructure). Spending in this category is focused largely on ensuring employees have the appropriate tools to perform their work effectively and are able to carry out their activities in a safe, secure environment. More broadly, however, many of these

[22] The lone exception is the Connection Cost Recovery Agreement (CCRA) program, which covers Hydro Ottawa's contributions towards upgrades of the high-voltage transmission system which are necessary to ensure adequate power supply to customers. In light of the significant number of station projects planned over the 2026-2030 period, CCRA costs are set to increase more than 2.5 times the level experienced during the current rate term.

investments hold the potential to unlock new value and efficiencies, and the failure or inability to follow through on them will diminish the quality of outcomes expected by customers in relation to service reliability, quality, convenience and personalization; outage detection and response; data-driven decision-making; data privacy; and availability of new energy management tools.

Maintaining administrative and operational facilities in excellent condition has a direct impact on employee safety and productivity, and is thus a key determinant of the utility's ability to provide high-quality customer service. Discrete modification and remediation work will be required at specific facilities in order to optimize floor space to accommodate new employees, connect to the municipal sewer system, and upgrade electrical service so as to enable the adoption of equipment with higher energy efficiency and lower emissions. Similarly, safe and reliable vehicles are essential to enabling Hydro Ottawa's crews to perform an extensive range of capital, maintenance, testing and inspection-related work. The historic levels of grid investment planned for the next rate period will result in more crew members spending more time in the field. Renewal and expansion of the utility's vehicle fleet at a pace that mitigates the risk of disruption to construction and maintenance activity is therefore a critical business imperative.

In addition, Hydro Ottawa is planning an array of investments in IT and OT systems and assets which will help transform and adapt the utility's operations and capabilities in the face of significant shifts in its external business environment.

For applications at the customer interface, projects include the integration of an AI-powered chatbot providing customers with 24/7 assistance for common inquiries (with seamless hand-off to a live agent, when needed); improved features and functionality across core digital engagement platforms and channels (e.g. online customer portal and outage map), including the introduction of a disaggregation tool for electricity consumption and the corresponding carbon footprint; and necessary upgrades to the utility's customer information and billing system.

As for business-facing applications, there are several major initiatives contemplated. Foremost is the strengthening of Hydro Ottawa's cyber security technology stack, ensuring critical IT and OT assets are regularly monitored and upgraded. The utility will also transition end-of-life technology to a single, modernized data integration platform, simplifying and streamlining integration across dozens of business applications and databases. Finally, implementation of a dedicated software solution for Business Continuity Management (BCM) will support the ongoing maturation of Hydro Ottawa's BCM program, facilitate the consolidation of action management across the organization, and better position the utility to efficiently activate and execute BCM plans in the event of a major operational disruption or emergency.

Table 8 below summarizes Hydro Ottawa's planned investments in General Plant programs.

Table 8 - 2026-2030 General Plant Expenditures ($'000 000s)

Capital Program	Historical/ Bridge Years	Test Years	Variance
	2021-2025	2026-2030	
Connection Cost Recovery Agreement	$17	$46	$29
Fleet Replacement	$18	$41	$23
Tools Replacement	$3	$5	$2
Buildings - Facilities	$7	$7	$(1)
Grid Technology	$2	$4	$2
Meter to Cash	$4	$9	$5
Customer Engagement Platform	$7	$3	$(5)
Enterprise Solutions	$6	$1	$(4)
Infrastructure and Cybersecurity	$11	$15	$4
Data and System Integrations	$2	$3	$2
Total Capital Expenditures	**$76**	**$134**	**$57**
Capital Contributions	$(4)	$(13)	$(9)
Net Capital Expenditures	**$73**	**$121**	**$48**

5.2. OPERATIONAL PLANS

Operating expenditures are those that are required for the ongoing operations, maintenance and management of a company's infrastructure, assets and services. In the OEB-regulated utility context, "OM&A" refers to the following:

- Operations: day-to-day activities required to deliver the utility's core services or products;
- Maintenance: preserving and ensuring the reliability of the utility's physical assets and infrastructure; and
- Administration: support for the utility's management and administrative functions.

Hydro Ottawa's responsibilities to manage a safe and reliable distribution system, ensure employee and public safety, 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 OM&A costs that are proportionate to the scope of its service obligations. Table 9 outlines the annual OM&A expenditures that will be required during the 2026-2030 rate term.

Table 9 - Annual OM&A Expenditures ($'000 000s)

2026	2027	2028	2029	2030
$140.0	$147.3	$154.9	$162.9	$171.4

The foregoing costs are spread across 21 program categories that structure the myriad activities which are part and parcel of keeping the lights on, maintaining infrastructure and assets in good working order, meeting customer needs, and administering the essential functions of the organization.[23]

Across a handful of core OM&A programs, a key cost driver and overarching imperative is increased workforce capacity. Over the course of two successive five-year rate plans for Hydro Ottawa, there has been no provision for expanded headcount. Looking ahead to the 2026-2030 rate term (and beyond), this is no longer a tenable proposition, in light of the historic levels of investment required in the grid as well as the growing challenges in the utility's business environment.

A two-fold multiplication of its capital investment portfolio means that Hydro Ottawa needs a larger complement of staff resources to plan, design, and execute system construction and

[23] Additional details regarding specific OM&A program costs are available in Schedule 4-1-2 - Operations, Maintenance and Administration Program Costs.

maintenance projects. Similarly, the shift towards electrification and DERs is yielding increasingly complex customer requests and inquiries, thereby placing heightened demands on engineering and customer service and support groups, as well as on back-end functions tasked with ensuring compliance with regulatory codes and accounting requirements. In addition, the accelerating digitization of informational and operational systems is giving rise to the need for greater internal capacity and competencies when it comes to specialized skills in cyber security protection, data analytics and integration, solutions architecture, artificial intelligence and DER platforms.

In view of these pressures and trends, Hydro Ottawa cannot afford to take a just-in-time approach to human capital management. Whether the task at hand is maintaining infrastructure, designing a more electrified and decentralized grid, balancing supply and demand using sophisticated digital tools, or advising customers on energy optimization, the average employee needs years of training, learning and development to cultivate the requisite knowledge and experience. The scale of activity which the utility must undertake in the years ahead therefore means that a wide reach and urgent pace to investing in human resources must be front and centre in its plans. Moreover, a unique confluence of factors during the current rate term – including an expanding scope and volume of capital and maintenance work, severe weather events, and a labour disruption, to name only a few examples – compelled the utility to begin adding new headcount prior to its scheduled rebasing in 2026.

In short, workforce levels and skill sets need to align with the realities of an increasingly electrified, decarbonized and digitized future, in which customer expectations for reliable service and minimal outages will be magnified, and which warrant advanced engineering and technological capabilities. Accordingly, Hydro Ottawa's workforce plans for the 2024-2030 period contemplate a 29% increase, relative to OEB-Approved levels for 2021.[24]

[24] Additional information regarding Hydro Ottawa's workforce needs and the rationale for increased headcount levels are available in Schedule 4-1-3 - Workforce Staffing and Compensation, Attachment 4-1-3(B) - Workforce Planning Strategy, and Attachment 4-1-3(C) - Workforce Growth.

5.2.1. Key Priorities – Operations

5.2.1.1. Reliable and modernized grid operations

In many ways, Hydro Ottawa's value proposition begins and ends with providing reliable service. The utility's System Operations program is focused on the real-time management, monitoring and control of the distribution grid, ensuring that supply balances with demand and system performance is optimized.

For the 2026-2030 period, a major focus will be deployment and implementation of the enhanced operational technology, tools and platforms included in Hydro Ottawa's Grid Modernization roadmap. These innovations will equip control room operators to more effectively direct outage emergency response, and will minimize downtime through automation of feeder fault location. In addition, they will be essential to enabling System Operations to manage the shifting consumption and demand patterns associated with increased electrification and penetration of DERs, and to maximizing the benefits of electrified devices and distributed forms of energy. The integration of advanced metering infrastructure will likewise be a priority, with system planning and operations set to benefit significantly from enriched load analysis and forecasting. Ongoing testing, training, change management and knowledge sharing across all of the personnel managing these operational interfaces will be crucial to success during the upcoming five-year rate term, and to the prospects of transitioning to a DSO model over the long term (subject to policy and market developments at the provincial level).

5.2.1.2. Customer service excellence and energy transition support

Hydro Ottawa's business operations are anchored in the core imperative to generate value for customers. Across multiple customer-focused operational programs, and consistent with its formal Customer Strategy, the utility will seek to enhance customer service and elevate the customer experience over the course of 2026-2030.

The Customer and Community Relations program is responsible for providing customer contact and communications services, fostering a best-in-class customer experience, and cultivating customer relationships (especially Key Accounts). Its high-level priorities involve empowering customers through expanded self-serve options and new digital solutions for monitoring and managing energy use; achieving greater personalization, choice and convenience in customer services and interactions; centralizing and streamlining customer data points; and developing and implementing tailored service, product and program offerings for customers, ensuring an end-to-end customer experience. The next phases of Hydro Ottawa's CRM platform, integration of an AI-powered chatbot, new functionality for the online customer account portal (and its expansion to commercial customers), improved website features, and the roll-out of energy and carbon management tools will be key initiatives in this regard.

Moreover, supporting customer objectives vis-à-vis the energy transition will remain a focal point of activity throughout the upcoming rate period. Hydro Ottawa is planning for the launch and delivery of additional energy efficiency, decarbonization and DER programs, and will strengthen its position as a trusted partner in the administration of federal clean energy funding through its signature Ottawa Retrofit Accelerator, which is assisting building owners with deep energy retrofits. The utility's Customer Billing program will also have a role to play in this effort, through the introduction of tailored billing options for customers with DERs and the piloting of innovative pricing models.

5.2.2. Key Priorities – Maintenance

5.2.2.1. Planning and execution of system capital and maintenance work

As noted above, an unprecedented capital investment program is looming on the 2026-2030 horizon. Alongside of it sits an expansive portfolio of testing, inspection and maintenance work for infrastructure and assets with varying degrees of wear and tear and failure risk. The planning demands and execution burden associated with these needs are exceptional, and much of

Hydro Ottawa's success during the upcoming rate term will be determined by the utility's ability to satisfy them.

Several operational programs will shoulder responsibilities for the on-time, on-budget delivery of this work. Engineering and Design provides high-level coordination for planning infrastructure expansion and upgrades, connecting new customers, forecasting long-term needs, prioritizing investments, scheduling work, and managing external contractors. A key area of focus will be ensuring efficiencies in project management through the implementation of a new model for project delivery, which was kickstarted during the current rate term. With respect to maintenance, multiple individual program areas are accountable for discrete aspects of activity – i.e. planned, reactive, stations, metering, and routine and low-cost tasks. Noteworthy expenditures will include those associated with decommissioning legacy 4 kV stations, the use of advanced data analytics for asset management and anomaly detection, the operation of NWS owned by third-parties, and the implementation of a drone inspection program for overhead infrastructure. Moreover, the increased expenditures proposed in testing, inspection and maintenance activity will help contain cost increases in capital renewal by informing more risk-based investment decisions.

5.2.2.2. Tree trimming

Notwithstanding the achievement of steady reductions in tree-related outages in recent years, tree contact consistently ranks as one of the leading causes of power outages in Hydro Ottawa's service territory. The implementation of a dedicated vegetation management program therefore remains an essential component of the utility's approach to preventative maintenance, as well as to the mitigation of hazards and risks for worker and public safety. The scope of the program covers upwards of 40,000 trees on an annual basis and encompasses regular cycle trimming to maintain clearance standards, the removal of specific trees identified as hazards or requested by customers, and emergency action in response to storms or imminent safety threats. For the 2026-2030 period, Hydro Ottawa will execute a comprehensive trim cycle, which balances the needs of the electrical system with support for the health and longevity of the local tree canopy. The program will be strengthened through the fulsome integration of a satellite imaging solution, recently piloted by the utility, which yields greater precision in identifying hazards and assessing risks, and enables superior flexibility in supplementing planned cycles with targeted trimming.

5.2.2.3. Non-distribution asset maintenance and optimization

Maintaining the integrity and condition of non-distribution assets is essential to employee safety and productivity, and to the efficient operations of the business. In addition to its fundamental responsibilities for the maintenance and management of Hydro Ottawa's administrative and operations centres, the Facilities program will be tasked with re-configuring and optimizing floor space in specific buildings in order to accommodate the planned addition of new staff. For fleet maintenance, costs and accountability rest with the Distribution Support program, which will be tasked with minimizing fuel expenditures, optimizing usage and asset lifecycle costs, and integrating a growing number of electric and hybrid vehicle models. Finally, with all employees relying on some type of IT hardware and software to perform their work, the Information Management and Technology program must ensure the reliability and availability of critical IT systems and infrastructure, and regularly test its back-up redundancy and recovery plans.

5.2.3. Key Priorities – Administration

5.2.3.1. Employee and public safety

Ensuring employee and public safety is the top priority for Hydro Ottawa when carrying out its business activity and operations. Looking ahead to the 2026-2030 period, the utility anticipates a need for heightened vigilance and innovative approaches with respect to employee safety, on account of a unique confluence of factors and pressures: hiring and onboarding a large complement of new employees; workforce demographics signaling a lower average employee age and length of service; the workload associated with a record-high capital investment program; shifts in infrastructure design, commissioning, use, operation and maintenance induced by increased electrification; and the prospects of sustained severe weather patterns. In addition, with Hydro Ottawa closing out a five-year rate term in which the utility experienced a succession of highly disruptive events, a key priority area remains preserving its sharpened posture around business continuity, effectively implementing lessons learned, and enhancing overall organizational resilience. The Safety, Environment and Business Continuity program will bear primary responsibility for these efforts, and will likewise coordinate with the Customer and Community Relations program in the development and roll-out of public safety education and awareness campaigns.

5.2.3.2. Digital transformation

The Information Management and Technology program encompasses all activities and costs related to IT and OT services within Hydro Ottawa. Over the next five years, this program will focus on the efficient delivery and implementation of new solutions which will further accelerate the digital transformation of the utility's operations, yield value-added services to customers and increase productivity. Signature initiatives are planned across all aspects of Hydro Ottawa's business activity, from grid operations to asset management to back-end administrative functions. Alongside these multi-year projects, there will be a sustained focus on the prudent management of the ongoing transition to, and growing reliance on, cloud-based solutions and the implications for storage, data management, maintenance and related services which they present.[25]

5.2.3.3. Cyber security protections

In light of the trend towards greater digitization and the increasingly complex and hostile threat landscape which accompanies it, Hydro Ottawa has robust plans in place for the protection of critical infrastructure, assets and systems; the mitigation of cyber-related risks; the safeguarding of customer data; and the continuity and recovery of operations in the event of a major cyber disruption. The utility's DSP contemplates a series of enhancements to cyber security controls

[25] A more detailed examination of Hydro Ottawa's investments in cloud-based solutions is available in Attachment 4-1-1(A) - Transition to Cloud Computing.

and protections across its IT and OT ecosystem. Timely and effective implementation of these measures is a critical operational imperative. Moreover, Hydro Ottawa will be proactive and diligent in the maturation of its cyber security program, pursuing continuous improvement across core components such as employee awareness and training, table-top exercises, external partnerships, incident management and response, and governance.

5.2.3.4. Proactive legal and regulatory compliance

Hydro Ottawa carries out its business operations in accordance with a multiplicity of statutory and regulatory requirements, which place particular emphasis on employee and public safety, the reliability of distribution infrastructure, just and reasonable rates for customers, and integrity in recordkeeping, auditing and reporting. Responsibility for diligent compliance with all of the requirements to which the utility is subject is diffused across several program areas.

For example, Regulatory Affairs ensures that the utility fulfills its core sector-specific obligations under the various rules, regulations, and codes of the OEB, IESO, and Ministry of Energy and Mines. The Legal Services and Governance group (housed within the Corporate Costs program) manages overall corporate compliance. The Finance program oversees financial reporting and the application of accounting standards. Compliance with the provincial *Employment Standards Act* is coordinated by Human Resources & Training, while the Safety, Environment and Business Continuity program is accountable for ensuring adherence to health, safety and environmental obligations.

Over the 2026-2030 rate term, each of these groups will proactively manage any shifts in the legal and regulatory environment and will help sustain Hydro Ottawa’s commitment to compliance excellence.

5.2.3.5. Procurement and supply chain management

With the next five-year rate period set to feature a historic level of distribution investment, as well as expansive maintenance activity, the timely and cost-effective procurement of necessary materials and services will assume critical importance. Moreover, the instability experienced in global supply chains in recent years, as a result of such factors as geopolitical conflicts and the COVID-19 pandemic, has underscored the need for proactive risk and inventory management. In the face of these pressures, and by leveraging digital tools and data analytics, the utility's Supply Chain program will focus on improving demand forecasting and inventory optimization, so as to ensure the timely availability of materials while minimizing carrying costs. The program will also emphasize strengthening vendor relationships by fostering partnerships with ethical, high-performing suppliers, enabling Hydro Ottawa to secure competitive pricing and reliable delivery of goods and services. Finally, the program will support the utility's broader sustainability objectives by strengthening green procurement practices and facilitating the transition to more sustainable materials and services.

6. PERFORMANCE REPORTING

Hydro Ottawa is committing to a robust performance measurement and reporting framework for the upcoming five-year rate period, which expands and builds upon the success of the one that was in place for 2021-2025. The cornerstone of this framework is the set of measures comprising the utility's 2026-2030 Custom Performance Scorecard. These measures have been selected based upon a variety of factors and criteria, including responsiveness to customer preferences, alignment with core RRF and corporate strategic objectives, and correlation to key capital and OM&A investments. What's more, the utility has intentionally incorporated numerous measures that are focused on tracking its performance in relation to evolving change drivers in its business environment, including DERs, electrification, cyber security and emissions reduction.

The proposed Custom Performance Scorecard is presented in Table 10 below.

Table 10 - 2026-2030 Custom Performance Scorecard

RRF Outcome	OEB Reporting Category	Hydro Ottawa Custom Measures	Target
Customer Focus	Customer Satisfaction	Contact Centre Satisfaction – Transactional Feedback	85%
		Percentage of Online Billing Accounts	80%
		Customer Participation in Non-Wires Solutions	Monitor
Operational Effectiveness	Safety	All Injury Frequency Rate	Reduce
		Lost Workday Severity Rate	Reduce
	System Reliability & Resilience	Percentage of Distribution Assets in Poor/Very Poor Condition	Monitor
		Percentage of Distribution Assets Reaching End of Life	≤65%
		Feeders Experiencing Multiple Sustained Interruptions	≤10
		Worst Performing Feeders	≤6
		Station Load Index (4 or 5)	0
		Incremental System Capacity	577 MVA
		Distributed Energy Resource Capacity	Monitor
	Cyber Security Readiness	Cyber Security Program Health	Green
	Cost Control	Productive Time	Maintain
		Labour Allocation	Maintain
		OM&A per Customer	Monitor
Public Policy Responsiveness	Environment	Scope 1 Greenhouse Gas Emissions	Reduce
		Scope 2 Greenhouse Gas Emissions	Monitor
		Annual Oil Spills & Costs of Remediation	Reduce
		Non-Hazardous Waste Diversion Rate	Maintain
		Percentage of Green Suppliers	Maintain
Financial Performance	Financial Metrics	Bad Debt as a Percentage of Total Electricity Revenue	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.

7. PRODUCTIVITY, INNOVATION & CONTINUOUS IMPROVEMENT

Responsibly controlling costs, focusing on cost-effective delivery of outcomes that matter to customers and exploring innovative alternatives to traditional solutions remain core priorities for Hydro Ottawa. Amidst the unique confluence of demands, pressures and constraints on its operations, the utility is placing increased emphasis on incorporating productivity and continuous improvement gains, as well as leveraging emerging technologies and innovative tools, so as to offset increasing expenditures and boost organizational capacity.

In accordance with internal guidelines for the preparation of plans and budgets for the 2026-2030 period, each administrative division within the utility was required to demonstrate productivity savings in a quantitative and/or qualitative fashion, and to identify initiatives dedicated to continuous improvement. Similarly, in formulating its OM&A expenditures, Hydro Ottawa applied a custom escalation factor to contain upward pressure on operational spending and embed productivity expectations throughout the upcoming rate period.[26] Together, these guardrails provide assurance that productivity and cost control objectives were firmly integrated into the utility's business planning process.

Moreover, Hydro Ottawa is set to enter into its next five-year rate term riding on the momentum of the augmentation of its productivity and continuous improvement efforts during the 2021-2025 period. From strategically restructuring its distribution construction and maintenance groups, to revamping its project management practices and delivery model for distribution design, to leveraging satellite imaging for vegetation management, to automating the labour-intensive

[26] Please see Schedule 1-3-1 - Rate Setting Framework for more information.

billing process for net metered customers – the utility achieved numerous milestones in its ongoing pursuit of operational excellence. These initiatives will continue to yield considerable savings in the years ahead and therefore ought to be viewed in tandem with new activity that is contemplated as part of this Business Plan.[27]

Whether through harnessing the potential of new technologies and solutions to better serve customers, elevating standards of business performance, or rationalizing and re-purposing resources, Hydro Ottawa will continue strengthening its culture of productivity, innovation and continuous improvement over the course of 2026 to 2030. Highlights of planned initiatives include the following:

- Refinement of the utility's recent adoption of condition-based and data-driven distribution asset management and maintenance strategies, through such steps as increased asset data collection and the expanded deployment of advanced diagnostics and predictive analytics, which will optimize asset lifecycle management and contain costs;
- Replacement of end-of-life meters with next-generation metering infrastructure, accompanied by advanced grid-edge devices, that will improve grid visibility, expedite outage restoration, and equip customers with data-driven insights and tools for greater control over energy usage;
- Alleviation of capacity constraints, reduction of peak demand and empowering of customers through the implementation of various NWS, including battery storage and demand-side management programs;
- Implementation of an Enterprise Asset Management solution, providing Hydro Ottawa with a centralized repository of asset lifecycle information by which

[27] A more detailed overview of relevant Hydro Ottawa initiatives and accomplishments in this regard is available in Schedule 1-3-4 - Facilitating Innovation and Continuous Improvement.

maintenance work can be prioritized on the basis of actual asset condition and which will automate work management processes;

- Launch of a drone inspection program, which will gather more granular data on overhead distribution assets, enabling targeted maintenance and improved asset health assessments;
- Introduction of advanced diagnostic testing for station transformers to measure moisture content with more precision and thereby safeguard transformer health and longevity more effectively;
- Deployment of a unified CRM platform, enabling a 360-degree view of each customer;
- Roll-out of additional energy management tools (including for disaggregation of electricity consumption), providing customers with more detailed insights on their energy use and costs;
- Integration of generative AI across existing business systems and platforms, to boost productivity, automate processes and enrich data analysis;
- Expansion of the utility's fleet pooling program, allowing more effective and extensive sharing of corporate vehicles by field crews and administrative staff through enhanced coordination of availability and usage, which will optimize vehicle utilization and reduce the need for the acquisition of over 20 new vehicles; and
- Delivery of the Ottawa Retrofit Accelerator program, through which federal funding is administered to local building owners to support deep energy retrofits, and lower both operating costs and building emissions.

7.1. 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, North America and select jurisdictions abroad has yielded valuable insights into areas in which the utility performs well and those in which there is room for improvement.[28] 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 2026-2030 period, the use of internal and external benchmarking will remain a vital tool for monitoring and measuring performance. The utility 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.

8. REVENUE REQUIREMENT & BILL IMPACTS

The Revenue Requirement and Bill Impacts associated with Hydro Ottawa's proposed 2026-2030 capital and operational plans are summarized in the tables below.

[28] Additional information is available in Schedule 1-3-3 - Benchmarking.

1 **Table 11 - Revenue Sufficiency/Deficiency ($'000s)**

	2026	2027	2028	2029	2030
Return on Rate Base	$91,549	$101,661	$113,928	$123,382	$130,196
Distribution Expenses (not including amortization)	$140,010	$147,263	$154,891	$162,914	$171,353
Amortization	$67,205	$75,392	$82,256	$88,364	$94,410
Payment in Lieu of Taxes	$6,638	$6,528	$12,204	$12,671	$15,432
Other Expenses	$4,590	$4,596	$0	$0	$0
Service Revenue Requirement	**$309,993**	**$335,440**	**$363,279**	**$387,331**	**$411,392**
Less Revenue Offsets	$11,018	$10,697	$10,859	$11,123	$11,460
Revenue Requirement from Rates	**$298,975**	**$324,743**	**$352,420**	**$376,208**	**$399,932**
Forecasted Load at Prior Year Rates	$249,050	$300,938	$327,932	$355,874	$379,297
Yearly Revenue Deficiency	**$(49,926)**	**$(23,804)**	**$(24,488)**	**$(20,334)**	**$(20,636)**
Cumulative Revenue Deficiency	**$(49,926)**	**$(73,730)**	**$(98,218)**	**$(118,552)**	**$(139,187)**

2

3 **Table 12 - Distribution Bill Impacts by Customer Class**

Rate Class	Year-over-Year Distribution % Change					
	2026	2027	2028	2029	2030	Average
Residential	17.62%	9.34%	7.46%	5.70%	5.44%	*9.11%*
GS < 50 kW	16.96%	8.38%	6.89%	5.69%	4.71%	*8.52%*
GS > 50 to 1,499 kW	22.46%	9.64%	7.16%	5.72%	5.45%	*10.09%*
GS > 1,500 to 4,999 kW	11.17%	14.16%	7.57%	5.80%	4.78%	*8.70%*
Large Use	12.60%	17.33%	9.32%	6.22%	8.17%	*10.73%*
Street Lighting	5.89%	-25.52%	4.57%	2.12%	0.94%	*-2.40%*
Sentinel Lighting	8.51%	9.97%	7.45%	5.73%	5.43%	*7.42%*
Unmetered Scattered Load	12.27%	10.46%	6.92%	5.78%	4.64%	*8.01%*

MEMO

To: Executive Management Team (EMT) and Directors

Date: January 5, 2024

Subject: 2024-2030 Priorities and Budget Guidelines

Purpose:

The purpose of this memorandum is to formalize the guidelines to be used in preparation of the Hydro Ottawa Limited (Hydro Ottawa or HOL) 2024 to 2030 Priorities and Budgets. As you are aware, the labour disruption in 2023 has impacted and compressed the timelines for both the normal annual budgeting process and the 2026-2030 Rate Application. Recognizing that each division has been advancing their plans to the best of their ability, the issuance of this memorandum is to ensure clarity around guidelines and timelines. The Hydro Ottawa Board of Directors also recently authorized a deferral of the HOL 2024 Budget approval to April 2024.

Overview:

Hydro Ottawa will file its 2026-2030 Rate Application in Q1 2025 in order to have new distribution rates effective January 1, 2026. The key considerations include:

- The type of application will be either a five year Custom Incentive Regulation (CIR) or a Price Cap Incentive Rate-setting (Price Cap IR) which is a one year Cost of Service (COS) rebase, followed by four years of inflation, minus stretch factor. Regardless of the rate setting option chosen, full budgetary data will be required for the 2024-2030 period.

- The filing will include the 2024 and 2025 Budgets (referred to as the Bridge years) and Budgets for the 2026 to 2030 period (referred to as the Test years).

- Consistent with a normal budget year, the information submitted by each business unit for the 2024 to 2030 period will need to be at a detailed level.

- Each of the business unit plans will need to outline the major projects and programs being undertaken and their tie to the company's strategic direction with particular focus on the alignment with our customers' preferences, productivity, continuous improvement and cost control. There will also need to be a discussion of all of the major projects and programs and the outcomes that are expected from them.

- The Budgets for 2026 to 2030 will be entered into the financial system at the detailed Business Unit (BU) level.

- Capex and Capital Additions will be aligned with the actual 2023 ending balances. For projects continuing in 2024 and beyond, please ensure the budgeting aligns with the 2023 ending balances.

Key Milestones:

The following timelines support the customer engagement aspect of the rate application:

2024-2025 Bridge Years
- Compensation Assumptions and Position budget are due January 22, 2024. (See "Compensation & Position Budgeting" below for more information)
- 2024 and 2025 OM&A budgets are due by January 26, 2024
- 2024 & 2025 CAPEX budgets are due by February 2, 2024
- Full budget to be finalized March 31, 2024 for HOL Board of Directors approval on April 23, 2024

2026 Test Year Budget
- Compensation Assumptions and Position budget are due February 22, 2024
- 2026 OPEX and CAPEX budget are due May 24, 2024
- Approval from Rate Application Steering Committee in June 2024

2027-2030 Test Year Budget
- Compensation Assumptions and Position budget are due March 22, 2024
- 2027 to 2030 OPEX and CAPEX budgets are due June 14, 2024
- Approval from Rate Application Steering Committee in July / August 2024

Other Critical Milestones
- The first draft of the Distribution System Plan (DSP) write-up is due June 1, 2024
- Development (writing) of evidence should commence now
- The Regulatory Affairs Group will release the detailed schedule of due dates on evidence writing under separate cover
- Preliminary revenue requirement and rate impacts for 2026 are due in June 2024 and for 2027-2030 in July / August 2024

- Customer Survey on Hydro Ottawa's plan will begin in early September 2024, with any necessary adjustment to plans due by November 2024

Alignment of Spending to Company Priorities

All spending must align to our enterprise strategic objectives and outcomes as per the strategic plan It should also be noted that Hydro Ottawa's objectives and key areas of focus must align to the Ontario Energy Board's (OEB) policy and direction.

Capital

Capital investments should provide for customer growth and the replacement of aging infrastructure to maintain plant reliability as per the needs analysis documented in the Asset Management Plan and Distribution System Plan.

Capital investment key considerations include but are not restricted to the following:

- Affordability;
- Reliability and storm-hardening;
- Electrification;
- Climate change and net-zero;
- Efficiency;
- Technological changes (including non-wires alternatives);
- Connection of renewable energy generation (distributed energy resources);
- Smart grid investments;
- Customers' preferences and expectations;
- Coordination of infrastructure planning with customers, the transmitter, other distributors, and the Independent Electric System Operator (IESO) or other third parties where appropriate.

For any capital projects exceeding $1,000,000, the first draft of the Material Investment Plan documentation must also be completed by June 1, 2024.

Technology

Divisions are responsible for liaising with the CITO Division (IT) through their IT Prime Contacts to communicate and coordinate technology requirements to ensure alignment with company priorities. For any new technology project greater than $1,000,000, the Material Investment Plan documentation must be completed – this is a joint responsibility between the Division requesting the IT Project and the IT Prime Contact. The first draft of the Material Investment Plan is due by June 1, 2024. IT will consolidate all requests from each Division and will prioritize and recommend which projects are to move forward for Rate Application Steering Committee approval prior to inclusion in the budgets.

Compensation & Position Budgeting

Compensation and benefit estimates will be provided by the Chief Human Resources Officer (CHRO) Division and will be based on the renewed collective agreement and anticipated increases beyond the existing term.

With support from the Director, Corporate Planning, Risk, Advisory Services and Head, Internal Audit, CHRO will be conducting divisional, and in some cases cross divisional, organizational capacity and design conversations and workshops with a focus on workforce capacity building. These conversations and workshops will centre around the skills and positions needed to support both current projects and initiatives as well as those planned for the next rate application period. The output of these sessions will drive additional position requirements and form the basis of our workforce plan.

It will be critical for each Division/Group to be prepared for these sessions by understanding their current and future work plans to a degree that will support a discussion of the required skills and positions to support the implementation and maintenance of these plans.

Non-Compensation OM&A

Hydro Ottawa's OM&A plans should include costs that are incurred to continue providing a safe, reliable and efficient electricity distribution system and support the Distribution System Plan, along with meeting legislative and regulatory compliance requirements. The key investment considerations noted under the Capital section above are also considerations for OM&A plans, along with other considerations such as cloud computing, cybersecurity, and other external drivers like insurance premiums. Existing OM&A funding should also be reviewed for savings.

All new or expansion of existing funding must be supported and approved by each respective EMT and ultimately the Rate Application Steering Committee with approval of the overall budgets.

Productivity, Continuous Improvement and Cost Control

Productivity, continuous improvement and cost effectiveness remain a key corporate priority across each area: capital, technology, compensation and other OM&A. Each program area should consider a focus on cost effective delivery of outcomes that matter to customers, with appropriate pacing and prioritization to control costs and manage risks.

Inflation Rate

Inflation is a significant concern and planning challenge for Hydro Ottawa in the current environment. Corporate Finance will assist in applying forecast inflation out to 2030. In the absence of long term contracts or specific inflationary expectations, please budget in constant dollars using 2024 as the base year. Secondly, ensure that each budget is in a sufficient amount of detail to allow for appropriate application of corporate inflation rates by grouping by appropriate cost driver - labour, materials, etc. For longer term contracts with pricing for 2025 and beyond, please advise your management accountant of the negotiated inflation factor from the contract. Similarly for equipment, materials, technology, or services for which standard inflation will not suffice, please advise your management accountant of these circumstances and the inflation factor deemed appropriate for the situation.

Thank you.

Geoff Simpson
Chief Financial Officer

cc: Rate Application Working Group
Management Accountants [1]
HR Partners [1]
IT Prime Contacts [1]

[1] Refer to HydroBuzz under Key Contacts for the most up to date divisional partner lists

IMPACTS OF COVID-19 PANDEMIC

1. INTRODUCTION

This Schedule summarizes the impacts of the global COVID-19 pandemic on Hydro Ottawa, consistent with section 2.1.10 of the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications - 2025 Edition for 2026 Rate Applications*, dated December 9, 2024. The first part of this Schedule examines the impacts experienced by the utility during the 2021-2025 rate term, while the second part addresses how and whether any lingering effects from the pandemic have impacted Hydro Ottawa's forecasts and plans for the 2026-2030 period.

2. COVID-19 IMPACTS DURING THE 2021-2025 RATE TERM

On March 17, 2020, the Government of Ontario declared a state of emergency to protect public health and safety in light of the accelerating transmission of COVID-19. Over the next two years, the provincial government took numerous steps and directed numerous actions aimed at safeguarding public health, limiting the spread of the virus, supporting the continuity of critical services, and providing financial and cost relief to businesses and residents of Ontario. April 27, 2022 marked the date in which all emergency orders under the *Reopening Ontario (A Flexible Response to COVID-19) Act, 2020* were revoked.[1]

Like all businesses in Ontario, Hydro Ottawa was significantly impacted by COVID-19 and the restrictions put in place by all levels of government to mitigate the public health emergency. The sections below provide a high-level summary of these impacts and, where appropriate, indicate to what extent they were largely confined to the period of the pandemic itself or endured over the course of the months and years which followed.

[1] Government of Ontario, "Report on Amendments, Extensions, and Revocations of Orders under the Reopening Ontario (A Flexible Response to COVID-19) Act, 2020 from December 2, 2021, to March 28, 2022," https://www.ontario.ca/document/report-amendments-extensions-and-revocations-orders-under-reopening-ontario-flexible-3.

2.1. WORKFORCE SAFETY AND PLANNING

Throughout the pandemic, ensuring employee health and safety was a top priority for Hydro Ottawa, with the utility proactively implementing numerous protocols to protect its workforce.

Nearly two months before COVID-19 was declared a public health emergency in Ontario, Hydro Ottawa formally activated its pandemic plan. Subsequent to the province's declaration on March 17, 2020, the utility pivoted seamlessly to a remote work environment for office-based employees. For field crews and other employees whose responsibilities precluded work from home, enhanced safety measures were implemented, alongside modified work schedules and environments (e.g. personal protective equipment (PPE) issuance; staggered start/end times; daily COVID-19 self-assessments prior to reporting to work; division of System Office staff into two separate groups assigned to either the primary location or a back-up location). From the outset of the pandemic, Hydro Ottawa's actions were guided by the recommendations of public health authorities, governments and industry regulators, including for purposes of return-to-work plans which were instituted (as public health conditions allowed) at different junctures over the course of late 2020, 2021 and 2022, and which involved employees rotating between the workplace and home. When COVID-19 vaccination became available in early 2021, Hydro Ottawa undertook an education and awareness campaign encouraging employees to receive the vaccine.

Hydro Ottawa successfully migrated to remote working during the early days of the pandemic, as the utility was well-positioned to implement the changeover, having already phased-out desktop computers in favour of laptops, and begun the transition to cloud-based collaboration tools and information management systems. While this groundwork was in place, certain modules such as Google Meet were fast tracked because of the pandemic. Upon receiving instructions to work from home, employees were able to carry out all work activities and continue operating core business systems with no interruption in service delivery.

As the pandemic progressed, employees demonstrated their ability to continuously adapt to constraints and uncertainty in the external environment, and to embrace new solutions for performing their work. For example, Hydro Ottawa became one of the first major utilities in Ontario to defend its rebasing application through a virtual adjudicative proceeding (EB-2019-0261). The utility submitted its application on February 10, 2020, expecting the customary in-person process; however, it was required to shift its approach following the province's emergency declaration and engage in Technical Conference and Settlement Conference discussions in a virtual format. The constructive engagement between Hydro Ottawa, intervenors and OEB staff in the proceeding helped inform the OEB's broader approach to conducting virtual hearings.[2]

Subsequent to the pandemic, and in step with economy-wide trends, Hydro Ottawa implemented a structured hybrid work program for employees, so as to provide flexibility and remain competitive in a tightening labour market.

With respect to workforce impacts, the utility experienced higher than normal attrition rates due to resignations and retirements during and following the pandemic. Key drivers underlying these trends included a more fluid and dynamic labour market, as well as an uptick in employees opting for early retirement in response to the unprecedented challenges associated with the pandemic and other disruptive events such as the May 2022 Derecho and the 84-day strike in 2023. As part of its ongoing, proactive approach to workforce planning, Hydro Ottawa has been addressing these and other pressures through targeted recruitment, retention, training and development strategies. For more information please see Attachment 4-1-3(B) - Workforce Planning Strategy.

[2] On June 17, 2020, the OEB issued a letter to all registered stakeholders seeking input on virtual hearings. (Available: https://www.oeb.ca/sites/default/files/OEBltr-Seeking-Feedback-Virtual-Hearing-20200617.pdf). The first day of the Technical Conference in Hydro Ottawa's rebasing application proceeding was held less than one month later (July 15, 2020) in a virtual format.

2.2. CUSTOMER SERVICE

Alongside employee safety, Hydro Ottawa focused on serving and supporting customers through the pandemic. Within a week of the province's emergency declaration in March 2020, the utility had collaborated effectively with an external service provider to deploy a cloud-based customer-contact solution that ensured service continuity in a work-from-home environment. Similarly, in light of the shifts in customer demand related to working and learning from home, planned power interruptions were limited to critical needs only, with non-essential work deferred. Hydro Ottawa likewise introduced a program which proved to be popular, in which portable battery packs were loaned to customers affected by planned outages, allowing them to continue using small electronic devices for the duration of the outage. In addition, as described in Schedule 1-4-1 - Customer Engagement Ongoing, Hydro Ottawa transitioned to virtual open houses in 2020, offering increased accessibility through multiple time slots. In 2023, a hybrid approach was adopted and continues to be used, providing both virtual and in-person options for customer participation. This flexible format ensures ongoing effective communication and engagement with customers.

Considerable effort was also spent on ensuring relief for customers experiencing financial hardship as a result of the pandemic. In this regard, the utility offered flexible payment plans for these customers, implemented Ontario's rate plan emergency electricity rate relief, extended the OEB mandated disconnection ban to all customers and collaborated with provincial policymakers and regulators on the design and administration of the COVID-19 Energy Assistance Program (CEAP) to ensure that all allocated dollars were fully disbursed.

As described in further detail in Attachment 1-3-3(C) - Electricity Utility Scorecard, Hydro Ottawa sustained high levels of delivery and performance on core service quality and customer satisfaction indicators throughout the pandemic. Notably, the utility achieved its highest annual customer satisfaction ratings of the past decade during the two most challenging years of the pandemic – 96% in 2020 and 94% in 2021.

2.3. SYSTEM DEMAND

The public health restrictions imposed as a result of the pandemic impacted local use of electricity. The most significant impact was tied to more people working and learning from home. This led to an increase in consumption among residential customers and a corresponding decrease among commercial customers. Commercial use also decreased as a result of some businesses reducing or ceasing their activity altogether and closing, resulting in lost revenue and an increased number of customers changing commercial rate classes. Please see Schedule 3-1-2 - Accuracy of Load Forecast and Variance Analyses for more details and trends.

During the early months of the pandemic, average daily use dropped. However, by Summer 2020, with more people at home using their air conditioners, this actually led to a higher level of summer peak demand than the previous year.

As the pandemic progressed into Fall/Winter 2020, demand and consumption began to return to pre-COVID-19 levels. These shifts in consumption and demand were similar to those observed for the Ontario-wide system.[3]

2.4. CAPITAL INVESTMENT PROGRAM

The COVID-19 pandemic presented significant challenges, including supply chain disruptions, which contributed to project delays and cost escalations across various programs. The restrictions imposed on economic and social activity triggered significant increases across global supply chains in the cost of goods and the lead times for their delivery. As a result of these pressures and constraints, Hydro Ottawa encountered considerable challenges in sourcing critical materials and equipment (e.g. transformers), which in turn led to budget exceedances and scheduling delays for certain projects. For further details on work program and capital variances, please refer to Schedule

[3] Independent Electricity System Operator, *2021 Annual Planning Outlook - Ontario's electricity system needs: 2023-2042* (December 2021).

2-5-5 - Capital Expenditure Plan, Schedule 4-1-1 - Operations, Maintenance and Administration Summary and Schedule 1-2-5 - Impacts of Inflationary Pressure.

Despite the challenges noted above, Hydro Ottawa executed the majority of its planned capital investments for 2020 and 2021-2025. A notable example of capital work accomplishment during the COVID-19 outbreak is the Cambrian Municipal Transformer Station (MTS) project. Construction on this project began in the fall of 2019, by which point all major equipment and components had been procured. Although construction was temporarily paused in early 2020 following the provincial emergency declaration, work schedules were adjusted and on-site safety protocols were enhanced to enable continued activity. By March 2022, construction and testing was complete, and energization occurred the following month, allowing for the project to come in on schedule and within budget.

2.5. FINANCIAL

Notwithstanding the fact that Hydro Ottawa is not proposing to recover costs through the generic COVID-19 Deferral Account which was established by the OEB in response to the pandemic,[4] it should be noted that the utility experienced a range of adverse financial impacts such as lost revenues caused by reduced customer demand and consumption, an increase in bad debt, and the incurrence of additional costs. With respect to the latter, these incremental costs were driven by numerous factors and needs, including but not limited to the following: purchases of PPE for employees, such as face masks and hand sanitizers; increased cleaning of administrative and operational facilities, as well as fleet vehicles; and standby fees from an additional credit facility obtained in order to cover potential liquidity issues (which was ultimately not used).

Hydro Ottawa mitigated these revenue shortfalls and cost increases through several cost-containment measures, including a hiring freeze for vacant positions, termination of temporary

[4] For additional information related to the COVID-19 Account and agreed limited use of this Account as noted in the 2021-2025 Approved Settlement Agreement, please see Schedule 9-1-3 - Group 2 Accounts.

contract and part-time employees, cancellation of the summer student program, and restrictions on employee travel, training and events. Please refer to Schedule 4-1-2 - Operations, Maintenance and Administration Program Costs for year-over-year variance details.

It should also be noted that the pandemic's economic fallout, including increased government spending and relief measures, contributed to rising inflation and interest rates. These broader economic trends also significantly impacted Hydro Ottawa. Inflation, in particular, is discussed further in Schedule 1-2-5 - Impacts of Inflationary Pressure.

Furthermore, the timing of Hydro Ottawa's last rebasing application meant that the first three years of revenue requirements reflected a return on equity affected by COVID-19, while short-term and long-term debt rates were set using uncharacteristically low parameters in comparison to market conditions during the rate period.[5] This resulted in Hydro Ottawa starting with a lower cost of capital position than many of its peers.

3. COVID-19 IMPACTS ON 2026-2030 DISTRIBUTION RATE PLAN

The COVID-19 pandemic, while initially presenting acute challenges during its most intense period, has had lasting and evolving effects on Hydro Ottawa. These effects, combined with other significant events such as the May 2022 Derecho, the strike and inflationary pressures, are key considerations in the utility's planning for the 2026-2030 rate term.

3.2. 2026-2030 LOAD FORECAST

Detailed information regarding Hydro Ottawa's load forecast for the 2026-2030 rate term is available in Schedule 3-1-1 - Revenue Load and Customer Forecast, including impacts of rate reclassification of commercial loads and a slower pace of conservation and demand management programs.

[5] https://www.oeb.ca/regulatory-rules-and-documents/rules-codes-and-requirements/cost-capital-parameter-updates

3.3. 2026-2030 CAPITAL EXPENDITURES

As stipulated by OEB Filing Requirements, Hydro Ottawa has filed a Distribution System Plan (DSP), which can be found in Schedules 2-5-1 through 2-5-9. In particular, Schedule 2-5-1 - Distribution System Plan Overview summarizes the documentation related to Hydro Ottawa's planned expenditures over the coming five years on its distribution system and general plant. The DSP provides detailed information and analysis regarding the key drivers underlying the historic levels of investment that are necessary over the course of 2026 to 2030: deteriorating infrastructure; local population and economic growth; reliability and resilience imperatives; and increased electrification.

Lingering effects of the pandemic impact Hydro Ottawa's planned capital program, specifically regarding the procurement and costs of particular infrastructure, equipment and external services. As noted above, COVID-19 and accompanying public health restrictions imposed extraordinary pressures on domestic and international supply chains, resulting in increased costs for goods and longer lead times for delivery. These pressures have also been compounded by other events such as wars, labour disruptions globally and US tariffs. The high rates of inflation which were experienced in the latter stages of the pandemic and the ensuing years imposed upward pressure on the prices of certain goods and services, including key infrastructure components like power transformers and the labour provided by third-party contractors retained by Hydro Ottawa to assist with the construction of major capital projects. These capital cost pressures and trends carry over into the 2026-2030 rate term.

For more information, please refer to the DSP in Schedules 2-5-1 through 2-5-9.

3.4. 2026-2030 OM&A EXPENDITURES

Similar to the foregoing discussion on the lingering impacts of high levels of inflation on capital expenditures, there are comparable pressures with respect to operations, maintenance and administration expenses for the next five years (for example, for operational services provided by third-parties). Please see Schedule 4-1-2 - Operations, Maintenance & Administration Program Costs for more information.

In summary, the material and labour cost increase experienced due to pandemic induced supply chain disruption and inflationary pressures have not reversed and continue into the 2026-2030 rate period. Additionally, pressure such as US tariffs are creating new cost considerations to manage.

IMPACTS OF INFLATIONARY PRESSURE

1. OVERVIEW

Subsequent to Hydro Ottawa submitting its five-year Custom Incentive Rate-Setting (Custom IR) Application for the years 2021-2025,[1] the Canadian economy experienced inflation at a greater rate than it had in the prior five-year period. In the 2020-2024 period, Canada's inflation rate as measured by the Consumer Price Index (CPI) was the highest in 40 years.[2]

For a number of reasons, such as the COVID-19 pandemic, supply chain disruptions, and demand-driven impacts, the actual rate of inflation experienced by Hydro Ottawa in the first four years of the current Custom IR period (2021-2024) has been higher than forecasted. This has resulted in higher-than-planned actual operations, maintenance and administration (OM&A) and capital costs. As discussed further in this Schedule, the level of OM&A included in Hydro Ottawa's rates over the 2021-2024 period was increased by the OEB's inflation factor, less the stretch factor plus a growth factor. With respect to capital costs, the approved plan did not include any amounts forecast for inflation, nor did it include any cost escalation adjustment mechanisms. Essentially the capital plan assumed that a modest level of inflation would continue and the impact of any inflation would be offset by productivity and efficiency savings. Furthermore, the 2022-2025 capital related revenue requirement was reduced by a cumulative annual 0.6% capital stretch factor.

The electricity industry has experienced higher cost increases than the general economy due to the significant increase in the cost of many core commodities and products used in the industry. These commodities include steel, aluminum, copper, and lumber. Cost increases in these core materials have had an impact on the price of key electrical components such as transformers, conductors, and switchgears. While it is difficult to determine the exact impact that inflationary pressure has had on overall Hydro Ottawa costs, it is possible to identify many of the underlying contributors to cost increases. This Schedule identifies the increase in key input costs to Hydro Ottawa that have caused expenditures to be higher than planned in the 2021-2025 period.

[1] Hydro Ottawa Limited, *2021-2025 Custom Incentive Rate-Setting Distribution Rate Application*, EB-2019-0261 (February 10, 2020).
[2] Statistics Canada, May 22, 2024. [*High Inflation in 2022 in Canada: Demand–pull or supply–push?*]

These cost increases are expected to remain and further increase costs in the 2026-2030 Custom IR period is expected.

The forecasted inflationary pressures described in this Schedule and reflected in Hydro Ottawa's proposed spending for the 2026-2030 period do not consider any further inflationary risks caused by climate change and political circumstances. Tariffs imposed by the United States will increase the cost of materials and products produced in that country. Retaliatory tariffs imposed by Canada on goods and services purchased from the United States will more directly and materially increase Hydro Ottawa's costs for any of those goods and services. Retaliatory tariffs will also increase the cost of materials and commodities purchased by Hydro Ottawa's Canadian suppliers. These cost increases would be further compounded by impacts that tariffs would have on the broader Canadian economy, which would likely weaken the Canadian dollar and cause increases in prices that Hydro Ottawa incurs for all goods and services procured by Hydro Ottawa or its Canadian suppliers from other countries.

Extreme weather events caused by climate change, such as flooding and wildfires, have caused cost increases in the past and may cause increases in the future as extreme weather events become more frequent. For example, wildfires on the west coast reduce the supply of timber, increasing the cost of Western Red Cedar wood poles. Extreme weather events also damage buildings and infrastructure, which increases the demand and costs for the materials required to replace and rebuild. Hydro Ottawa would incur costs that are materially higher than forecast if any of these risks materialize.

Hydro Ottawa has and continues to see the impacts of rising costs across all areas of business including internal labour, outside services, equipment, materials and supplies, and fuel. With respect to equipment, materials and supplies, and fuel, the actual rate of inflation experienced by Hydro Ottawa exceeded the OEB inflation factor rate.

This Schedule provides information on cost increases in the 2021-2025 period that have contributed to variances from the OEB-Approved amounts and also provides a basis to support the level of expenditures in the 2026-2030 Custom IR period. Information is provided on:

- The inflation factor as calculated by the OEB and provided to LDCs for use in adjusting rates;
- The impact of inflation on the price of core commodities that are used in manufacturing material and equipment used by LDCs;
- The impact of inflation on the price of electrical components used by LDCs;
- Specific inflation impacts on Hydro Ottawa labour and common procurement items; and
- The expected impact of inflation on Hydro Ottawa in the 2026-2030 period.

2. INFLATION (2016-2025)

2.1. OEB INFLATION PARAMETERS

In its 2013 report, *Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors,*[3] the OEB established a methodology for determining its annual inflation factor for use in incentive-based rate adjustment mechanisms. 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.

Based on this methodology, the OEB calculated the inflation parameters to be used by Distributors in the 2016-2025 period. As can be seen in Table 1 below, the rate of inflation as calculated by the OEB has increased in the 2021-2025 period (3.5% annual average) as

[3] Ontario Energy Board, *Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors* EB-2010-0379 (November 21, 2013)

compared to the 2016–2020 period (1.7% annual average). Furthermore, it is noted that in calculating the annual inflation parameters the OEB uses historical Statistics Canada information that reflects cost data two years prior to the period it is being applied to. Thus the inflation that an LDC is compensated for will lag the actual inflation impact incurred.

Table 1 – OEB Inflation Parameters

	OEB Inflation Parameters									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
%	2.1%	1.9%	1.2%	1.5%	2.0%	2.2%	3.3%	3.7%	4.8%	3.6%
5-YEAR ANNUAL AVERAGE	1.7%					3.5%				

Taking a closer look at the components of the OEB Inflation Parameter calculation, Tables 2 and 3 provide a breakdown of the Non-Labour and Labour Components of the OEB Inflation Parameter, respectively.

Table 2 – Non Labour Component

	OEB Inflation Parameters – Non Labour Component[4]									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
%	2.2%	1.6%	1.2%	1.4%	1.6%	1.9%	1.7%	3.8%	5.9%	3.7%
5-YEAR ANNUAL AVERAGE	1.6%					3.4%				

The rate of inflation for Non-Labour Components has increased in the 2021-2025 period (3.4% annual average) as compared to the 2016–2020 period (1.6% annual average).

[4] GDP-IPI (FDD)

Table 3 – Labour Component

	OEB Inflation Parameters – Labour Component[5]									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
%	2.0%	2.6%	1.1%	1.9%	2.9%	2.7%	7.0%	3.5%	2.3%	3.2%
5-YEAR ANNUAL AVERAGE	2.1%					3.7%				

The rate of inflation for the Labour Component has increased in the 2021-2025 period (3.7% annual average) as compared to the 2016–2020 period (2.1% annual average).

It is noted that the Statistics Canada indices used in the OEB Inflation Parameter calculation are not specifically indicative of costs incurred in the electricity industry or by Hydro Ottawa. The Canada GDP-IPI (FDD) measure represents a broad macroeconomic measure of inflation. The AWE- All Employees - Ontario measure is comprised of 20 classifications of employees, one of which is utilities. While the two measures both generally indicate an inflationary impact higher that what Hydro Ottawa had planned for, it is Hydro Ottawa's experience that actual incurred costs are higher than the general inflation measures calculated by the OEB. Sections 3 and 4 below take a closer look at the specific inflationary cost pressures that Hydro Ottawa incurred.

It is also noted that the inflation factor derived by the OEB is based on a calculation methodology that uses historical information. This results in a lag to the inflation factor that applies to LDCs. For example, the 2025 inflation factor is based on Statistics Canada information from 2022 and 2023. This is summarized in Table 4 below.

[5] AWE – All Employees – Ontario

Table 4 - 2021-2025 I-Factor Components[6]

	Non-Labour							Labour			
	GDP-IPI(FDD) - Normal							AWE- All Employees - Ontario			
	Q1	Q2	Q3	Q4	Annual Average	% Change	Weight	Annual	% Change	Weight	Annual % Change
						A	B		C	D	(A*B) + (C*D)
2021 I-Factor											
2018	109.4	109.9	110.6	111	110.23			1,021.4			
2019	111.4	112.2	112.6	113.3	112.38	1.9%	70%	1,049.5	2.7%	30%	2.2%
2022 I-Factor											
2019	111.2	111.8	112.1	112.9	112.00			1,049.7			
2020	113.3	113.5	114.1	114.8	113.93	1.7%	70%	1,126.3	7.0%	30%	3.3%
2023 I-Factor											
2020	113.4	113.5	114.0	114.7	113.900			1,126.3			
2021	116.2	117.4	118.9	120.8	118.325	3.8%	70%	1,166.8	3.5%	30%	3.7%
2024 I-Factor											
2021	116.4	117.5	119.1	121.0	118.50			1,166.7			
2022	123.6	125.3	126.2	127.5	125.65	5.9%	70%	1,194.2	2.3%	30%	4.8%
2025 I-Factor											
2022	114.3	116.1	117.1	118.4	116.48			1,193.3			
2023	119.1	120.4	121.4	122.8	120.93	3.7%	70%	1,232.0	3.2%	30%	3.6%

[6] Note: Statistics Canada periodically updates figures so values for a given year may change over time. The base year was updated in 2022 from 2012 to 2017 (2017 = 100).

2.2. INFLATION METHODOLOGY IN HYDRO OTTAWA'S 2021-2025 APPLICATION

In Hydro Ottawa's 2016-2020 Custom IR Application,[7] Hydro Ottawa proposed including an inflation factor of 2.26% as a component of its Custom Price Escalation Factor (CPEF). The CPEF was originally proposed to include a Hydro Ottawa-specific inflation factor, less a stretch factor, plus a growth factor. The proposed 2.26% inflation rate was derived by applying Hydro Ottawa's specific labour/non-labour weighting factors to two indices (the GDP-IPI and AWE for workers in Ontario) and averaging them over the historic and forecast 2017-2025 period. These alternate labour/non-labour weighting factors were more aligned with inflationary pressures associated with Hydro Ottawa's spending.

The CPEF was proposed to apply only to OM&A and there was no inflation included in the forecast of capital costs or in annual price escalations of capital-related revenue requirement components. In the Approved Settlement Agreement, the Hydro Ottawa-specific inflation factor of 2.26% was replaced with the OEB's annual inflation factor.[8]

Hydro Ottawa's CPEF used to escalate OM&A for 2022-2025 is summarized in Table 5. The inflation factor (I) is the OEB's annual inflation factor as summarized in Table 4. The growth factor (G) is the forecast average growth in customers from 2021 to 2025, 0.97%, multiplied by a scaling factor of 0.35%. The stretch factor (X) is 0.45%, the stretch factor assigned to cohort IV LDCs, plus a 0% productivity factor. The growth and stretch factors were fixed for the duration of the Custom IR term so the CPEF was equal to the OEB's inflation factor minus 0.11% in each year.

[7] Hydro Ottawa Limited, *2016-2020 Custom Incentive Rate-Setting Distribution Rate Application*, EB-2015-0004 (April 29, 2015).
[8] Hydro Ottawa Limited, *2021-2025 Custom Incentive Rate-Setting Approved Settlement Agreement*, EB-2019-0261 (September 18, 2020). Page 15

Table 5 - 2022-2025 Approved CPEF

Year	Inflation Factor (I)	Growth Factor (G)	Stretch Factor (X)	CPEF (I + G - X)
2022 (EB-2021-0035)	3.3%	0.34%	0.45%	3.19%
2023 (EB-2022-0042)	3.7%	0.34%	0.45%	3.59%
2024 (EB-2023-0032)	4.8%	0.34%	0.45%	4.69%
2025 (EB-2024-0035)	3.6%	0.34%	0.45%	3.49%

Capital spending was not escalated by inflation and Hydro Ottawa's capital budget was not forecast with inflation so there was an implicit productivity factor applied to capital spending throughout the Custom IR period. Despite the OEB-Approved amounts being set without inflation, an additional annual capital stretch factor of 0.6% was applied to capital spending. The 0.6% capital stretch factor was set based on the Cohort IV stretch factor of 0.45% plus an additional 0.15%. Please reference Schedule 1-3-1 - Rate Setting Framework for further information.

Table 6 – 2021-2025 Capital Stretch Factor Values

Test Year	Capital Stretch Factor
2021	0.0%
2022	0.6%
2023	1.2%
2024	1.8%
2025	2.4%

3. INFLATION ON COMMON COMMODITIES AND PRODUCTS

3.1. INTRODUCTION

This section takes a closer look at the impact of inflation on the key commodities, equipment, and materials that support the electricity industry.

The indices and inflation data in this section reflect external data from Canadian and United States sources to provide context for the cost of materials incurred by Hydro Ottawa. The indices reflect the overall market price of certain goods which directionally aligns with the cost trends of products Hydro Ottawa requires for its distribution system. Data from Statistics Canada is provided unless more precise indices are available from other sources, primarily the Federal Reserve Economic Database from the United States.

The OEB inflation factors noted in Table 8 to Table 22 in this section reflect non-labour inflation measures from 2020 to 2024. The cumulative and compounded annual average inflation factors over this period are summarized in Table 7.

Table 7 – OEB Non-Labour Inflation

	2020 to 2021	2021 to 2022	2022 to 2023	2023 to 2024	Annual Average	Total Inflation
%	1.9%	1.7%	3.8%	5.9%	3.3%	13.9%

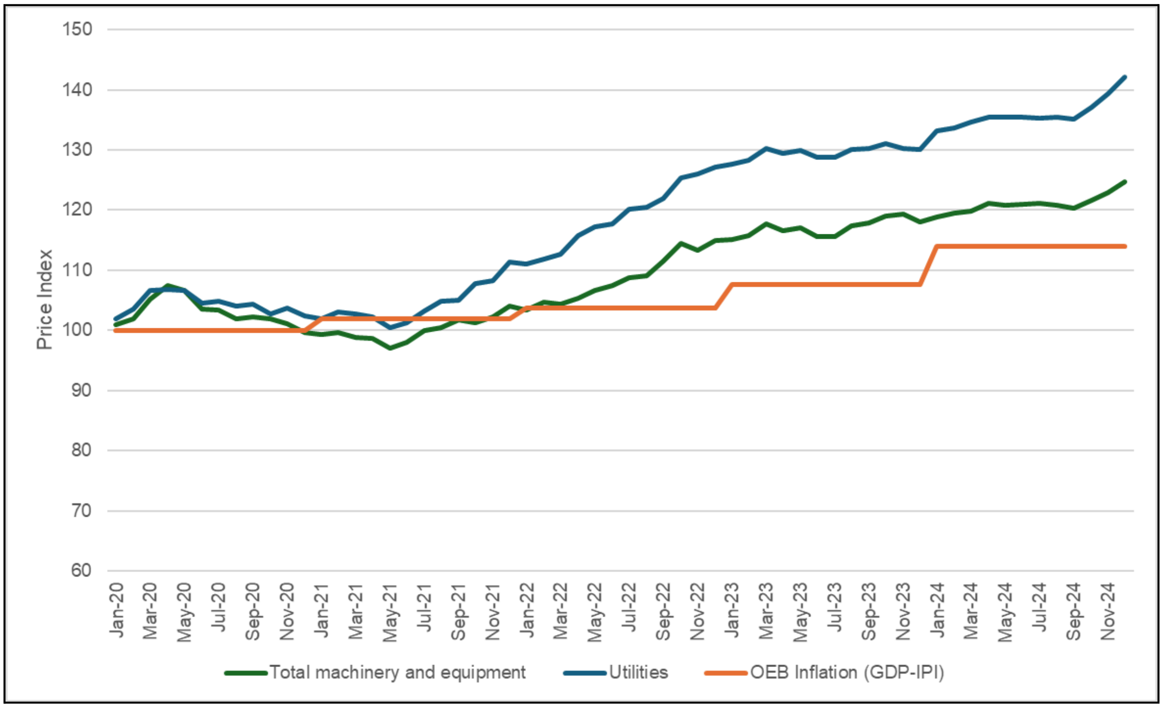
Price index graphs in this section include data from January 2020 to December 2024. The total inflation for each index or material is calculated as the monthly average price in 2024 divided by the monthly average price in 2020. Annual average inflation rates in this Schedule reflect compounded annual average inflation.[9]

Overall, machinery and equipment required in the utility industry has experienced a higher rate of inflation than the general GDP-IPI measure and the industrial average increase for machinery

[9] Compounded annual average = (1 + Total Increase) ^ (¼) - 1

and equipment. The higher rate of inflation experienced by the utility industry is illustrated in Figure 1.[10]

Figure 1 - Machinery and Equipment by Industry of Purchase Price Trend (2020 to 2024)



The utilities index includes electricity generation, transmission, control, and distribution; natural gas distribution; water treatment and distribution; sewer systems and sewage treatment facilities; and services related to permanent infrastructure lines, pipes, and treatment and processing facilities. Data for this index including only electricity related machinery and equipment is not available from Statistics Canada.

[10] Statistics Canada Table: 18-10-0284-01. The Machinery and Equipment Price Index (MEPI) series is based on the 2016 Input Output Final Demand Classification (IOFDC).

Table 8 - Machinery and Equipment Price Trend (2020 to 2024)

	Total	Utilities	OEB
Annual Average Increase	4.1%	6.9%	3.3%
4-Year Total Increase	17.5%	30.3%	13.9%

Inflation impacts with respect to general commodities are provided in Section 3.2 and inflation impacts on specific electrical components are provided in Section 3.3.

3.2. COMMODITIES

There have been significant market price changes across many commodities that are inputs to Hydro Ottawa's costs. Given the nature of Hydro Ottawa's business and capital program, the price of essential commodities has a significant impact on costs. Equipment purchased by Hydro Ottawa (i.e. power transformers, breakers, and steel) is heavily impacted by certain raw material indices.

Specific commodities relevant to the equipment, materials, and supplies used in the work performed by Hydro Ottawa include:

- Fuel, both gasoline and diesel fuels (e.g. transportation costs and vehicles)
- Copper (e.g. Connectors, Transformers)
- Aluminum (e.g. Cable, Connectors, Vehicles)
- Lumber (e.g. Cross arms, Poles)
- Steel (e.g. Pole Hardware, Switchgear)
- Grain Oriented Electrical Steel(GOES) (e.g. Transformers)

Price indices which reflect increases in these commodities are provided below.

3.2.1. Fuel

3.2.1.1. Regular

Figure 2 shows the 2020-2024 price trend of regular gasoline in Ottawa.[11] Table 9 summarizes the information displayed in Figure 2, which is that the price increases for this commodity exceeded the annual inflation rates as calculated by the OEB.

Figure 2 – Gasoline Prices Price Trend (2020 to 2024)

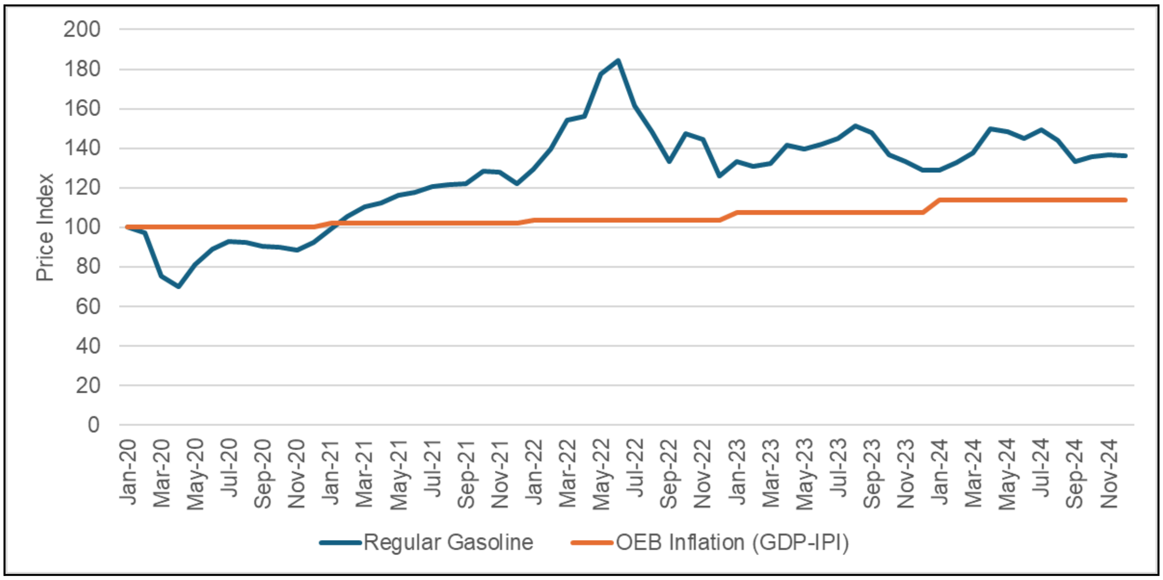


Table 9 - Regular Gasoline Price Trend (2020-2024)

	Regular Gasoline	OEB
Annual Average Increase	12.2%	3.3%
4-Year Total Increase	58.3%	13.9%

[11] Statistics Canada Table: 18-10-0001-01

3.2.1.2. Diesel Fuel

Figure 3 shows the 2020-2024 price trend of diesel fuel in Ottawa.[12] Table 10 summarizes the information displayed in Figure 3, which shows that the price increases for this commodity exceeded the annual inflation rates as calculated by the OEB.

Figure 3 – Diesel Fuel Price Trend (2020 to 2024)

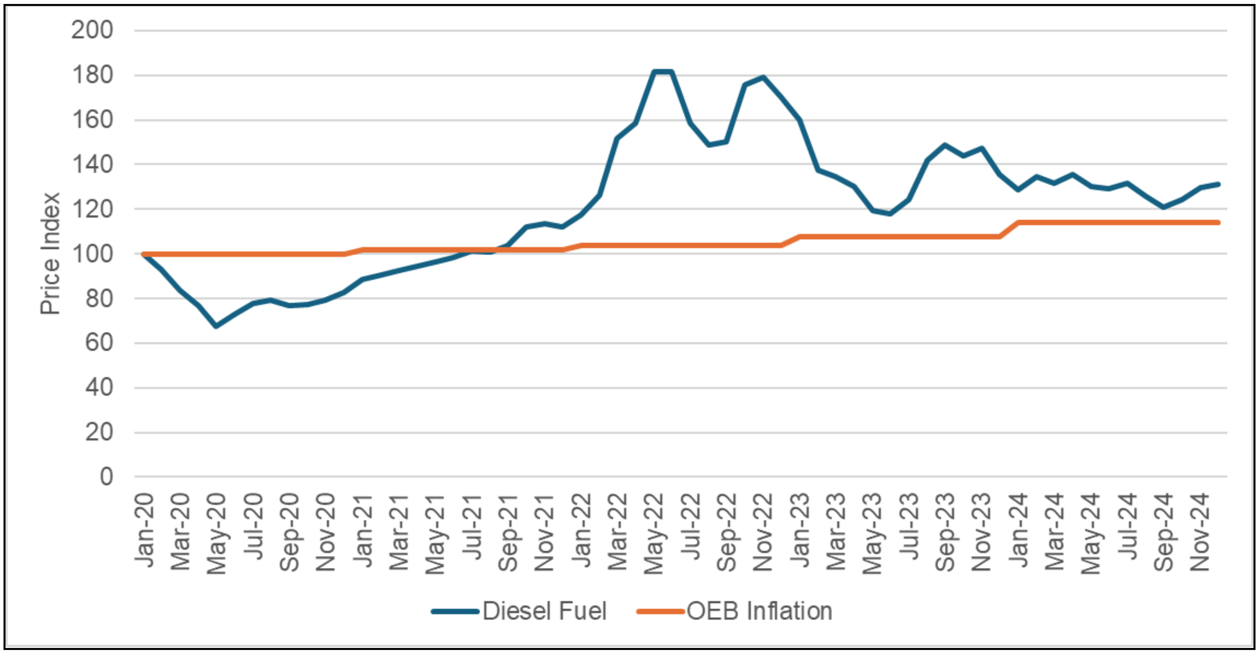


Table 10 - Diesel Fuel Price Trend (2020-2024)

2020-2024 Inflation	Diesel Fuel	OEB
Annual Average Increase	12.6%	3.3%
4-Year Total Increase	60.6%	13.9%

[12] Statistics Canada Table: 18-10-0001-01.

3.2.2. Copper

Figure 4 shows the 2020-2024 price trend of copper in Canada.[13] Table 11 summarizes the information displayed in Figure 4, which shows that the price increases for this commodity exceeded the annual inflation rates as calculated by the OEB.

Figure 4 - Copper Price Trend (2020 to 2024)

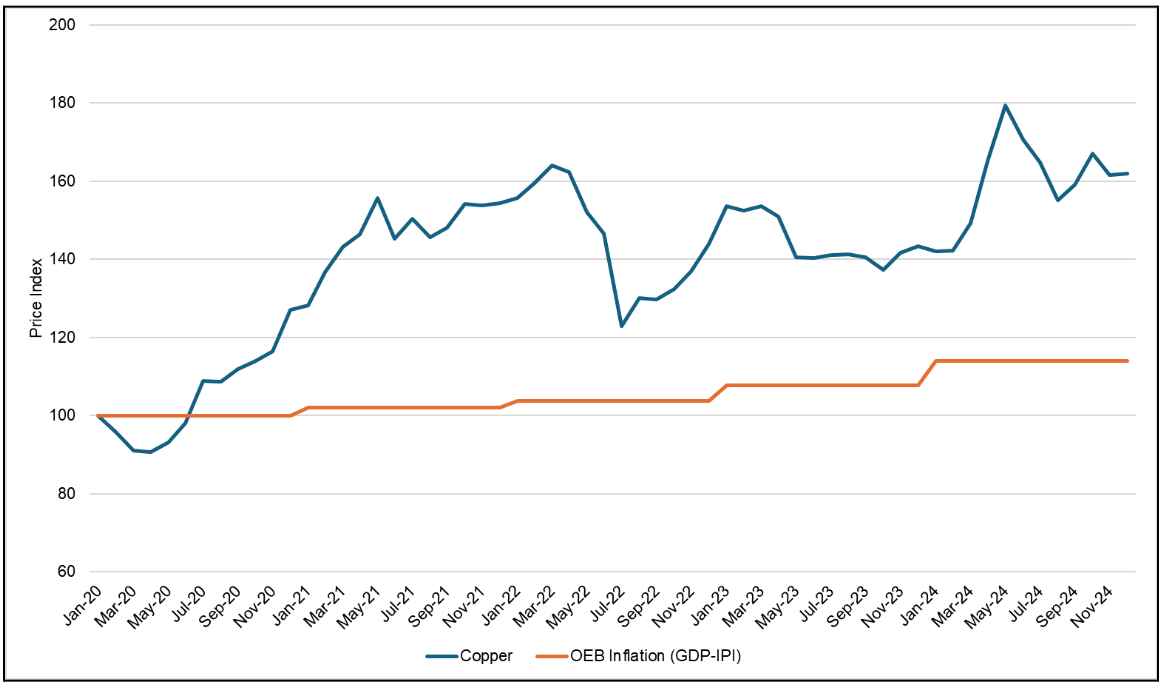


Table 11 - Copper Price Trend (2020-2024)

2020-2024 Inflation	Copper	OEB
Annual Average Increase	11.2%	3.3%
4-Year Total Increase	52.8%	13.9%

[13] Statistics Canada Table: 18-10-0268-01. Copper ores and concentrates, North American Product Classification System: 152.

3.2.3. Aluminum

Figure 5 shows the 2020-2024 price trend of aluminum in Canada.[14] Table 12 summarizes the information displayed in Figure 5, which shows that the price increases for this commodity exceeded the annual inflation rates as calculated by the OEB.

Figure 5 - Aluminum Price Trend (2020 to 2024)

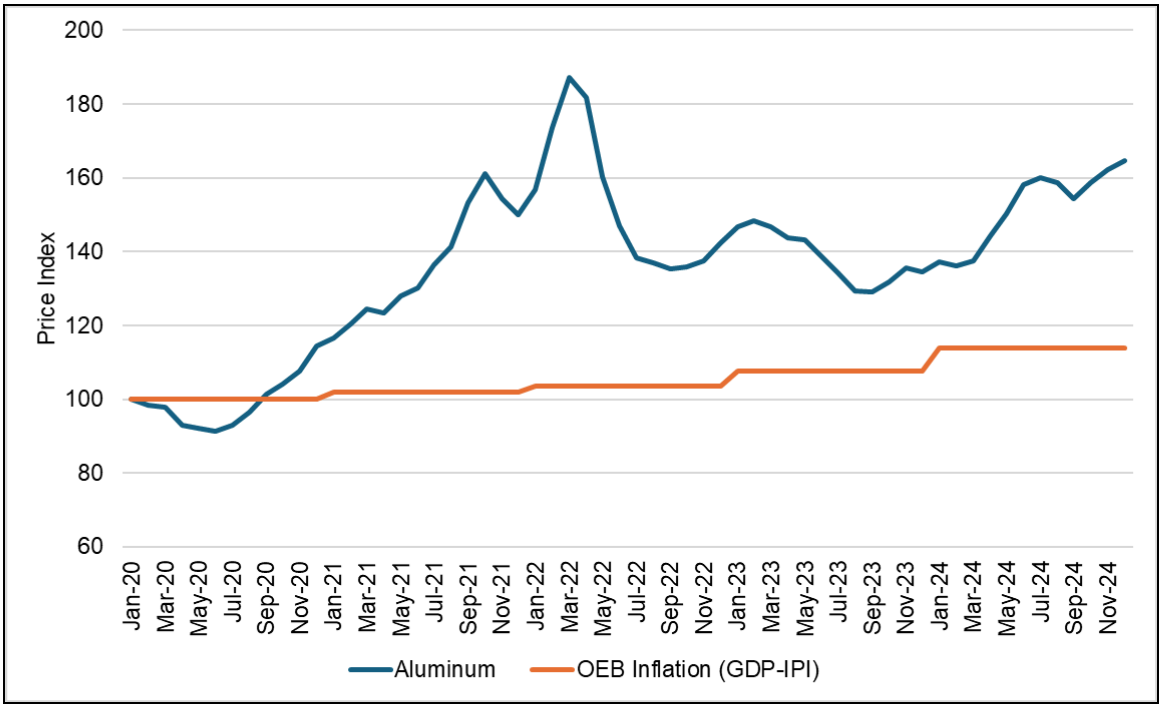


Table 12 - Aluminum Price Trend (2020-2024)

	Aluminum	OEB
Annual Average Increase	11.2%	3.3%
4-Year Total Increase	53.2%	13.9%

[14] Statistics Canada Table: 18-10-0267-01. North American Industry Classification System: 3313.

3.2.4. Wood Poles

Figure 6 shows the 2020-2024 price trend of wood poles in the United States.[15] Table 13 summarizes the information displayed in Figure 6, which shows that the price increases for this commodity exceeded the annual inflation rates as calculated by the OEB.

Figure 6 – Wood Poles Price Trend (2020 to 2024)

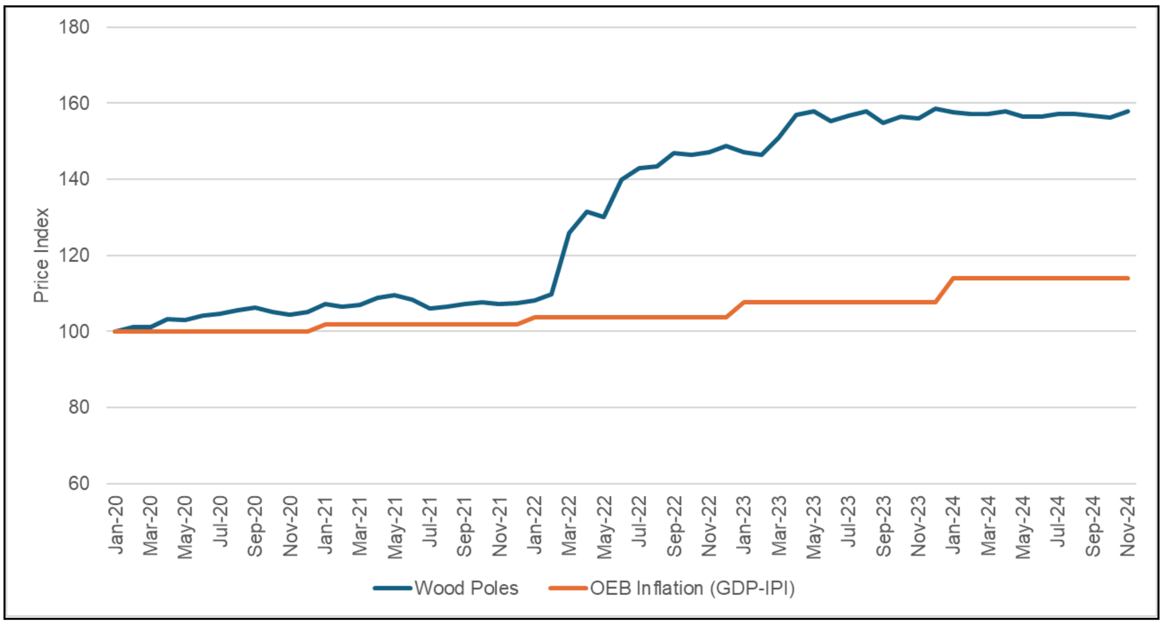


Table 13 - Wood Poles Price Trend (2020-2024)

2020-2024 Inflation	Wood Poles	OEB
Annual Average Increase	11.0%	3.3%
4-Year Total Increase	51.8%	13.9%

[15] U.S. Bureau of Labor Statistics, Producer Price Index by Commodity: Lumber and Wood Products: Wood Poles, Piles, and Posts Owned and Treated by the Same Establishment [WPU08710101], retrieved from FRED, Federal Reserve Bank of St. Louis.

3.2.5. Steel

Figure 7 shows the 2020-2024 price trend of steel in Canada.[16] Table 14 summarizes the information displayed in Figure 7, which shows that the price increases for this commodity exceeded the annual inflation rates as calculated by the OEB.

Figure 7 - Steel Price Trend (2020 to 2024)

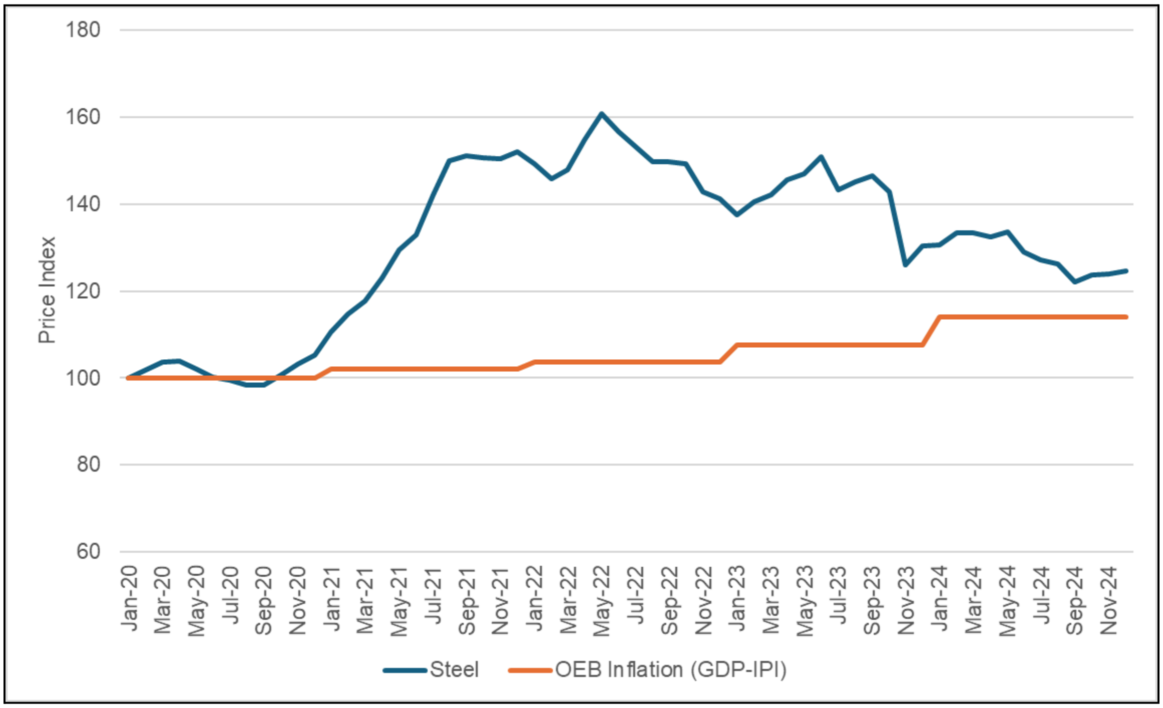


Table 14 - Steel Price Trend (2020-2024)

	Steel	OEB
Annual Average Increase	6.1%	3.3%
4-Year Total Increase	26.6%	13.9%

[16] Statistics Canada Table: 18-10-0267-01. North American Industry Classification System: 3312.

3.2.6. Grain-Oriented Electrical Steel

Figure 8 shows the 2020-2024 price trend of Grain-Oriented Electrical Steel (GOES) in the United States.[17] GOES is the type of steel commonly used in transformers and other electrical devices. GOES refers to steel that is manufactured to orient the grains within the steel in a manner that optimizes magnetic properties to minimize losses.

Figure 8 - Grain-Oriented Electrical Steel Price Trend (2020 to 2024)

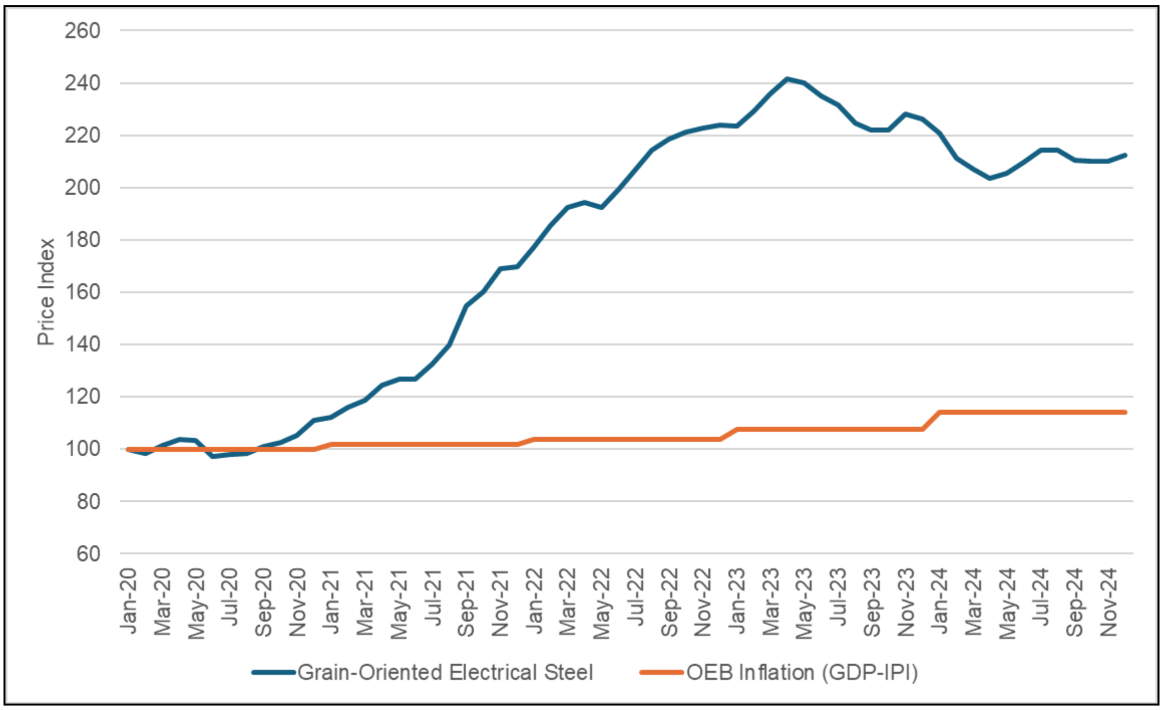


Table 15 summarizes the information displayed in Figure 8, which shows that the price increases for this commodity exceeded the annual inflation rates as calculated by the OEB. The cost of GOES and other steel generated for the electricity sector has increased significantly in recent years because of growing demands from electric vehicles, battery storage systems, and overall electrification.

[17] Business Analyst iQ, Grain oriented electrical steel price index, https://businessanalytiq.com/procurementanalytics/index/grain-oriented-electrical-steel-price-index/

Table 15 - Grain-Oriented Electrical Steel Price Trend (2020-2024)

	Grain-Oriented Electrical Steel	OEB
Annual Average Increase	20.0%	3.3%
4-Year Total Increase	107.2%	13.9%

3.3. INDUSTRIAL PRODUCT PRICE INDEX

This section provides information on the price index inflation of key materials used to complete Hydro Ottawa work programs. These materials include:

- Metal building and construction materials;
- Commercial and service industry machinery and equipment;
- Communication and electric wire and cable;
- Power, distribution, and other transformers and transformer parts; and
- Switchgear, switchboards, relays, and industrial control apparatus.

3.3.1. Metal Building and Construction Materials

Figure 9 shows the 2020-2024 price trend of metal building and construction materials in Canada.[18] Metal building and construction materials include fabricated steel plate and other fabricated structural metal; metal valves and pipe fittings (except industrial valves) and enamelled metal sanitary ware; metal windows and doors; and other architectural metal products.

[18] Statistics Canada Table: 18-10-0266-01. North American Product Classification System: 466.

Figure 9 - Metal Building and Construction Materials Price Trend (2020 to 2024)

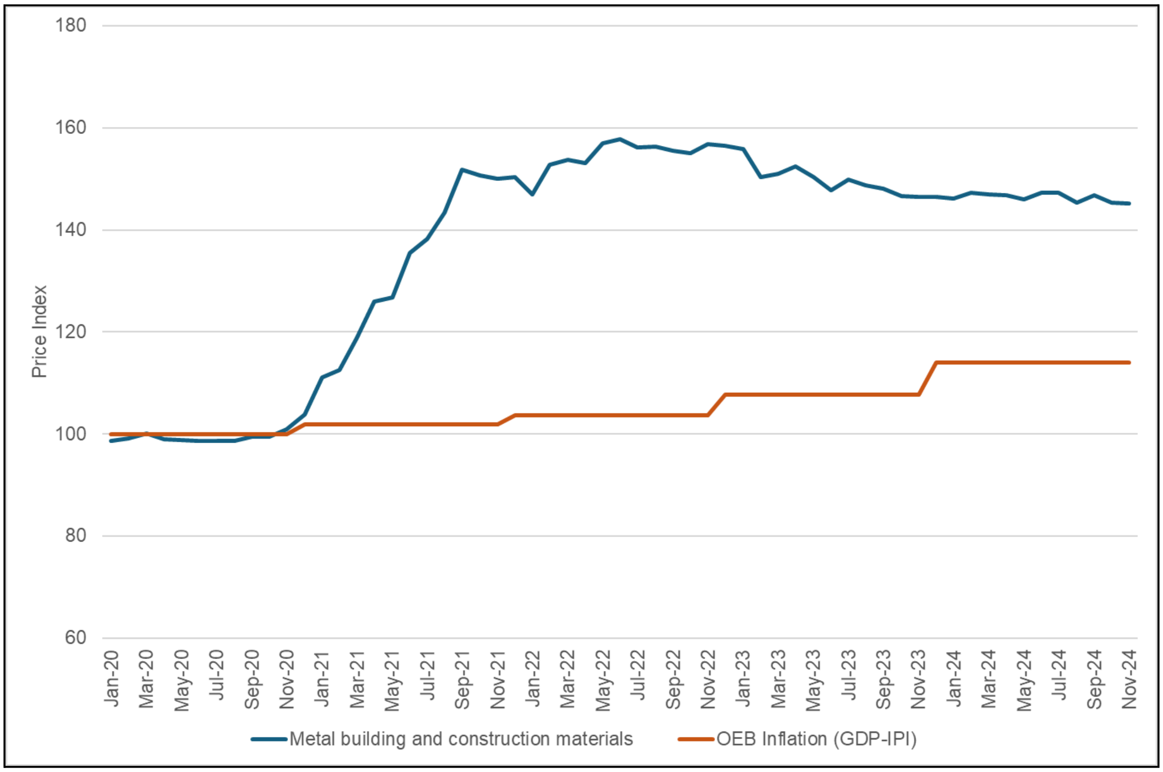


Table 16 summarizes the information displayed in Figure 9, which shows that the actual price increases for this industrial product exceeded the annual inflation rates as calculated by the OEB.

Table 16 – Metal Building and Construction Materials Price Trend (2020-2024)

	Actual 2020-2024	OEB
Annual Average Increase	10.2%	3.3%
4-Year Total Increase	47.4%	13.9%

3.3.2. Communication and Electric Wire and Cable

Figure 10 shows the 2020-2024 price trend of communication and electric wire and cable in Canada.[19] Communication and electric wire and cable includes co-axial cable, insulated copper winding wire, insulated electric cable, insulated electric wire, insulated metal wire and cable, and accessory material for telephone cables (except plastic).

Figure 10 - Communication and Electric Wire and Cable Price Trend (2020 to 2024)

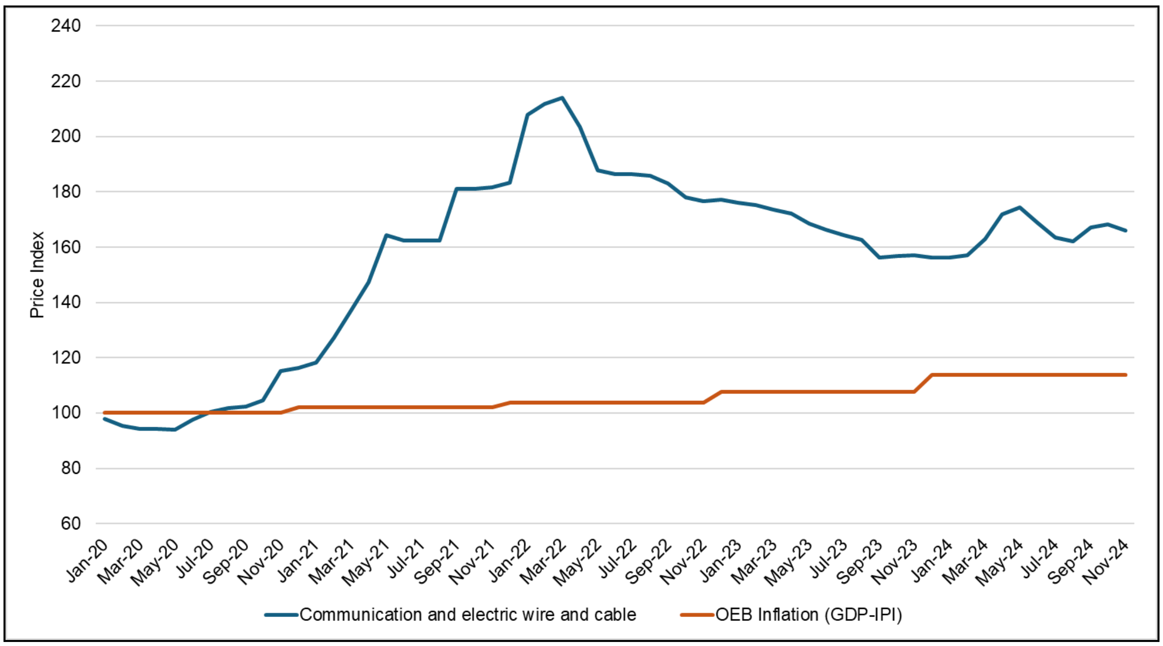


Table 17 summarizes the information displayed in Figure 10, which shows that the actual price increases for this industrial product exceeded the annual inflation rates as calculated by the OEB.

[19] Statistics Canada Table: 18-10-0266-01. North American Product Classification System: 38121.

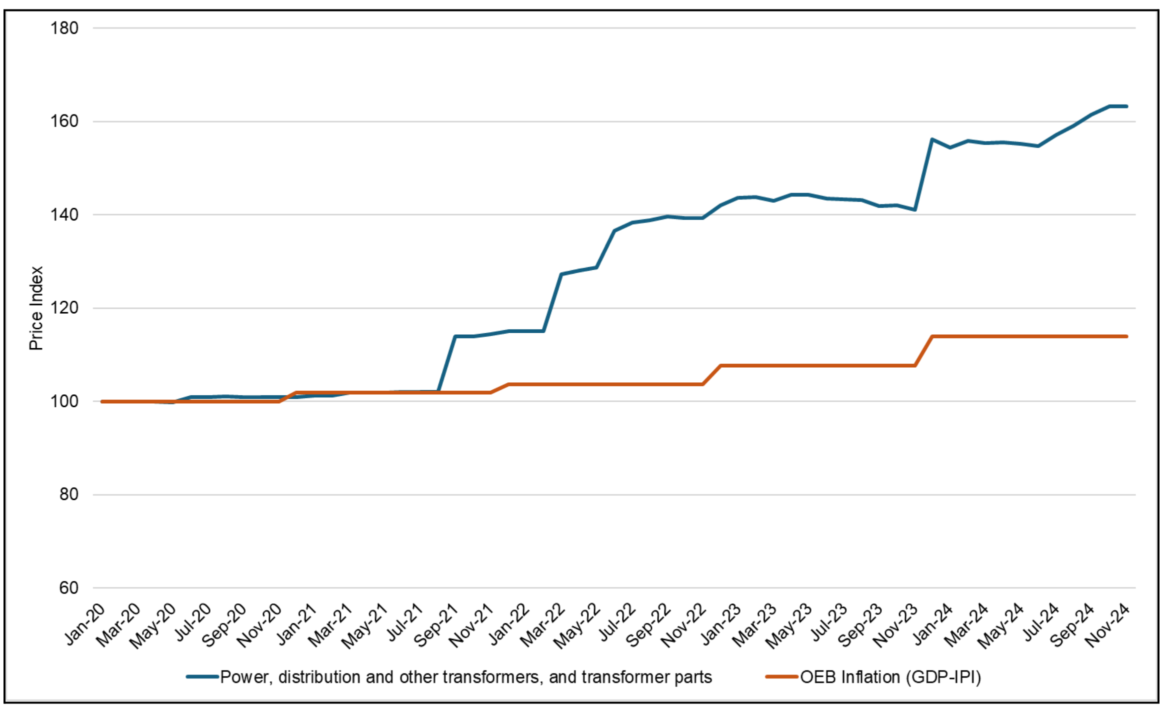
Table 17 - Communication and Electric Wire and Cable Price Trend (2020-2024)

	Actual 2020-2024	OEB
Annual Average Increase	13.3%	3.3%
4-Year Total Increase	64.8%	13.9%

3.3.3. Power, Distribution and Other Transformers, and Transformer Parts

Figure 11 shows the 2020-2024 price trend of power, distribution, and other transformers and transformer parts in Canada.[20] Power, distribution, and other transformers and transformer parts include: power and distribution transformers, specialty transformers, and other transformers and transformer parts.

Figure 11 - Power, Distribution and Other Transformers, and Transformer Parts Price Trend (2020 to 2024)



[20] Statistics Canada Table: 18-10-0266-01. North American Product Classification System: 38122.

Table 18 summarizes the information displayed in Figure 11, which shows that the actual price increases for this industrial product exceeded the annual inflation rates as calculated by the OEB.

Table 18 - Power, Distribution and Other Transformers, and Transformer Parts Price Trend (2020-2024)

	Actual 2020-2024	OEB
Annual Average Increase	11.9%	3.3%
4-Year Total Increase	56.9%	13.9%

3.3.4. Switchgear, Switchboards, Relays, and Industrial Control Apparatus

Figure 12 shows the 2020-2024 price trend of switchgear, switchboards, relays, and industrial control apparatus in Canada.[21] Switchgear, switchboards, relays, and industrial control apparatus includes industrial control apparatus; low-voltage fuses and power distribution, switching, and interrupting equipment; high-voltage fuses and power distribution, switching, and interrupting equipment; as well as relays for electronic circuitry.

[21] Statistics Canada Table: 18-10-0266-01. North American Product Classification System: 38123.

Figure 12 - Switchgear, Switchboards, Relays, and Industrial Control Apparatus Price Trend (2020 to 2024)

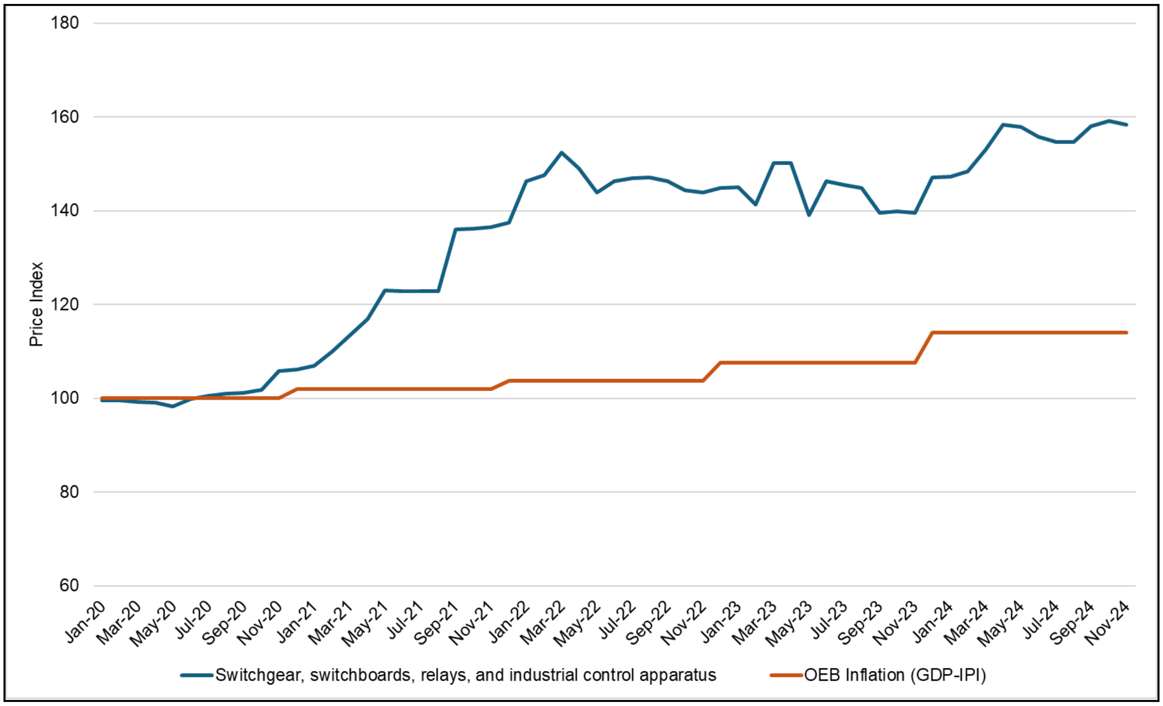


Table 19 summarizes the information displayed in Figure 12, which shows that the actual price increases for this industrial product exceeded the annual inflation rates as calculated by the OEB.

Table 19 - Switchgear, Switchboards, Relays, and Industrial Control Apparatus Price Trend (2020-2024)

	Actual 2020-2024	OEB
Annual Average Increase	11.3%	3.3%
4-Year Total Increase	53.6%	13.9%

3.4. SPECIFIC ELECTRICITY RELATED COMPONENTS

The increase in the price of electrical equipment is not a uniquely Canadian issue. Federal Reserve Economic Data (FRED) shows that the price of such equipment has also experienced a significant inflationary impact in the United States. This international increase in prices, along with an increase in demand, supply chain issues, and long lead times for delivery (e.g. transformers), has had an impact on Hydro Ottawa.

3.4.1. Electrical Equipment Manufacturing

Figure 13 shows the 2020-2024 price trend of electrical equipment manufacturing in the United States.[22] Electrical equipment manufacturing includes power, distribution, and specialty transformers manufacturing; motor and generator manufacturing; and switchgear, switchboard, relay, and industrial control apparatus manufacturing.

Figure 13 – Electrical Equipment Manufacturing Price Trend (2020 to 2024)

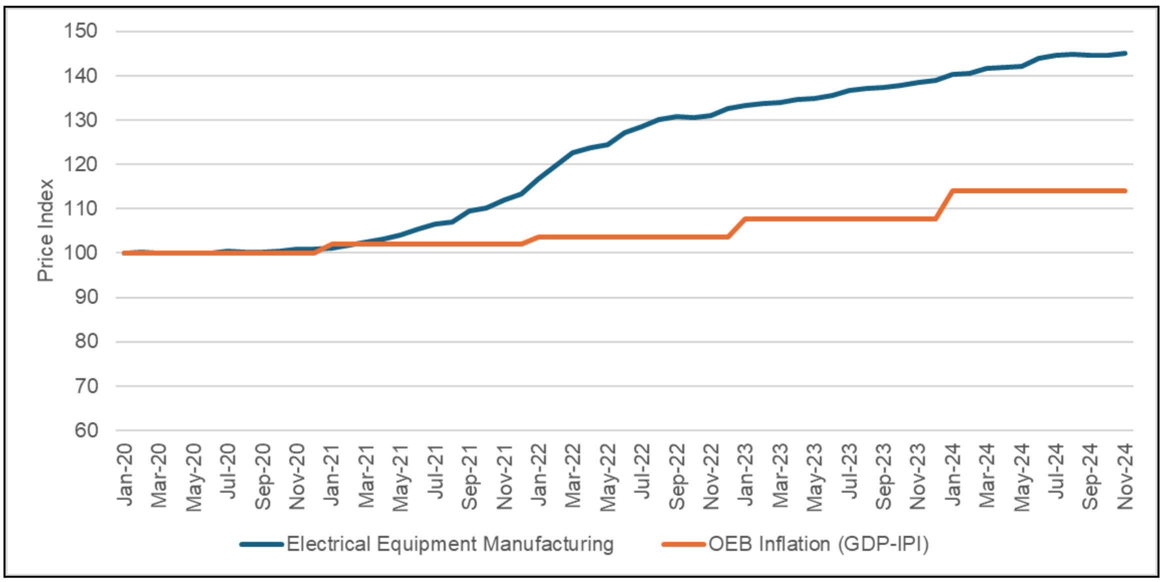


Table 20 summarizes the information displayed in Figure 13, which shows that the price increases for electrical equipment manufacturing exceeded the annual inflation rates as calculated by the OEB.

[22] U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Electrical Equipment Manufacturing [PCU3353133531], retrieved from FRED, Federal Reserve Bank of St. Louis. North American Industry Classification System: 33531.

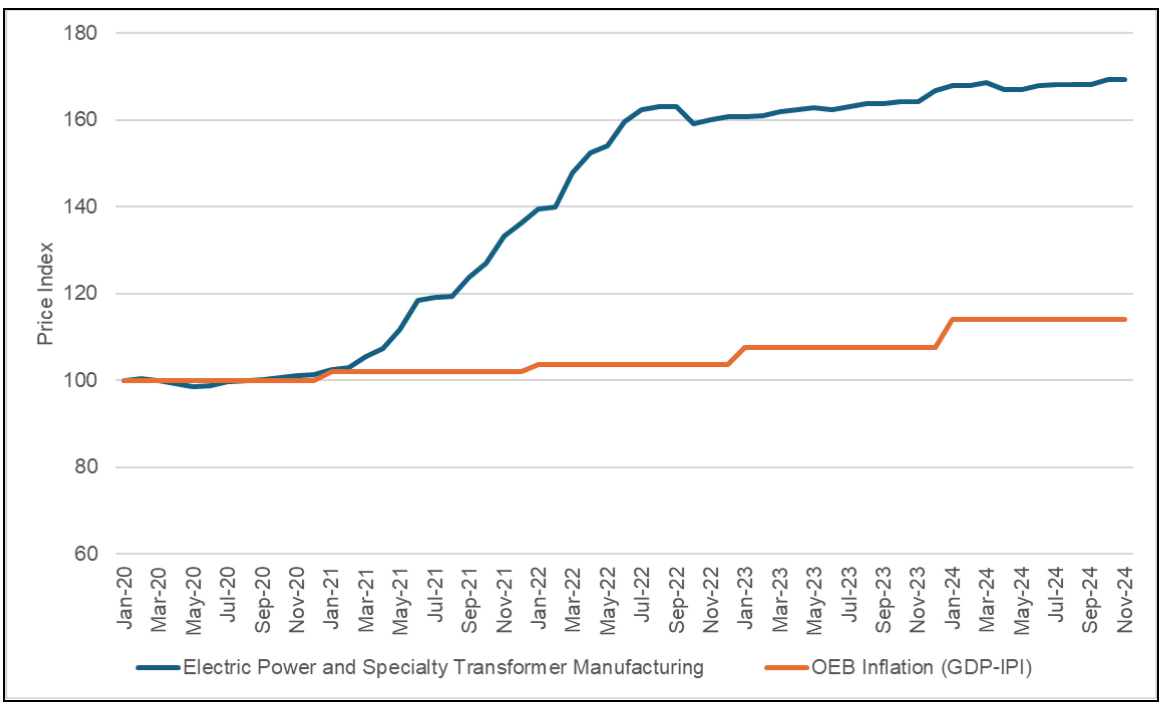
Table 20 - Electrical Equipment Manufacturing Price Trend (2020-2024)

	Actual 2020-2024	OEB
Annual Average Increase	9.4%	3.3%
4-Year Total Increase	43.0%	13.9%

3.4.2. Electric Power and Specialty Transformer Manufacturing

Figure 14 shows the 2020-2024 price trend of electric power and specialty transformer manufacturing in the United States.[23] This index is a subset of electrical equipment manufacturing. Electric power and specialty transformer manufacturing includes distribution transformers manufacturing, instrument transformers (except portable) manufacturing, and power transformers manufacturing.

Figure 14 – Electric Power and Specialty Transformer Manufacturing Price Trend (2020 to 2024)



[23] U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Electric Power and Specialty Transformer Manufacturing [PCU335311335311], retrieved from FRED, Federal Reserve Bank of St. Louis. North American Industry Classification System: 335311.

Table 21 summarizes the information displayed in Figure 14, which shows that the price increases for electric power and specialty transformer manufacturing exceeded the annual inflation rates as calculated by the OEB.

Table 21 - Electric Power and Specialty Transformer Manufacturing Price Trend (2020-2024)

	Actual 2020-2024	OEB
Annual Average Increase	13.9%	3.3%
4-Year Total Increase	68.3%	13.9%

3.4.3. Communication and Energy Wire Manufacturing

Figure 15 shows the 2020-2024 price trend of communication and energy wire manufacturing in the United States.[24] Communication and energy wire manufacturing reflects the production costs of establishments primarily engaged in manufacturing insulated communications and energy wire and cable made from purchased non-ferrous wire and optical fibres.

[24] U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Communication and Energy Wire and Cable Manufacturing [PCU3359233592], retrieved from FRED, Federal Reserve Bank of St. Louis. North American Industry Classification System: 335920.

Figure 15 – Communication and Energy Wire Manufacturing Price Trend (2020 to 2024)

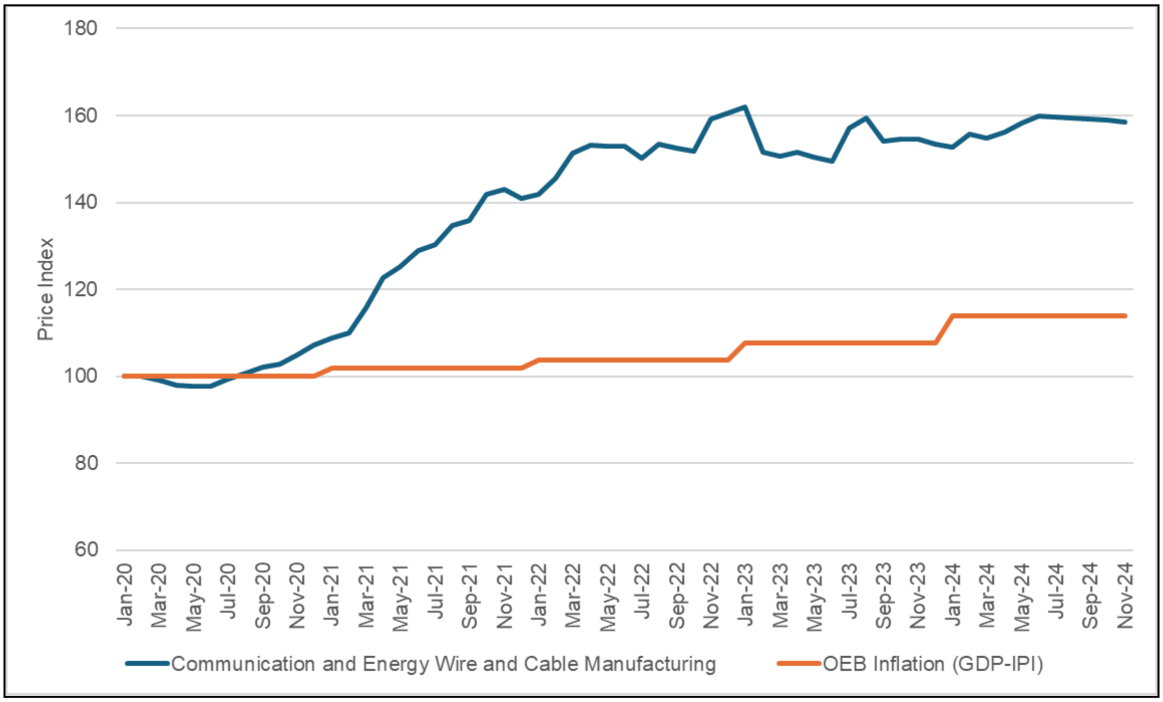


Table 22 summarizes the information displayed in Figure 15, which shows that the price increases for communication and energy wire manufacturing exceeded the annual inflation rates as calculated by the OEB.

Table 22 - Communication and Energy Wire Manufacturing Price Trend (2020-2024)

	Actual 2020-2024	OEB
Annual Average Increase	11.8%	3.3%
4-Year Total Increase	56.3%	13.9%

3.4.4. Electricity Distribution Producer Price Index

Figure 16 shows the 2020-2024 electricity distribution producer price index in the United States.[25] This index includes dedicated generating stations, distribution lines and transformer stations integral to power distribution, and electric power brokers and agents that arrange the sale of electricity over power distribution systems operated by others.

Figure 16 – Electricity Distribution Producer Price Index Trend (2020 to 2024)

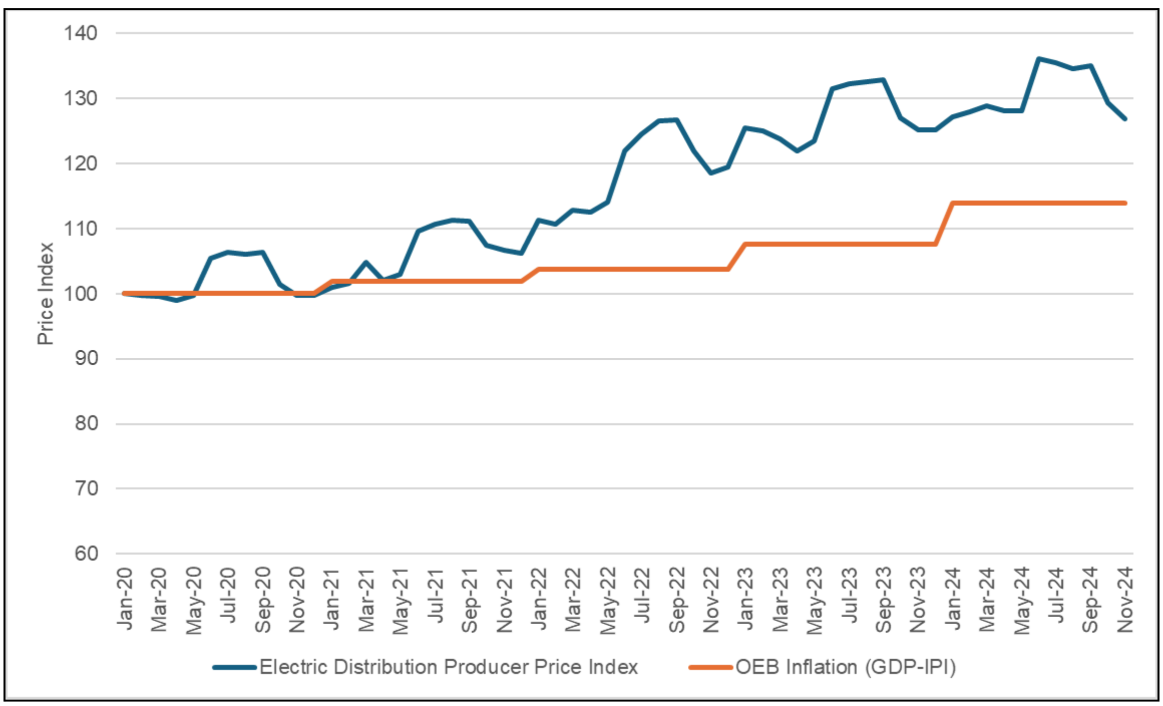


Table 23 summarizes the information displayed in Figure 16, which shows that the electricity distribution producer price index exceeded the annual inflation rates as calculated by the OEB.

[25] U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Electric Power Distribution: Primary Products [PCU221122221122P], retrieved from FRED, Federal Reserve Bank of St. Louis. North American Industry Classification System: 221122.

Table 23 - Electricity Distribution Producer Price Index Trend (2020-2024)

	Actual 2020-2024	OEB
Annual Average Increase	6.3%	3.3%
4-Year Total Increase	27.9%	13.9%

Based on the above graphs of electricity system components, it can be seen that the actual price has significantly exceeded the rate of inflation.

One component of the above index is distribution transformers. An example of challenges with respect to acquisition and price of such transformers is discussed in an article produced by the National Renewable Energy Laboratory (NREL) in February titled "Major Drivers of Long-Term Distribution Transformer Demand". An excerpt is provided as follows:[26]

> *"Distribution transformers, used to step-down medium-level voltage to service-level voltage for end-use electrical consumption, are currently experiencing an unprecedented imbalance between supply and demand. Utilities are experiencing extended lead times for transformers of up to 2 years (a fourfold increase on pre-2022 lead times), and reporting price increases by as much as 4–9 times in the past 3 years [1-3]. Current shortages have been attributed to pent-up post-pandemic demand; difficulty recruiting, training, and retaining a skilled workforce; component supply chain challenges; and materials shortages (grain-oriented electrical steel, aluminum, and copper)."*

4. HYDRO OTTAWA INFLATION EXPERIENCE (2021-2025)

4.1. LABOUR

Labour costs represent approximately 54% of total OM&A costs, and typically 11% of capital expenditures. Table 24 presents the labour increases for Hydro Ottawa employees in the 2021-2025 period as well as the OEB Labour Component included in their inflationary parameter as per Table 3 above.

[26] NREL, February 2024, *Major Drivers of Long-Term Distribution Transformer Demand*

Table 24 – Labour Rate Increases

	Historical Years			Bridge Years		Average	Total
	2021	2022	2023	2024	2025	2021-2025	2021-2025
Hydro Ottawa Labour Rate Increase	2.35%	2.58%	3.86%	3.70%	3.55%	3.21%	17.09%
OEB Labour Escalation (Table 3)	2.7%	7.0%	3.5%	2.3%	3.2%	3.73%	20.07%

The 2021-2025 increases presented in Table 24 represent the wage increases as per the collective agreement described in Attachment 4-1-3(A) - Employee Compensation Strategy as well as the increases for management employees. They are materially in line with the OEB labour component, as such, are not a significant contributor to higher actual 2021-2025 OM&A. However, while the escalation of Hydro Ottawa's OM&A labour costs reflected in rates were aligned with the OEB's escalation, planned capital expenditures were not escalated by inflation. This was done to ensure implicit productivity was built in; instead of including inflation and then decreasing for productivity, Hydro Ottawa did not apply inflation to begin with. Therefore, labour related increases impacted actual capital spending and contributed to a variance.

4.2. NON-LABOUR

Non-labour costs consist of materials and equipment and outside services. These are discussed below.

4.2.1. Materials and Equipment

In the 2021-2024 period non-labour costs represent approximately 46% of total OM&A and 89% of capital expenditures. Similar to price trends noted in Section 3 above, Hydro Ottawa experienced a significant increase in the cost of equipment, materials, and supplies that are required to support and execute work programs and projects. This section provides specific examples of the cost pressures that Hydro Ottawa faced due to the impact of inflation.

Tables 25 through 30 provide price information for common equipment and materials purchased by Hydro Ottawa, showing how prices have changed since 2020. The line items in each table represent some of the most frequently procured items in each of the identified categories.

Table 25 - Underground & Overhead Cables – Average Price Increases

Item Description	Average Price 2020	Average Price 2024	4-Year Total Increase	Annual Average Increase
Cable Al TR-XLPE 28kV #1/0	$ 10.02	$ 12.41	23.9%	5.5%
Cable Cu EPR 3C15kV 500MCM	$ 130.12	$ 166.24	27.8%	6.3%
Cable Al Trip URD 600V 500MCM	$ 14.61	$ 20.69	41.6%	9.1%
Cable Cu TR-XLPE 15kV #1/0 CN	$ 16.12	$ 19.94	23.7%	5.5%
Cable Al Trip O/H 300V # 2	$ 3.79	$ 4.77	25.9%	5.9%
Cable Al Trip O/H 600V 266MCM	$ 13.70	$ 20.18	47.3%	10.2%

Over the 2020-2024 period, the price of various types of commonly-used cable increased at a rate of 5.5% to 10.2% per year. Overall, the price of cable in 2024 was 23.7% to 47.3% higher than in 2020. The extent of cable inflation experienced by Hydro Ottawa was lower than the 64.8% increase over the same period in the Communication and Energy Wire Manufacturing index in Section 3.3.2 as measured by Statistics Canada and the 56.3% increase as measured by FRED in Section 3.4.3.

Table 26 - Transformers – Average Price Increases

Item Description	Average Price 2020	Average Price 2024	4-Year Total Increase	Annual Average Increase
Transformer 1-Phase Pad Mount	$ 5,469	$ 13,389	144.8%	25.1%
Transformer 1-Phase Pad Mount	$ 7,960	$ 22,481	182.4%	29.6%
Transformer Pole Mount	$ 2,348	$ 6,588	180.6%	29.4%
Transformer Pole Mount	$ 3,470	$ 9,258	166.8%	27.8%
Transformer Pole Mount	$ 2,203	$ 4,934	124.0%	22.3%

Over the 2020-2024 period, the price of the most commonly purchased transformers increased at a rate of 22.3% to 29.4% per year. The price of transformers in 2024 was 124.0% to 182.4% higher than in 2020. Significant increases in the cost of transformers was caused by increased prices of the materials used to produce transformers and the high demand for transformers across North America, as noted in Section 3.4.

Table 27 - Switchgear – Average Price Increases

Item Description	Average Price 2020	Average Price 2024	4-Year Total Increase	Annual Average Increase
SF6 Padmount 15kV 25kA Type 006	$ 69,816	$ 87,652	25.5%	5.9%
SF6 Volt 15kV 25kA Type 009	$ 36,149	$ 57,675	59.5%	12.4%
SF6 Padmount 15kV 25kA Type 009	$ 52,269	$ 65,176	24.7%	5.7%

Over the 2020-2024 period, the price of the most commonly purchased switchgear increased at a rate of 5.7% to 12.4% per year. The price of switchgear in 2024 was 24.7% to 59.5% higher than in 2020.

Table 28 - Poles – Average Price Increases

Item Description	Average Price 2020	Average Price 2024	4-Year Total Increase	Annual Average Increase
Treated 45' Class 3 Western Red Cedar	$ 970	$ 1,737	79.1%	15.7%
Treated 45' Class 2 Western Red Cedar	$ 994	$ 2,177	119.0%	21.7%
Treated 50' Class 2 Western Red Cedar	$ 1,308	$ 2,431	85.9%	16.8%
Treated 40' Class 2 Western Red Cedar	$ 758	$ 1,669	120.2%	21.8%
Treated 65' Class 1 Western Red Cedar	$ 3,217	$ 4,967	54.4%	11.5%
Treated 60' Class 1 Western Red Cedar	$ 2,748	$ 4,218	53.5%	11.3%

Over the 2020-2024 period, the price of the most commonly purchased wood poles increased at a rate of 11.3% to 21.8% per year. The price of wood poles in 2024 was in the range of 53.5% to 120.2% higher than in 2020. The extent of wood pole inflation experienced by Hydro Ottawa was higher than the 51.8% increase over the same period in the Wood Poles, Piles, and Posts index as measured FRED, referenced in Section 3.2.4.

Table 29 - Meters – Average Price Increases

Item Description	Average Price 2020	Average Price 2024	4-Year Total Increase	Annual Average Increase
Smart Meters 1-Phase (2018-2021/2022)	$ 97	$ 188	93.8%	18.0%

Over the 2020-2024 period, the price of the most commonly purchased meters increased on average 18.0% per year. The price of meters in 2024 was 93.8% higher than in 2020.

Table 30 - Vehicle Unit Price Increases 2021 Compared to 2024

Vehicle Category	Example	2021	2024	3-Year Total Increase	Annual Average Increase
Light Duty	3/4 Ton Pick-Up	$ 51,485	$ 73,700	43.1%	12.7%
Light Duty	Cargo Van	$ 38,880	$ 54,846	41.1%	12.2%
Medium Duty	Step Side Van (excluding interior upfit)	$ 152,900	$ 209,500	37.0%	11.1%
Heavy Duty	Large RBD	$ 435,201	$ 613,705	41.0%	12.1%
Heavy Duty	Large Bucket	$ 471,800	$ 582,891	23.5%	7.3%

Over the 2021-2024 period, the price of the most commonly purchased vehicles increased at a rate of 7.3% to 12.7% per year. The 2024 price of vehicles was 23.5% to 43.1% higher than in 2021.

4.2.2. Outside Services

In addition to its own labour force, Hydro Ottawa engages outside services to support executing OM&A and Capital work programs. Some of the most commonly purchased services are summarized in Table 31. Hydro Ottawa procures, negotiates and secures these contracts on an on-going basis and a number of them are multi-year contracts with defined annual escalation rates.

Table 31 - Outside Services Average Historical Price Increases (2020-2024)

Service Description	Average Historical Yearly Increase
Civil & Electrical	2% - 11%
High Voltage Substation Maintenance	2% - 5%
Vegetation Management	4% - 5%
Technology Support	2% - 7%

Over the 2020-2024 period, the price of some of the most commonly procured outside services increased at a rate of 2% to 11% per year, some of these significantly exceeding the OEB inflation parameters.

5. IMPACTS ON HYDRO OTTAWA 2026-2030 BUDGET

5.1. OVERVIEW

The general inflationary price trends in the cost of labour, commodities, industrial products, and electrical components, as identified in Sections 3.2 to 3.4 and Hydro Ottawa's own specific experiences noted in Sections 4.1 and 4.2, have impacted the cost of labour and specific products that Hydro Ottawa purchases in support of its OM&A programs and capital projects.

Labour costs represent 54% and non-labour costs represent 46% of Hydro Ottawa's average OM&A budget for 2026-2030. Internal labour costs represent 11% of Hydro Ottawa's average capital expenditures for 2026-2030. Materials and supplies are 38% of the Test Years budget. Hydro Ottawa expects that 45% of its capital budget will go towards projects undertaken by contractors. The remaining proposed Capital spending includes overhead, fleet, and other expenditures.

For the 2026-2030 period, Hydro Ottawa's proposed OM&A and capital expenditures incorporate annual labour increases based on the currently-negotiated collective agreement and bank and government forecasts.

Given that some of these inflationary trends noted in the previous Sections are expected to continue for the 2026-2030 period, Hydro Ottawa has assumed an average annual increase range of 2.1% to 5.0% with respect to the future cost of equipment and materials. This range is based on an analysis of the historical cost of equipment and materials commonly used by Hydro Ottawa. It is noted that there has been a range of inflationary impacts across all equipment and materials and the overall average increase in equipment and materials costs has outpaced the average OEB rate of inflation. The use of a higher-than-average economy-wide inflation rate is based on anticipated increases in raw materials, such as copper and steel required for transformers and lumber for poles.

As described in the sections above, drivers of the price increases include increased frequency of forest fires caused by climate change, supply chain uncertainty, growth and electrification and geopolitical tensions. Based on the historical trend, the future average annual increase of 2.1% to 5.0% is a conservative estimate and assumes that the inflationary pressures of recent years will partially subside for the 2026-2030 period. It is noted that, where possible, Hydro Ottawa mitigates commodity price risk exposure through provisions in long-term contracts with suppliers.

Hydro Ottawa has negotiated escalation rates between 2.0% and 3.3% for certain outside services in support of executing OM&A and capital work programs in the earlier years of the Custom IR period.

5.2. EXTERNAL GENERAL INFLATION FORECASTS

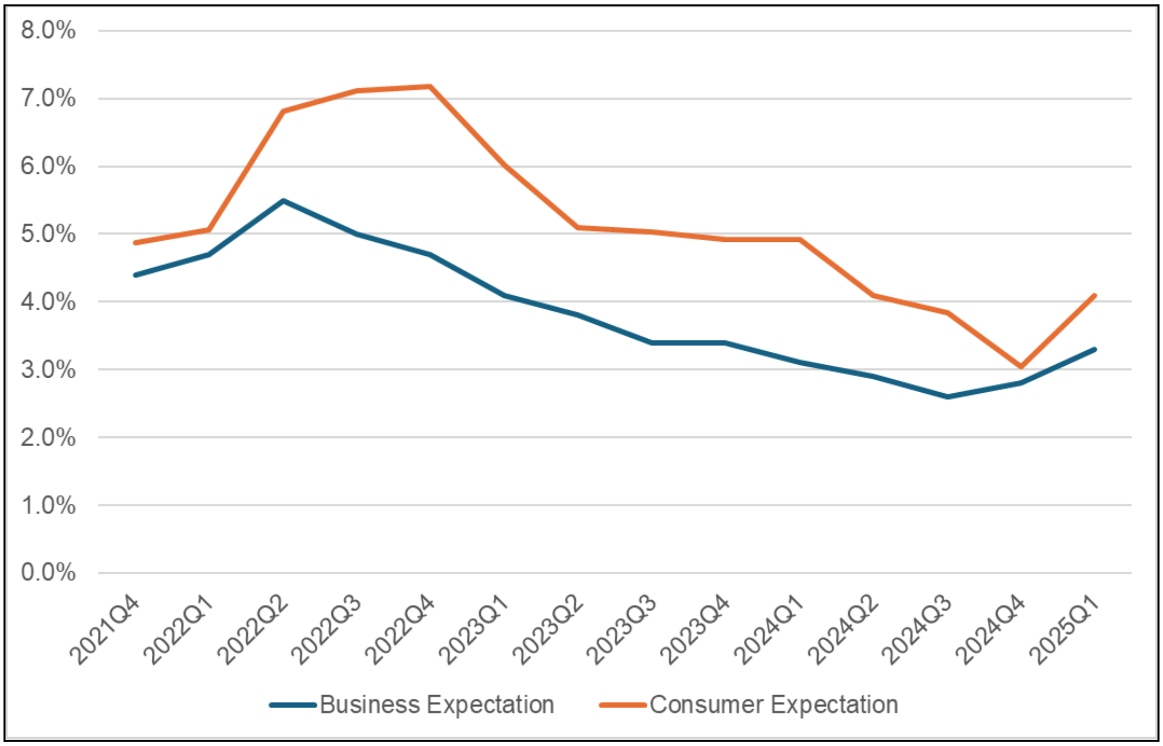
Forward-looking inflation forecasts from major Canadian banks and the Conference Board of Canada typically align with the Bank of Canada's 2% inflation target. However, forecasts for near-term inflation have increased and there is a growing degree of variability caused by uncertain tariff policies. A March 13, 2025 article in the Globe and Mail entitled "Tariffs Leave Households and Bosses Bracing for Steeper Inflation"[27] indicated that there is an expectation of increasing inflation in 2025.

> *"While the annual pace of inflation has generally been on a downward trajectory for more than two years, and measured 1.9 per cent in January, households fear the barrage of tariffs Canada and the U.S. have slapped on each other will push the inflation rate to 4.1 per cent over the next year. Likewise, business leaders surveyed in February expect inflation to climb over the next 12 months to 3.3 per cent."*

Figure 17 below shows business and consumer inflation expectations over the next year according to the Bank of Canada's Business Outlook Survey and Canadian Survey of Consumer Expectations.[28]

[27] The Globe and Mail, *Tariffs leave households and bosses bracing for steeper inflation*, March 13, 2025.
[28] Bank of Canada, 2024 Q4 Business Outlook Survey (BOS_2024Q4_C8_S2: Input price growth, change over the next 12 months) and Canadian Survey of Consumer Expectations (CES_C1_SHORT_TERM: 1-year-ahead inflation expectations). 2025 Q1 data is from The Globe and Mail.

Figure 17 - Canadian Inflation Expectations



The price of commodities and industrial products purchased by utilities has increased at a rate higher than economy-wide inflation. The overall rate of inflation has declined, however, the extent that the price of commodities and equipment used by utilities has outpaced the economy-wide rate of inflation has continued. The extent that inflation relevant to utilities exceeds overall inflation can be expressed as a “utility inflation rate adjustment”. Table 32 considers the inflation of utility-related machinery and equipment over the last five years and adjusts this rate downward to account for the lower forecast of the overall rate of inflation that is expected in the future. This calculation uses an economy-wide inflation rate of 2.0%, consistent with the Bank of Canada target, though this rate of inflation is conservative given the increase in inflation expectations. Inflation rates for machinery and equipment (overall and utility-specific) given in the table are the annual average inflation rates as shown in Table 8.

Table 32 - Utility-related Machinery and Equipment Inflation[29]

Utilities machinery and equipment inflation (Table 8)	**6.9%**	A
Overall machinery and equipment inflation (Table 8)	**4.1%**	B
Utility inflation rate adjustment	**2.6%**	C = (1+ A) / (1 + B) - 1
Forecast 2026-2030 inflation	**2.0%**	D
2026-2030 Utility inflation	**4.7%**	E = (1 + C) * (1 + D) - 1

This approach suggests if inflation were to decline from 4.1%, as it was for machinery and equipment in the 2020 to 2024 period, to 2.0% over the 2026 to 2030 period, and if the rate of utility-related inflation continues to exceed overall inflation to the same extent, then the inflation rate for utility-related machinery and equipment will be approximately 4.7%. This projection of approximately 4.7% aligns with the inflation rates included in Hydro Ottawa's Application (ranging from 2.1% to 5%) which Hydro Ottawa considers a conservative approach to the benefit of ratepayers.

The increases in the cost of commodities used in the electricity sector have significantly outpaced the overall rate of inflation and the rate that is included in the OEB's inflation calculation in the last five years. Table 33 below summarizes the increases in commodity costs from Tables 9 to 15 in Section 3.2.

[29] Rounded numbers are presented in Table 32. Specifically Item A within the calculation is 6.851% while item B is 4.125%.

Table 33 - Summary of Commodity Price Increases

Commodity Index	Annual Average Increase	Total Increase 2020-2024	Total Increase Above OEB Inflation
Regular Gasoline	12.2%	58.3%	44.4%
Diesel Fuel	12.6%	60.6%	46.7%
Copper	11.2%	52.8%	38.9%
Aluminum	11.2%	53.2%	39.3%
Wood Poles	11.0%	51.8%	37.9%
Steel	6.1%	26.6%	12.7%
Grain-Oriented Electrical Steel	20.0%	107.2%	93.3%
OEB Inflation (GDP-IPI)	**3.3%**	**13.9%**	

The higher rate of inflation is also reflected in the utility and electricity equipment-specific price indices that are measured by Statistics Canada and FRED. Table 34 summarizes the increases in industrial product indices from Table 8 of Section 3.1 and Tables 16 to 23 of Section 3.3.

Table 34 - Summary of Industrial Product Indices

Industrial Product Index	Annual Average Increase	Total Increase 2020-2024	Total Increase Above OEB Inflation
Utility Machinery and Equipment	6.9%	30.3%	16.4%
Metal Building and Construction Materials	10.2%	47.4%	33.5%
Communication and Electric Wire and Cable (Statistics Canada)	13.3%	64.8%	50.9%
Power, Distribution and Other Transformers, and Transformer Parts	11.9%	56.9%	43.0%
Switchgear, Switchboards, Relays, and Industrial Control Apparatus	11.3%	53.6%	39.7%
Electrical Equipment Manufacturing	9.4%	43.0%	29.1%
Electric Power and Specialty Transformer Manufacturing	13.9%	68.3%	54.4%
Communication and Energy Wire Manufacturing Price (FRED)	11.8%	56.3%	42.4%
Electricity Distribution Producer Price Index	6.3%	27.9%	14.0%
OEB Inflation (GDP-IPI)	**3.3%**	**13.9%**	

The extent that commodity and utility product indices have increased at a rate higher than overall inflation is generally in line with Hydro Ottawa's capital material and equipment cost experience over the same period.

Table 35 below summarizes Hydro Ottawa's unit cost increases for frequently procured items over the 2020 to 2024 period from Tables 25 to 30 in Section 4.2.

Table 35 - Summary of Frequently Procured Item Price Increases

Hydro Ottawa Frequently Procured Items	Annual Average Increase	Total Increase 2020-2024	Total Increase Above OEB Inflation
Cables (Low)	5.5%	23.7%	9.8%
Cables (High)	10.2%	47.3%	33.4%
Transformers (Low)	22.3%	124.0%	110.1%
Transformers (High)	29.6%	182.4%	168.5%
Switchgear (Low)	5.7%	24.7%	10.8%
Switchgear (High)	12.4%	59.5%	45.6%
Poles (Low)	11.3%	53.5%	39.6%
Poles (High)	21.8%	120.2%	106.3%
Meters	18.0%	93.8%	79.9%
Vehicles (Low)[30]	7.3%	23.5%	9.6%
Vehicles (High)[31]	12.7%	43.1%	29.2%
OEB Inflation (GDP-IPI)	**3.3%**	**13.9%**	

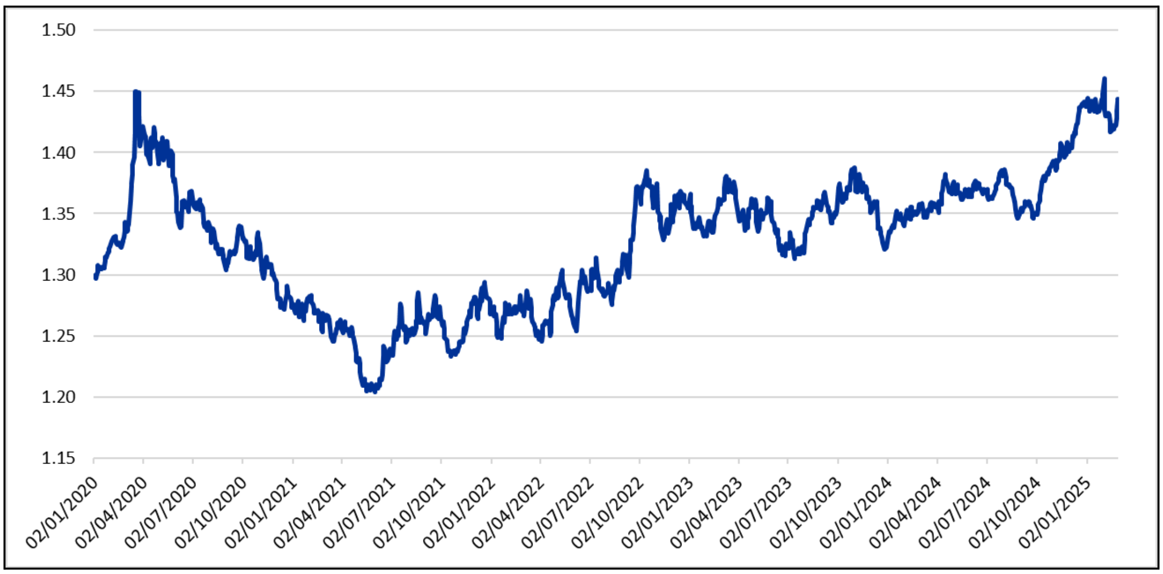
5.3. IMPACT OF FOREIGN EXCHANGE RATES

The Canadian Dollar (CAD) has depreciated against the United States Dollar (USD) over the period January 1, 2020 to February 28, 2025, as shown in Figure 18. The CAD hit a 22-year low against the USD on January 31, 2025. Given the recent depreciation of the CAD, the price of commodities purchased by Canadian utilities is expected to increase further since most commodities are traded on global markets priced in USD. Furthermore, many industrial products purchased by Canadian utilities are manufactured abroad, and even those items manufactured in Canada often require a significant amount of components to be imported from the United States.

[30] 2021-2024
[31] Ibid

The CAD is not expected to strengthen in the foreseeable future[32] due to a rising unemployment rate, interest rate policy divergence between the Bank of Canada and the US Federal Reserve, and concerns about the magnitude and duration of import tariffs with key trading partners, including the United States and China. The weak CAD is expected to compound the inflationary trends described in the foregoing sections of this Schedule, as Canadian vendors continue to adjust prices to account for a weak Canadian dollar.

Figure 18 – United States Dollar / Canadian Dollar Cross (USDCAD) January 2020 to February 2025[33]



5.4. INFLATION SUMMARY

In summary, Hydro Ottawa's OM&A and capital expenditures were higher than planned in the 2021-2024 period in part due to the impact of higher than budgeted inflation. This inflationary impact was not sufficiently compensated by the annual OEB inflation adjustment as the OEB inflation adjustment is based on broader, economy-wide indices and also lags behind the impact of actual current-year inflation experienced. The inflationary adjustment as per Hydro Ottawa's

[32] Morningstar, A Grim Outlook for the Canadian Dollar in 2025 , January 3, 2025.
[33] Bank of Canada, Daily Exchange Rates

2021-2025 Settlement Agreement[34] applied only to OM&A. Hydro Ottawa's 2021-2025 OEB-Approved capital expenditures did not include inflationary increases and further included a 0.6% annual capital stretch factor.

The electricity industry has experienced a greater inflationary impact (on equipment, materials and supplies it commonly uses) than the general economy has. On a forecast basis, although the rate of inflation is decreasing, the impact of inflation on equipment and materials used in the electricity industry is expected to continue to exceed the average rate of inflation. This expectation is based on the historical experience of inflation for equipment and materials used in the electricity industry being higher than the average rate of inflation, cost pressures associated with continued industry higher demand, longer lead time supply issues and the uncertainty associated with resource and manufacturing base tariffs.

For the Test Years, Hydro Ottawa has included annual inflationary increases to spending on materials and equipment in the range of 2.1% to 5.0%. Hydro Ottawa views this range as conservative as it is materially lower than its Historical inflation experiences over the last five years. Please note any potential US and Canadian tariffs and related economic impacts have not been considered. Please see Schedule 1-3-1 Rate Setting Framework for the proposed treatment of tariffs during the 2026-2030 rate period.

[34] Hydro Ottawa Limited, *2021-2025 Custom Incentive Rate-Setting Approved Settlement Agreement*, EB-2019-0261 (September 18, 2020).

RATE SETTING FRAMEWORK

1. INTRODUCTION AND OVERVIEW

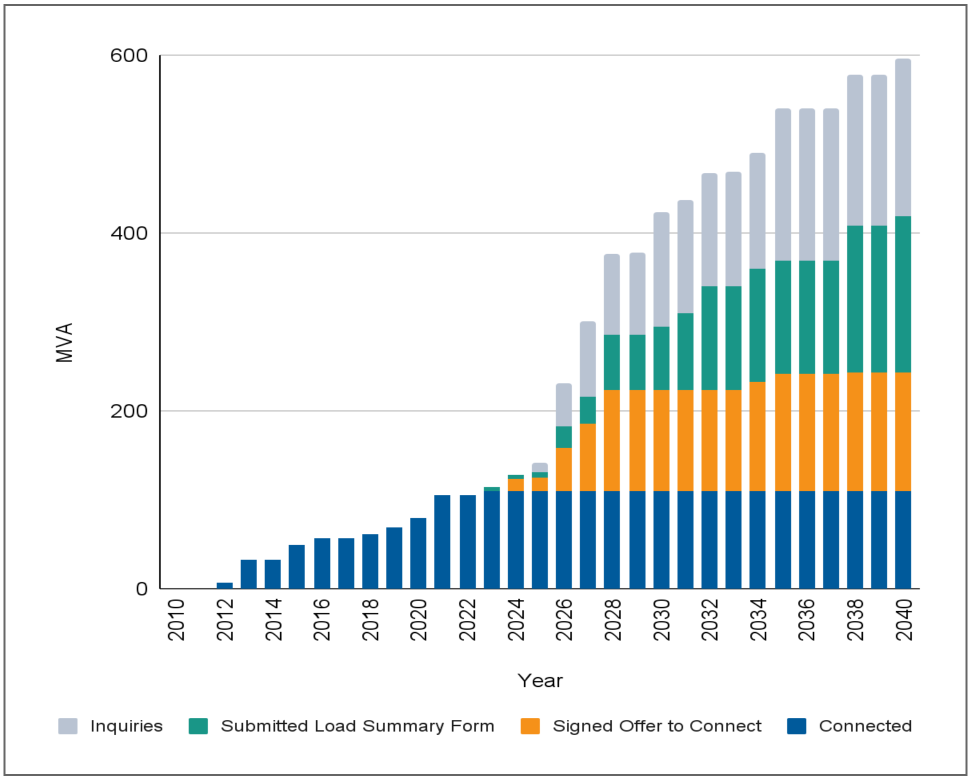
This Schedule presents Hydro Ottawa's custom rate framework for the 2026-2030 rate term. As detailed in Schedule 1-2-2 - Distribution System Overview, Hydro Ottawa's service area is currently undergoing a period of significant demographic expansion, a trend that is expected to persist in the foreseeable future. The City of Ottawa's official long-term development plan projects a 15% increase in population between 2021 and 2031, with an overall growth of 33% anticipated by 2046.[1] This expansion will manifest in various forms, including the construction of new mixed-use commercial and residential developments, the densification of the urban core, and continued suburban expansion in the eastern, western, and southern sectors of the city. To meet provincial housing objectives, Ottawa has committed to the creation of 151,000 new residential units by 2031, which translates to approximately 15,100 new units annually.[2]

These growth drivers underlie the forecast presented in Figure 1 below which shows the cumulative large load requests that Hydro Ottawa has received as of January 1, 2025. The projected growth includes numerous large projects, ranging from 5 MVA to 57 MVA, to be undertaken by customers such as universities and hospitals, technology firms and federal agencies. Electrified heating and transportation to align with municipal and federal decarbonization goals are the primary drivers for the majority of these large load requests. For more detailed information please see Schedule 2-5-4 - Asset Management Process at section 9.4.1.1.

[1] City of Ottawa, "Growth Projections for Ottawa: 2018-2046," https://ottawa.ca/en/living-ottawa/statistics-and-demographics/growth-projections-ottawa-2018-2046#section-26e79cf6-0a3c-4ab0-92fe-6a0c44150b93

[2] City of Ottawa, "Committee receives progress report on housing pledge targets," https://ottawa.ca/en/city-hall/city-news/newsroom/committee-receives-progress-report-housing-pledge-targets

Figure 1 - Cumulative (MVA) Large Load Requests



In addition to growth and electrification, Hydro Ottawa's 2026-2030 Distribution System Plan delivers on three other investment priorities that were determined through a comprehensive analysis that considered customer preferences identified through engagement, system needs, historical system performance, and trends identified through the business planning process.[3] Altogether the DSP focuses on four key investment priorities:

1. **Growth & Electrification - Powering the Growing Community:** Focusing on expanding grid capacity to serve a growing community and ensure a reliable, resilient electricity system capable of meeting increasing demand driven by new customer connections and distributed energy resources (DERs).

[3] For further details on Hydro Ottawa's business planning process, see Schedule 1-2-3 - Business Plan.

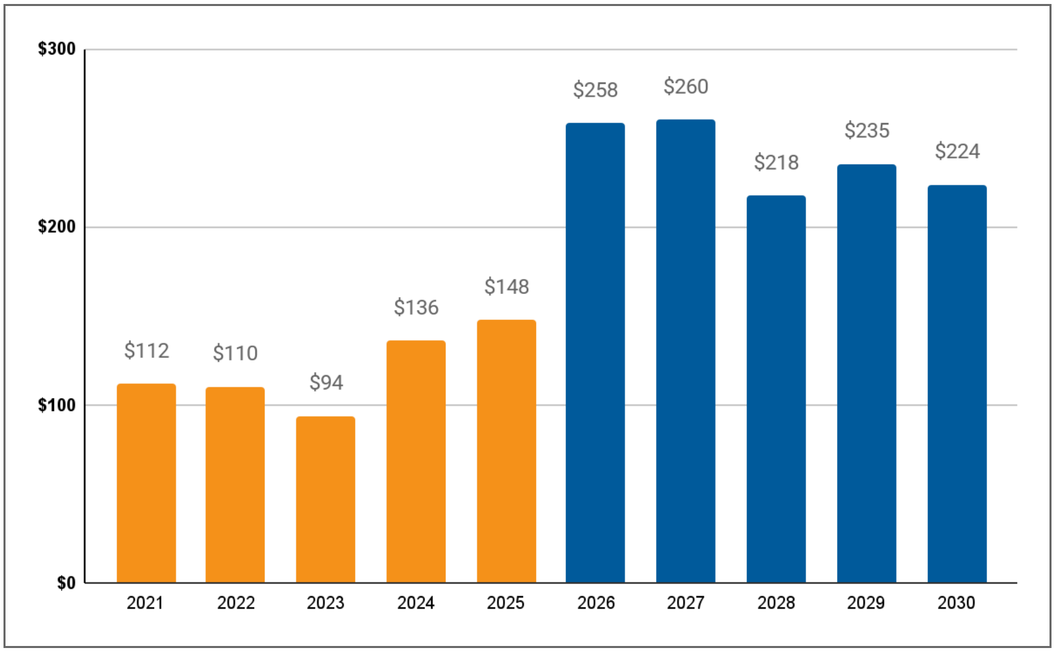
2. **Renewing Deteriorating Infrastructure:** Focusing on mitigating reliability risk by strategically upgrading or replacing deteriorating and critical infrastructure, prioritizing assets with the greatest impact on system reliability and safety based on condition assessments.
3. **Grid Modernization - Enabling the Energy Transition:** Focusing on modernizing the grid through strategic technology adoption and infrastructure upgrades to enable the energy transition, facilitate customer participation, and optimize DER integration, thereby enhancing grid capabilities and efficiency.
4. **Enhancing Grid Resilience:** Focusing on enhancing grid resilience by proactively upgrading infrastructure and implementing measures to protect against increasingly frequent and intense severe weather events and cyber threats.

The DSP investment priorities are supported by two foundational focuses: Managing Rising Costs and Investing in the Workforce. In all aspects of planning, execution and performance monitoring, Hydro Ottawa emphasizes maintaining affordability for customers while ensuring a reliable and resilient electricity system to meet growing demand. To accomplish the priorities set out in this plan, Hydro Ottawa recognizes the importance of workforce development and safety to ensure a skilled and secure energy future.

To accommodate these investment priorities Hydro Ottawa is forecasting significant increases in both capital and OM&A expenditures over the 2026-2030 period.

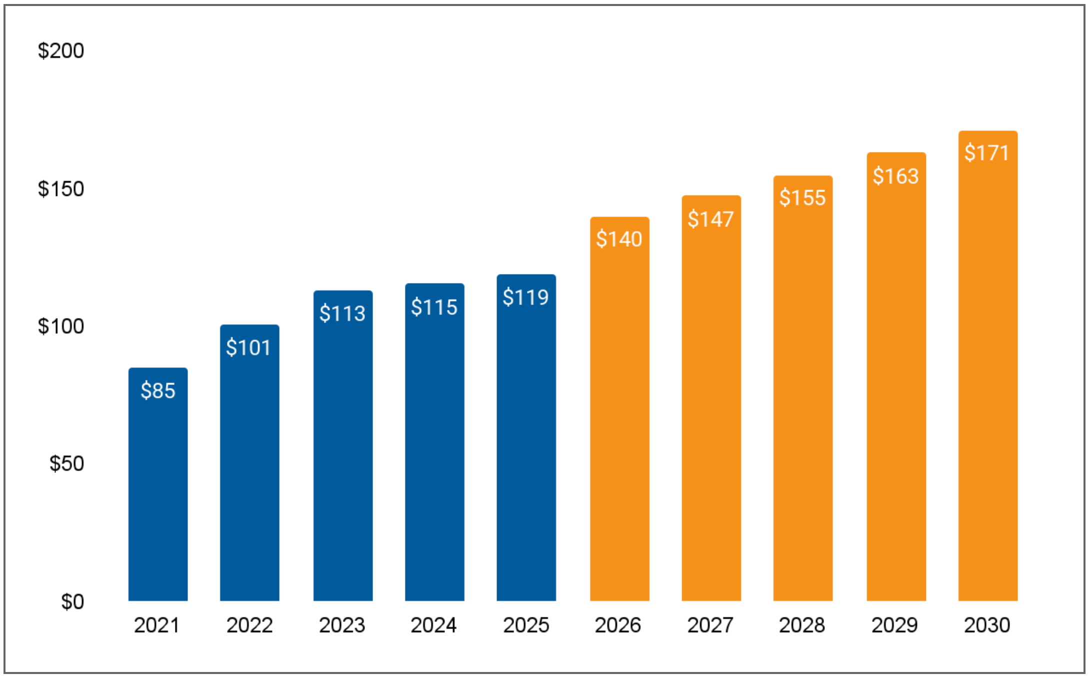
Figure 2 below shows that capital investment needs in the next rate period are nearly doubling compared to the 2021-2025 rate term. These needs are founded upon a thorough assessment of current infrastructure conditions based on detailed engineering studies, anticipated load growth and capacity requirements driven by both organic expansion and the significant acceleration of electrification, and grid enhancement and modernization imperatives to improve resilience, integrate distributed energy resources and support a decarbonized energy future. For more information please refer to Schedule 2-5-4 - Asset Management Process.

Figure 2 - Summary of 2021-2030 Annual Capital Expenditures ($'000 000s)



The proposed increase in capital necessitates a corresponding increase in OM&A expenditures, as shown in Figure 3 below to hire and retain the necessary resources to support the execution of the capital program, and to fund enhanced testing and asset inspection programs to manage system health and reliability with constrained levels of renewal investment relative to the condition needs of the assets. Furthermore, escalating IT costs associated with extreme weather resilience and the implementation of advanced technologies, including cyber security measures for digital and AI-driven systems, must be factored into the OM&A budget to ensure operational continuity and security amidst evolving environmental and technological challenges.

Figure 3 - Summary of 2021-2030 Annual OM&A Expenses ($'000 000s)[4]



2. RATE-SETTING OPTIONS

There are three incentive rate-setting (IR) options for electricity distributors:

- **Price Cap IR:** Base rates are set through a cost of service process for the first year and the rates for the following four years are adjusted using an inflationary index minus a productivity factor.
- **Custom IR:** 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.
- **Annual IR Index:** Existing rates are escalated using the annual adjustment under Price Cap IR, without a rebasing cost of service review.

[4] 2027-2030 illustrates the OM&A outcome of Hydro Ottawa's Custom Revenue OM&A Factor.

Hydro Ottawa considered these options above from the perspective of being able to provide the necessary funding to enable the utility to carry out the investments summarized above and detailed through this application. This assessment ruled out the option of Annual IR because it precludes rebasing. The Price Cap IR option allows Hydro Ottawa to rebase, but limits rate increases in the outer years of the rate period to inflationary adjustments. This constraint poses a significant challenge for Hydro Ottawa given that its service territory is experiencing accelerated electrification and unprecedented levels of growth.

To be able to serve its customers during this period of surging demand, Hydro Ottawa must make significant capital investments which cannot be funded under the standard Price Cap IR option. The Advanced Capital Module (ACM) available under Price Cap IR is not compatible with the large multi-year capital investments required to expand and modernize the grid for the future. ACM necessitates annual regulatory approvals over the rate term and thus carries regulatory cost and uncertainty which can hinder Hydro Ottawa's ability to complete the work that is necessary to serve its customers and prepare its grid for electrification.

Hydro Ottawa requires a tailored framework to plan and execute its investments quickly and cost-effectively over the 2026-2030 rate period, and has determined that a Custom IR approach is the only suitable method to achieve these objectives. The need for flexible and responsive planning and regulatory frameworks to support the government of Ontario's pro-growth vision is underscored by the Ministry of Energy and Electrification's December 2024 Letter of Direction to the OEB:

> *Planning for Growth Ontario's economy and the day-to-day lives of its 15 million residents depend on a reliable energy system that delivers power on demand. As a result of the government's work over the past six years, demand on that system is growing quickly.*
>
> *….*
>
> *To meet this challenge, Ontario needs planning and regulatory frameworks that are flexible and will get infrastructure and resources built quickly and cost-effectively to support the government's pro-growth agenda. This includes ensuring regulated utilities critical to*

> *Ontario's growth can earn a fair rate of return to enable rational expansion and maintenance of the electricity and natural gas systems. The OEB will play a critical role in creating that environment, while balancing the need for continued affordability for customers*

In addition to the need for revenue requirement to align with the growth in Hydro Ottawa's service territory, a custom approach was also required to support an appropriate rate design that required a five year load forecast and five cost allocation models. Without this approach, class level revenue requirements allocation would not accurately reflect class level revenue requirement drivers throughout the rate term.

The proposed 2026-2030 framework builds on the design of prior successful Custom IR frameworks, with purposeful refinements to address the unique circumstances of the upcoming rate period: rapid growth and accelerated electrification coupled with the need to invest in system renewal and enhancements to maintain a safe and reliable grid, and prepare for a future that is unlike the past. This framework enables critical investments in the grid to provide continued access to safe and reliable power, while preserving the utility's financial stability and ensuring rate predictability, service quality and reliability for customers.

3. PROPOSED RATE FRAMEWORK

Hydro Ottawa is proposing a revenue cap rate setting model for the 2026-2030 period, utilizing a structure analogous to the utility's previous methodology. For ease of reference, Table 1 below compares the key elements of Hydro Ottawa's 2021-2025 Custom IR Framework and the proposed 2026-2030 Custom IR Framework. Each of these elements is further discussed below.

Table 1 - Hydro Ottawa's Current vs. Proposed Custom Rate Frameworks

	2021-2025 Custom IR Rate Framework	2026-2030 Custom IR Rate Framework
RATE-SETTING METHODOLOGY		
Year 1 Capital Related Funding	Capital Forecast with no inflation and Scientific Research & Experimental Development SR&ED tax credits contributions. Standard Rebasing for Working Capital Allowance (WCA), Cost of Capital and Payments in Lieu of Taxes (PILs).	Capital Forecast with inflation, stretch ($6.9M) embedded through identified efficiencies, SR&ED tax credits and accelerated Capital Cost Allowance (CCA) contribution. Standard Rebasing for WCA, Cost of Capital and PILs. Recovery of accelerated CCA for 2026.
Years 2-5: Capital Related Funding	Starting in year 2 a Capital Stretch Factor was applied of 0.60% (0.45% plus 0.15%). For the remaining years the Capital Stretch Factor was annually increased by a value of 0.60%.	Capital Forecast with inflation and stretch embedded through identified efficiencies and SR&ED tax credits and 2027 accelerated Capital Cost Allowance (CCA) contribution.
	Working Capital: OEB Generic WCA factor of 7.5% applied to the 2021 test year Power Purchases and OM&A, escalated by inflation (I)	**Working Capital:** OEB Generic WCA factor of 7.5% applied to annual estimated Power Purchases (utilizing revenue load forecast inclusive of electrification) and test year OM&A escalated by inflation and growth (I + G).
	Cost of Capital: Mid-term adjustment in 2024 to update for OEB cost of capital parameters for return on equity to be used for 2024 & 2025.	**Cost of Capital:** Fixed for all 5 years based on OEB's 2026 Cost of Capital parameters which will be issued in the fall of 2025.
	Payments in Lieu of Taxes: utilized the 5 year capital forecast and updated annually for inflation impact of working capital component of rate base and mid-term adjustment for ROE cost of capital parameter for 2024 and 2025.	**Payments in Lieu of Taxes:** Fixed for all 5 years with no adjustments. Recovery of accelerated CCA for 2026 and 2027.
Year 1 OM&A Funding	Standard Cost of Service rebasing	Standard Cost of Service rebasing with embedded stretch

	2021-2025 Custom IR Rate Framework	2026-2030 Custom IR Rate Framework
Years 2-5 OM&A Funding	Year 1 escalated by annual **Custom Price Escalation Factor (CPEF)** composed of **I – X + G** where:	Year 1 escalated by annual **Custom Revenue OM&A Factor (CROF)** composed of **I – X + G** where:
	I = OEB Inflation Factor	I = OEB Inflation Factor
	X = 0.45% derived from PEG Model (based on under reporting of secondary lines)	X = 0.15%, based on the outputs of the adjusted PEG's Model (Attachment 1-3-3 (A) - PEG Benchmarking Analysis) with an adjustment to recognize the embedded stretch productivity in base OM&A capped at maintaining a 0.15% stretch factor.
	G = 0.34% calculated using forecasted customer growth rate based on the 2021-2025 load forecast multiplied by a 0.35 scaling factor.	G = 3.23% calculated using forecasted customer and system capacity growth, weighted using the assumptions in the OEB's cost allocation model for OM&A.
Other Revenue	Mix of some other revenue set for 5 years while other revenue and rates were updated based on OEB approved inflation.	Set both rates and revenue for 5 years. Where rates are proposed to be adjusted in years 2 to 5 based on inflation, set rate of 2.1% for all four years (no adjustment based on the OEB approved inflation factor)
OTHER ELEMENTS OF THE RATE FRAMEWORK		
Earnings Sharing Mechanism	Asymmetrical ESM account on a 50/50 basis with no dead band	Asymmetrical ESM account on a 50/50 basis above a dead band of 150 basis points if the utility's efficiency cohort determined by the adjusted PEG (as described in Attachment 1-3-3 (A) - PEG Benchmarking Analysis) remains constant or reduces over the rate period.
Performance Incentives	A Performance Outcomes Accountability Mechanism deferral account to link the execution of certain aspects of Hydro Ottawa's DSP to the recovery of amounts included in the agreed-upon revenue requirement	
Off-Ramp and Z-Factor	In accordance with standard OEB policy	In accordance with standard OEB policy

	2021-2025 Custom IR Rate Framework	2026-2030 Custom IR Rate Framework
Capital Variance Accounts	***Asymmetrical*** sub-account to track underspending in System Access (excluding plant relocation and residential expansion).	***Asymmetrical*** sub-account to track underspending in System Access (except investments related to third-party plant relocations, and commercial and residential expansions (Growth Capital Development Additions which are tracked in another sub-account as detailed below)
	Asymmetrical sub-account to track underspending in System Renewal and System Service	***Asymmetrical*** sub-account to track underspending in System Renewal and System Service (except capacity upgrades to enable housing developments which are tracked in another sub-account as detailed below)
	Asymmetrical sub-account to track underspending in General Plant	***Asymmetrical*** sub-account to track underspending in General Plant
	Symmetrical sub-account to record System Access over/underspending driven by third-party plant relocations and residential expansion	***Symmetrical*** sub-account to record over/underspending in System Access investments related by third-party plant relocations, commercial and residential expansion, and in System Service investments related to capacity upgrades to enable housing developments (together as Growth Capital Development Additions).
CCRA Variance Account	***Symmetrical*** account for CCRA payments to HONI including both new contribution and true-ups	***Symmetrical*** account for CCRA payments to HONI including both new contributions and true-ups
Non-Wires Solutions (NWS) Variance Account	N/A	***Symmetrical*** account to capture NWS costs in other revenue and OM&A, net of any external funding related to NWS
Large Load Revenue Variance Account	N/A	***Symmetrical*** account to capture revenue variances associated with differences in volume and timing of large loads adjusted into the load forecast (as presented in Table 8 of Schedule 3-1-1) to actual billing load, net of contribution adjustments

	2021-2025 Custom IR Rate Framework	2026-2030 Custom IR Rate Framework
Tariff Impact Deferral Account	N/A	***Asymmetrical*** account to track global tariff related costs

The proposed framework and the evidence underlying the investment plans for which Hydro Ottawa seeks rate funding in this application meets the key standards as outlined in the OEB's Handbook for Utility Rate Applications and consistent with the Renewed Regulatory Framework (RRF), as follows:

- **Term:** A five year rate term based on forecasts, designed to include productivity gains and financial incentives that foster continuous improvement.
- **Annual Rate Adjustment:** The CROF incorporates adjustments for inflation, productivity, and an annual growth factor as summarized above and further detailed in Sections 3.1 - 3.3 below.
- **Benchmarking:** Internal and external benchmarking have been incorporated into the application that analyze specific measures and programs against industry and peer comparator groups, as well as to assess Hydro Ottawa's continuous improvement over time. The following schedules provide a clear understanding that Hydro Ottawa compares well against its peer and the industry average

  These analyses include:
  - An in-depth review and analysis of the current PEG Model (Attachment 1-3-3(A) - PEG Benchmarking Analysis, as well as Excel Attachment 1-3-3(G) - OEB Benchmarking Spreadsheet Forecast Model);
  - Activity and Program Based Benchmarking (Attachment 1-3-3(B) - Activity and Program-Based Benchmarking Analysis)
  - Electric Utility Scorecards (Attachment 1-3-3(C) - Electricity Utility Scorecard Benchmarking Analysis); and

- Supplementary industry measures related to utility characteristics, labour force, cost ratios, loss factor and outage cause codes (Attachment 1-3-3(D) - Supplemental Industry Benchmarking Analysis).

Utilizing the OEB Open Source Data, these analyses provide a comparative assessment of Hydro Ottawa's performance against its own historical performance, against relevant peer groups among Ontario electricity distributors, and against the provincial average. Furthermore, Hydro Ottawa has conducted external benchmarking studies, which analyze the utility's cost performance for IT and Compensation relative to industry peers. These reports can be found at Attachment 1-3-3(E) - Hydro Ottawa Enterprise IT Spending & Staffing Benchmark and Attachment 1-3-3(F) - Compensation Benchmarking Study.

- **Performance Metrics:** Hydro Ottawa is proposing a comprehensive custom scorecard which includes 22 measures aligned to the outcomes identified in this Application. Further details on the Custom Performance Scorecard can be found in Schedule 1-3-2 - Proposed Annual Reporting.
- **Updates:** Aside from inflation updates using the OEB's standard inflation factor (impacting OM&A and as such working capital), Hydro Ottawa is not proposing any annual updates to the rate framework, which means that as part of this framework customers will have the benefit of rate stability and predictability.
- **Protecting Customers:** In addition to efficiency gains and productivity incentives that are built into the investment plan and proposed rate framework, this Application includes numerous asymmetrical variance accounts to protect customers in the event of underspending, as well as an Earnings Sharing Mechanism to safeguard against excessive utility earnings. Further details on these mechanisms can be found in section 3.5 below.

3.1 CAPITAL FUNDING

The proposed framework funds the capital related revenue requirement that is necessary to execute Hydro Ottawa's 2026-2030 Distribution System Plan. This plan reflects a comprehensive investment strategy that aligns with customer expectations, addresses the evolving needs of Hydro Ottawa's electricity grid and incorporates key improvements, including enhanced asset management processes, expanded grid modernization and resilience planning, updated system capacity assessments, and refined long-term forecasting based on customer feedback and system needs.

Table 2 below presents the capital related revenue funded by the proposed rate framework. Consistent with Hydro's Ottawa's current rate framework approved for the 2021-2025 rate period, this revenue is not escalated by an annual index, but rather is funded on a forecasted basis. In this proposed approach, Hydro Ottawa bears the risk of capital-related inflation, and customers receive the benefit of productivity savings upfront that have been built into the capital forecast. Each of these elements are further described below.

Table 2 – 2026-2030 Capital Revenue Requirement, net of revenue offset ($'000 000s)[5]

	2026F	2027F	2028F	2029F	2030F	Total
Amortization/Depreciation	$ 67.2	$ 75.4	$ 82.3	$ 88.4	$ 94.4	$ 407.6
Income Taxes (Grossed up)	$ 6.6	$ 6.5	$ 12.2	$ 12.7	$ 15.4	$ 53.5
Deemed Interest Expense	$ 36.4	$ 40.4	$ 45.3	$ 49.0	$ 51.7	$ 222.8
Return on Deemed Equity	$ 55.2	$ 61.3	$ 68.7	$ 74.4	$ 78.5	$ 337.9
Capital related revenue requirement	**$ 165.4**	**$ 183.6**	**$ 208.4**	**$ 224.4**	**$ 240.0**	**$ 1,021.8**

3.1.1 Capital Inflation

Hydro Ottawa's proposed rate framework places the risk of capital-related inflation on the utility to manage over the 2026-2030 rate period. This approach represents a significant risk in light of recent history whereby inflation reached a 40-year high in 2022, and in contrast with other rate frameworks approved by the OEB which provide for inflationary adjustments to capital related revenue.[6] By fixing capital-related inflation for the purposes of setting rates, Hydro Ottawa is taking

[5] Property Taxes was included into capital related spending as part of Hydro Ottawa's capital related stretch factor, however has not been included as part of revenue requirements presented in this table.
[6] For example, Ontario Energy Board, *Partial Decision and Order - Toronto Hydro-Electric System LTD Application for electricity distribution rates beginning January 1, 2025*, EB-2023-0195 (November 12, 2024).

on incremental financial risk and responsibility to provide customers greater protection and rate stability and predictability over the term. For more information regarding the inflationary assumption built into Hydro Ottawa's capital plan please refer to Schedule 1-2-5 Impacts of Inflationary Pressure.

3.1.2 Capital Productivity

As discussed in Schedule 1-3-4 - Facilitating Innovation and Continuous Improvement Hydro Ottawa is committed to fostering a culture of innovation and continuous improvement across its operations. The utility has cultivated a robust track record with respect to the following: applying innovative practices and solutions to serving customers and to planning and operating the distribution system; prioritizing productivity, savings, efficiencies and cost reductions in the execution of its programs and projects; and pursuing continuous improvement in all aspects of its business activity.

During the 2021-2025 rate term, Hydro Ottawa enhanced its operational efficiency and productivity in a host of different ways allowing it to embed estimated savings in capital expenditures and additions that flow through the capital related costs providing customers with increased benefit starting in year one of the rate plan.

As an example, as detailed in section 3.1.1.2 of Schedule 1-3-4 Facilitating Innovation and Continuous Improvement, Hydro Ottawa was able to achieve a significant reduction in average annual labour hours on the planned pole renewal program in System Renewal. While these savings have only been sustained over a relatively short period of time, the utility applied the efficiency assumptions to stretch its capital expenditure plan, taking the risk that it can sustain these productivity savings over the 2026-2030 rate period to deliver its plan during a period of unprecedented growth.

Hydro Ottawa embedded these productivity savings assumptions in the capital expenditures plan in the DSP. Table 3 below shows the required and proposed capital expenditures and the stretch amounts that have been built into the proposed plan.

Table 3 – 2026-2030 Required and Proposed Capital Expenditures ($'000 000s)

	2026-2030			
	Required	Proposed	Stretch $	Stretch %
Capital Expenditures	$1,230	$ 1,195	($35)	(2.9%)

Table 4 below shows the application of the embedded stretch to the 2026-2030 capital related revenue requirement (excluding property tax).

Table 4 – 2026-2030 Capital Related Revenue Requirement Savings ($'000s)

	2026-2030			
	Required	Proposed	Stretch $	Average Stretch %
Capital Related Revenue Requirement	$1,028,547	$1,021,817	($6,731)	(0.65%)

3.1.3 Working Capital

As outlined in Schedule 2-3-1 - Working Capital Requirement, Hydro Ottawa proposes to apply the OEB generic 7.5% WCA factor to the annual estimated Cost of Power (COP) based on the utility's load forecast presented in Schedule 3-1-1 - Revenue Load and Customer Forecast. This approach recognizes the significant electrification built into the 2026-2030 load forecast, which provides an upfront rate benefit to customers (by reducing rates based on estimated future customer load forecasts not captured by the base load forecast), and should be duly reflected in the flow-through COP expense (by using the same customer load forecast data).

Test year OM&A is used for the first year WCA calculation and thereafter it is proposed to use the base year OM&A escalated by inflation and growth. Productivity has not been included as the main driver of working capital costs are costs associated with generation and transmission. Productivity related to the cost drivers of these activities are managed by the IESO and transmitters and monitored by the OEB in their respective applications. As such, Hydro Ottawa should not be required to manage any expected cost increases related to these items.

3.1.4 Cost of Capital

Hydro Ottawa's proposed capital structure is in accordance with the OEB guidelines provided in the Decision and Order, Generic Proceeding - Cost of Capital and Other Matters (EB-2024-0063) issued on March 27, 2025 (2025 OEB Cost of Capital Decision and Order). Hydro Ottawa targets a 60:40 debt to equity range. The 60% debt component is comprised of a targeted split between 56% long-term debt and 4% short-term debt.

Hydro Ottawa proposes to incorporate the ROE and short-term debt as set by the OEB while the long-term debt primarily relies on the embedded or actual cost of long-term debt and only uses the deemed long-term debt rate as a proxy to bridge the period between external financings.

As part of this Original evidence, Hydro Ottawa is using the 2025 cost of capital parameters, published by the OEB in its Decision and Order, Generic Proceeding - Cost of Capital and Other Matters (EB-2024-0063) dated March 27, 2025, as a placeholder. This approach is further outlined in Schedule 5-1-1 - Cost of Capital and Capital Structure.

Please see Table 5 for a summary of the cost of capital parameters.

Table 5 – Summary of Cost of Capital Parameters

Rates Effective	Placeholder ROE[7] (fixed for 2026-2030)	Placeholder Long-Term Debt[8] (fixed for 2026-2030)	Placeholder Short-Term Debt[9] (fixed for 2026-2030)
January 1, 2026 - December 31, 2030	9.00%	3.96%	3.91%

Please see Section 2.4.1 of Attachment 1-3-3(D) - Supplemental Industry Benchmarking Analysis for a presentation of a weighted average cost of Debt comparison to illustrate Hydro Ottawa's performance to that of the industry and established peer groups.

[7] To be updated based on the ROE for 2026 to be set by the OEB in the fall of 2025.
[8] To be updated as per Schedule 5-1-1 Cost of Capital and Capital Structure
[9] To be updated based on the Short-Term Debt rate for 2026 to be set by the OEB in the fall of 2025.

3.1.5 Payments in Lieu of Taxes

Hydro Ottawa exercises sound tax planning and manages its tax costs diligently in order to minimize costs. As required, the utility maximizes tax deductions such as Capital Cost Allowance, and takes advantage of available tax credits, such as apprentice tax credits, student co-op tax credits, and scientific research and experimental development (SR&ED) tax credits.

Hydro Ottawa proposes to incorporate two unique factors related to PILs as part of the 2026-2030 rate period.

Hydro Ottawa proposes to provide rate payers the benefit of SR&ED tax credits reflected as a reduction in capital expenditures (by way of a capital contribution) and/or OM&A expenses for each Test Year. This provides benefits in two ways to customers. The capital expenditures reduction provides reduced ROE and cost of debt over the life of the associated assets while the reduction in OM&A provides immediate benefit to customers in OM&A and provides a smaller base in which to inflate costs over the rate term. A similar approach was approved as part of Hydro Ottawa 2021-2025 CIR Application.

As described in Schedule 6-2-1 - Payments in Lieu of Taxes, Accelerated CCA (related to Bill C-97 the *Budget Implementation Act, 2019*) is no longer available after 2027. This rule allows enhanced first-year tax depreciation on eligible capital assets acquired and available for use after November 20, 2018. Accelerated CCA does not change the total amount of CCA that Hydro Ottawa can deduct over the tax life of the eligible capital assets. This Accelerated CCA is only available to be claimed in the first tax year that the eligible capital assets are acquired and available for use. By claiming a larger CCA deduction in the first year, Hydro Ottawa will have smaller CCA deductions available in future years.

Previous to this CIR Application, Hydro Ottawa has provided benefit to current customers by either refunding the tax saving through Account 1592 PILS and Tax Variance or providing an immediate benefit through rates. For the two remaining years, namely 2026 and 2027, Hydro Ottawa proposes to instead collect the 2026 and 2027 accelerated PILS benefit and create an offsetting capital contribution as part of ratebase. Similar to the SR&ED tax credits, this will provide rate payers cost reduction over the life of the associated assets through a reduced cost of capital (ROE and Debt). This reduces intergenerational equity issues that arise in the context of deferred taxes when income tax decisions in the present have long-term tax implications for future generations. Please also see Schedule 6-1-1 - Revenue Requirement and Revenue Deficiency or Sufficiency.

Hydro Ottawa also proposes to dispose of amounts currently in Account 1592 PILS and Tax Variance for 2021 Immediate expensing measures in the same manner. Please see Schedule 9-1-4 - Account 1592 PILS and Tax Variance for more details.

The intention would be to treat any extension (if applicable) to either accelerated CCA or immediate expensing in a similar way.

3.1.6 Property Taxes

In the Regulatory framework, property taxes are not considered an OM&A expenditure and are part of the capital related funding requirements. In specific circumstances property taxes are recorded outside USoA Account 6105.

Hydro Ottawa has estimated a base year property tax value of $3.7M in 2026. These amounts are estimated based on current property tax payments with projected increases. They are recorded in three USofA accounts: 6105 Taxes Other Than Income Taxes, 5012 Station Buildings and Fixtures Expense, and 5015 Transformer Station Equipment - Operation Supplies and Expenses. Hydro Ottawa proposes to escalate property taxes over the rate term using the OM&A CROF, as outlined in the following section of this schedule. As a result, unless otherwise noted property taxes have been included in OM&A totals through this application.

3.2. OM&A FUNDING

The proposed rate framework provides OM&A funding in years two through five of the rate period (i.e. 2027-2030), using a custom annual adjustment known as the Custom Revenue OM&A Factor (CROF). Table 6 below outlines the components of this factor.

Table 6: Custom Revenue OM&A Factor (CROF) Components

CROF = I - X + G		
Component	**Methodology**	**Value**
I	Standard OEB inflation factor methodology; to be updated annually based on OEB parameters.	2.10%[10]
X	Two components: Productivity factor of 0% ; Stretch Factor as per PEG Model of 0.30% reduced by embedded productivity in test year (capped at 0.15%); fixed throughout the term.	0.15%
G	Weighted growth factor composed of customer count and system capacity Compound Annual Growth Rates (CAGR) weighted in accordance with the assumptions in the OEB cost allocation model; fixed throughout the term.	3.23%
CROF	Custom Revenue OM&A Factor	5.18%

The following sections describe the components of the CROF in further detail.

3.2.1. Inflation Factor

For the purposes of rate modelling provided in this Application, Hydro Ottawa used a forecasted inflation factor of 2.10%. However, consistent with standard OEB policy, in years two to five of the custom rate period (i.e. 2027-2030) Hydro Ottawa intends to update the inflation factor included in the proposed CROF through the annual rate application process. This update will be based on the OEB-inflation factor, which is derived from the weighted sum of two distinct sub-indices:

[10] Placeholder value, to be updated annually

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

3.2.2. X Factor

Consistent with OEB policy, the proposed X-factor in CROF consists of two components: an industry Total Factor Productivity (TFP) component and a stretch factor component. Each of these is described in further detail below.

3.2.3 Productivity Factor

Consistent with the OEB's Rate Setting Parameters and Benchmarking under the RRF,[11] Hydro Ottawa proposes to adopt the OEB's TFP factor of 0% in its CROF, but notes that the effect of increasing the productivity factor to zero creates an additional stretch factor during the term of this application.

3.2.4 Stretch Factor

The second component of 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. Under the current methodology, stretch factors are determined based on a distributor's assignment in one of the five efficiency assessment rankings, determined using a total cost benchmarking econometric model developed by PEG (the PEG Model), which is updated annually.

[11] 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, 2023; corrected December 4, 2013), page 17.

The PEG Model predicts what a distributor's total costs "should be" (predicted costs) based on various business condition variables, and then compares the predicted costs to a distributor's actual costs. Between 2015 and 2024, Hydro Ottawa has been categorized in Cohort IV based on the PEG Model's results, with its Efficiency Performance ranging from 12.1% to 20.8%.

In preparing this Application, Hydro Ottawa reviewed the historical data that was reported to the OEB and was factored into the PEG Model. This review identified three data elements that Hydro Ottawa believes should be adjusted in the PEG Model to derive a result that does not unduly underestimate the utility's cost performance. The first element reflects improved reporting from Hydro Ottawa's annual OEB reporting, while the remaining two are custom aspects Hydro Ottawa proposes as part of this rate setting framework to incorporate the future PEG result estimate and to be used as part of Hydro Ottawa proposed ESM. These elements are as follows:

1. Secondary Circuit kilometers not being included in the Circuit Kilometers metric;[12]
2. The absence of a variable to capture impacts of Conservation and Demand Management (CDM) on a utility's cost drivers; and
3. The exclusion of Other Revenue within the PEG Model while certain costs associated with Other Revenue are included in OM&A and capital.

The omission of these three data elements from the PEG Model has had a substantive adverse impact on Hydro Ottawa's efficiency performance assessment, and needs to be considered going forward. Please see Attachment 1-3-3(A) - PEG Benchmarking Analysis for a more fulsome explanation of these adjustments and how Hydro Ottawa proposes incorporating them into the PEG forecasting model as part of this rate setting framework.

[12] Hydro Ottawa intends to reflect updated Circuit Kilometers, and Delivery volumes in its 2024 Reporting and Record-keeping Requirements filings, and has incorporated these refinements to the PEG Model in this rebasing application as outlined in Attachment 1-3-3(A) - PEG Benchmarking Analysis as well as Excel Attachment 1-3-3(G) - OEB Benchmarking Spreadsheet Forecast Model.

Based on the empirical benchmarking results presented in Attachments 1-3-3(A) and 1-3-3(G), PEG's model yields a 0.3% efficiency stretch factor for Hydro Ottawa, which is the equivalent of Cohort III instead of Cohort IV.

However, the utility also notes that the PEG Model does not account for the impact of substantial growth and accelerated electrification that Hydro Ottawa needs to plan for in the 2026-2030 rate term. When the PEG Model was adopted in 2014, the electricity sector faced stable and modest incremental growth patterns, which is evidently no longer the case in Ontario, and particularly in Hydro Ottawa's service territory. Crucially, the PEG Model operates on the assumption that cost increases are directly proportional to load growth. This assumption becomes problematic when utilities are mandated to proactively drive growth, as articulated in the Ministry of Energy and Electrification's December 2024 Letter of Direction to the OEB, which emphasizes the need for 'planning and regulatory frameworks that are flexible and will get infrastructure and resources built quickly and cost-effectively to support the government's pro-growth agenda.' Under such directives, where utilities are expected to expand beyond traditional load-driven cost increases, the PEG Model's inherent constraints, including its 'stretch factor,' become counterproductive and fail to reflect the necessary investments for mandated growth.

Specifically, the model's historical data and assumptions fail to account for the increased capital expenditures, workforce expansion, and technological upgrades required to support the rapid adoption of electric vehicles, the integration of distributed energy resources, expanded housing connections, and the broader modernization of the grid to accommodate higher loads. These requirements are relatively new, stemming from recent changes in government policy, technological advancements, and shifts in consumer behavior that have fundamentally altered the trajectory of the energy system and the outlook for electricity within the system.

Hydro Ottawa's view that relying solely on the stretch factor derived from the current PEG Model overestimates the level of productivity and cost management that the utility can reasonably achieve during this period of transformative growth.

Based on the foregoing, it is Hydro Ottawa's view that relying solely on the stretch factor derived from the current PEG Model overestimates the level of productivity and cost management that the utility can reasonably achieve during this period of transformative growth. As such, Hydro Ottawa has proposed a Hybrid stretch on OM&A and a growth factor as described below.

Hydro Ottawa has already embedded productivity into the 2026 OM&A Test Year forecast. As an example, Hydro Ottawa set an ambitious stretch target of 80% for online billing adoption by the end of 2025, and built the associated savings into its 2026 base OM&A as a direct benefit to customers. As a result, the utility assumes a significant financial risk of managing the incremental printing, postage and other related costs should this ambitious target not be met or sustained over the rate term. This is only one of the examples of 2026 base rate stretch already built into Hydro Ottawa's 2026 base OM&A. Based on only the quantifiable productivity savings estimated for 2026 in Schedule 1-3-4 - Facilitating Innovation and Continuous Improvement, Hydro Ottawa has calculated that the base year OM&A has been reduced by 2.3% which results in a 2027 to 2030 additional annual stretch already embedded in OM&A of 0.61%.

Recognizing the significant savings that have already been embedded in Hydro Ottawa's proposed OM&A while recognizing the principle of the RRF, Hydro Ottawa proposes to cap the reduction of the adjusted PEG Model Stretch of 0.30% by 0.15% resulting in an X factor of 0.15% in the CROF formula. However, in total Hydro Ottawa will have an actual stretch factor in the 2027 to 2030 years of 0.76% (0.15% plus 0.61% embedded in the 2026-2030 OM&A forecast).

The implementation of the 0.15% additional stretch factor in the CROF is projected to yield a reduction in OM&A expenditures of an additional $2.3M over the 2026-2030 rate term. Along with the embedded productivity savings of $8.7M as a result of the embedded first year savings (and resulting impact on 2027-2030), the framework results in a revenue requirements reduction benefit of $11M over the rate term.

3.3. GROWTH FACTOR

The proposed CROF includes a 3.23% growth factor to fund incremental OM&A costs associated with Hydro Ottawa's rapid growth and electrification, as detailed throughout Exhibit 4, and particularly Schedule 4-1-2 - Operations, Maintenance and Administration Program Costs, Attachments 4-1-3(B) - Workforce Planning Strategy and 4-1-3(C) - Workforce Growth. The growth factor is derived from increases in customer count and system capacity calculated based on the forecast CAGR for the 2025-2030 period. In formulating the growth factor, elements are weighted based on the customer and demand/capacity split in the OEB's cost allocation model.

3.3.1 Customer Growth

As summarized in Table 7 below and detailed in the evidence presented in Schedule 3-1-1 - Revenue Load and Customer Forecast, Hydro Ottawa's load forecast shows a CAGR of 1.005% in customer count for the 2026-2030 period.

Table 7 - 2025-2030 Forecast Customer Count[13]

	2025	2026	2027	2028	2029	2030	CAGR
Total Customers	373,277	377,521	381,118	384,796	388,582	392,422	1.005%

3.3.2 System Capacity Growth

As noted through the application, one of the key investment priorities is Growth & Electrification, and Hydro Ottawa is witnessing a significant escalation in large load requests as evidenced by Figure 1 in Section 1 above. The implementation of the capacity upgrades program (Schedule 2-5-8, Section 2.1), Hydro One secondary cable, transformer, and switchgear upgrades (Schedule 2-5-9, Section 7.1), and the demand-driven Hydro Road station (Schedule 2-5-6, Section 4) will collectively increase Hydro Ottawa's planning capacity by over 811 MVA. However, it is important to note that Table 8 below utilizes maximum continuous rating for the growth calculation, rather than planning capacity. Therefore the 811 MVA increase in planning capacity translates to a 594.9 MVA

[13] Excludes standby customer count

increase in continuous rating capacity. As shown in Table 8, this 594.9 MVA increase is the difference between the 2030 continuous rating capacity of 2,723 MVA and the 2025 capacity of 2,128 MVA. This additional 594.9 MVA capacity is included in Hydro Ottawa's investment plan over the 2026-2030 period, representing a 5.054% CAGR.

Table 8 - 2025-2030 Forecast System Capacity (MVA)

	2025	2026	2027	2028	2029	2030	CAGR
Base and Incremental Capacity	2,128	2,228	2,353	2,624	2,624	2,723	5.054%

3.3.3 Weighted Growth

To calculate the weighted growth factor of 3.23%, Hydro Ottawa applied the assumptions in the OEB's cost allocation model (which reflects Hydro Ottawa's own unique system makeup and costs attributed to customer count and capacity) to derive the weightings shown in Table 9 below.

Table 9 - Weighted Growth Percentage - based on Customer Growth and System Capacity Growth

	Cost Allocation Weighting	CAGR
Capacity	54.8%	5.054%
Customer	45.2%	1.005%
Weighted Growth Rate		**3.23%**

3.4. OTHER REVENUE

Other Revenue, also referred to as Revenue Offsets, relates to all utility revenues other than distribution and cost of power revenues. Hydro Ottawa has classified these into four categories; Specific Service Charge Revenue, Late Payment Charge Revenue, Other Operating Revenue and Other Income and Deductions. Given the wide range of service types provided, multiple factors can impact the trends of the overall revenue offsets. Please see Schedule - 6-3-1 Other Revenue Summary for more details.

As with the previous two rate cycles, Hydro Ottawa takes a detailed look at any rates set through Other revenue to determine if they should be adjusted and how to propose the rates be treated throughout the rate term. In some cases Hydro Ottawa utilizes OEB generic rates while others are utility-specific. Hydro Ottawa's utility-specific rates can be where productivity savings are directly provided to customers at the time of a paid service. One such rate that Hydro Ottawa has seen a significant decrease in is the Account Set Up/Change of Occupancy Charge which has decreased from $29 to $10.

Hydro Ottawa proposes to set both rates and revenue related to Other Revenue for 5 years. Where rates are proposed to be adjusted in years two to five, for simplicity, an annual inflation rate of 2.1% is proposed to avoid annual adjustments to the rates throughout the rate term.

3.5. OTHER ELEMENTS OF THE RATE FRAMEWORK

In addition to the rate-setting methodology set out above, Hydro Ottawa's proposed rate framework includes several other elements which are designed to protect customers and provide the utility flexibility to manage the execution of its investment plan throughout the rate term. Each of these elements are described in detail below.

3.5.1. Earnings Sharing Mechanism (ESM)

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

As a customer protection mechanism, Hydro Ottawa proposes an ESM which facilitates sharing 50:50 with customers any cumulative utility earnings above 150 basis points (dead-band) of the approved rate of ROE. The utility would only share earnings that exceed the threshold above the utility's return on equity (ROE), with no sharing if its earnings fall below its allowed ROE.

A unique aspect of Hydro Ottawa's rate setting framework is the proposal to set the threshold at 150 basis points, instead of the standard 300 basis points. It is important to acknowledge that the 300-basis point dead band is a well-established tool used by the OEB for various purposes over many years. As outlined in Section 5.6 of the Ontario Energy Board's Handbook to Electricity Distributor and Transmitter Consolidations (June 18, 2024), this 300-basis point standard is consistent with the incentive rate-setting policy for off-ramps. It is also used to apply the means test for advanced capital modules/incremental capital modules, impacts of over earning during the four years of incentive rate-setting mechanism term,[14] when distributions defer rebasing due to consolidation,[15] as well for recovery of balances recorded in Account 1509 - Impacts Arising from the COVID-19 Emergency. Despite this established practice, Hydro Ottawa proposes the lower 150 basis point threshold to provide greater customer protection by enabling a faster sharing of any excess earnings.

In addition, to better align the ESM with the objective of incentive regulation to drive continuous improvement in the utility's cost performance, Hydro Ottawa proposes to incorporate an efficiency performance test into the ESM. Specifically, Hydro Ottawa must maintain its Cohort III efficiency position in the adjusted PEG Model (as described in Attachment 1-3-3 (A) - PEG Benchmarking Analysis) by the end of the rate term, in order to be able to retain any cumulative earnings between 0 and 150 basis points. Failure to meet this condition results in Hydro Ottawa sharing all earnings exceeding the approved ROE with customers.

The proposed ESM test is summarized in Table 10 below:

[14] Ontario Energy Board, Filing Requirements For Electricity Distribution Rate Applications Filed in 2024 for Rates Taking Effect in 2025, Chapter 3 Incentive Rate-Setting Applications (June 18, 2024), page 1.
[15] Ontario Energy Board, Handbook to Electricity Distributor and Transmitter Consolidations (June 18, 2024), Appendix 3 page.

Table 10 – 2026-2030 ESM Test

Earnings Results	Efficiency Test Met	Treatment
Below approved ROE	N/A	Borne entirely by utility/shareholder
0-150 basis points above approved ROE	Yes	Retained by utility/shareholder if the adjusted PEG cohort is maintained at the end of the term per Attachment 1-3-3 (A) - PEG Benchmarking Analysis
0-150 basis points above approved ROE	No	50:50 sharing of ratepayer/shareholder
Above 150 basis points	N/A	50:50 sharing of ratepayer/shareholder

Earnings captured by the ESM would be recorded in the proposed ESM Deferral Account, which is further described in Exhibit 9-2-1: New Deferral and Variance Accounts.

3.5.2. Off-Ramp and Z-Factor Eligibility

Hydro Ottawa proposes to continue to apply the OEB's generic policy with respect to off-ramps for the 2026-2030 rate term (as outlined in the Rate Handbook), and continue to be allowed to have Z-factor relief available based on the OEB's generic criteria (as set out in the Report of the Board on 3rd Generation Incentive Regulation).[16] These mechanisms protect both customers and the utility against excessive over/under-earnings, and provide Hydro Ottawa the ability to address significant impacts arising from unforeseen factors, including major weather events, or changes in laws or regulations, that necessitate significant remedial investment.

3.5.3. Capital Variance Account

Hydro Ottawa proposes a Capital Variance Account which consists of various sub-accounts as detailed below. These accounts provide continued transparency, accountability and necessary flexibility in the delivery of Hydro Ottawa's 2026-2030 DSP.

[16] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 2016), page 28; *Report of the Board on 3rd Generation Incentive Regulation for Ontario's Electricity Distributors* (July 14, 2008), pages 35-36.

3.5.3.1 Asymmetrical Sub-Accounts

In the current 2021-2025 rate term, the Capital Additions Variance account includes three asymmetrical sub-accounts that record the revenue requirement impact of underspending in the utility's capital plan for the categories of: (a) System Renewal/ System Service (excluding the subset of capacity upgrades, as detailed below), (b) System Access (excluding the subset of System Access related to plant relocation requests by third parties and residential expansion, as detailed below), and (c) General Plant. These sub-accounts being asymmetrical means that they function entirely for the protection of customers, and do not allow Hydro Ottawa to record any revenue requirement associated with incremental expenditures in these investment categories during the rate term.

In the 2026-2030 rate period Hydro Ottawa proposes to continue the existing asymmetrical sub-accounts in the Capital Additions Variance Account as described above, with two refinements to the scope:

1. Exclude commercial expansion from the scope of the asymmetrical System Access sub-account (in addition to the existing exclusions related to third party initiated relocations and residential expansions),
2. Exclude capacity upgrades associated with housing developments from the scope of the asymmetrical System Renewal/System Service sub-account.

The investments excluded from the scope of these asymmetrical sub-accounts would be tracked in a separate symmetrical sub-account entitled the System Access & System Service Capital Additions Differential Sub-Account - System Access Plant Relocates and Growth Capital Development Additions, as further described below.

3.5.3.2 Symmetrical Sub-Account: System Access & Growth Capital Development Additions

Hydro Ottawa proposes to maintain (and expand the scope of) its existing symmetrical sub-account for System Access Capital Additions which was approved in EB-2019-0261. This sub-account currently captures over/underspending related to third-party driven plant relocation and residential expansion investments, both of which are externally driven and are subject to volatility due to changes in customer requirements and government priorities and policies and undergoing a period of significant growth.

In the 2026-2030 rate term, Hydro Ottawa proposes to expand the scope of this symmetrical sub-account to also include commercial expansions (under System Access) and capacity upgrades (under System Service) related to enabling housing development. This expansion would include not only new residential connections under System Access but also extend to specific commercial expansions (also under System Access) and essential capacity upgrades (categorized under System Service). This broadened scope stems from the recognition that these capital investments are required to support the Ontario government's housing development objectives and are driven by customer-initiated projects. Specifically, these investments include critical System Service capital upgrades designed to ensure necessary system enhancements are in place to meet the escalating demand for electricity distribution infrastructure resulting from housing development, as explicitly defined under Ontario's Bill 214, the *Affordable Energy Act, 2024*. To reflect these changes Hydro Ottawa proposes to update the name of the sub-account to System Access and Growth Capital Development Additions.

3.5.4. CCRA Payments Differential Variance Account

Under its Connection Cost Recovery Agreements (CCRAs) with the transmitter, Hydro Ottawa is required to pay capital contributions to Hydro One for transmission system expansions and modifications that are needed to serve Hydro Ottawa’s customers. The need for this work and the related costs are beyond the utility’s control, as the requirements are identified and carried out by Hydro One in accordance with regional plans and the Transmission System Code. To continue to manage these externally-driven costs, Hydro Ottawa proposes to maintain the CCRA Payments Differential Variance Account that was established in EB-2019-0261. This account records the revenue requirement difference between what the utility has included in base rates and the revenue requirement of what is actually paid for in both new and true-up CCRA payments. For additional information, please see Schedule 9-1-3 - Group 2 Accounts.

3.5.5. Non-Wires Solutions (NWS) Variance Account

An important aspect of Hydro Ottawa's rate framework is its support of non-wires solutions. This can be seen in multiple elements of the framework: the removal of the net metering charges; to offer a free Residential Electrical Isolations/Re-energizations for electrical work; the updated Standby rate design; and the forecast to spend $2M per year for its Non-Wires Customer Solutions Program.

In addition, in line with the OEB's Framework for Energy Innovation, which aims to facilitate the deployment of innovative and cost-effective solutions, Hydro Ottawa is investing in non-wires solutions (NWSs) that leverage third-party and customer-owned technologies such as battery storage and distributed energy resources (DERs) to manage peak demand and provide other grid benefits.

Table 11 below outlines Hydro Ottawa's NWSs forecast costs included in OM&A and Other Revenue, as detailed in Schedule 4-1-2 Operations, Maintenance and Administration Program Costs and Schedule 6-3-5 - Other Income & Deductions, net of external funding.

Table 11 - NWS 2026-2030 Investment Costs ($'000)[17]

	2026	2027	2028	2029	2030
Costs included in OM&A	$2,192	$2,319	$2,454	$2,597	$2,747
Costs included in Other Income & Deductions	$2,000	$2,000	$2,000	$2,000	$2,000
Total NWS costs	**$4,192**	**$4,319**	**$4,454**	**$4,597**	**$4,747**

Over the 2026-2030 rate term, Hydro Ottawa proposes a symmetrical NWS variance account to record the difference between forecasted and actual NWS operational costs, net of third-party

[17] The 2026 amount includes external funding. Figures for 2027-2030 are based on the Custom Revenue OM&A Factor.

funding grants or contributions. This account provides customer protection in the event that the utility is able to obtain incremental third-party funding or contributions to deliver its NWS initiatives, as those amounts would be recorded as offsets (or credits) in the account and to address the evolving nature of these programs.

Importantly, the proposed account also provides Hydro Ottawa the funding flexibility to adapt and evolve its NWS program based on acquired experience designing and implementing NWS initiatives, and to be responsive to changes in needs and circumstances that may present themselves over the rate term as a result of various factors beyond the utility's control. These include, but are not limited to: (i) changes in the pace and type of DER uptake in Hydro Ottawa's service territory due to policy development, technological advancement and/or customer and market behavior; (ii) changes in demand-driven needs and requirements that can be addressed with NWS solutions; and (iii) changes resulting from regional planning initiatives, collaboration with the IESO or other LDCs, and OEB consultations and initiatives related to DER enablement and integration.

The proposed NWS Variance Account satisfies the OEB's three criteria for establishing a new utility-specific Group 2 variance account:

1. **Causation:** The amounts to be captured in this account relate to variances in costs and other revenues driven by external factors (e.g. market demand, public policy and technology changes) that are outside of the utility's control.
2. **Prudence:** Differential costs that would be captured in the account are costs that are necessary to enable Hydro Ottawa to deliver incremental cost-effective NWS initiatives in accordance with OEB requirements. Other revenues that would be recorded as offsets are presumptively prudent based on the rationale that these credits provide a direct benefit to customers.
3. **Materiality:** Considering the nascency of NWS initiatives, and the breadth and potential variability of the factors outlined above which could affect NWS deployment over the

2026-2030 rate term, Hydro Ottawa believes that the amounts recorded in the proposed account could exceed the utility's materiality threshold.

Please see Schedule 9-2-1 - New Deferral and Variance Accounts for more information including sample journal entries.

In addition, Hydro Ottawa acknowledges the dynamic nature of non-wires solutions and the OEB's evolving cost-benefit framework. It is anticipated that increased reliance on these solutions may be necessary during the five-year plan due to fluctuating large load requests and evolving government policies related to electrification, beneficial electrification, and housing. While Hydro Ottawa will strive to adhere to its existing five-year plan, alternative solutions to traditional infrastructure may be required. Therefore, Hydro Ottawa proposes to maintain the option of using the existing, and any future updates to, the Non-Wires Solutions for Electricity Distributors Guidelines.

Should the need arise, Hydro Ottawa will submit a comprehensive application for any incremental solutions that fall outside of its approved funding. This mechanism will be used judiciously, and Hydro Ottawa will first explore alternative solutions, including delaying costs until the next rebasing application, before pursuing additional funding for non-wires solutions.

3.5.6 Large Load Revenue Variance Account

As outlined in the introduction to this Schedule, and further detailed in Section 9.4.1.1 of Schedule 2-5-4 - Asset Management Process, Hydro Ottawa expects a marked increase in large load requests driven in large part by decarbonization and electrification initiatives. The specific timing and unprecedented scale of these large load connections, coupled with the novelty of forecasting energy demand requirements and managing evolving consumption patterns related to electrified technologies, presents a significant risk of demand volatility and revenue uncertainty for load forecasting purposes. Discrepancies between forecasted load and actual energy use, as a result of the volatility and uncertainty described, can unduly impact the utility's revenues and earnings over the rate term. However, not including anticipated loads would not provide customers with benefits of related load to forecasted spending as outlined in the DSP.

To address this unique and unprecedented challenges, with a view to protecting both the interests of customers and the utility, Hydro Ottawa proposes to establish a large load variance account to track the revenue variances between forecast and actual billed demand for the large load requests outlined in Table 8 of Schedule 3-1-1 - Revenue Load and Customer Forecast. This would account for both volume and timing variations and would only be calculated for the period of time until the load substantially materializes, net of any adjustment in the customer contribution.

The proposed Load Revenue Variance Account satisfies the OEB's three criteria for establishing a new utility-specific Group 2 variance account:

1. **Causation:** Variances that would be captured in this account would be outside of the forecasted base upon which the rates are derived, reflecting the revenue impact of difference between forecast and actual demand for certain large load requests.
2. **Prudence:** Revenues that would be captured in the account are presumptively prudent in that they are driven by factors that are outside of the utility's control. These factors include changes in customer project timing, and differences in load demand requirements and electricity consumption patterns due to policy, technology and consumer behaviour changes.
3. **Materiality:** Given the unprecedented volume, scale and electrification drivers of the large load demand requests, Hydro Ottawa believes that the amounts recorded in the proposed account could exceed the utility's materiality threshold over the next rate term.

3.5.7. Tariff Impact Deferral Account

Per the OEB's Decision on Ontario Power Generation's Application for a variance account to capture the impact of the overturning of Bill 124,[18] where a reasonable risk exists or should have been foreseeable the utility should address it as part of their rate application. As such Hydro Ottawa requests a deferral account to address the risk of tariffs from supply chain disruptions and tariffs on imported components essential for Hydro Ottawa's distribution infrastructure.

The proposed Tariff Impact Account satisfies the OEB's three criteria for establishing a new utility-specific Group 2 variance account:

1. **Causation:** Variances that would be captured in this account would be outside of the forecasted base upon which the rates are derived, US Tariffs and Retaliatory Canadian Tariffs were announced and introduced after Hydro Ottawa estimated the costs of materials and labour incorporated into the proposed revenue requirements and continue to evolve. This deferral account would capture the costs associated with tariffs.
2. **Prudence:** Costs that would be captured in the account are presumptively prudent in that they are driven by factors that are outside of the utility's control. As described through this application in relation to the management of high inflation, and specifically within scheduled Schedule 1-2-5 - Impacts of Inflationary Pressure, Hydro Ottawa will look at reasonable cost mitigation strategies to contain the impact of global tariffs.
3. **Materiality:** Given the expanded and wide ranging tariff announcements, Hydro Ottawa believes that the amounts recorded in the proposed account could exceed the utility's materiality threshold over the next rate term.

3.5.8 Custom Performance Measurement Framework

Hydro Ottawa proposes a custom performance measurement framework for the 2026-2030 five-year rate term which will allow the OEB, customers, and stakeholders to monitor and assess

[18] Ontario Energy Board, *Decision and Order - Ontario Power Generation Inc. Application for variance account to capture the nuclear revenue requirement impact of the overturning of Bill 124*, EB-2023-0098 (June 27, 2023).

diverse aspects of Hydro Ottawa's performance. The proposed framework consists of two components: (1) a Custom Performance Scorecard featuring 22 specific measures upon which Hydro Ottawa will report annually and publish the result on its website, and (2) updates on capital expenditures in key programs.

3.5.8.1 Custom Performance Scorecard

Under this rate-setting framework, Hydro Ottawa is proposing to include annual reporting in the form of a Custom Performance Scorecard over the 2026-2030 period. This scorecard will provide a comprehensive and transparent view of Hydro Ottawa's activities and their impact, and includes 22 key measures. These measures are categorized to align with the performance outcomes of the OEB's RRF: Customer Focus, Operational Effectiveness, Public Policy Responsiveness, and Financial Performance.

Building upon the existing reporting practices from the 2021-2025 rate framework, the 2026-2030 Custom Performance Scorecard features both a continuation of current measures (e.g., contact centre satisfaction, feeder performance, productive time, environmental targets, bad debt, etc.) as well as new measures that have been added to reflect the evolving priorities and challenges of the upcoming rate period. Specifically, new metrics have been incorporated that directly align with Hydro Ottawa's four key Investment Priorities outlined in the Distribution System Plan. For example:

- For **Growth & Electrification**, which focuses on expanding grid capacity, new measures include tracking incremental system capacity and DER capacity.
- For **Renewing Deteriorating Infrastructure**, which focuses on mitigating reliability risk, new measures include tracking the percentage of assets in poor/very poor condition and those reaching end of life.
- For **Grid Modernization**, which focuses on modernizing the grid to enable the energy transition, new measures include tracking customer participation in non-wires solutions.
- Finally, for **Enhancing Grid Resilience**, which focuses on protection against severe weather and cyber threats, new measures include tracking overall cyber security program health.

3.5.8.2 Capital Expenditure Reporting

To ensure continued transparency and accountability in the execution of its capital programs, Hydro Ottawa proposes to provide annual capital expenditures reports in the same form and manner as the current 2021-2025 annual Custom IR Annual Reports. These reports provide a clear and comprehensive overview of actual gross capital expenditures, broken down by investment category (i.e. System Access, System Renewal and System Service, and General Plant). Presented alongside the approved capital expenditure plans, the annual results enable stakeholders to evaluate the utility's adherence to the capital plan, get insight into the allocation of capital resources and understand the progress of critical infrastructure projects in Hydro Ottawa's service territory.

PROPOSED ANNUAL REPORTING - 2026-2030

1. INTRODUCTION

An area of enduring emphasis under the Renewed Regulatory Framework (RRF) is the public reporting by electricity distributors of their performance against the RRF's four categories of performance outcomes: Customer Focus, Operational Effectiveness, Public Policy Responsiveness and Financial Performance.

This emphasis is highlighted, in particular, through the OEB's sustained use of a standardized Electricity Utility Scorecard, which is intended to provide open and transparent reporting and monitoring of individual distributors' performance, and allow for comparisons across the sector. For more information on Hydro Ottawa's recent performance trends relative to the metrics and targets established under the Electricity Utility Scorecard, please see Attachment 1-3-3(B) - Electricity Utility Scorecard Benchmarking Analysis. During the 2026-2030 period, the utility intends to maintain its delivery of a high level of performance against the OEB's scorecard, consistent with historical results.

As outlined in Schedule 1-3-1 - Rate Setting Framework, Hydro Ottawa is proposing to set rates for the 2026-2030 period through the Custom Incentive Rate-Setting (Custom IR) method. In its *Handbook for Utility Rate Applications* issued in 2016, the OEB states the following in relation to specific performance reporting considerations for utilities under the Custom IR option:

> *"**Performance Metrics:** The OEB has established a scorecard for electricity distributors, however, additional performance metrics should also be proposed so that expected outcomes can be monitored. All other utilities must propose a comprehensive scorecard that is informed by the scorecard for electricity distributors, but specifically includes other*

performance metrics aligned to the outcomes identified in the application. This is required for both Custom IR and cost of service rate applications."[1]

In step with OEB requirements, Hydro Ottawa committed to the following annual reporting obligations as part of its 2021-2025 Custom IR rate plan:[2]

- Custom Performance Scorecard, consisting of 26 measures which track performance and continuous improvement across customer, operational and financial categories, and which are not included in any other reporting mechanisms.

- Annual updates on the progress of capital spending in the following categories:
    - System Access;
    - System Service and System Renewal; and
    - General Plant.

- A Performance Outcomes Accountability Mechanism (POAM)

The annual reporting over the course of the current rate plan, as well as the previous Custom IR term (2016-2020), has been instructive and beneficial for Hydro Ottawa from a continuous improvement perspective. It has supported the ongoing focus the utility has on aligning its operations with the objectives and outcomes underpinning the RRF. In addition, it has served as a mechanism for Hydro Ottawa to monitor and meet the evolving expectations of the OEB as they relate to electricity distributor performance. For example, the use of unit cost metrics in the 2021-2025 Custom Performance Scorecard assisted the utility in preparing effectively for the OEB's implementation of Activity and Program-based Benchmarking. In addition, the reporting regime

[1] OEB, *Handbook for Utility Rate Applications* (October 13, 2016), page 26.
[2] Copies of the annual Custom Incentive Reports submitted by Hydro Ottawa to the OEB during its current rate term are available on the utility's website: https://hydroottawa.com/en/about-us/regulatory-affairs/custom-incentive-reports.

works to foster greater trust with customers, stakeholders and the utility's shareholder, as Hydro Ottawa has been able to draw attention to the transparency and accountability inherent in its reporting, and its commitment to responsible stewardship of ratepayer funds. The reporting obligations have also aligned with Hydro Ottawa's culture of data-driven decision-making.

Building on the robust foundation that Hydro Ottawa has established in previous rate cycles for transparent and meaningful performance reporting on outcomes that are valued by customers, in this Schedule Hydro Ottawa outlines annual performance reporting which the utility is proposing for the upcoming five-year rate term. Consistent with the RRF, these reporting provisions will provide the OEB, customers and other stakeholders with the opportunity to monitor and understand diverse aspects of Hydro Ottawa's performance, and demonstrate the utility's accountability in transparently communicating the outcomes achieved under its performance management framework.

The proposed performance reporting framework comprises two essential elements: (1) a Custom Performance Scorecard and (2) updates on capital spending in key programs.

As part of Hydro Ottawa's rate framework, a new unique performance mechanism to replace the POAM is being proposed. With consideration of the recent announcement by the OEB to develop and implement Performance Incentive Mechanisms (PIMs) for rate-regulated utilities, as part of its review of utility remuneration models,[3] Hydro Ottawa is proposing an earning sharing mechanism that leans on the OEB's Pacific Economics Group (PEG) model in establishing remuneration benefits. Under the OEB's timeline, a final framework for the implementation of PIMs for electricity distributors is set to be issued in Fall 2025.[4] Please see Schedule 1-3-1 - Rate Setting Framework for more details on Hydro Ottawa's proposed earning sharing mechanism.

[3] Ontario Energy Board,*Advancing Performance-based Rate Regulation* (EB-2024-0129).
[4] Ontario Energy Board,*Advancing Performance-based Rate Regulation* (EB-2024-0129). Stakeholder Meeting Presentation (November 19, 2024), page 44.

2. CUSTOM PERFORMANCE SCORECARD

Hydro Ottawa is proposing to include 22 measures in its Custom Performance Scorecard for the 2026-2030 rate term. These measures will track performance and continuous improvement across all of the OEB's categories of performance outcomes.

When combined with the measures contained in the Electricity Utility Scorecard, this amounts to a total of 43 outcomes to be monitored annually as part of the utility's 2026-2030 Custom IR plan.

The establishment of targets for individual measures (where appropriate) has been informed by recent historical data. With a few exceptions, it is generally Hydro Ottawa's intent for the targets to be assessed as five-year targets, stretching over the duration of the 2026-2030 rate period. Where possible and appropriate, the utility has provided specific, quantitative targets for particular measures. As Hydro Ottawa progresses through each year of its rate term, it will continue to assess the feasibility of setting annual targets for other measures.

Hydro Ottawa's proposed Custom Performance Scorecard is presented in Table 1 below.

Table 1 - 2026-2030 Custom Performance Scorecard Measures

RRF Outcome	OEB Reporting Category	Hydro Ottawa Custom Measures	Target
Customer Focus	Customer Satisfaction	Contact Centre Satisfaction – Transactional Feedback	85%
		Percentage of Online Billing Accounts	80%
		Customer Participation in Non-Wires Solutions	Monitor
Operational Effectiveness	Safety	All Injury Frequency Rate	Reduce
		Lost Workday Severity Rate	Reduce
	System Reliability & Resilience	Percentage of Distribution Assets in Poor/Very Poor Condition	Monitor
		Percentage of Distribution Assets Reaching End of Life	≤65%
		Feeders Experiencing Multiple Sustained Interruptions	≤10
		Worst Performing Feeders	≤6
		Station Load Index (4 or 5)	0
		Incremental System Capacity	577 MVA
		Distributed Energy Resource Capacity	Monitor
	Cyber Security Readiness	Cyber Security Program Health	Green
	Cost Control	Productive Time	Maintain
		Labour Allocation	Maintain
		OM&A per Customer	Monitor
Public Policy Responsiveness	Environment	Scope 1 Greenhouse Gas Emissions	Reduce
		Scope 2 Greenhouse Gas Emissions	Monitor
		Annual Oil Spills & Costs of Remediation	Reduce
		Non-Hazardous Waste Diversion Rate	Maintain
		Percentage of Green Suppliers	Maintain
Financial Performance	Financial Metrics	Bad Debt as a Percentage of Total Electricity Revenue	Monitor

2.1. DESCRIPTION AND RATIONALE FOR CUSTOM PERFORMANCE SCORECARD MEASURES

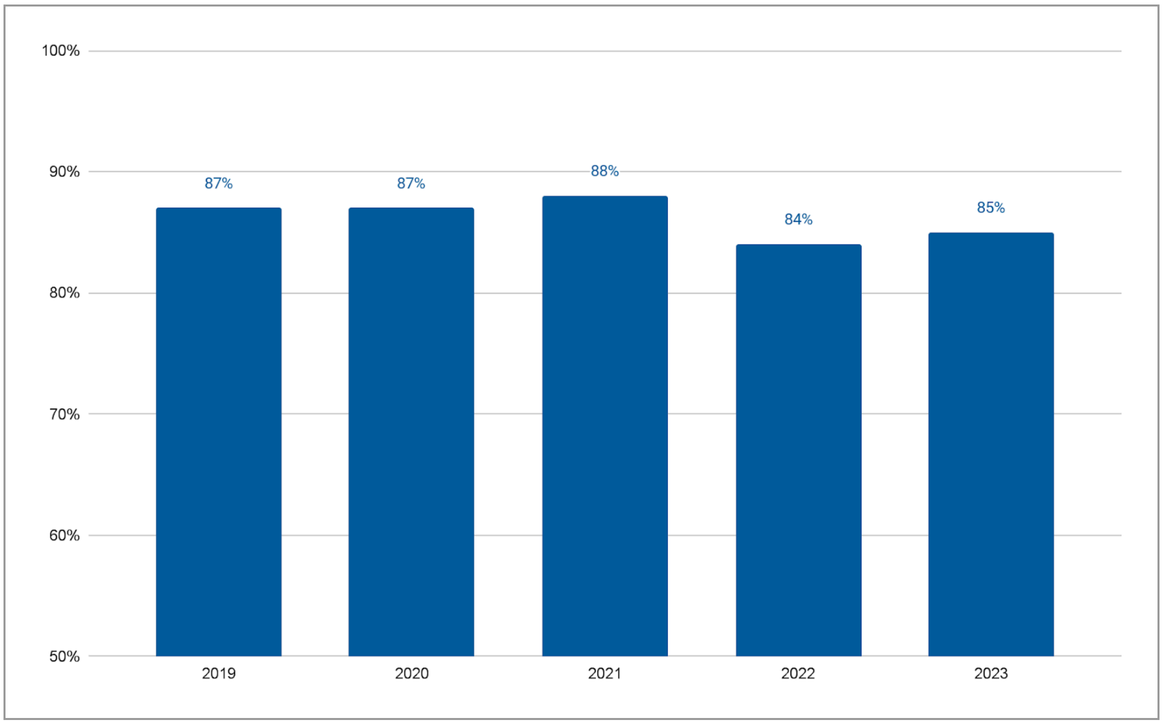
To ensure that the OEB, customers, other stakeholders and Hydro Ottawa are aligned in their understanding of the nature of the Custom Performance Scorecard measures that are proposed, the following section provides a detailed description of each performance metric, accompanied by historical data (where available), along with the rationale for the metric's inclusion and its corresponding target (as applicable).

2.1.1. Contact Centre Satisfaction - Transactional Feedback

This metric measures the level of satisfaction expressed by customers with the service received from Hydro Ottawa's Contact Centre and encompasses customer interactions through phone, email and web chat channels. With approximately 18,000 unique customer interactions every month, the Contact Centre is a critical point of contact between the utility and its customers, who reach out to the Contact Centre for a variety of needs, inquiries and services. Ensuring a positive experience in all communications with the Contact Centre is a fundamental imperative and is a basic litmus test for customers when it comes to the utility's credibility and trustworthiness. Given the essential role that the Contact Centre plays on the front lines of customer experience, Hydro Ottawa utilizes post-transactional surveys to gauge customers' satisfaction levels with the service they received. For more information on the scope of these surveys and how they are carried out, see Schedule 1-4-1 - Customer Engagement Ongoing.

Figure 1 illustrates the five-year historical baseline for Contact Centre Satisfaction.

Figure 1 - 2019-2023 Contact Centre Satisfaction Levels



For the 2026-2030 rate term, Hydro Ottawa's target is to maintain Contact Centre satisfaction at 85%, consistent with historical performance. This target reflects the utility's commitment to providing consistent service quality in a dynamic environment. Maintaining this level requires ongoing adaptation, as customer expectations for efficient service continue to rise, impacting expectations across all service channels. The utility is experiencing growth in its customer base and increasing complexity of customer inquiries due to interest in electrified technologies and services such as solar generation, heat pumps, storage and electric vehicles.

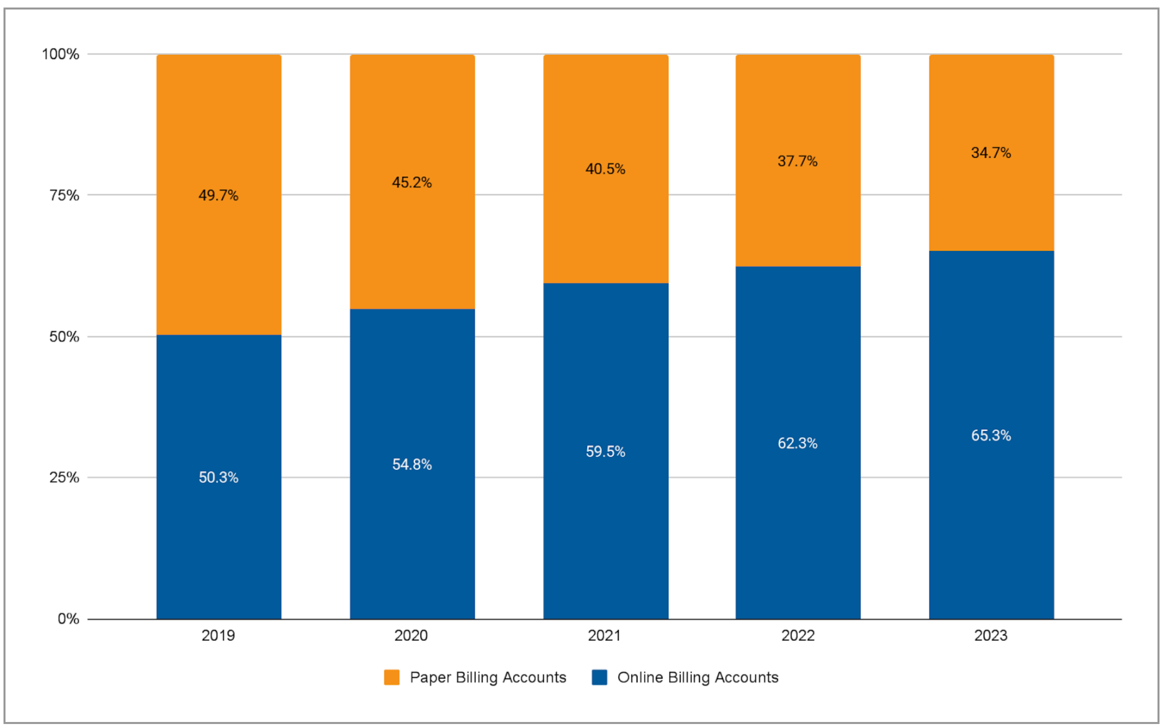
Hydro Ottawa is confident that the planned implementation of a cloud-based Contact Centre solution prior to the conclusion of its current rate term will enable sustained satisfaction levels, with new scaling capabilities to accommodate surges in the number of customer interactions during severe weather events, as well as other value-added features such as omnichannel support, expanded self-serve through artificial intelligence (AI), and more intuitive interfaces for agents and supervisors.

2.1.2. Percentage of Online Billing Accounts

This metric measures the number of customers who are registered to receive their bills electronically, relative to Hydro Ottawa's total customer base.

Figure 2 identifies the percentage of customers enrolled in online billing over the 2019-2023 period.

Figure 2 - 2019-2023 Annual Percentage of Online Billing Customers



Hydro Ottawa has prided itself on being an industry leader in supporting and facilitating greater customer adoption of online billing. The uptick in the percentage of online billing accounts from 2019 to 2023 attests to the sustained emphasis which the utility has placed on this effort, with adoption increasing from 50% to 65% over that timeframe. Online billing provides numerous benefits to customers and Hydro Ottawa alike. For a more detailed examination of those benefits and the actions taken by the utility in recent years to maximize them, please refer to Section 3.2.2 in Schedule 1-3-4 - Facilitating Innovation and Continuous Improvement.

Online billing is well-suited to inclusion in Hydro Ottawa's Custom Performance Scorecard, in light of growing customer expectations for easy and convenient service through digital channels and platforms. It is likewise in step with the focal points of the utility's Customer Strategy, as detailed in Attachment 1-4-1(B) - Customer Experience Strategy, as well as Attachment 1-3-4(B) - Digital Strategy. Moreover, Hydro Ottawa views its inclusion as an important accountability measure, to ensure there is no backsliding on what has been an important area of focus for the utility and a valued service for customers.

In 2025, the utility is set to undertake a dedicated campaign to further drive customer enrollment in online billing, with the ambitious goal of reaching the 80% threshold by the end of the year. For the upcoming five-year rate term, Hydro Ottawa's objective will be to maintain its percentage of online billing accounts at this industry-leading level.

2.1.3. Customer Participation in Non-Wires Solutions

This metric captures elements of customer participation in Non-Wires Solutions (NWS) which are set to be delivered by Hydro Ottawa during the 2026-2030 rate term.

In its NWS guidelines for electricity distributors, the OEB defines NWS as solutions that reduce instantaneous electricity demand (measured in kilowatts or kilovolt-amperes) on a utility's distribution system, or a portion of that system, or which reduce overall electricity consumption (measured in kilowatt-hours).[5] The guidelines specify the following examples of NWS that can be considered by distributors for the purpose of addressing system needs: energy efficiency programs; demand response programs; programs that improve the efficiency of the distribution system and reduce distribution losses; energy storage (in front of or behind the meter); and generation (in front of or behind the meter).[6]

As part of its 2026-2030 rate plan, Hydro Ottawa is proposing two main initiatives. The first is a "Non-Wires Customer Solutions Program" which will be made available to customers and will advance specific objectives, including unlocking short-term capacity in targeted areas by engaging and empowering customers to reduce peak demand. This program (comprising an initial portfolio of four individual programs under evaluation) will explore collaborative opportunities with the Independent Electricity System Operator (IESO) where feasible. Although it is initially focused on a targeted area of Hydro Ottawa's service territory that is capacity constrained, the potential exists for further deployment across the utility's network as needs arise and where it is economically feasible to do so. Further information on Hydro Ottawa's Non-Wires Customer Solutions Program can be found in Section 9.2 of Schedule 2-5-4 - Asset Management Process.

The second initiative is a federally-funded project titled "Ottawa Distributed Energy Resources Accelerator" (ODERA). It is aimed at enabling distributed energy resources (DERs) and supporting grid modernization and innovation by exploring system integrations leveraging demand-side solutions. For additional information on ODERA, please see Section 3 of Schedule 2-5-8 DSP - System Service Investments.

[5] OEB, *Non-Wires Solutions Guidelines for Electricity Distributors* (EB-2024-0118), March 28, 2024, page 6.
[6] Ibid.

The increasing prevalence of DERs/NWS is a significant trend and change driver impacting the electricity sector broadly as well as Hydro Ottawa's specific operational environment, as discussed throughout this Application (e.g. Schedule 1-2-3 - Business Plan). The utility acknowledges and embraces growing customer interest in these resources and solutions, and is committed to enabling their increased use and deployment across customer classes – hence the inclusion of this metric in the Custom Performance Scorecard and under the category of Customer Satisfaction.

It is Hydro Ottawa's intent to include three elements in its annual reporting against this metric: number of customers by class, percentage and total megawatts (MW) which participate in NWS led by the utility.

In light of the fact that the NWS programs contemplated for the 2026-2030 rate term are new, Hydro Ottawa is not able to present any historical baseline data for this metric. Similarly, in lieu of a quantitative or qualitative target, the utility is proposing to monitor its performance, with the accompanying commitment to adjust action as necessary throughout the upcoming rate period to ensure effective design and delivery of these programs.

2.1.4. All Injury Frequency Rate

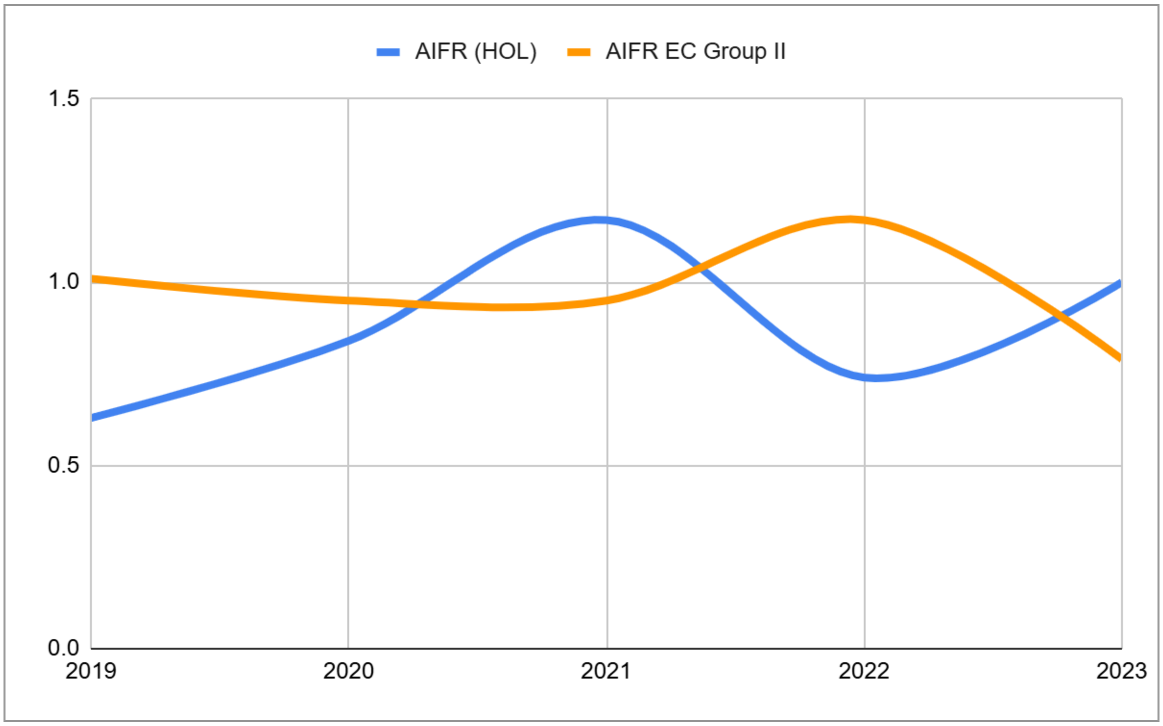
Ensuring employee and public safety is the top priority for Hydro Ottawa when carrying out its business activity and operations. The safety risks which employees must manage on a daily basis are numerous and vary widely in scope. For example, field crews perform maintenance and service work at heights in close proximity to (or in some instances, directly on) energized circuits. Whether in an overhead or underground context, they likewise experience sustained exposure to equipment and infrastructure which is at risk of failure as a result of condition or age. Meanwhile, storm restoration efforts involve work in exceptionally hazardous circumstances and present unique public safety challenges, as does working along roadways and near traffic. Similarly, non-field workers encounter their share of workplace risks, ranging from the movement of equipment and hazardous substances to the operation and maintenance of vehicles.

Accordingly, the utility affirms and recognizes the need for inclusion of safety-related metrics in its annual reporting framework for its 2026-2030 rate plan. To this end, the following two metrics are included in the Custom Performance Scorecard: All Injury Frequency Rate (AIFR) and Lost Workday Severity Rate (the latter of which is described in section 2.1.5 below).

AIFR measures the number of work-related injuries and illnesses sustained by employees, multiplied by 200,000 hours, and divided by the total number of actual hours worked. As shown in Figure 3, Hydro Ottawa has maintained positive performance relative to its industry peers, with injury frequency rates typically at or below the Electricity Canada Group II averages from 2019-2023.[7]

[7] Group II within Electricity Canada's taxonomy consists of utility member companies with 300 to 1,500 employees.

Figure 3 - 2019-2023 Hydro Ottawa vs. EC Group II AIFR Results



Hydro Ottawa employs a multi-layered approach to safeguarding employee safety.

First and foremost is a corporate Occupational Health, Safety, and Environmental (OHSE) Accountability Program, which details specific OHSE activities required by each party in the workplace, in addition to their job-specific duties. Further strengthening the internal responsibility and accountability model is the OHSE Management Framework – a structured system of management review, discussion, and recommendation involving employees from the Supervisor to the Executive levels. To ensure its OHSE programs are current, effective, well-managed and documented, and focused on continuous improvement, the utility also administers an integrated OHSE management system that is third-party audited and registered to the ISO 14001

Environmental Management Systems Standard, and the ISO 45001 Occupational Health and Safety Management Systems Standard. What's more, the utility maintains a multi-workplace Joint Health and Safety Committee (JHSC) which functions within a mandate established by the Terms of Reference approved by the Ministry of Labour, Immigration, Training and Skills Development. Hydro Ottawa likewise provides ongoing training to all employees around safe work practices. Over the last five years, annual training averaged 42 hours for trades employees (whose work environments are inherently hazardous), and 18 hours for other employees. Finally, safety-related information is a regular feature of corporate communications to employees, including the utility's intranet postings and weekly internal newsletter. Bespoke bulletins and dedicated campaigns on specific safety issues are regularly circulated and rolled out, such as an initiative focused on Safety Excellence that was launched in late 2024.

For additional information on Hydro Ottawa's safety programs, see Attachment 4-1-3(E) - Health, Safety and Environmental Compliance,Sustainability and Business Continuity Management.

Looking ahead to the upcoming five-year rate term, the utility anticipates a need for heightened vigilance and innovative approaches to ensuring employee safety, on account of a unique confluence of factors and pressures: hiring and onboarding a large complement of new employees; workforce demographics signaling a lower average employee age and length of service; the workload associated with a record-high capital investment program; shifts in infrastructure design, commissioning, use, operation and maintenance induced by increased electrification; and the prospects of sustained severe weather patterns.

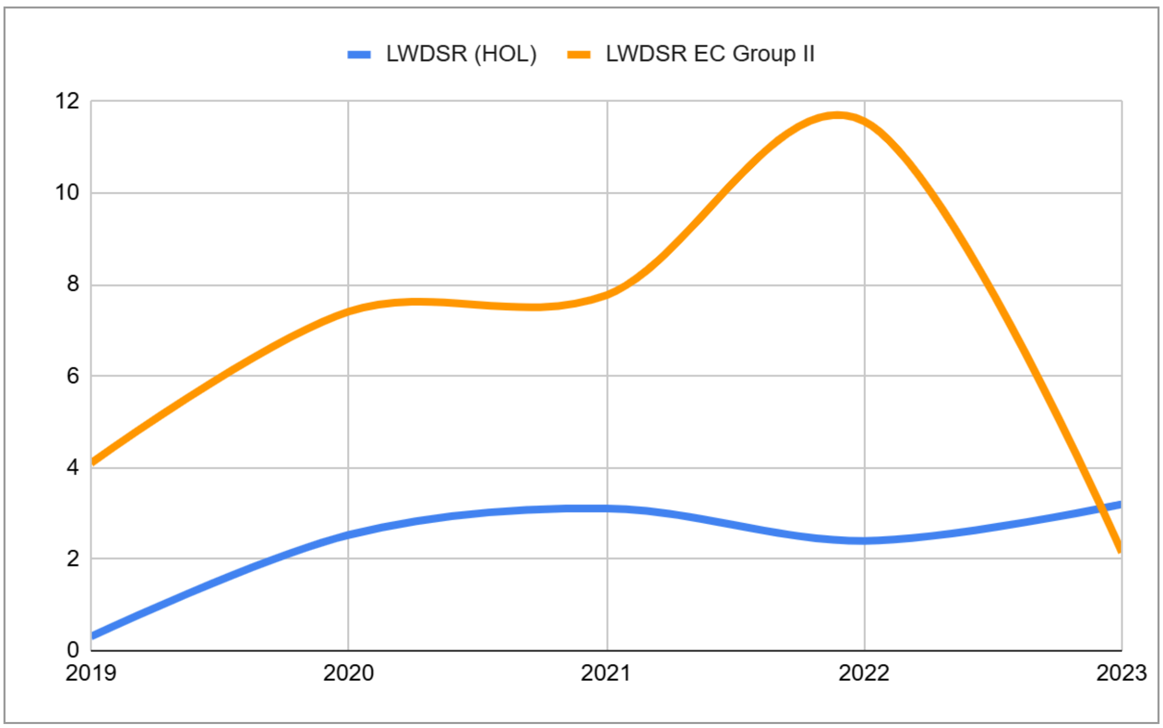
In step with its safety commitments and culture, Hydro Ottawa's goal is to reduce its AIFR score over the 2026-2030 period, and maintain AIFR performance that meets or exceeds industry benchmarks.

2.1.5. Lost Workday Severity Rate

Further to the foregoing discussion in section 2.1.4, the second safety-related metric included in Hydro Ottawa's Custom Performance Scorecard is Lost Workday Severity Rate (LWDSR). This metric measures the number of workdays lost due to work-related injuries and illnesses, multiplied by 200,000 hours, and divided by the total number of actual hours worked.

Figure 4 outlines Hydro Ottawa's LWDSR performance over the past five years and juxtaposes it with the average results from its industry peers within Electricity Canada's membership.

Figure 4 - 2019-2023 Hydro Ottawa vs. EC Group II Lost Workday Severity Rate Results



Consistent with the information and rationale set forth in section 2.1.4, Hydro Ottawa is targeting a reduced LWDSR score over the course of the upcoming five-year rate term.

2.1.6. Percentage of Distribution Assets in Poor/Very Poor Condition

As an electricity distributor, Hydro Ottawa manages distribution assets in four main systems: Stations, Overhead, Underground and Metering. The utility uses health index scores to rate the condition of its assets and understand any requirements for intervention. Within this framework, asset-specific parameters are employed for calculating the health index score, and are tailored to reflect the specific degradation mechanisms and failure modes relevant to each asset class. This approach maximizes the precision and granularity of condition assessments.

The health index is an indicator of an asset's condition and remaining life and is assigned a score from 100% to 0%. Under this index, the condition of "Poor" is described as "widespread serious deterioration" and is assigned a band of 30-50%; "Very Poor", as "extensive serious deterioration" and an accompanying band of 0-30%. More information on Hydro Ottawa's formal process for assessing the condition of its assets, as well as the demographics and condition profile for major asset classes, is available in Schedule 2-5-4 - Asset Management Process.

Based on the overall condition profile of the utility's assets, approximately 6% are in Poor or Very Poor condition. Without intervention, this figure is set to rise to approximately 10% by 2030. Accordingly, the utility has formulated a risk-based System Renewal investment plan to proactively address assets posing the greatest risk to the distribution grid. For further detail on this plan, see Schedule 2-5-7 - System Renewal Investments.

To ensure accountability and transparency in the overall monitoring and execution of its System Renewal plan for the 2026-2030 rate term, Hydro Ottawa is proposing to include a metric in its Custom Performance Scorecard tracking the percentage of assets in poor or very poor condition.

Consistent with the process outlined in Schedule 2-5-4 - Asset Management Process, Hydro Ottawa will monitor asset performance indicators and undertake maintenance or replacement activities, as needed.

2.1.7. Percentage of Distribution Assets Reaching End of Life

To complement the foregoing metric, which is focused on a specific condition profile of distribution assets, Hydro Ottawa is including a companion metric which is focused on asset age.

Historically, the utility's approach to asset management relied heavily on asset age and probability of failure to determine investment needs at the program level for system renewal. More recently, the utility has enhanced its asset management framework to account for a more comprehensive range of risk factors and optimized intervention strategies. As part of this effort, Hydro Ottawa has developed new insights into the typical lifespans of various asset types. These values provide a firm basis for making informed asset renewal and replacement decisions, ensuring that assets are not prematurely retired (leading to unnecessary capital expenditure) nor kept in service beyond their safe and reliable operational lifespan (which could increase the risk of failures and service disruptions). For further information, see Section 8 in Schedule 2-5-4 DSP - Asset Management Process.

With respect to Hydro Ottawa's overall asset demographics, approximately 54% of the asset population has reached its typical useful life, posing a higher risk of failure. In the absence of necessary interventions, this proportion is set to increase to 67% by 2030.

As an additional means of instilling confidence in its commitment to accountability and transparency in tracking the progress of its System Renewal investments, Hydro Ottawa is including the percentage of distribution assets reaching end of life as a metric in its Custom Performance Scorecard, with an accompanying five-year target of ≤ 65%.

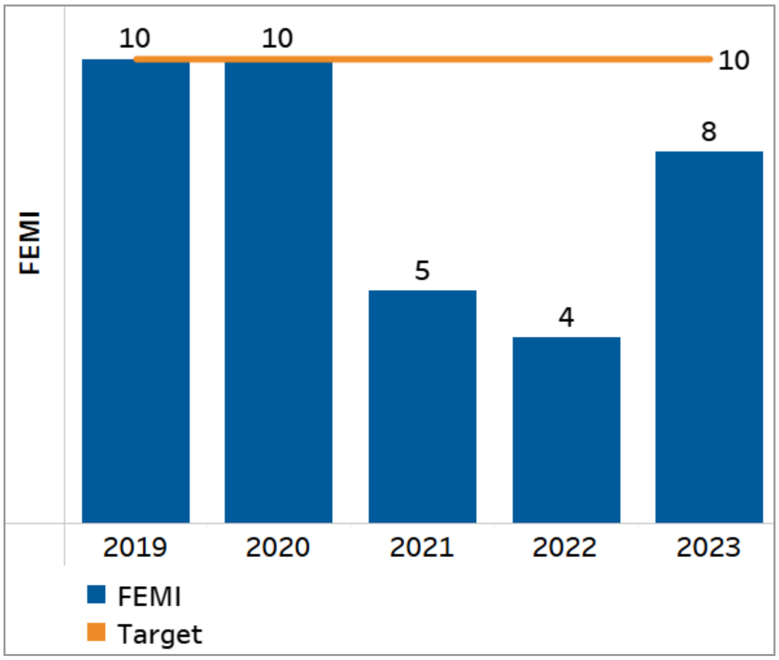
2.1.8. Feeders Experiencing Multiple Sustained Interruptions

Feeders Experiencing Multiple Sustained Interruptions (FEMI) is a system reliability performance metric that is defined as the number of distribution feeders experiencing sustained outages greater than one minute in duration over a defined period.

FEMI is an essential metric serving multiple purposes: identifying underperforming feeders which may require inspection, maintenance or upgrades; supporting the prioritization of reliability investments; reducing outage frequency on targeted feeders, thereby enhancing customer service and satisfaction; providing insights into regional variations in service quality; and facilitating compliance with service standards. On a monthly basis, Hydro Ottawa tracks and evaluates feeders that affect overall FEMI performance. This results in the identification of projects to improve the reliability of these parts of the distribution system. To ensure accuracy and relevance, FEMI excludes Scheduled Outages, Loss of Supply and Major Event Days. These exclusions allow for a more focused analysis of system performance and its impact on customers.

Figure 5 shows the recent historical performance for FEMI.

Figure 5 - 2019-2023 FEMI Reliability Performance



Hydro Ottawa achieved its targets for FEMI during the 2019-2023 period. For the upcoming rate term, the utility is targeting the maintenance of a FEMI value less than or equal to 10.

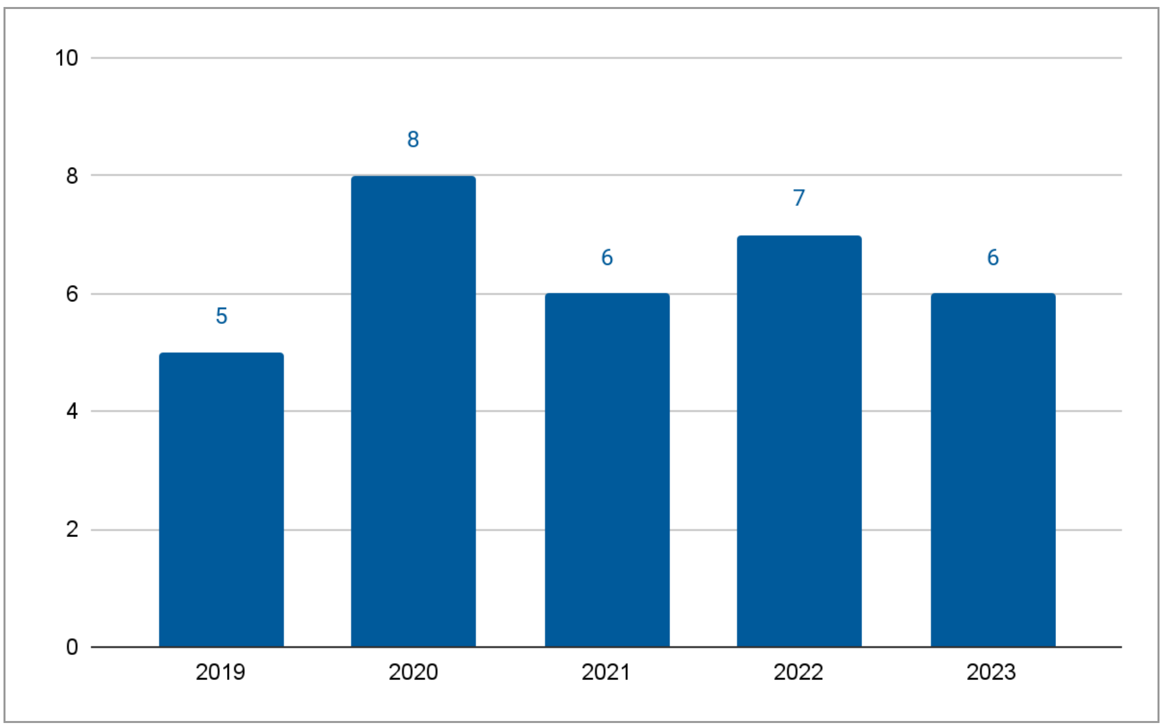
2.1.9. Worst Performing Feeders

This metric pertains to feeders whose reliability performance correlates to the lowest levels captured within predefined criteria.

Hydro Ottawa's methodology for classifying Worst Performing Feeders involves a threshold-based approach based on a Feeder Performance Index (FPI) score. This score encompasses several performance- and outage-related factors, with a higher score indicating worse performance. For a given feeder, there may be various causes contributing to a high FPI score (e.g. condition, equipment failure, age, adverse weather or environment, foreign interference). Under the utility's methodology, a feeder is considered "worst performing" if its FPI score falls below 30, which indicates “Very Poor” performance. Similar to FEMI, Worst Performing Feeder is an effective metric for prioritizing maintenance activity and capital upgrades, based on the results of investigations and root cause analysis.

Figure 6 below provides five-year historical information for the number of Worst Performing Feeders on Hydro Ottawa’s systems.

Figure 6 - 2019-2023 Worst Performing Feeders



Based on the five-year average for 2019 to 2023, Hydro Ottawa's annual target for the 2026-2030 period is to not exceed six feeders classified as worst performing.

This metric is one of three included in the Custom Performance Scorecard (along with Station Load Index and Incremental System Capacity) that likewise appear in the specific performance measurement framework within the utility's 2026-2030 DSP. For further details on these performance measurements, see Section 6 in Schedule 2-5-3 - Performance Measurement for Continuous Improvement. In light of the central role that the DSP plays in Hydro Ottawa's rate plan, it is appropriate to ensure that there is some overlap of key performance indicators included in its specific framework and the public reporting obligations which the utility will assume for the upcoming rate period. The three metrics in question were selected on account of their linkages to core priorities in Hydro Ottawa's investment plans, such as deteriorating infrastructure, growth and electrification, and of their correlation to major investments within the System Renewal and System Service categories.

2.1.10. Station Load Index (4 or 5)

Station Load Index (SLI) measures the ratio of peak load to capacity rating for a substation. It is a critical parameter for determining the current utilization of the substation's capacity and planning future upgrades or expansions. SLI is essential to reliability and service quality, capacity planning, load management and investment prioritization.

Section 8.4.1 of Schedule 2-5-4 - Asset Management Process provides a detailed description of SLI and the number of stations in Hydro Ottawa's system which have recently scored in the upper tiers of the index (i.e. SLI 4 or 5), signifying operations near or in exceedance of the station's rated capacity, and thus posing a risk to reliability.

For this specific metric, Hydro Ottawa is proposing a five-year target – i.e. by the end of 2030, zero stations will fall within the highest-risk segments of the index. This target is informed by 2023 results, in which the highest-risk classification applied to nine stations.

2.1.11. Incremental System Capacity

This metric measures the increase in system capacity achieved through planned upgrades to distribution infrastructure, as well as through the use of non-wire alternatives.[8]

A central focus for Hydro Ottawa's 2026-2030 rate application – and its DSP, in particular – is the pressing need for additional capacity on the utility's grid. Capacity constraints are the single largest driver of proposed capital investments for the upcoming rate period, representing 25% of all expenditures. Over the coming rate term, the utility's plans for providing the new levels of capacity required in order to accommodate unprecedented (and in many instances, electrification-driven) growth and demand include the completion of six new station projects and three station upgrades, construction of new distribution circuits, upgrades to existing limiting station cables and the targeted installation of BESS units. For further details, please see Schedule 2-5-8 - System Service Investments.

Capacity investments are one of the top priorities of Hydro Ottawa's overall rate plan, especially in light of the direct linkage between the addition of system capacity and the utility's ability to enable greater electrification and customer adoption of electrified technologies. It is therefore appropriate for the Custom Performance Scorecard to include a metric holding the utility accountable for delivering on this critical objective. Given the scope and nature of its planned investments, the utility is proposing a target of 577 megavolt-amperes (MVA) in Incremental System Capacity by 2030 (i.e. five-year target).[9]

2.1.12. Distributed Energy Resource Capacity

This metric measures the total capacity of DERs which are connected to Hydro Ottawa's distribution grid. A formal definition of DERs provided by the IESO is the following:

[8] Of note, in this context "incremental system capacity" is understood as the total new capacity which is added to Hydro Ottawa's distribution grid. The capacity increase is on a gross, not net, basis.
[9] The target only encompasses capacity additions or upgrades associated with assets that are owned by Hydro Ottawa.

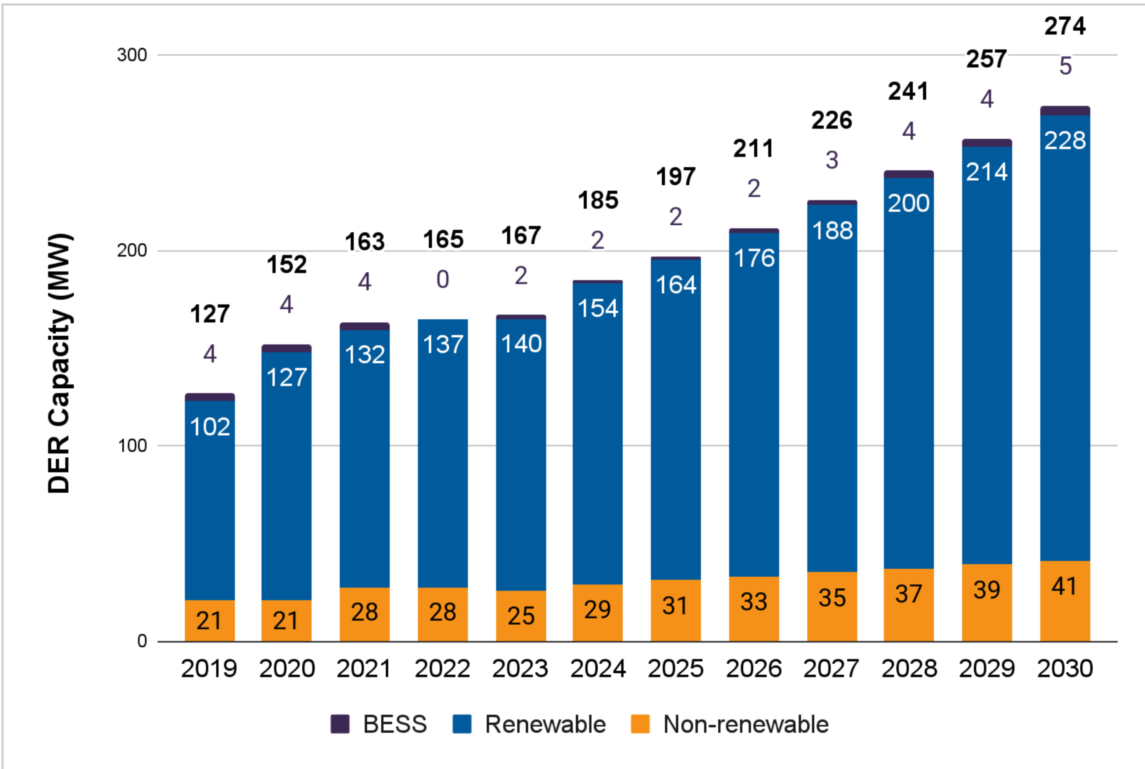
> *"Electricity resources that generate electrical energy, store and discharge electrical energy, or dynamically modify electric load, and that are connected directly to an electric distribution system or to an end-use customer's premises within a distribution system. They can include but not be limited to solar photovoltaics (PV), combined heat and power plants, backup generators, energy storage, electric vehicles, and consumer devices that can reduce or increase electricity use on demand."*[10]

The growing proliferation of DERs is among the key trends driving dynamic change in the operating environment of electricity distributors in Ontario, including Hydro Ottawa. The utility has witnessed a sustained rise in the popularity of DERs across its customer base, with different customer segments pursuing DER solutions for different reasons: offsetting electricity costs, ensuring back-up supply, sourcing power from cleaner forms of generation, and/or selling electricity back into the grid. Over the last five years, as shown in Figure 7 below, there was a 30% increase in the total capacity of DERs connected to the utility's grid, with growth largely attributable to new renewable generation.

As part of its system forecasting and planning activities for the 2026-2030 period, Hydro Ottawa has prepared a forecast of the expected increase in DER capacity for the upcoming rate term. As Figure 7 below illustrates, the utility is anticipating another 30% increase in installed DER capacity, with renewable generation once again comprising the bulk of the expansion.

[10] IESO Transmission-Distribution Coordination Working Group (TDWG), Glossary of Working Terms and Definitions, Revised Draft (May 2024).

Figure 7 - Historical and Forecasted DER Capacity



For more information on how DERs are integrated into Hydro Ottawa's assessment of system capacity, please see Section 9 of Schedule 2-5-4 - Asset Management Process.

Hydro Ottawa is a strong proponent of the value that DERs can provide to distributors and customers alike. Through its corporate strategy, the utility has adopted a favourable outlook on DERs, viewing them as a valuable resource for helping utilities to fulfill their essential responsibilities of maintaining and optimizing grid infrastructure. The utility is committed to enabling the widespread adoption and utilization of DERs, through such actions as connecting customers to available financial incentives, fostering collaborative partnerships and implementing strategic programs. Additional details regarding the specific programs and activities pursued by Hydro Ottawa to support customer adoption of DERs, as well as the positioning of DERs within the utility's Grid Modernization Strategy, are available in Section 2.4 of Schedule 1-4-1 - Customer Engagement Ongoing; Section 5.3 of Attachment 1-4-1(B) - Customer Strategy; Sections 3 and 9 of Schedule 2-5-4 - Asset Management Process; and Section 3 of Schedule 2-5-8 - System Service Investments.

In light of the recent and projected growth of DERs across Hydro Ottawa's service territory, their heightened importance and relevance in the context of an evolving operational landscape, and the utility's goals for enabling greater DER penetration and deployment, it is appropriate to include a metric in the Custom Performance Scorecard tracking the capacity of DER connections. This number will be monitored throughout the duration of the next five-year rate term, with a view towards ensuring Hydro Ottawa is proactive in providing support for customers who are interested in DER adoption. Ultimately, customer choice fuels the demand for DERs and this demand is highly sensitive to policy influences, particularly the availability of funding and incentive programs. Predicting the precise timing, magnitude and likelihood of customer adoption is challenging due to the numerous policy, economic and technological variables at play. Actual growth may deviate from projections if programs, incentives or technologies are introduced or curtailed.

2.1.13. Cyber Security Program Health

This metric assesses the overall maturity, effectiveness and resilience of Hydro Ottawa's cyber security program. It is intended to provide a holistic, high-level view of how well the utility's cyber security policies, controls and practices are implemented, maintained and improved over time.

As the electricity distributor to the capital city of a G7 country and the service provider to a multitude of customers (including governmental and institutional) with unique service quality and data confidentiality needs, Hydro Ottawa understands the responsibility to mitigate cyber security risks and ensure continuous fortification of its cyber security protections.

Hydro Ottawa maintains a formal, highly active cyber security program aimed at safeguarding the integrity, confidentiality and availability of the utility's assets, systems and information. This program is comprised of an evolving set of tools, risk management approaches, technologies, training and best practices designed to protect networks, devices, programs and data from attacks or unauthorized access. Areas of focus within the program include patch management, risk management, asset management, network architecture and security, information and data security, governance, program assessment and audits, awareness and training, incident and crisis management, threat and vulnerability management, insider risk, and third-party and supply chain security.

Among Ontario electricity distributors, Hydro Ottawa was an early implementer of the U.S. National Institute of Standards and Technology cyber security framework, which is widely regarded as a best-in-class standard and which informs much of the Ontario Cyber Security Framework administered by the OEB. Other major cyber security initiatives at the utility in recent years have included the following:

- Assessments of program maturity, gaps and privacy protections;
- Establishment of incident response and managed security services from external third-party experts;
- Regular penetration testing of corporate and operational networks and network segmentation;
- Administration of tabletop exercises for executive management and the Board of Directors;
- Expanded cyber visibility to substations;
- Implementation of formal policies and procedures to address insider threats;

- Sustained engagement and leadership in industry and government partnerships for intelligence sharing and security exercises, including the OEB's Cyber Security Advisory Committee, IESO Cyber Security Forum, Electricity Canada's Security and Infrastructure Protection Committee, Canadian Centre for Cyber Security and North American Electric Reliability Corporation; and
- Creation of new positions and additional resourcing for the program.

Hydro Ottawa recognizes that any measurement of an electricity distributor's cyber security health ought to encompass a combination of qualitative and quantitative indicators, such as compliance and maturity scores, incident response times, percentage of service levels achieved, risk assessment results and security audit findings. For purposes of this metric, the utility is proposing a "Green-Yellow-Red" scoring system (with "Green" as the corresponding target), providing a high-level representation of its cyber security performance, as follows:

- Green (Healthy) – program is effective, mature, and meeting or exceeding targeted outcomes and service levels.
- Yellow (Needs Improvement) – some program gaps or weaknesses exist, but risks are manageable with corrective actions.
- Red (Critical Deficiencies) – program suffers from major weaknesses, exposing the utility to unacceptable levels of risk.

Annual reporting of its Cyber Security Program Health will serve as an effective and innovative complement to the information provided by Hydro Ottawa to the OEB pursuant to Reporting and Record Keeping Requirements (RRRs) regarding cyber security readiness.
For more information on the investments planned by Hydro Ottawa to strengthen its cyber security protections during the 2026-2030 rate term, please see Schedule 2-5-9 - General Plant Investments.

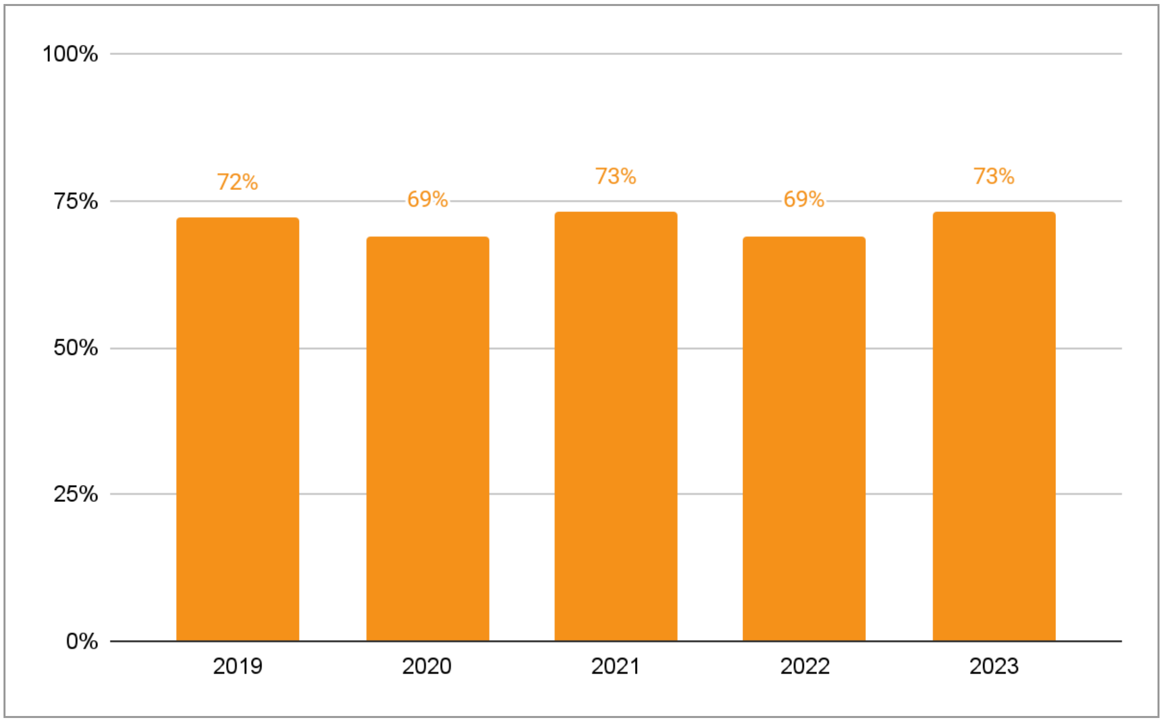
2.1.14. Productive Time

Controlling costs is a fundamental imperative and expectation for electricity distributors under the OEB's RRF. Among other considerations, minimizing price increases and rate impacts consistently ranks as an outcome prioritized by customers. Hydro Ottawa takes seriously its responsibility to maintain downward pressure on costs and recognizes that there are mechanisms which must be incorporated into a Custom IR application to ensure cost control and continuous improvement.

With the purpose of the Custom Performance Scorecard being to align performance metrics with outcomes that are valued by customers, the utility sees merit in including a pair of measures which are explicitly linked to cost control – namely, Productive Time and Labour Allocation. (Labour Allocation is described below in section 2.1.15).

Productive Time measures the total regular hours charged to a work order as a ratio of total regular hours. Five-year historical data for this metric is presented in Figure 8 below.

Figure 8 - 2019-2023 Productive Time



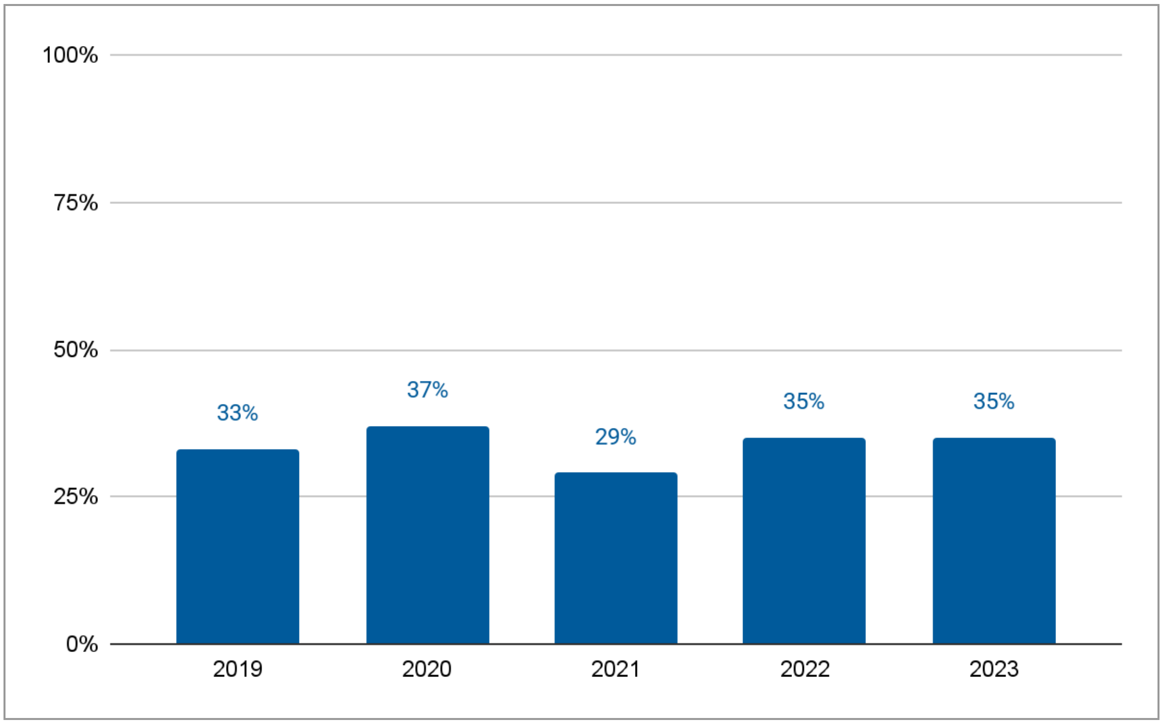
For additional detail, including information on the formula used to calculate Productive Time as well as an interpretation of historical results, please see Section 3 in Schedule 2-5-3 - Performance Measurement for Continuous Improvement. Based on the information set forth therein, Hydro Ottawa is aiming to maintain Productive Time at historical average levels during the 2026-2030 rate period.

2.1.15. Labour Allocation

Together, Labour Allocation and Productive Time (see section 2.1.14 above) serve as the foundation for the utility's evaluation of its labour utilization performance. This data-driven approach facilitates ongoing optimization of workforce deployment and operational efficiency.

Labour Allocation is the amount of labour spent on maintenance and administrative work as a ratio of total productive time. Historical data is provided in Figure 9 below.

Figure 9 - 2019-2023 Labour Allocation



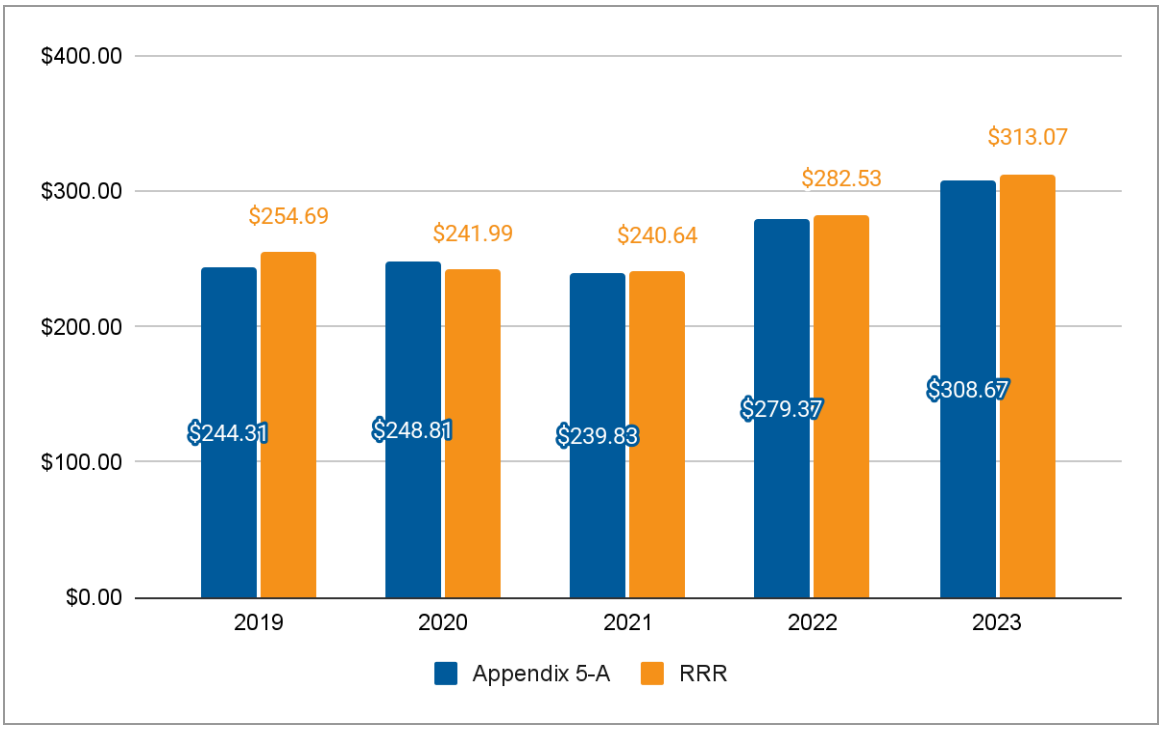
For additional detail on this metric, including the formula for its calculation and an interpretation of historical results, please see Section 3 in Schedule 2-5-3 - Performance Measurement for Continuous Improvement. Based on the information set forth therein, Hydro Ottawa is aiming to maintain Labour Allocation at historical average levels during the 2026-2030 rate period.

2.1.16. OM&A per Customer

This metric is defined as the total amount of operations, maintenance and administration (OM&A) expenditures incurred by Hydro Ottawa (on an annual basis) divided by the total number of customers that the utility serves.

Figure 10 below outlines five-year historical data for OM&A per Customer.

Figure 10 - 2019-2023 OM&A per Customer



The reason for including two different data sets in Figure 10 is that there have been different formulas available for calculating OM&A per customer. In its 2021-2025 Custom Performance Scorecard, Hydro Ottawa adopted the definition of "Total O&M per Customer" that was previously utilized in OEB Appendix 5-A, which was appended to DSPs in distributor rate applications. The Appendix 5-A formula is what the utility has employed (and will continue to employ) for its annual reporting to the OEB, as part of its current rate plan. However, with Appendix 5-A no longer being a component of the Chapter 5 Filing Requirements, the utility has also included OM&A per customer values which are calculated using the methodology under the OEB's RRR requirements. This latter methodology is what Hydro Ottawa will adopt for the 2026-2030 rate term (and is also aligned with the definition of OM&A per customer that is presented in Attachment 1-3-3(D) - Supplemental Industry Benchmarking Analysis).

The measurement of a utility's costs, or a subset of its costs, relative to the overall size of its customer base is a well-established practice and principle for cost control purposes. OM&A per Customer is a metric that will complement the assessment of Hydro Ottawa's total costs per customer, which is included in the OEB's annual Electricity Utility Scorecard.

The utility's proposed OM&A costs for the 2026-2030 rate period are summarized in Schedule 4-1-1 - Operations, Maintenance and Administration Summary. As described therein, these costs are necessary to safely and reliably operate and maintain the distribution grid, provide service levels that are satisfactory to customers, and ensure continued compliance with legislative and regulatory requirements. The annual adjustment of OM&A expenditure levels using a Custom Revenue OM&A Factor (CROF) will serve as an effective mechanism over the upcoming rate term for balancing the needs of the utility (i.e. to recover costs that are prudently incurred) with those of the customer (i.e. to have the assurance of value for money), consistent with the principles of incentive regulation set forth in the RRF.

Hydro Ottawa believes that the inclusion of OM&A per Customer in its annual reporting obligations will serve as an additional means for demonstrating accountability to, and instilling confidence in, customers when it comes to controlling costs, limiting upward pressure on OM&A and minimizing impacts on rates. The utility will monitor its cost control performance over the course of the next five-year rate term and ensure that it is supported through the successful achievement of planned productivity improvements and operational efficiencies.

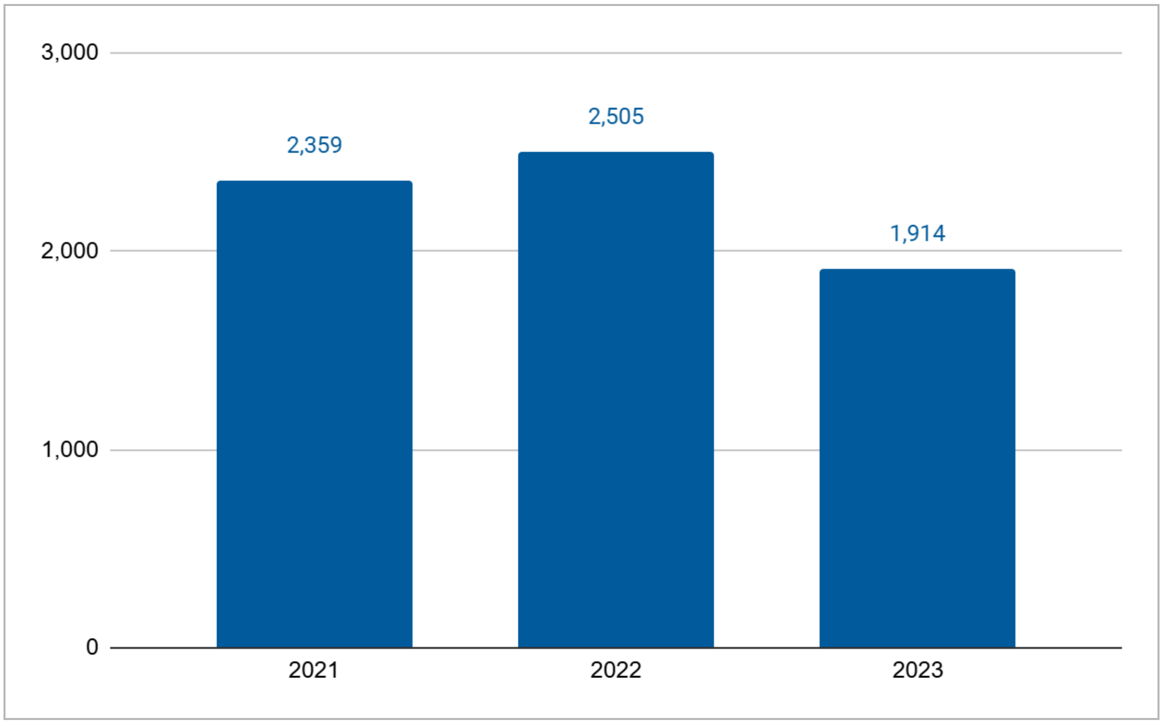
2.1.17. Scope 1 Greenhouse Gas Emissions

This metric measures the greenhouse gas (GHG) emissions that are generated by Hydro Ottawa in carrying out its business activity and operations, and that are produced by sources controlled or owned by the utility. *Canadian Sustainability Disclosure Standard 2: Climate-related Disclosures* defines "Scope 1" as follows: "Direct greenhouse gas emissions that occur from sources that are owned or controlled by an entity."[11] In Hydro Ottawa's case, Scope 1 encompasses emissions from the utility's heating of administrative and operational facilities, its vehicle fleet, and equipment containing sulfur hexafluoride (SF_6), which is used as insulating material.

Figure 11 below provides historical data for the utility's Scope 1 emissions.

[11] In December 2024, the Canadian Sustainable Standards Board issued the first Canadian Sustainability Disclosure Standards. Available: https://www.frascanada.ca/en/cssb/news-listings/csds1_csds2_launch.

Figure 11 - 2021-2023 Scope 1 GHG Emissions (Tonnes)



The inclusion of this metric in the Custom Performance Scorecard is appropriate for several reasons.

First, it aligns well with the RRF's emphasis on Public Policy Responsiveness. Governments at all levels – federal, provincial and municipal – have set targets for the reduction of economy-wide GHG emissions. Hydro Ottawa is particularly attuned to the aspirations of its shareholder, the City of Ottawa, which is seeking 100% reduction of emissions by 2050, relative to 2012 levels.[12] The utility is a committed partner in supporting the City's emissions-reduction goals and recognizes the role it must play in lowering its own corporate emissions in order for municipal objectives to be achieved.

[12] See here for additional information on the City of Ottawa's Climate Change Master Plan: https://ottawa.ca/en/planning-development-and-construction/official-plan-and-master-plans/climate-change-master-plan#section-08062b40-74a0-4521-b619-93451ff489fe.

Secondly, the proposed approach is consistent with the broader trajectory of sustainability reporting in domestic and international capital markets, including the recent finalization of the first sustainability and climate-related disclosures that are tailored to Canadian entities and the Canadian business landscape. At the time of filing, these standardized disclosures are not binding on electricity distributors in Ontario; however, Hydro Ottawa has aimed to maintain leading governance and reporting practices for a company of its size and mandate. The utility is guided by standards applicable to publicly-traded companies, and seeks to meet or exceed them. Accordingly, the utility acknowledges that the public reporting of its emissions as part of its 2026-2030 rate plan would comport with the standards that are being established for corporations more widely in Canada.

Finally, Hydro Ottawa's parent company, Hydro Ottawa Holding Inc., has committed to achieving net-zero operations by 2030. While this a holding company-level goal, as the largest subsidiary within the corporate enterprise, Hydro Ottawa is well-positioned to help contribute meaningfully to its achievement. The obligation for the utility to report annually to the OEB against its own progress in reducing emissions is therefore fitting within a corporate context as well.

In step with the foregoing, Hydro Ottawa intends to lower its Scope 1 GHG emissions profile over the course of its upcoming five-year rate period. Additional information regarding planned action and investments with respect to its work centres and vehicle fleet is available in Sections 10 and 11 of Schedule 2-5-9 - General Plant Investments.

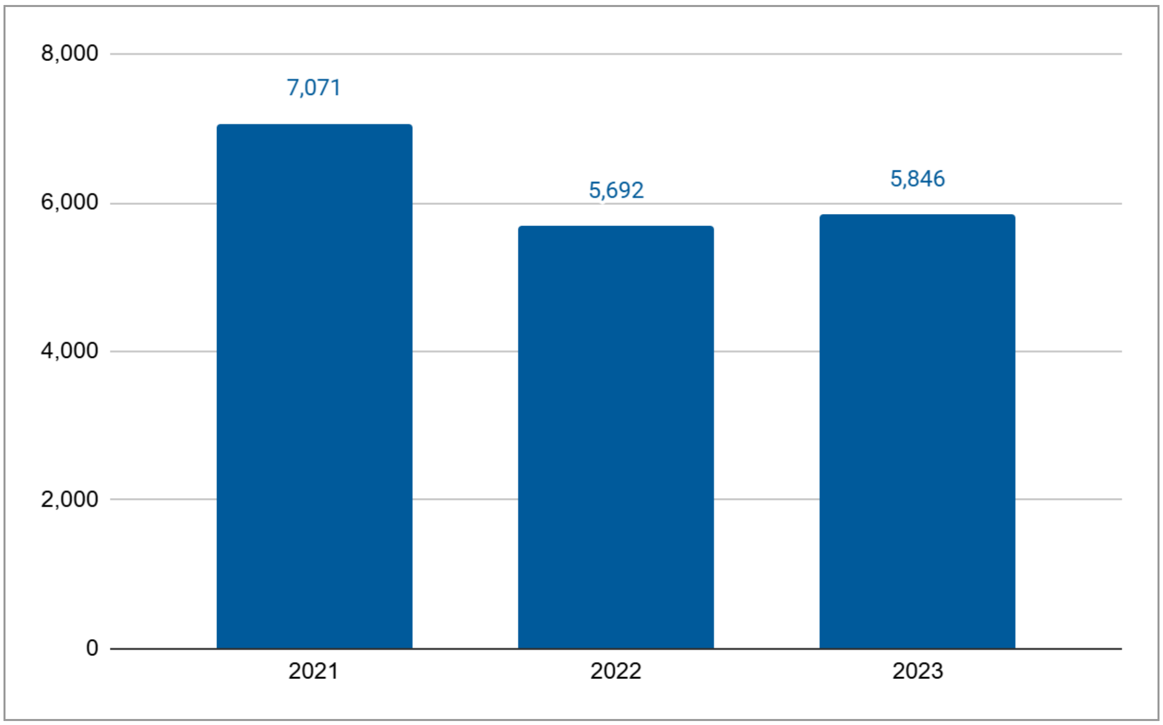
2.1.18. Scope 2 Greenhouse Gas Emissions

Similar to the metric discussed above, this metric measures GHG emissions that are produced as part of the business activity and operations of Hydro Ottawa. Whereas Scope 1 emissions are those over which the utility has direct control, the utility's control over Scope 2 emissions is much more limited. *Canadian Sustainability Disclosure Standard 2: Climate-related Disclosures* defines "Scope

2” as follows: “Indirect greenhouse gas emissions from the generation of purchased or acquired electricity, steam, heating or cooling consumed by an entity. Purchased and acquired electricity is electricity that is purchased or otherwise brought into an entity’s boundary. Scope 2 greenhouse gas emissions physically occur at the facility where electricity is generated.”

Historical data for Hydro Ottawa’s Scope 2 GHG emissions is presented in Figure 12 below.

Figure 12 - 2021-2023 Scope 2 GHG Emissions (Tonnes)



The rationale for the proposed inclusion of Scope 2 GHG emissions mirrors that of the Scope 1 metric. However, a key factor for Scope 2 emissions is the carbon-intensity of the provincial electricity system. As the IESO has noted, from 2025-2030, the emissions profile of Ontario’s bulk grid is set to rise, as natural gas generation helps to address supply shortfalls in the midst of the refurbishments of the province's nuclear generating stations.[13] During this window of time, the ability of all electricity distributors in Ontario, including Hydro Ottawa, to manage and limit their Scope 2 GHG emissions effectively will be significantly constrained. Accordingly, on account of the indirect nature of Scope 2 emissions, Hydro Ottawa believes that a commitment to monitor, rather than reduce, their levels is appropriate.

2.1.19. Annual Oil Spills & Costs of Remediation

These metrics measure the total amount of oil (in litres) from Hydro Ottawa infrastructure and equipment spilled into the environment, and the corresponding costs of remediation (represented in external contractor costs only). Oil is a critical component of certain types of distribution system assets – in particular, transformers (both overhead and underground) and breakers. Oil is essential to cooling, insulation and longevity of the assets, and plays a crucial role in the management of asset temperature, moisture in the surrounding environment, oxidation and corrosion.

In step with its asset management and environmental stewardship objectives, Hydro Ottawa administers routine inspection programs for oil-filled equipment and actively manages replacements to mitigate the environmental impact of oil spills and to minimize health and safety risks to the public and employees. The utility endeavours to minimize oil spills through the use of proactive measures (e.g. infrared scanning) to identify and address leaking equipment before the leaks become larger spills, and through the installation of oil containment units underneath each transformer.

Nevertheless, unexpected oil releases do occur, with the majority of these releases being related to the failure of transformers due to age or damage. Hydro Ottawa maintains a 24-hour response system, which involves the mobilization of an immediate response through an on-call spill remediation contractor, as well as prompt reporting to the Ministry of Environment, Conservation

[13] IESO, Ontario's Energy Future: Spring 2024 Update, page 4. Available: https://www.ieso.ca/-/media/Files/IESO/Document-Library/Decarbonization-Hub/IESO-Ontarios-Energy-Future-Spring-2024.pdf.

and Parks. All of the utility's large vehicles carry spill response kits containing protective equipment for employees, and absorbent materials and mats to prevent spill entry into sensitive areas.

The figures below summarize the total volume and remediation costs associated with oil spills from Hydro Ottawa equipment during the 2019-2023 period.

Figure 13 - 2019-2023 Oil Spill Volumes (Liters)

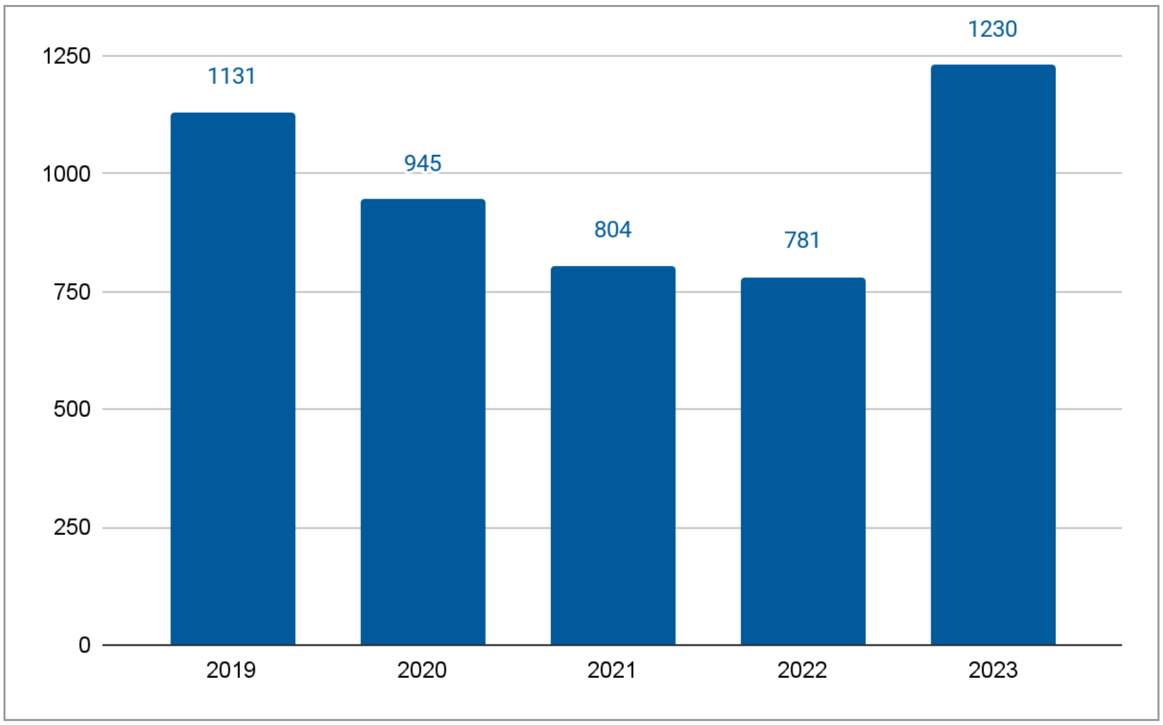
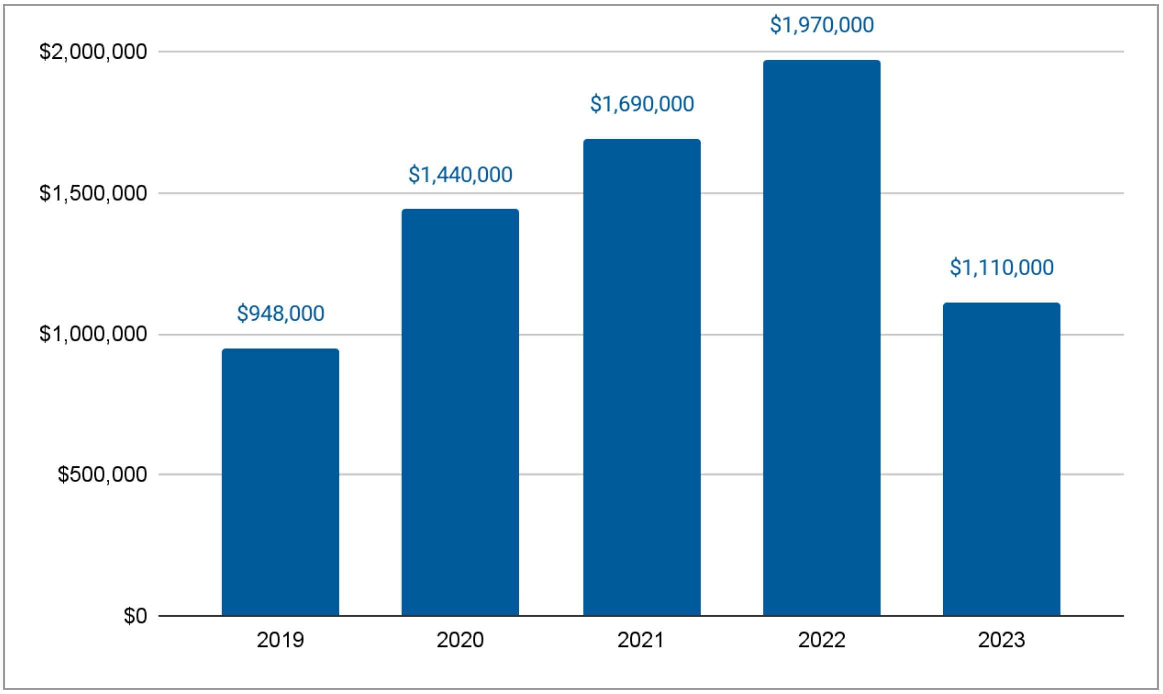


Figure 14 - 2019-2023 Costs of Oil Spill Remediation



While the amount of oil spilled yearly has been trending down since 2019, the costs of remediation have been trending upwards (with 2023 being an outlier on both fronts). Key factors at play include the greater complexity and costs associated with remediation efforts for leaks and spills in underground transformers, as well as an increase in third-party contractor costs driven in part by recent inflation.

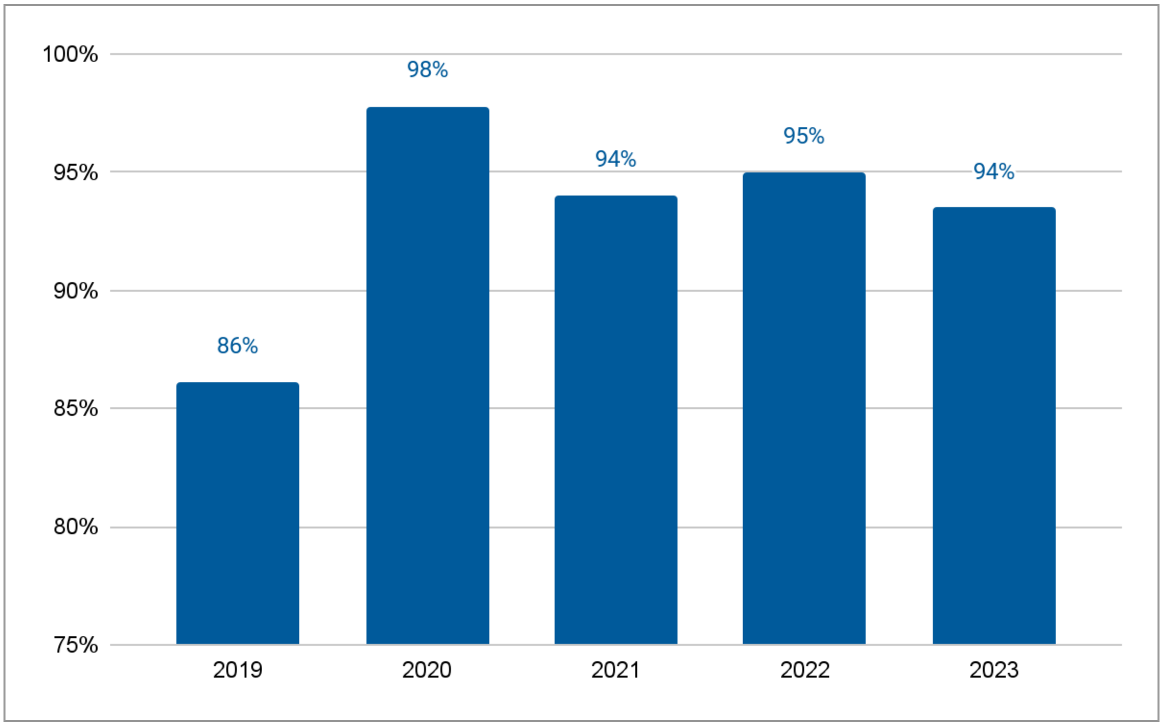
In keeping with its commitment to accountability for environmental protection, and in light of the significant investments the utility is planning in infrastructure renewal and build-out over the 2026-2030 rate term, Hydro Ottawa is targeting sustained reductions in oil spills and the corresponding remediation costs.

2.1.20. Non-Hazardous Waste Diversion Rate

This metric tracks the rate at which non-hazardous waste is successfully diverted from landfills, measured as a percentage. Reducing the amount of non-hazardous waste that is generated and diverting more away from landfill are important elements of minimizing Hydro Ottawa's environmental footprint. The utility tracks all solid and liquid wastes, and has systems in place to ensure high diversion rates are maintained. Elements of this system range in size and scope, from the centralized four-stream waste collection program which is a pillar of activity, to more modest measures which yield significant combined benefits (e.g. recycling stations, drinking bottle fill stations, food waste dehydrator and environmentally-friendly default settings on office printers).

The waste diversion rate can vary slightly from year to year, depending on the type and volume of materials being removed from service and the availability of recycling options for the resulting waste. Figure 15 outlines the waste diversion levels achieved in recent years.

Figure 15 - 2019-2023 Non-Hazardous Waste Diversion Rate



Additional information on Hydro Ottawa's waste diversion program is available in Attachment 4-1-3(E) - Health, Safety and Environmental Compliance,Sustainability and Business Continuity Management.

For the 2026-2030 rate term, the utility is aiming to maintain the high rates of non-hazardous waste diversion which have been reached in recent years. First and foremost, a diligent and sustained focus on minimizing waste will be required during a period of historic capital investment and expansion of the workforce. Heightened levels of construction and asset refurbishment and replacement, along with the presence of more employees in the field and the office, introduces the prospect of generating waste in higher-than-average quantities. Additional attention will therefore be needed to ensure waste diversion remains responsibly managed. What's more, Hydro Ottawa wishes to ensure that the Custom Performance Scorecard appropriately reflects the emphasis placed by the utility on environmental protection and the priority status afforded to this objective by customers and stakeholders – especially with the principal landfill sites in the Ottawa area approaching maximum capacity over the coming years.[14] During the upcoming five-year period, Hydro Ottawa will work to ensure employees have all the tools they need to reduce waste and minimize pressures on local landfills.

2.1.21. Percentage of Green Suppliers

This metric measures the percentage of goods and services that are procured from local suppliers (i.e. suppliers located within a 100 km radius of the National Capital Region [NCR]).

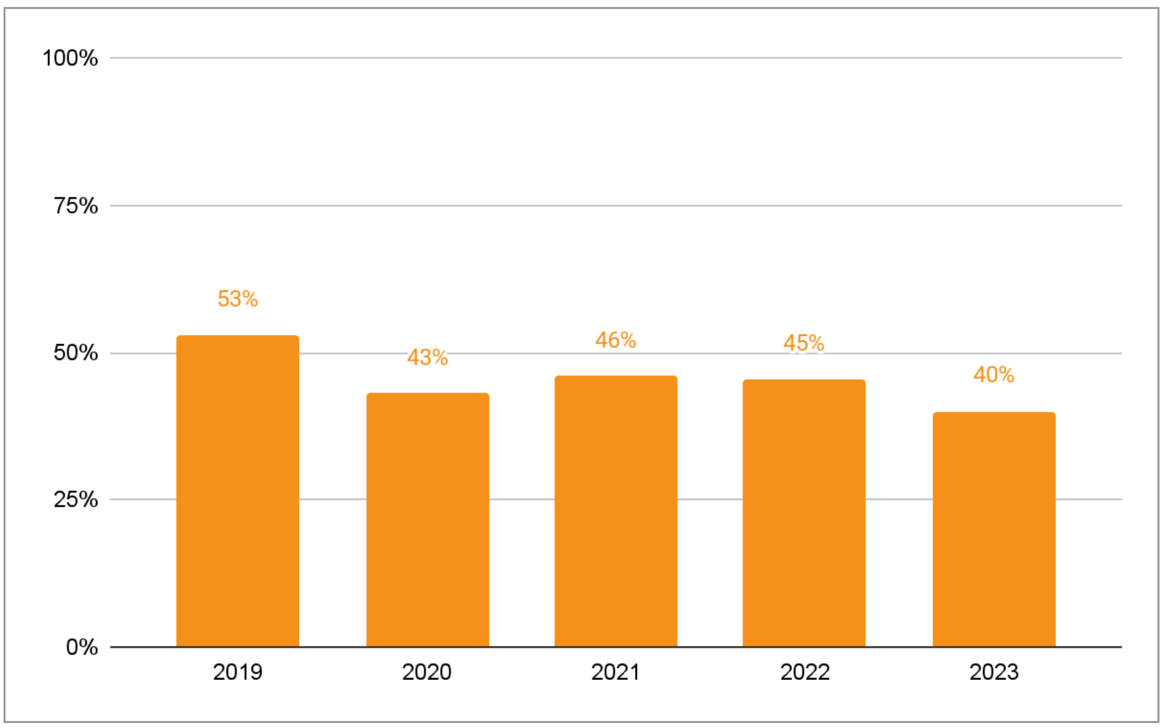
Housed within the Supply Chain Program at Hydro Ottawa, the procurement function is essential to the utility's effectiveness and efficiency. The function is responsible for procuring all products and services required across every facet of the utility's business and operations, with a rigorous focus on achieving value for money on behalf of ratepayers. This is achieved through adherence to fair, open, efficient, transparent and accountable processes, and through the cultivation of strong relationships with reputable, ethical and high-performing vendors. Together, this enables Hydro Ottawa to secure competitive pricing and reliable delivery of goods and services. Please see Attachment 4-2-2(A) - Procurement Policy for additional details.

Consistent with its commitment to sustainability, a hallmark of Hydro Ottawa's approach to procurement has been the administration of policies and purchasing decisions with a view towards maximizing environmentally-friendly outcomes. The utility uses a point system for evaluating supplier proposals, and includes environmental designations and practices in proposal

[14] For example, according to the City of Ottawa's *Solid Waste Master Plan* updated in 2024, based on then-current waste disposal rates the Trail Road Landfill in Ottawa could be full between 2034 and 2036.

requirements, as appropriate. Where cost-effective to do so, Hydro Ottawa sources goods and services locally, so as to minimize transportation and associated impacts on the environment, reduce its Scope 3 emissions,[15] and support community-based economic development. To that end, Hydro Ottawa tracks the relative proportion of purchase orders placed with firms in and surrounding the NCR. Sourcing of goods and services from local suppliers within a 100 km radius of the NCR, measured in terms of dollars spent, has annually averaged 45% over the past five years, as shown in Figure 16 below.

Figure 16 - 2019-2023 Percentage of Green Suppliers



[15] *Canadian Sustainability Disclosure Standard 2: Climate-related Disclosures* defines “Scope 3” as follows: “Indirect greenhouse gas emissions (not included in Scope 2 greenhouse gas emissions) that occur in the value chain of an entity, including both upstream and downstream emissions. Scope 3 greenhouse gas emissions include the Scope 3 categories in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011).”

The inclusion of this metric in the Custom Performance Scorecard for the next five-year rate term is appropriate for several reasons. First, it is responsive to shareholder and stakeholder expectations for Hydro Ottawa to support local economic development opportunities and contribute to community well-being. Second, it is consistent with the broader trajectory of sustainability reporting in domestic and international capital markets, including the recent finalization of the first sustainability- and climate-related disclosures that are tailored to Canadian entities and the Canadian business landscape (whose scope encompasses Scope 3 emissions). Finally, it comports with recently-enacted requirements from the Government of Canada for businesses to sharpen their focus on ensuring forced labour and child labour is not being used in their supply chains[16] (i.e. more relationships with locally-based suppliers allows for greater confidence and risk management in this regard).

At the same time, objectives for locally-sourced procurement must be balanced against other business imperatives, not the least of which is the unprecedented capital investment program that is required for the 2026-2030 rate period and which will compel Hydro Ottawa to look beyond its immediate geographic confines to obtain critical distribution equipment and infrastructure. Accordingly, the utility is planning to maintain local procurement at current levels over the next five years.

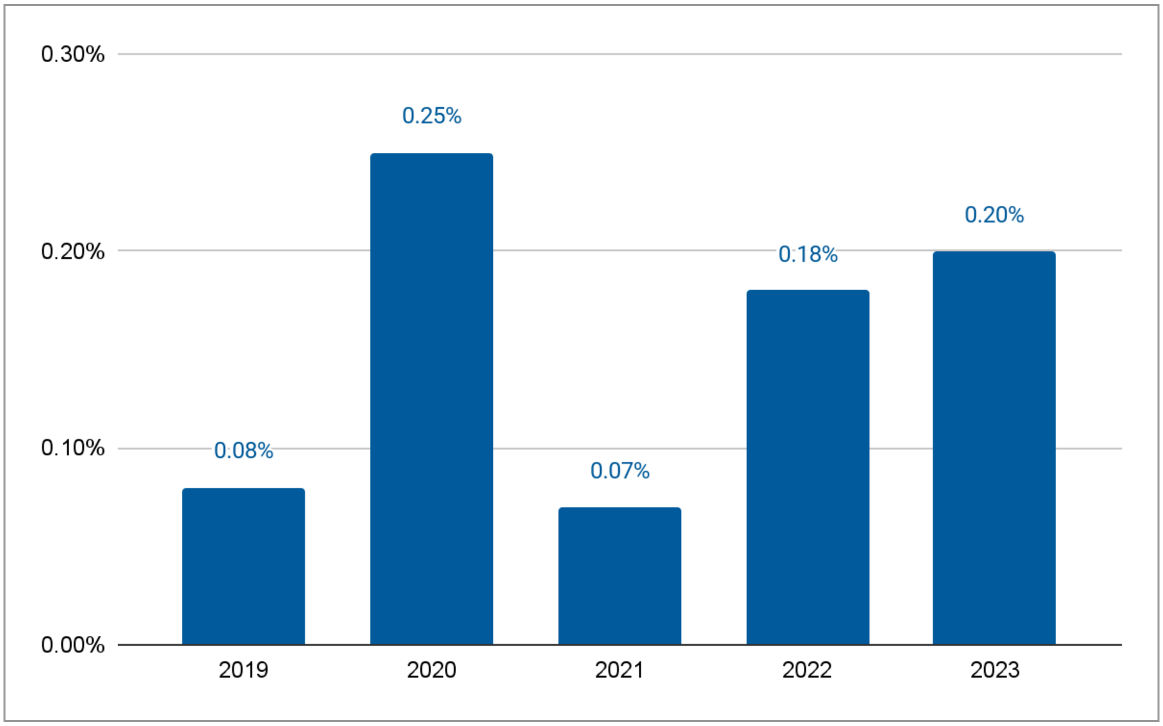
2.1.22. Bad Debt as a Percentage of Total Electricity Revenue

This metric measures the proportion of bad debt relative to electricity revenue over a specific period of time. It is a useful performance measurement tool for electricity distributors, as it enables high-level monitoring of financial and credit risk, while serving as an indicator of the effectiveness and efficiency of a distributor’s revenue collection process as well as the effectiveness of informing customers about the Ontario Electricity Support Program and the Low-income Energy Assistance Program.

[16] As per the *Fighting Against Forced Labour and Child Labour in Supply Chains Act*, which took effect in 2023.

Figure 17 below provides historical data for this metric.

Figure 17 - 2019-2023 Bad Debt as a Percentage of Total Electricity Revenue



Hydro Ottawa is proposing the inclusion of this metric in its Custom Performance Scorecard for several reasons. First, it is helpful in assessing whether the utility's credit and collection policies and practices may require adjustment, as a high bad debt percentage can signal that a significant portion of revenue is not being collected. Similarly, in view of the strain that bad debt can place on cash flow, the metric lends assistance to the utility's efforts to plan for a stable level of OM&A and capital expenditures.

Finally, the metric is one of the unique barometers available to Hydro Ottawa of broader conditions within the economy. As illustrated in Figure 15 above, this metric has tracked closely with major economic pressures and challenges which resulted in increased instances of non-payment by customers. Within the last five years, the crests in bad debt percentage have coincided with the outbreak of a global pandemic and accompanying public health restrictions on economic and social activity (2020), as well as a prolonged period featuring the combined effects of elevated levels of inflation and interest rates (2023). The metric is therefore well-suited to supporting the utility in proactively identifying segments of its customer base which may require targeted assistance.

Against a larger backdrop of persistent economic uncertainty, Hydro Ottawa sees merit in publicly reporting on its bad debt percentage throughout its 2026-2030 rate term. The utility plans to monitor the status of this metric and enhance its risk mitigation and customer payment strategies as circumstances warrant.

3. PROGRESS ON CAPITAL SPENDING

To ensure transparency and accountability in the execution of its capital programs, Hydro Ottawa proposes to continue publishing detailed annual updates on the progress of capital spending progress throughout the 2026-2030 rate period. These updates will maintain the same form and manner as the current 2021-2025 annual Custom IR Annual Reports. They will provide a clear and comprehensive overview of actual gross capital expenditures, broken down by program type, specifically System Access, System Renewal and System Service, and General Plant. This data will be presented alongside the approved capital expenditure plans, enabling stakeholders to effectively evaluate Hydro Ottawa’s ability to adhere to its capital spending commitments, assess the progress of critical infrastructure projects, and gain insights into the efficient and prudent allocation of resources.

BENCHMARKING

1. INTRODUCTION

A key tool in the Renewed Regulatory Framework (RRF) performance measurement toolkit is benchmarking. In its Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach (RRFE Report), the OEB determined that “[e]xpanded use of benchmarking will be necessary to support the Board’s renewed regulatory framework policies.”[1] This finding is affirmed in the Handbook for 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.”[2]

This Schedule contains several pieces of benchmarking evidence, which are intended to serve multiple purposes:

- Including benchmarking information will assist the OEB in evaluating Hydro Ottawa’s performance patterns and in assessing the proposals outlined in the utility’s capital and operational plans.
- Benchmarking conducted or commissioned by the utility has helped inform the establishment and incorporation of specific outcomes into the proposed annual reporting for the 2026-2030 rate period.[3] It has also influenced the development of the Custom Revenue Operations, Maintenance & Administration (OM&A) Factor, a defining feature of the Customer Incentive Rate-Setting (Custom IR) framework underpinning this Application.[4]
- The use of benchmarking studies and analysis is directed at supporting the achievement of the OEB’s RRF outcome of Operational Effectiveness, which is interpreted as the

[1] Ontario Energy Board, *Report of the Board - Renewed Regulatory Framework for Electricity Distributors: A Performance Based Approach* (October 18, 2012), page 59.
[2] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 18.
[3] See Schedule 1-3-2 - Proposed Annual Reporting for more information.
[4] See Schedule 1-3-1 - Rate Setting Framework for more information.

achievement of performance excellence through the cultivation of a culture of innovation and continuous improvement. It also aligns with Hydro Ottawa's corporate strategic objectives, such as ensuring organizational capacity to deliver on its core service obligations.[5]

Together, these functions help demonstrate Hydro Ottawa's continued accountability to the OEB, its customers, other stakeholders, and its shareholders to provide value for money and cost-effective outcomes delivery.

Consistent with OEB requirements, the benchmarking evidence appended to this Application takes two forms - external and internal. The external benchmarking consists of two reports commissioned from third parties to analyze the utility's performance in compensation and information technology (IT) relative to comparator groups. It also consists of benchmarking analyses conducted by Hydro Ottawa, in which the utility's performance is juxtaposed against that of comparable utilities in Ontario and the provincial electricity distribution industry as a whole. The internal benchmarking relies upon metrics in the annual Electricity Utility Scorecard (OEB scorecard), Activity and Program-Based benchmarking (APB), custom supplemental benchmarking, and total cost benchmarking to assess Hydro Ottawa's performance and continuous improvement over time. The attachments to this Schedule are as follows:

- Attachment 1-3-3(A) - PEG Benchmarking Analysis
- Attachment 1-3-3(B) - Activity and Program-Based Benchmarking Analysis
- Attachment 1-3-3(C) - Electricity Utility Scorecard Benchmarking Analysis
- Attachment 1-3-3(D) - Supplemental Industry Benchmarking Analysis
- Attachment 1-3-3(E) - Hydro Ottawa Enterprise IT Spending & Staffing Benchmark
- Attachment 1-3-3(F) - Compensation Benchmarking Study

[5] For more information on the utility's strategic objectives, please see Section 2 of Schedule 1-2-3 - Business Plan.

Also appended to this Schedule, as per Chapter 2 Filing Requirements, is Excel Attachment 1-3-3(G) - OEB Benchmarking Spreadsheet Forecast Model.

In the section below, and the accompanying Attachments to this Schedule, Hydro Ottawa explains in greater detail its rationale for conducting the respective benchmarking exercises, what insights were yielded into recent trends in the utility's performance and efficiency, how the utility is interpreting the findings, and what actions the utility is taking as a result.

2. PEER GROUP SELECTION FOR ANALYSIS

Hydro Ottawa, with the support of Utilis, has developed peer groups of electricity distribution companies in Ontario to benchmark against for the APB, OEB scorecard, and supplemental benchmarking analyses. Hydro Ottawa reviewed its position relative to three main distribution characteristics published in the OEB's open data inventory: (1) total customers, (2) load distribution across customer classes, and (3) rural and urban distribution, calculated as the square footage of rural territory divided by the square footage of total territory.

Hydro Ottawa also identified peer groups for each APB unit cost, scorecard, and supplemental metric, with some exceptions where benchmarking did not add value, based on a qualitative assessment of the defining characteristic of each unit cost or metric. For example, Hydro Ottawa selected peer group 4 for unit costs that used customer counts as their denominator because customer counts are the defining similarity between utilities. To expand the robustness of comparators, it was assessed that load distribution characteristics should be considered as well. The peer groups help to provide context and perspective relative to industry averages because they identify distributors with characteristics similar to Hydro Ottawa.

Hydro Ottawa notes, though, that few comparable utilities, if any, in Ontario have similar characteristics (size, weather patterns, population distribution, growth, and geography) suitable for its benchmarking. Hydro Ottawa is constrained by a lack of public data outside Ontario to identify comparable utilities in North America and draw meaningful insights from benchmarking.

Consequently, the utility established several peer groups for benchmarking depending on what was being measured. However, accurately ascertaining the reasons for differences in performance between utilities was challenging for the reasons described above, as well as not having a clear understanding of how each distributor uses the Uniform System of Accounts.

Based on this selection process, Hydro Ottawa established the comparative peer groups of the following Ontario distributors, outlined in Table 1 below.

Table 1 - Benchmarking Peer Groups

Source	Peer Group	Criteria	Distributors	Value
2023 Data Inventory	1	Customer Counts > 150,000	Alectra Utilities Corporation	1,082,646
			Elexicon Energy Inc.	176,725
			Enova Power Corporation	162,022
			Hydro Ottawa Limited	**364,334**
			London Hydro Inc.	167,081
			Toronto Hydro-Electric System Limited	792,732
2023 Data Inventory	2	Percentage of Residential Load	Enova Power Corp.	37.0%
			ENWIN Utilities Ltd.	36.4%
			Hydro Hawkesbury Inc.	35.6%
			Hydro Ottawa Limited	**36.6%**
			Kingston Hydro Corporation	35.8%
			Niagara Peninsula Energy Inc.	37.2%
			Niagara-on-the-Lake Hydro Inc.	36.4%
			Orangeville Hydro Limited	35.6%
			Renfrew Hydro Inc.	36.1%
2023 Data Inventory	3	Rural/Urban Ratio (within 15% of Hydro Ottawa)	Bluewater Power Distribution Corporation	54.2%
			Burlington Hydro Inc.	47.9%
			Elexicon Energy Inc.	59.6%
			Hydro Ottawa Limited	**59.3%**
			InnPower Corporation	73.6%
			London Hydro Inc.	58.0%

Source	Peer Group	Criteria	Distributors	Value
			Synergy North Corporation	67.6%
			Welland Hydro-Electric System Corporation	44.4%
2023 Data Inventory	4	Peer Groups 1 and 2	Alectra Utilities Corporation	Combined
			Enova Power Corp.	
			ENWIN Utilities Ltd.	
			Elexicon Energy Inc.	
			Hydro Hawkesbury Inc.	
			Kingston Hydro Corporation	
			London Hydro Inc.	
			Niagara Peninsula Energy Inc.	
			Niagara-on-the-Lake Hydro Inc.	
			Orangeville Hydro Limited	
			Renfrew Hydro Inc.	
			Toronto Hydro-Electric System Limited	

Table 2 below summarizes which metrics the peer groups are assigned to based on the process described above.

1 **Table 2 - Peer Group Assignment Summary**

Benchmark	Attachment	Metric	Peer Group Use
APB	1-3-3(B)	Billing O&M	4
APB	1-3-3(B)	Metering O&M	4
APB	1-3-3(B)	Vegetation Management O&M	3
APB	1-3-3(B)	Lines O&M	3
APB	1-3-3(B)	Stations O&M	4
APB	1-3-3(B)	Poles, Towers, & Fixtures O&M	4
APB	1-3-3(B)	Stations Capital Expense (CAPEX)[6]	4
APB	1-3-3(B)	Poles, Towers, & Fixtures CAPEX	4
APB	1-3-3(B)	Line Transformers CAPEX	3
APB	1-3-3(B)	Meters CAPEX	4
Scorecard	1-3-3(C)	New Residential/Business Connections	4
Scorecard	1-3-3(C)	Scheduled Appointments Met	4
Scorecard	1-3-3(C)	Telephone Calls Answered	4
Scorecard	1-3-3(C)	Billing Accuracy	4
Scorecard	1-3-3(C)	Level of Public Awareness	4
Scorecard	1-3-3(C)	Average Number of Hours that Power to a Customer is Interrupted (SAIDI)	3
Scorecard	1-3-3(C)	Average Number of Times that Power to a Customer is Interrupted (SAIFI)	3
Scorecard	1-3-3(C)	Total Cost per Customer	4
Scorecard	1-3-3(C)	Total Cost per KM of Line	3
Scorecard	1-3-3(C)	Liquidity: Current Ratio	1
Scorecard	1-3-3(C)	Leverage: Total Debt-to-Equity Ratio	1
Scorecard	1-3-3(C)	Return on Equity	1
Supplemental	1-3-3(D)	System Load (MWh) Per Customer	1
Supplemental	1-3-3(D)	Primary Circuit Kilometers Per 1,000 Customers	1
Supplemental	1-3-3(D)	Severe Weather Event Frequency Per Year	1

[6] All OEB benchmarking references to CAPEX denote capital additions.

Benchmark	Attachment	Metric	Peer Group Use
Supplemental	1-3-3(D)	Loss Factor Percentage	1
Supplemental	1-3-3(D)	FTE Per Primary Circuit Kilometer	1
Supplemental	1-3-3(D)	FTE Per 1,000 Customers	1
Supplemental	1-3-3(D)	FTE Per GWh	1
Supplemental	1-3-3(D)	FTE Per $1,000,000 Capital Additions	1
Supplemental	1-3-3(D)	OM&A Costs Per Customer	1
Supplemental	1-3-3(D)	OM&A Costs Per Primary Circuit Kilometer	1
Supplemental	1-3-3(D)	OM&A Costs Per FTE	1
Supplemental	1-3-3(D)	OM&A Costs Per MWh	1
Supplemental	1-3-3(D)	OM&A Cost and Capital Additions Ratio	1
Supplemental	1-3-3(D)	Total Cost Per FTE	1
Supplemental	1-3-3(D)	Weighted Average Cost of Debt	1
Supplemental	1-3-3(D)	Operating Ratio	1
Supplemental	1-3-3(D)	Monthly Loss Factor Cost Per Customer	1
Supplemental	1-3-3(D)	Outage Cause Codes	1

3. TOTAL COST BENCHMARKING ANALYSIS

The OEB uses total cost benchmarking to assess and compare the cost efficiency of distribution utilities in Ontario. The tool used to perform this analysis is the total cost econometric benchmarking model (PEG model) developed by PEG. PEG uses econometric techniques to model a utility's relationship between total costs and various factors that influence these costs. The model costs are compared to a utility's actual total costs to determine its cost performance. This performance is compared to other utilities in Ontario, and each utility is stratified into cohorts with corresponding stretch factors. The stretch factor is an input in Hydro Ottawa's Custom Revenue OM&A Factor that is a main aspect of the utility's Custom Incentive Rate-setting (Custom IR) framework for the 2026-2030 period.

Submitting the model is a rate application requirement per Section 2.1.6 of the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications - 2025 Edition for 2026 Rate Applications*, as updated on December 9, 2024 (Filing Requirements). Distributors must provide a forecast of their efficiency assessment to provide the OEB with a directional indication of efficiency. Each year, the OEB supplies a consolidated PEG model with prefilled data for distributors. Hydro Ottawa has used this model to complete its total cost benchmarking forecast for 2024 to 2030, which can be found in Excel Attachment 1-3-3(G) - OEB PEG Benchmarking Forecast Model. The results of this forecast are outlined in Attachment 1-3-3(A) - PEG Benchmarking Forecast Analysis.

It is important to note that Hydro Ottawa's efficiency results use adjusted values, including total circuit kilometers that include secondary lines (in addition to its primary lines), which had been omitted from the model in the past. This inclusion is consistent with existing practices and will produce a more accurate estimate of the utility's predicted total costs. Further, adjustments are made for the impact of provincial conservation and demand management (CDM) programs, and other revenues.

3.1. KEY FINDINGS

Using the OEB-supplied PEG model, Hydro Ottawa has reached the following conclusions:

- Hydro Ottawa's three-year cost performance average produces a 2026 (the base year of the Custom IR period) cohort of 3, which equates to a stretch factor of 0.3%. The test period stretch factors are summarized in Table 3.
- Subsequent cost performance increases at the utility are largely due to the demands of electrification and modernizing the network. The PEG model's regression period (2002-2012) reflects a different set of cost conditions and therefore underestimates total costs.
- Hydro Ottawa has corrected for omitted secondary total circuit kilometers and updated its PEG model, producing a more accurate model.

- The PEG model has methodological deficiencies that underestimate predicted costs and overreport OM&A, due to the lack of consideration of CDM and removal of costs related to other revenues, which Hydro Ottawa corrected for, producing a more accurate model as it relates to Hydro Ottawa.
- An OEB-commissioned study, "Review of Total Cost Benchmarking Methodology for Electricity Distributors," confirmed the existence of PEG model deficiencies, including an absence of explanatory variables and an out-of-date regression model.[7]

Table 3 - Projected Total Cost Benchmarking Results

Model Results	2025	2026	2027	2028	2029	2030
3-year Average Performance	2.3%	3.1%	5.8%	9.3%	11.4%	13.0%
Annual Result	3	3	3	4	4	4
Three-year Average	3	3	3	3	4	4

3.2. RECOMMENDED STRETCH FACTOR

Based on the findings and scores produced by PEG's econometric benchmarking model, Hydro Ottawa calculates a stretch factor of 0.30%.

3.3. INCORPORATING RESULTS INTO THE APPLICATION

Throughout this Application, there are several linkages between the plans and proposals set forth by Hydro Ottawa and the results of the PEG econometric benchmarking model. Foremost among these is the inclusion of the proposed stretch factor of 0.30% in the utility's Custom Revenue OM&A Factor adjusted for a 0.15% stretch Hydro Ottawa embedded into its rebasing year.[8]

Furthermore, along with the generally positive and supportive feedback received from customers on Hydro Ottawa's proposed capital and operational plans, the findings yielded from

[7] University of Toronto, *Review of Total Cost Benchmarking Methodology for Electricity Distributors* (November 12, 2024).
[8] See Schedule 1-3-1 - Rate Setting Framework for more information.

this econometric benchmarking exercise serve as critical validation of the reasonableness of the utility's projected capital and OM&A expenditures from 2026-2030. This affirmation informed Hydro Ottawa's approach to finalizing its overall envelope of capital projects and OM&A programs, with the utility drawing confidence from the PEG benchmarking model's results around what would be considered prudent investment by customers, its shareholder, other stakeholders, and the OEB.

4. ACTIVITY AND PROGRAM-BASED BENCHMARKING ANALYSIS

The APB framework is designed to enhance the OEB's oversight of electricity distributors in Ontario by providing a more granular and targeted approach to performance assessment. APB examines specific operational activities enabling a deeper understanding of utility cost structures, operational efficiency, and value delivered to customers. By benchmarking performance at this activity level, APB aims to identify best practices, facilitate peer comparisons, encourage continuous improvement, and ensure cost-effective service delivery for energy consumers.

Section 2.1.6 of the Filing Requirements stipulates that a utility should include a variance analysis of the 10 programs outlined in the OEB's Activities and Program Benchmarking Reports. Hydro Ottawa has adopted this tool to measure and monitor the achievement of productivity gains across the utility and in comparison with its distribution peers in Ontario.

Hydro Ottawa views the inclusion of unit cost analysis as a valuable complement to benchmarking the utility's total cost envelope and as an opportunity to obtain insights into the efficiency of its capital investments and OM&A programs at a more granular level.

Hydro Ottawa respectfully notes large volatility in unit cost results from year to year across Ontario distributors in the source data, with some reporting negative unit costs.[9] The volatility of these unit costs suggests that some of the programs are not pragmatically quantified and that variability in spending is driving large differences in unit costs between years. Unit costs are meant to measure the cost inputs for producing a single output unit. By expressing costs in these terms, stakeholders can measure the amount of O&M/capital expenditures needed to produce the desired results in comparison to other distributors. Hydro Ottawa contends that, in some instances, the APB unit costs fail to achieve this outcome. Many of the unit costs are divisible not by outputs (pole additions for example), but by quantifiable utility characteristics that may or may not have a direct relationship with the numerator. This methodological approach limits the benchmarking efficacy of the APB unit costs. While Hydro Ottawa does not agree with all aspects of the methodological approach, the analysis strives to demonstrate this tool and promote discussion of its outcomes, potentially showing areas of improvement for future analysis.

The utility completed the APB analysis with the results outlined in Attachment 1-3-3(B) - Activity-Based Performance Benchmarking Analysis.

4.1. KEY FINDINGS

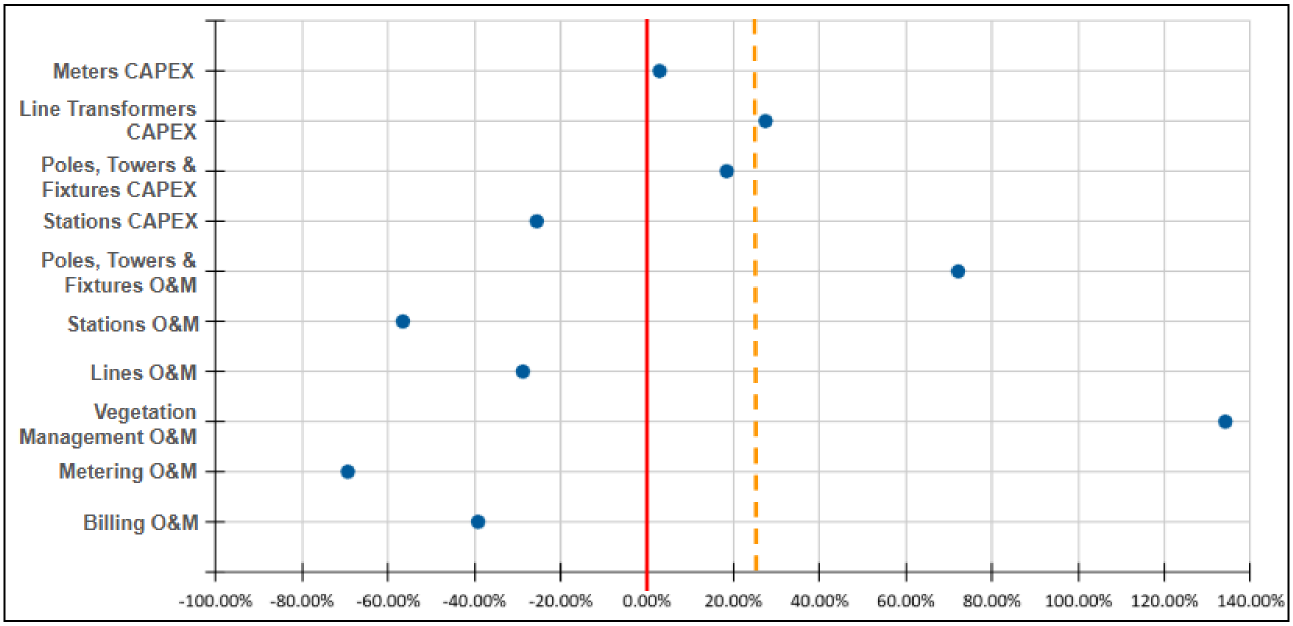
On the whole, Hydro Ottawa compares favourably to the Ontario distribution industry.[10] The key takeaways from the analysis are captured in Figure 1 below.

As shown in Figure 1, in five of the 10 APB programs, Hydro Ottawa's performance is below five-year industry averages, and in two, it is below 25% of the industry average.[11] Of the three

[9] Ontario Energy Board, "Activity and Program-based Benchmarking Initiative - 2023 Unit Cost Report," https://www.rds.oeb.ca/CMWebDrawer/Record/868525/File/document. Alectra Utilities Corporation's Power, Towers and Fixtures O&M unit cost for 2022 was - $0.01 per pole.
[10] "Industry" refers to all 54 local distribution companies in Ontario that report to the OEB.
[11] Ontario Energy Board, *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications - 2025 Edition for 2026 Rate Applications* (December 9, 2024), page 13. The OEB established a 25% variance threshold versus the industry average for providing a plan to mitigate cost growth.

programs in which performance is above 25% industry average, two (Poles, Towers & Fixtures O&M, and Vegetation Management O&M) were affected by localized extreme weather events outside the utility's control. Poles, Towers & Fixtures O&M reverted to industry and peer group averages in 2023.

Figure 1 - Five-Year Average Hydro Ottawa versus Industry APB Results (%)



4.2. INCORPORATING RESULTS INTO THE APPLICATION

Together with the generally complimentary feedback received from customers on its proposed capital and operational plans, as well as the findings from the total cost benchmarking discussed above, Hydro Ottawa has interpreted the results of the APB variance analysis as an attestation of the overall efficiency and cost-effectiveness of the utility's capital and OM&A programs. Through this analysis, the rigour, discipline, and transparency that Hydro Ottawa strives to apply to its cost calculation and reporting have been affirmed, along with its focused efforts to ensure alignment between the RRF and corporate strategic objectives.

For additional details on Hydro Ottawa's proposed performance measurement framework for its Custom IR rate plan, please see Schedule 1-3-2 - Proposed Annual Reporting - 2026-2030.

5. OEB ELECTRICITY UTILITY SCORECARD

The OEB Electricity Utility Scorecard (OEB scorecard) is a key tool within the RRF, facilitating both performance monitoring and benchmarking of LDCs. Using five years of data, it assesses a distributor's effectiveness and improvement across the RRF's four performance outcomes: Customer Focus, Operational Effectiveness, Public Policy Responsiveness, and Financial Performance. As a key part of the RRF, the scorecard enables the OEB to align the needs of a sustainable, financially viable electricity sector with the expectations of customers, who want reliable service at a reasonable price.

Section 2.1.6 of the Filing Requirements stipulates that a utility should provide a link to its most recent scorecard and identify distributor performance improvement targets that would enhance scorecard performance. Hydro Ottawa has incorporated its scorecard results into the benchmarking function and provided additional discussion on past performance and forecasted performance during the Test period 2026-2030. The results of this analysis are outlined in Attachment 1-3-3(C) - Electricity Utility Scorecard Benchmarking Analysis.

A link to Hydro Ottawa's most recent scorecard is available here: Hydro Ottawa Limited - 2023 OEB Scorecard.[12]

5.1. KEY FINDINGS

Hydro Ottawa's OEB scorecard results demonstrate exceptional performance between 2019 and 2023. During that period, the utility met 87% of its defined targets (industry or distributor-specific) and made notable progress in service quality and customer-focused

[12] Hydro Ottawa Limited, "OEB 2023 Scorecard" https://hydroottawa.com/sites/default/files/2024-09/2023_Hydro%20Ottawa_Scorecard_EN.pdf

measures. The OEB scorecard results demonstrate the utility's strong adoption and execution of the OEB RRF's key performance values.

Table 4 below summarizes Hydro Ottawa's annual OEB scorecard target results, indicating whether a target was met or not, as well as the utility's five-year trend as published yearly by the OEB on the scorecard. The direction of the arrow indicates the rolling five-year trend. A green icon indicates that Hydro Ottawa met or exceeded its target, and a red icon indicates that Hydro Ottawa missed its target. Hydro Ottawa's performance improvement as expressed on the OEB's scorecard demonstrates the utility's commitment to continuous improvement and to providing value for its customers and shareholder.

Table 4 - Summary of Hydro Ottawa's Scorecard Targets Met/Not Met (2019-2023)

Performance Categories	Measures	2019	2020	2021	2022	2023
Service Quality	New Residential/Small Business Services Connected on Time	→	→	→	→	→
	Scheduled Appointments Met on Time	↑	↑	↓	↓	↓
	Telephone Calls Answered on Time	↑	↓	↓	↓	↑
Customer Satisfaction	Billing Accuracy	↑	→	→	↓	↓
Safety	Level of Compliance with O. Reg. 22/04	→	→	→	→	→
	Number of General Public Safety Incidents*	→	→	→	→	→
	Rate per 1000 km of line*	→	→	→	→	→
System Reliability	Average Number of Hours that Power to a Customer is Interrupted*	↓	↓	↓	↑	↑
	Average Number of Times that Power to a Customer is Interrupted*	↓	↓	↓	↓	↓
Percentage of Flat/Improving Trends		**100%**	**78%**	**100%**	**67%**	**89%**

*Note that a downward trend indicates performance improvements.

5.2. INCORPORATING RESULTS INTO THE APPLICATION

Hydro Ottawa expanded on the OEB scorecard's performance categories to guide its development of its Custom Performance Scorecard. The utility is proposing an additional 22 measures to those included in the scorecard that will track performance and continuous improvement across customer satisfaction, safety, system reliability, cyber security readiness, cost control, environment, and financial metrics. The development of these metrics is intended to further strengthen the utility's RRF performance by allowing for monitoring and comparison of the utility's performance. The utility's additional metrics will also increase its accountability and transparency to the OEB, customers, and other stakeholders.

To review the Custom Performance Scorecard, please refer to Schedule 1-3-2 - Proposed Annual Reporting - 2026-2030.

6. CUSTOM SUPPLEMENTAL BENCHMARKING ANALYSIS

To expand on the OEB's RRF benchmarking approach and to further demonstrate that Hydro Ottawa is well-positioned to execute its capital and operational plans, the utility opted to include its own custom supplemental benchmarking. In contrast to the OEB scorecard and APB analysis, the supplemental benchmarking focuses on company-level metrics and compares the utility to Ontario distributors in five areas: utility characteristics, labour force, OM&A performance, financial performance, and reliability.

In Hydro Ottawa's view, the inclusion of additional benchmarking is a valuable complement to the OEB's RRF and an opportunity to obtain insights into the effectiveness of its investments, OM&A programs, and unique operating conditions. The utility regards the presentation of such analysis as being consistent with and supportive of the APB and scorecard benchmarking.

The utility completed the Custom Supplemental Benchmarking Analysis with the results outlined in Attachment 1-3-3(D) - Supplemental Industry Benchmarking Analysis.

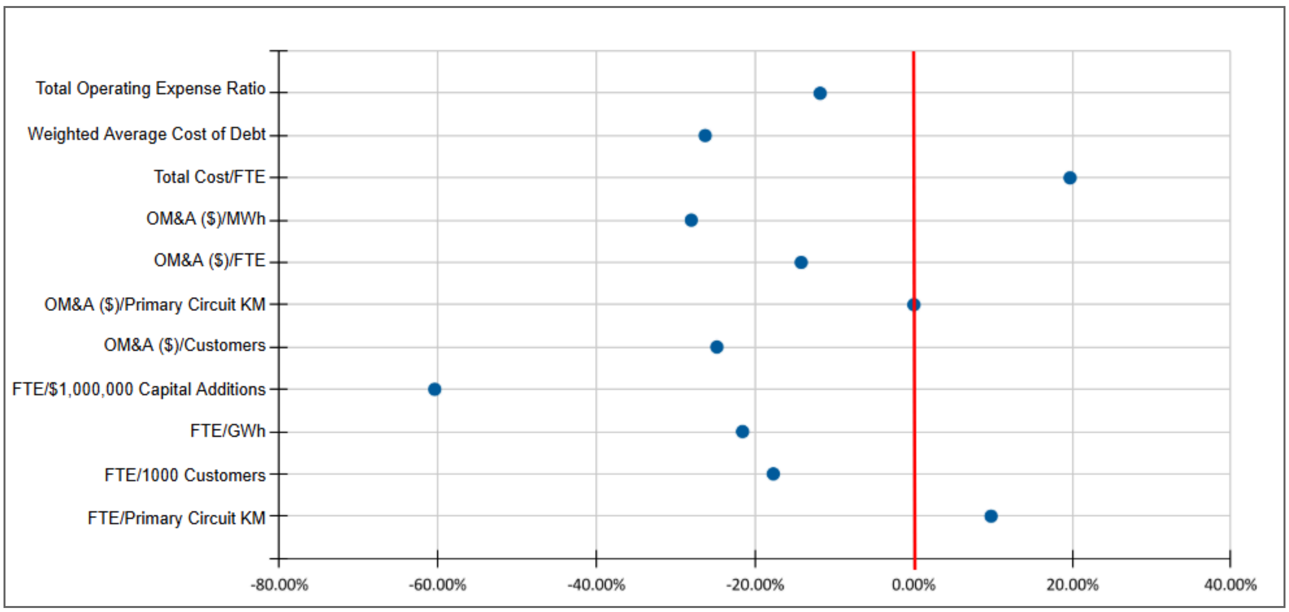
6.1. KEY FINDINGS

The results of the Custom Supplemental Benchmarking Analysis demonstrate that Hydro Ottawa outperforms the industry in OM&A spending efficiency, labour force sizing, and effective operational execution between 2019 and 2023. These results are exceptional when considering the difficult operating environment that the utility had to contend with in that time (extreme weather, labour disruptions, pandemic, inflation, etc).

As captured in Figure 2, nine of the 11 metrics are below the industry average, demonstrating Hydro Ottawa's adherence to cost controls. Taken in conjunction with the APB and scorecard results, the results attest to the success of the utility in delivering exceptional customer service, reliability, cost controls, and safety across its network.

Concerning the two metrics that were above industry average, Total Cost per FTE was higher due to Hydro Ottawa's larger capital program, and FTE per Primary Circuit Kilometer was higher due to the utility having relatively fewer primary circuit kilometers given its customer counts.

Figure 2 - Five-Year Average Hydro Ottawa versus Industry Supplemental Benchmarking Results (%)



6.2. INCORPORATING RESULTS INTO THE APPLICATION

The outcomes of the Custom Supplemental Benchmarking Analysis reinforce the reasonableness of Hydro Ottawa's Application. Combined with positive customer feedback on proposed capital and operational plans, these results validate the projected staffing increases, capital investments, and OM&A expenses for the 2026-2030 period. This validation guided Hydro Ottawa as it finalized its total budget for capital projects and operational programs, ensuring alignment with stakeholder expectations and regulatory prudence.

7. IT SPENDING ASSESSMENT BENCHMARKING

Hydro Ottawa's operational effectiveness relies heavily on complex IT systems that support frontline operations (e.g., geographic information systems, outage management, and supervisory control) and back-office processes (e.g., customer information, billing, and enterprise resource planning [ERP]). The complexity of these systems is increasing as the electricity distribution sector experiences a convergence of operational systems and enterprise information systems.

Given this reality, and Hydro Ottawa's commitment to leveraging innovative technologies to enhance the customer experience and improve productivity, the utility commissioned a benchmarking study focused on IT spending. This study aimed to assess the reasonableness of Hydro Ottawa's IT expenditures and provide valuable evidence for this application.

To this end, Hydro Ottawa commissioned Gartner to conduct an IT Spending Assessment Benchmark. This comprehensive study assessed the utility's IT spending allocation and overall expenditure against specific metrics, benchmarking it against a custom peer group of nine utilities from Canada, the USA, Europe, and New Zealand, as well as against Gartner's comprehensive IT Key Metrics Data for the utilities sector. Gartner determined that this peer group was representative of electricity utility peers and suitable for a valid benchmarking analysis.

Gartner’s report encompassed two key areas of analysis: (i) benchmarking the total IT spending envelope; and (ii) benchmarking the IT spending based on allocations. This analysis leveraged 2023 fiscal year data provided by Hydro Ottawa and the selected peer group members.

Gartner’s Enterprise IT Spending and Staffing benchmarking analysis is attached in Attachment 1-3-3(E) - Hydro Ottawa Enterprise IT Spending and Staffing Benchmark.

7.1. KEY FINDINGS

The study results revealed that Hydro Ottawa performed well compared to Gartner's peer group. The utility's IT spending was lower than its peer group average, with a higher spending allocation towards growth and transformation activities, reflecting the utility's focus on digital transformation and enhanced customer experience. IT staffing levels as a percentage of the total workforce were higher than the peer group's, but the utility relied less on external services. IT spend per employee was also higher due to Hydro Ottawa having a lower number of employees than the peer group average. Hydro Ottawa's software spending was notably higher due to the transition to cloud-based solutions. Overall, Hydro Ottawa spends less, manages a smaller IT workforce (and total workforce), and allocates more IT spending towards growth and transformation initiatives than its peers. The results are summarized in Table 5 below.

Table 5 - Results of Gartner's IT Spending Assessment

Metric	Hydro Ottawa	Peer Average
IT Spending as a % of Revenue	2.50%	2.52%
IT Spending as a % of Operating Expenses	2.80%	3.14%
IT Spend per Employee	$ 42,502	$ 36,763
IT Staffing Levels (% of total workforce)	12.9%	11.7%
IT Allocation to Growth/Transformation	52%	26%

7.2. INCORPORATING RESULTS INTO APPLICATION

Hydro Ottawa believes that Gartner's study confirmed that the utility's IT strategy and investments are consistent with the industry peer group, establishing that it is well-positioned to execute on its 2026-2030 rate plan.

Looking ahead, the utility has decided to defer certain IT investments and prioritize others between 2026 and 2030 to remain focused on IT cost management while balancing the needs of the business and customers.[13] Specifically, Hydro Ottawa will focus on transitioning to cloud

[13] For example, the ERP replacement project originally planned for the 2021-2025 rate term was deferred. See Schedule 2-5-5 - Capital Expenditure Plan for details.

computing, improving cyber security infrastructure, executing its meter-to-cash program, advancing enterprise applications and customer engagement platforms. The core strategy and reasoning for these investments are centered on the utility's digital strategy to enhance: (1) customer experience, (2) employee experience, (3) productivity and operational effectiveness, (4) grid automation and modernization, and (5) cyber security and business continuity. This approach is consistent with Gartner's findings, in that the utility will allocate more of its IT spending towards growth and transformation projects. For more information on IT programs, please refer to Schedule 2-5-9 - General Plant Investments, Attachment 4-1-1(A) - Transition to Cloud Computing, and Attachment 1-3-4(B) - Digital Strategy.

Hydro Ottawa is reinforcing the importance of effectively executing its IT program by including a Cyber Security Program Health metric in its Schedule 1-3-2 Proposed Annual Reporting - 2026-2030. The growth and transformation investments in IT infrastructure are necessary as the evolution towards digital solutions creates opportunities for new service offerings, but also exposure to cyber security risks.

8. COMPENSATION BENCHMARKING

Several factors motivated the preparation of this study. Compensation costs remain a significant portion of Hydro Ottawa's overall OM&A expenses, aligning with historical and industry trends. Additionally, the OEB has expressed interest in utilities benchmarking their compensation costs. Specifically, the OEB's Handbook for Utility Rate Applications outlines expectations for utilities to address aspects of their compensation strategies, including "how target salaries are compared to external benchmarks."[14]

Accordingly, Hydro Ottawa commissioned Mercer Canada (Mercer) to conduct a comprehensive review of its employee compensation packages, comparing them to similar roles within the utility sector and the general market (i.e., other economic sectors). This assessment included cash compensation and benefits for a sample of 20 positions, spanning various levels within both

[14] Ontario Energy Board, *Handbook for Utility Rate Applications* (October 13, 2016), page 19.

unionized and management categories. The sample encompasses a range of positions essential to Hydro Ottawa's operations, including core operational positions, as well as technical, professional, and para-professional roles that support the business. Of the 20 positions selected, 6 were management roles while 14 were from the unionized segments of the utility’s workforce.[15]

Mercer’s Market Compensation Review benchmarking analysis is available as Attachment 1-3-3(F) - Compensation Benchmarking Study.

8.1. KEY FINDINGS

In line with best practices for statistical integrity and standard reporting, Mercer’s study defined “competitive” salaries and total cash compensation as falling within +/- 10% of the median job rate for each market and industry comparator.[16]

The study found that compensation for Hydro Ottawa's core operational roles (e.g., Manager, Distribution Operations; Supervisor, Distribution Operations; Distribution Engineer; and System Operator) aligned well with the utility and general industry market benchmarks. However, the System Designer position was found to be above market.

Some roles, primarily unionized support positions, were compensated above the general market rate but typically aligned with the market median (P50) for the utility sector.

Regarding employer-paid benefits (i.e., insurance, wellness benefits, and pension contributions), Mercer found that Hydro Ottawa's contributions are generally in line with market standards for non-executive employees. Specifically, when compared to the Ontario Public

[15] All of the positions from the management group of employees that were within the scope of the study were non-executive positions.
[16] The market median job rate is also referred to as P50.

Sector, where such benefits account for 20% to 25% of base salary, Hydro Ottawa's benefits were found to be within 19% to 24% of base salary.

Overall, these findings indicate that Hydro Ottawa's total compensation package, including cash compensation and employer-paid benefits, is aligned with market and industry standards.

8.2. INCORPORATING RESULTS INTO APPLICATION

Hydro Ottawa views the results of Mercer's benchmarking analysis as a general validation of the utility's approach to managing compensation costs. The study's findings indicate a broad alignment between the average base salaries for various Hydro Ottawa positions and comparable jobs within the utility industry and the general market. These results encourage the utility to maintain its prudent approach to controlling total compensation costs, while ensuring that its compensation packages remain competitive enough to attract and retain a highly-skilled workforce and foster a performance-driven workplace culture.

For positions whose job rates exceed the market median by more than 10%, Hydro Ottawa will continue to monitor future increases and periodically conduct external benchmarking to ensure that average base salaries remain broadly aligned with industry standards.

As acknowledged in the OEB's Handbook for Utility Rate Applications, comparing target salaries to external benchmarks is just one aspect of a comprehensive employee compensation strategy. Other crucial elements may include formal policies for establishing and regularly reviewing salary scales, as well as performance-based pay structures. Hydro Ottawa's approach to employee compensation encompasses these elements alongside external benchmarking. For a more detailed explanation of the utility's compensation philosophy and its associated components, including the framework for evaluating employee performance and contributions to the utility's strategic objectives, please refer to Schedule 4-1-3 - Workforce Staffing and Compensation and the accompanying information in Attachment 4-1-3(A) - Employee Compensation Strategy, and Attachment 4-1-3(B) - Workforce Planning Strategy.

PEG BENCHMARKING ANALYSIS

1. INTRODUCTION

This Attachment presents the OEB's total cost benchmarking analysis results using the Pacific Economics Group benchmarking model (PEG Model) and provides rationale supporting Hydro Ottawa's recommended stretch factor.

2. PEG BENCHMARKING FORECAST MODEL - BACKGROUND

As part of the ongoing implementation and refinement of its policies governing incentive rate-making for electricity distributors, the OEB has engaged Pacific Economics Group (PEG) to conduct annual benchmarking of the total cost performance of regulated distributors in Ontario.

The PEG Model compares each distributor's "actual" total costs to their predicted costs. Then, each distributor is assigned to one of five cohorts, with the best cost performers in Cohort 1 and the poorest in Cohort 5. These rankings are used to assign stretch factors, which are one of two components comprising the "X factor." The X factor embeds expected productivity gains into a distributor's rate-setting framework.

Table 1 - OEB PEG Model Efficiency Performance Cohort Listing

Cohort	Efficiency Performance	Stretch Factor
1	Actual Costs are 25% or more below predicted costs	0.00%
2	Actual Costs are 10% to 25% below predicted costs	0.15%
3	Actual costs are within +/- 10% of predicted costs	0.30%
4	Actual costs are 10% to 25% above predicted costs	0.45%
5	Actual costs are 25% or more above predicted costs	0.60%

In simpler terms, the stretch factor produced by the PEG Model encourages distributors to become more efficient, to reward distributors for cost efficiencies, and in turn, to lower distribution rates for customers.

The PEG Model also generates two key metrics: Total Cost per Customer and Total Cost per Kilometer of Line. Together, these metrics and the cohort assignment serve as inputs into the Electricity Utility Scorecard (Scorecard) produced by the OEB annually for each distributor in Ontario. The metrics are included under the Cost Control category on the Scorecard, which measures distributors' performance relative to the Operational Effectiveness outcome under the Renewed Regulatory Framework.

PEG populates the PEG Model using the operational and financial data reported by Hydro Ottawa as part of the OEB's Reporting and Record Keeping Requirements (RRR). To be consistent, Hydro Ottawa has populated the PEG Model with this Application's forecasted operational and financial data applicable to the RRR filings and PEG Model.

3. PEG BENCHMARKING FORECAST MODEL - RESULTS

Hydro Ottawa has completed the PEG forecasting model, which can be found in Excel Attachment 1-3-3(G) - OEB Benchmarking Spreadsheet Forecast Model.

The results predict that Hydro Ottawa will begin its Custom IR period (2026 to 2030) in Cohort 3, move into the lower end of Cohort 4 in 2028 and remain in that position for the remainder of the rate term.[1] Cohort 3 denotes distributors whose actual costs are plus or minus 10% of predicted costs within the PEG Model framework. Under the model, the percentage difference between actual and predicted costs for the utility peak in 2030 at 14.4% (based on a three-year average of actual costs).

The results include three updates made to the PEG Model by Hydro Ottawa. The updates, rationale, and steps taken to adjust the PEG Model are discussed below.

[1] "Lower end" in this context means closer to the boundary between Cohort 3 and Cohort 4.

Table 2 - Hydro Ottawa's Projected Cost Efficiency Results

Model Results	Historical	Bridge Years		Test Years				
	2023	2024	2025	2026	2027	2028	2029	2030
Actual Total Cost (1,000s)	$ 332,046	$ 344,819	$ 354,942	$ 392,167	$ 424,091	$ 452,744	$ 476,713	$ 503,814
Predicted Total Cost (1,000s)	$ 318,479	$ 339,138	$ 350,740	$ 367,541	$ 385,000	$ 402,457	$ 419,182	$ 436,310
Difference (1,000s)	$ 13,567	$ 5,681	$ 4,201	$ 24,625	$ 39,090	$ 50,287	$ 57,531	$ 67,504
% Difference (Cost Performance)	4.2%	1.7%	1.2%	6.5%	9.7%	11.8%	12.9%	14.4%
Three-year Average Performance	-	-	2.3%	3.1%	5.8%	9.3%	11.4%	13.0%
Stretch Factor								
Annual Result	**3**	**3**	**3**	**3**	**3**	**4**	**4**	**4**
Three-year Average	-	-	3	3	3	3	4	4

4. UPDATES TO THE PEG BENCHMARKING FORECAST MODEL

4.1. ADDITION OF SECONDARY CIRCUIT KILOMETERS

4.1.1. Rationale

Hydro Ottawa added its historical secondary line circuit kilometers, previously omitted, to produce an updated total circuit kilometers (primary and secondary) value in the PEG Model to correct its underreporting and associated effects on the PEG Model's forecast.

PEG's econometric model predicts a distributor's total costs with explanatory variables. Those variables include outputs such as customers, kilowatt hour (kWh) deliveries, and capacity, prices for capital and operation, maintenance, and administration (OM&A), and other business conditions, including customer growth and average circuit kilometers.

The variables explain the predicted cost level incurred by distributors, or in other words, define the relationship between business conditions and total costs arising from those conditions. For the PEG Model to accurately predict costs, the explanatory variables must reflect actual business conditions as closely as possible.

Hydro Ottawa's historical total circuit kilometers and its average do not reflect its actual business conditions. As part of its 2026 rebasing application, the utility comprehensively reviewed its historical reporting and reporting by other utilities, discovering that it has incorrectly omitted secondary circuit kilometers from its annual RRR submission and that the omission had produced a significant underestimation within the PEG Model's predicted costs.[2]

The underestimation occurs because Hydro Ottawa's secondary line circuit kilometer expenses are reported by the utility and captured in the PEG Model's actual costs. The Uniform System of Accounts (USofA) defined by the *Accounting Procedures Handbook for Electricity Distributors* does not distinguish between primary and secondary lines. All line expenses are combined into underground (UG) and overhead (OH) accounts. The PEG Model draws its actual costs from the RRR filing, including accounts with secondary line expenses. In effect, Hydro Ottawa's actual costs include secondary line expenses, but its predicted costs do not.

4.1.2. Previous Reporting

In the past, Hydro Ottawa omitted secondary circuit kilometers from its RRR submission due to administrative complexities in quantifying older records. Before Hydro Ottawa's formation in 2000, several predecessor utilities had incomplete data regarding overhead secondary lines, and the remaining information was stored on paper maps. Although the incomplete data was a challenge, it did not hinder operations because technicians could locate secondary wires when needed. Additionally, surveying - a process that involves sending employees into the field to measure lines - was deemed burdensome and expensive.

[2] Many Ontario utilities report secondary circuit kilometers (overhead and underground) in their total circuit kilometers, e.g. Alectra Utilities Corporation, ENWIN Utilities Ltd. and Toronto Hydro Electric System Limited.

In 2002, Hydro Ottawa adopted a geographic information system (GIS) and began to digitize its network. GIS made mapping and analyzing data much easier. As part of this process, the utility commissioned an external firm to convert its legacy network paper maps into GIS. The firm completed the work over three years, from 2005 to 2008, and large network sections were added. However, not all sections of Hydro Ottawa's secondary lines were converted into GIS because of insufficient records from predecessor utilities.

Following the conversion of maps, Hydro Ottawa tracked circuit kilometer additions in GIS. This task was completed when new lines were added or work was done on existing lines. Further surveying was completed in 2022, when an internal overhead secondary modelling program was developed to quantify more secondary lines.

Hydro Ottawa is now in a position where most of its secondary lines are surveyed in GIS, except for a section of secondary overhead lines (36%) that have yet to be completed since the paper map conversions.

Despite past complexities and unmapped sections, Hydro Ottawa has quantified its total secondary circuit kilometers using GIS and submits these values as part of its PEG Model forecast. The utility has confidence that the final figures accurately represent its total circuit kilometers, the details of which are supported in more detail below.

4.1.3. Correction For Circuit Kilometer Understatement

Hydro Ottawa employed a four-step process to account for secondary circuit kilometers. This process used GIS data and modeling to estimate unsurveyed lines. The steps were: (1) use GIS to export a database of all mapped secondary lines, (2) assign a year of installation to each secondary line, (3) model unsurveyed secondary overhead lines using network characteristics, and (4) fill in the years before the GIS paper conversions in 2008.

Step 1: Exporting Mapped Secondary Lines from GIS

First, all known secondary circuit kilometers entries in GIS were exported into Microsoft Excel.

Step 2: Assigning Installation Years

Second, each secondary line recording was assigned a year of "installation". In GIS, when a secondary line is modified or surveyed for the first time, an entry with a date is made into the database, updating the line length. The date entry is known as the "Job Placement Date". Installation dates are also entered into the database when available and are updated in GIS under "Installation Date". During the initial conversion, an installation date was entered only if the dates were available and clear in historical records. A year was assigned to each secondary line event based on the installation date provided to GIS or the job placement date, whichever is earlier. Effectively, these are Hydro Ottawa's best estimates of when a line was installed and, therefore, when the circuit kilometers should be recognized in the PEG Model.

For example, when an existing secondary line was surveyed and modeled in GIS for the first time, Hydro Ottawa designated the job placement date as the installation date, even though the line had existed previously, due to the absence of a known installation date for that line. The same method was applied to the replacements of previously unsurveyed secondary lines recorded in GIS. The transition from paper charts to GIS also acknowledged the addition of secondary lines during the years the studies were conducted (2006 to 2008) for the paper maps, where the dating information was unclear. The results of this process are summarized in columns B and D of Table 3 below.

Step 3: Modeling Unsurveyed Overhead Lines

The third step adjusts the known secondary overhead line values to account for 36% of that unmapped network. To adjust, the known overhead secondary lines are divided by a factor of 0.64 (the inverse of 36%) to produce a whole estimate. The 36% value is based on the number of premises connected to an overhead transformer in December 2024, but missing a secondary overhead connection in GIS, compared to the total number of premises in GIS. Therefore, it can be extrapolated that these premises have unsurveyed secondary overhead lines. The 36% value is a conservative estimate because it reflects the state of GIS in 2024, while prior years were less surveyed, which would have larger swaths of unmapped secondary lines. Note that secondary underground lines are not adjusted because they are entirely mapped in GIS.

The result of the first three steps is the historical values of secondary circuit kilometers for each year going back to 2002, as shown in Table 3 below. However, the secondary line data before 2008 is inconsistent due to unclear installation dates on the converted paper maps.

Table 3 - Hydro Ottawa's Step 3 - Historical Total Circuit Km

Year	Total Primary km	GIS Secondary OH km	Adjusted Secondary OH km	GIS Secondary UG km	Total Secondary Km	Total Circuit Km
	A	**B**	**C = B / 0.64**	**D**	**E = C + D**	**F = A + E**
2002	4,830	2	3	14	17	4,847
2003	4,830	4	6	34	40	4,870
2004	5,040	7	11	42	53	5,093
2005	5,242	8	13	53	66	5,308
2006	5,451	12	19	1,693	1,712	7,163
2007	5,739	30	47	3,205	3,252	8,991
2008	5,353	40	63	3,339	3,402	8,755
2009	5,387	50	78	3,436	3,514	8,901
2010	5,414	84	131	3,492	3,623	9,037
2011	5,606	129	202	3,564	3,766	9,372
2012	5,658	196	306	3,619	3,925	9,583
2013	5,484	259	405	3,721	4,126	9,610
2014	5,506	437	683	3,776	4,459	9,965
2015	5,572	572	894	3,834	4,728	10,300
2016	5,608	726	1,134	3,883	5,017	10,625
2017	5,712	802	1,253	3,948	5,201	10,913
2018	5,767	858	1,341	4,021	5,362	11,129
2019	5,836	929	1,452	4,141	5,593	11,429
2020	5,913	979	1,530	4,217	5,747	11,660
2021	6,000	1,020	1,594	4,296	5,890	11,890
2022	6,226	1,208	1,888	4,372	6,260	12,486
2023	6,282	1,305	2,039	4,421	6,460	12,742

Step 4: Extrapolating Pre-GIS Conversion Data

The fourth part of the process filled the gap in secondary line data between 2002 and 2007. The gap in data must be reasonably adjusted because it is clear that secondary lines existed before the conversion between 2006 and 2008 (or they would not have been converted to GIS), and omitting secondary line data in those years would significantly skew the PEG Model's predictions. Hydro Ottawa extrapolated the secondary line length in those years using the compound annual growth rate from secondary line data between 2008 and 2023 (4.37%). This approach estimates the missing data based on the established growth trend. The restated circuit kilometer results are available in Table 4 below. The historical results of this PEG Model correction can be found in Table 6 further below.

1 **Table 4 - Hydro Ottawa Step 4 - Historical Total Circuit Km**

Year	Total Primary Km	Total Secondary Km	Total Circuit Km	Average Total Circuit Km
	A	B	C = A + B	
2002	4,830	2,632	7,462	7,462
2003	4,830	2,747	7,577	7,519
2004	5,040	2,867	7,907	7,648
2005	5,242	2,992	8,234	7,795
2006	5,451	3,123	8,574	7,951
2007	5,739	3,259	8,998	8,125
2008	5,353	3,402	8,755	8,215
2009	5,387	3,514	8,901	8,301
2010	5,414	3,623	9,037	8,383
2011	5,606	3,766	9,372	8,482
2012	5,658	3,925	9,583	8,582
2013	5,484	4,126	9,610	8,667
2014	5,506	4,459	9,965	8,767
2015	5,572	4,728	10,300	8,877
2016	5,608	5,017	10,625	8,993
2017	5,712	5,201	10,913	9,113
2018	5,767	5,362	11,129	9,232
2019	5,836	5,593	11,429	9,354
2020	5,913	5,747	11,660	9,475
2021	6,000	5,890	11,890	9,596
2022	6,226	6,260	12,486	9,734
2023	6,282	6,460	12,742	9,870

The average total circuit kilometers between 2002 and 2023 of 9,870 is inserted into the PEG Model for 2023. Subsequent annual total circuit kilometers and averages used to forecast 2024 to 2030 assume growth in primary and secondary lines. The firm Utilis Consulting has reviewed the inclusion of secondary circuit kilometers and validated the accuracy of the PEG Model in Attachment 1-3-3(G) - OEB Benchmarking Spreadsheet Forecast Model.

4.2. ADDITION OF LOSS KILOWATT-HOUR DEMAND DUE TO CONSERVATION AND DEMAND MANAGEMENT

4.2.1. Rationale

Further to the above, Hydro Ottawa concluded that the PEG Model omits key explanatory variables necessary to predict total costs accurately, namely, a variable to measure the effects of conservation and demand management (CDM).

The Province of Ontario has undertaken several tranches of CDM programs to incentivize customers to consume less electricity and set ambitious targets for energy savings.[3] These programs are intended to encourage cost-effective energy and demand reductions to support affordability and decarbonization efforts in the long term, and they have been successful in that endeavor. A report released by the Independent Electricity System Operator (IESO) stated that it projected to achieve 97% of its 2.4 terawatt-hour energy savings target as part of the 2021-2024 CDM Framework.[4] The practical effect is that Hydro Ottawa's kWh deliveries and annual peak demand (capacity) have been offset by CDM from 2010 to the present, affecting the utility's cost structure. However, an explanatory variable for CDM is missing from the PEG Model. Consequently, a program that has significantly impacted customer demand and utility costs is not captured in the PEG Model, resulting in underreported predicted costs.

Further, despite significant population growth in Ottawa over the past decade, Hydro Ottawa's peak load and electricity deliveries have remained relatively stable. The 2011 Census recorded Ottawa's population at 883,391, while the 2021 Census showed a population of 1,017,449, indicating a substantial percentage increase.[5] However, this population growth did not lead to a

[3] Independent Electricity System Operator, *2021-2024 Conservation and Demand Management Framework Mid-Term Review* (December 2022), page 29.
[4] Independent Electricity System Operator, *2021-2024 Conservation and Demand Management Framework Mid-Term Review* (December 2022), page 32.
[5] Statistics Canada, "Census of Population", https://www12.statcan.gc.ca/census-recensement/index-eng.cfm.

corresponding increase in electricity demand, largely due to the success of conservation efforts in Hydro Ottawa's service area.

While provincial conservation efforts have added new capacity to the provincial grid, this capacity may not always be located where distribution grid constraints exist for Local Distribution Companies. Hydro Ottawa notes that this is particularly true for their numerous greenfield projects. Although Hydro Ottawa's load has been relatively flat for over ten years, its electrified service territory has expanded. The PEG Model, however, does not accurately reflect the reasonable costs associated with this growth in the predicted model.

4.2.2. Correction For Delivery Volume Underrereporting

Hydro Ottawa has adjusted its delivery volumes and capacity proxy totals in the PEG Model to include CDM program energy savings delivered in Hydro Ottawa’s service territory. Hydro Ottawa has used the same values as reported through its Lost Revenue Adjustment Mechanism Variance (LRAM) Account. Although this is a conservative approach as it uses net versus gross conservation savings and does not include non-IESO conservation, it uses values already established as a reasonable measure of conservation savings.

Table 5 below provides a summary of the revised historical delivery volumes, including CDM’s impact. This approach recognizes lost kWh deliveries resulting from the Province of Ontario’s CDM programs and accurately represents the utility’s predicted costs, given that PEG’s econometric model does not expressly factor in the effects of CDM through an explanatory variable. The CDM kWh deliveries and capacity adjustments are extended in the PEG Model to produce a revised performance and cohort group ranking between 2024 and 2030, the results of which can be found in Table 2 above.

Table 5 - Hydro Ottawa's CDM Adjustment Totals

Year	Original Data from PEG Model		Adjusted for CDM	
	Deliveries (kWh)	**Peak Load (kW)**	**Deliveries (kWh)**	**Peak Load (kW)**
2013	7,454,176,542	1,430,303	7,574,876,951	1,477,398
2014	7,361,197,621	1,307,651	7,542,989,946	1,373,435
2015	7,348,001,357	1,374,915	7,608,267,442	1,427,189
2016	7,347,004,293	1,391,443	7,691,501,267	1,453,843
2017	7,167,732,848	1,360,318	7,642,403,563	1,437,938
2018	7,349,859,347	1,441,369	7,855,128,640	1,525,081
2019	7,227,463,251	1,348,215	7,760,514,443	1,440,228
2020	7,029,452,327	1,437,824	7,600,312,560	1,537,186
2021	7,098,952,945	1,358,319	7,679,687,180	1,462,330
2022	7,195,259,722	1,279,664	7,760,359,243	1,378,855
2023	7,227,010,710	1,438,526	7,810,185,461	1,540,267

4.3. REMOVAL OF COSTS ASSOCIATED WITH OTHER REVENUES

4.3.1. Rationale

Hydro Ottawa, as with all LDCs, has Other Revenue (or revenue offsets) incorporated into its base revenue requirement (to calculate distribution rates). The 2006 Rates Handbook refers to Other Revenue as "other regulated charges and other sources of revenue."[6] However, these revenues also have related OM&A.

The accounting treatment of certain revenue-generating costs for utility auxiliary services is such that for some, the full costs are accrued in the PEG Model's "actual costs", while for others, the costs are offset against revenues in the Other Revenue accounts. This differential treatment is directed through the Accounting Procedures Handbook (APH). Hydro Ottawa contends that the issue with leaving some costs with OM&A is that all auxiliary revenues and their associated costs are not factored into the base distribution charges and therefore do not constitute core

[6] Page 70.

distribution activities. For base revenue requirement, the geography of the placement of costs in OM&A or Other Revenue does not impact the result, however it could have implications on cost allocation and it does impact the PEG Model result. To accurately account for these revenue-generating costs, they should all be excluded from the PEG Model's actual costs. If distributors had similar volumes and costs of delivery of these other revenues, there would be limited impact. Hydro Ottawa suggests this is not the case.

As an example, Hydro Ottawa has a significant volume of move-in and move-out activities, driven in part by its serving multiple universities and colleges. The increased cost due to volumes is not an indication of inefficiency; however, as the total number of customers does not change, it can be perceived as such in the model. Two issues exist with the PEG Model in this regard:

1. The costs associated with Other Revenue are included in OM&A causing a misalignment and overstatement the total costs that are subject to the PEG Model assessment.
2. As revenue from those services can be recognized at a different pace than the costs, potentially leading to over or under billing, and therefore the current approach does not adequately incentivize the distributors to monitor the revenue charges.

Taking the same example of move-ins and move-outs, through investment in automation, Hydro Ottawa is proposing to reduce the Account Set Up/Change of Occupancy Charge from $29 to $10. Details of this reduction are available in Schedule 8-4-1 Specific Service Charges. Direct labour costs associated with these activities are included into the individual charge but up front system costs (often capital-related) and ongoing system maintenance and upgrade costs are not. Because of this, this reduction in the Account Set Up/Change of Occupancy Charge results in a shift from direct user pays recovery revenue to an increase to all rate payers: essentially a decrease in Revenue Offsets while an increase in Service Revenue requirement in Rate calculations. These changes provide better individual customer experiences and overall reduced costs, however the efficiency can be hidden by new and enhanced service offerings as a result of customer engagement or as part of regulatory changes through legislation or OEB codes. The costs associated with the services are included in OM&A and they are therefore subject to PEG Model assessment.

A second example is related to Hydro Ottawa's property rentals. Property rentals relate primarily to rental fees paid by Hydro One for land and buildings owned by Hydro Ottawa. Hydro Ottawa and Hydro One have joint facilities for transformer stations in several locations throughout the City of Ottawa. Therefore, these property costs are shared but the PEG Model treats them as only Hydro Ottawa costs. Hydro Ottawa contends that the PEG Model does not adjust for this scenario, such that Hydro Ottawa reports costs associated with maintaining those properties in the PEG Model, but does not account for the Other Revenue offsets received from the utilities renting those properties. In other words, there is no offset in OM&A recognizing that these costs support another utility's operations. Hydro Ottawa believes it to be unique in the number of joint use assets it shares.

Hydro Ottawa therefore proposes to remove Other Revenues from the PEG Model's OM&A. Hydro Ottawa is using Other Revenues as a proxy for the costs associated with these auxiliary services. Imposing an additional productivity factor on costs already offset by revenue, in Hydro Ottawa's view, creates a disincentive for utilities to share assets efficiently, to monitor Other Revenues, and to charge on a user pays model where appropriate. The remaining costs (after deducting Other Revenues) will still drive the need for continuous improvements. In addition, should the utility not be providing a competitive price, the utility will lose this source of revenue as it becomes more economical for the third party to build its own assets (in the case of property rental as an example). Removing Other revenue from OM&A in the PEG Model will achieve the following three things:

1. Account for the offset of increased-volume-driven costs by increased revenue;
2. Monitor where costs and revenues may appear to be disconnected; and
3. Put more visibility to efficiencies in other revenues.

4.3.2. Correction For Other Revenues

Hydro Ottawa used Other Revenues as a proxy for the economic costs associated with these auxiliary revenue generating activities, and used that revenue to offset its actual OM&A under the PEG Model. The utility corrected the PEG Model's predicted costs between 2013 and 2023, the results of which are in Table 6 below. In addition, forecasted other revenues were used to offset forecasted OM&A and produce a revised cohort and efficiency ranking between 2024 and 2030 (as outlined in Table 2 above).

An adjustment to the PEG Model would not be required if new USofA accounts are created to recognize all costs associated with auxiliary services categorized as Other Revenue.

4.4. IMPACT OF CORRECTIONS ON FUTURE EFFICIENCY ASSESSMENT

Hydro Ottawa understands that the PEG Model's econometric cost function relies heavily on accurate business condition data to generate expected cost predictions. With the correction of the circuit line, delivery volume, and OM&A data, Hydro Ottawa has identified the following impacts to the OEB's Efficiency Performance outcomes:

- **Predicted Costs:** The PEG Model will produce higher predicted costs for Hydro Ottawa, given that the network size has increased by including additional circuit kilometers and higher delivery volumes.
- **Efficiency Score**: The ratio of actual costs to predicted costs decreases because of higher predicted costs and other revenue offsetting OM&A.
- **Cohort Assignment:** The improved efficiency score shifts Hydro Ottawa into a lower cohort group, resulting in lower stretch factors.

The final result of the corrections is summarized in Table 2 above, with a detailed PEG Model in Attachment 1-3-3(G) - OEB Benchmarking Spreadsheet Forecast Model.

5. RESTATEMENT OF HISTORICAL TOTAL COST BENCHMARKING

Incorporating the corrections into historical PEG Models improves Hydro Ottawa's cost performance and stretch factor results, as summarized in Table 6. The utility was originally placed into Cohort 4 in 2014 and has remained there since. However, upon restating the PEG Model with the above corrections (or simply the secondary line correction), Hydro Ottawa would have been in Cohort 3, representing a better cost performance and demonstrating that the utility performed very close to PEG's predicted cost structure.

Table 6 - Hydro Ottawa's Restated Historical Stretch Factors

Year	Original Data from PEG Model		Adjusted for Circuit Kilometers, CDM, and Rental Property	
	% Difference (Cost Performance)	Stretch Factor (Annual Result)	% Difference (Cost Performance)	Stretch Factor (Annual Result)
2013	8.5%	3	(6)%	3
2014	12.7%	4	(2)%	3
2015	15.2%	4	(5)%	3
2016	15.7%	4	(6)%	3
2017	16.5%	4	(6)%	3
2018	18.2%	4	(4)%	3
2019	20.4%	4	(1)%	3
2020	19.8%	4	(2)%	3
2021	19.5%	4	(1)%	3
2022	23.1%	4	2%	3
2023	24.4%	4	4%	3

6. COMMENTS ON PEG BENCHMARKING FORECAST MODEL

Hydro Ottawa recognizes the value of total cost benchmarking as a measure of productivity and efficiency and as a tool for cost control. However, Hydro Ottawa respectfully submits that the PEG Model could be enhanced by addressing methodological limitations that undermine the model's efficacy for producing accurate assessments of the utility's efficiency and cost performance, especially for unique distributors and changes in industry conditions. The utility contends that there are several reasons to justify this view.

First, the PEG Model's actual total cost calculation includes USofA accounts that are beyond the control of utilities, some of which have experienced accelerated growth. For example, USofA 5655, Regulatory Expenses, is an account that includes "payments made to a regulatory body for fees assessed against the utility for pay and expenses of such body, its officers, agents, and employees."[7] In effect, a section of Hydro Ottawa's actual total costs as determined by PEG is tied to the efficiency of the regulatory body and its cost allocation methodology[8]. A second example is the inclusion of Connection Cost (CCRAs) without consideration that transmitter costs are assessed in their rate application and their level of efficiency should not be assessed as part of the LDC's controllable costs. This approach is inconsistent with PEG's description in its benchmarking report, where changes beyond business conditions are considered to be a result of the utility's management performance.[9] Consequently, Hydro Ottawa's stretch factor is negatively affected by including such expenses, while inconsistent with PEG's methodological approach to total cost benchmarking.

Second, the PEG Model omits emerging costs associated with the energy transition toward electrification because it is based on conditions between 2002 and 2012. Since then, the electricity supply chain and demand for its services have rapidly evolved. As the model ages, it underrepresents predicted costs because it does not factor in the more complex and riskier operating environment at present.

The causes of increased complexity are many, including political, technological, and social. Governments are implementing decarbonization policies, such as the City of Ottawa's Climate Change Master Plan, as well as the *Canadian Net-Zero Emissions Accountability Act*, which incentivize electrification. The growth of decentralized energy sources (batteries and solar) and digital technologies (smart metering) further complicates distributors' operations. Additionally,

[7] OEB, *Accounting Procedures Handbook for Electricity Distributors* (January 1, 2012), page 190.
[8] Please see Schedule 4-2-4 Regulatory Costs for the impact of the OEB cost allocation change to costs incurred by Hydro Ottawa.
[9] Pacific Economics Group Research LLC, *Spreadsheet Model for Benchmarking Ontario Power Distributors, User Guide* (May 2015), page 18.

consumer preferences are shifting towards electrification.[10] Many of these changes are happening quickly and are beyond the control of utilities.

In response to these demands, Hydro Ottawa is proposing to nearly double its annual capital expenditures during the 2026-2030 period compared to 2021-2025, as outlined in Schedule 2-4-1 - Capital Expenditure Summary as well as detailed throughout the Distribution System Plan in Schedules 2-5-1 through 2-5-9. This spending is necessary to respond to the increased demand for low-carbon electrical projects, including electric vehicles, heat pumps, renewables, and public transportation electrification, which are being incentivized by these conditions.

Layered onto these necessary investments, the OEB has tasked distributors with integrating increasingly complex programs into their operations, such as Distributed Energy Resource planning, upgrading smart grids, managing electric vehicle adoption, hardening the electrical grid, and bolstering cybersecurity. These programs create new costs and sometimes unpredictable outcomes, which are not reflected in the PEG Model's current design.

The above views are supported by an OEB-commissioned review of its total cost benchmarking.[11] The report recommended that the OEB re-estimate its regression model using data from 2014 to 2023, and explore additional parameter variables that reflect the current industry landscape.[12] An updated time series would provide a more robust estimate of total costs by accounting for recent trends that affect utilities. As demonstrated by Clearspring in Hydro Ottawa's 2021-2025 Custom Incentive Rate-setting rate Application, using additional variables would improve both the explanation and prediction of total costs.[13]

[10] IESO, "The Future of Electricity Demand in Ontario," https://www.ieso.ca/en/Powering-Tomorrow/2021/The-Future-of-Electricity-Demand-in-Ontario#:~:text=Preparing%20for%20Decarbonization,drive%20these%20projections%20even%20higher.
[11] University of Toronto, *Review of Total Cost Benchmarking Methodology for Electricity Distributors* (November 12, 2024).
[12] University of Toronto, *Review of Total Cost Benchmarking Methodology for Electricity Distributors* (November 12, 2024), pages vi and vii.
[13] Hydro Ottawa. *Attachment 1-1-12(A): Econometric Benchmarking Study of Hydro Ottawa's Total Cost and Reliability*, EB-2019-0261 (May 5, 2020). The study included parameters for forestation, urban congestion, smart metering, and weather.

Finally, the PEG Model's peer group for benchmarking uses Ontario-based distributors. The practical effect of this peer group composition is that several distinguishing characteristics of Hydro Ottawa in the Ontario context are overlooked in the model and its analysis. For example, Hydro Ottawa has a unique service territory, which is distinct not only as the fifth physically largest in the province but also in its urban/rural split, with approximately 60% rural. What's more, Hydro Ottawa is the only distributor in Ontario that services twice as many customers as the utility immediately below it in the rankings, while also serving less than half as many customers as the utility immediately above it. The uniqueness of several aspects of the utility's cost efficiency and performance may not lend itself to a benchmarking approach for which the peer group is restricted to Ontario.

The OEB-commissioned review of its total cost benchmarking acknowledged this shortcoming and recommended that the OEB adopt inter-jurisdictional productivity benchmarking.[14]

7. CONCLUSION

For the reasons outlined above, Hydro Ottawa submits that the stretch factor assignment of 0.30% or Cohort 3 is appropriate as incorporated into Hydro Ottawa's proposed rate framework. The utility has demonstrated that the PEG Model's predicted total costs have been consistently underreported due to the omission of secondary line data and the impact of CDM. Furthermore, the PEG Model suffers from methodological limitations, such as the exclusion of revenue offsets where the operational costs are included in the PEG Model. Lastly, the regression analysis should be refreshed given the number of years that have passed, changes in policies, and industry.

Please refer to Excel Attachment 1-3-3(G) - OEB Benchmarking Spreadsheet Forecast Model for further details and calculations.

[14] University of Toronto, *Review of Total Cost Benchmarking Methodology for Electricity Distributors* (November 12, 2024), page vii.

ACTIVITY AND PROGRAM-BASED BENCHMARKING ANALYSIS

1. INTRODUCTION

This Attachment provides Hydro Ottawa's Activity and Program-Based (APB) variance analysis results and discussion between 2019 and 2023. The analysis examines Hydro Ottawa's unit cost performance year-over-year and compares it to the industry's five-year averages and Hydro Ottawa's peer groups. Where Hydro Ottawa's year-over-year variances exceed 20% or where its five-year average unit cost exceeds 25% of the industry's five-year average, additional analysis is provided.

The benchmarking analysis does not forecast unit costs for the Bridge and Test periods because Hydro Ottawa does not base its financial forecasts on operational inputs, leaving the denominators unknown. As mentioned in Schedule 4-1-1 - Operations, Maintenance and Administration Summary, the utility utilized a top-down and bottom-up approach to forecast its Operations, Maintenance and Administration (OM&A) expenses for the Bridge and Test periods. Business units submitted program-level funding requests, which were prioritized, adjusted, and aggregated to align with Hydro Ottawa's operational needs.

Hydro Ottawa also notes that it is seeking approval for 2026 Test Year OM&A funding, which will be adjusted using the Custom Revenue OM&A Factor (CROF) thereafter. The utility will have to operate fiscally by the constraints of that formula, affecting its APB benchmarking in a way that may deviate from any forecast. Further information on the CROF is available in Schedule 1-3-1 - Rate Setting Framework.

Unless otherwise noted, the analysis in this Attachment is focused on 2019-2023 and will use the peer groups established in Table 1 of Schedule 1-3-3 - Benchmarking.

2. UNIT COST BENCHMARKING RESULTS

2.1. BILLING O&M

The Billing O&M unit cost is the sum of Hydro Ottawa's USofA 5315, Customer Billing, divided by the total number of customers.

$$\text{Unit Cost (\$/Customer)} = \frac{\text{USoA 5315 (\$)}}{\text{Total Number of Customers}}$$

Customer billing includes the cost of labour and expenses incurred in processing payments, such as issuing bills and processing customer payments.

As displayed in Figure 1 and outlined in Tables 1 and 2 below, Hydro Ottawa's Billing O&M unit costs steadily declined between 2019 and 2023, demonstrating increasing efficiency in customer billing operations. The utility's five-year average is well below the industry and peer group averages.

Hydro Ottawa maintained flat customer billing spending due to investments in billing infrastructure that improved the efficiency and accuracy of its processes. In 2022, Hydro Ottawa implemented automated billing for residential and small business net metering customers, eliminating manual processes and reducing errors.

Hydro Ottawa also continues to promote its digital solutions, such as online billing. Online billing service reduces reliance on paper-based billing, which creates tangible cost savings in printing and postage while providing greater self-service capabilities.

For more information, please refer to Schedule 1-3-4 - Facilitating Innovation and Continuous Improvement, and Schedule 4-1-2 - Operations, Maintenance, and Administration Program Costs.

1 **Figure 1 - Hydro Ottawa vs. Industry and Peer Group 2019-2023 Billing O&M Cost per**
2 **Customer**

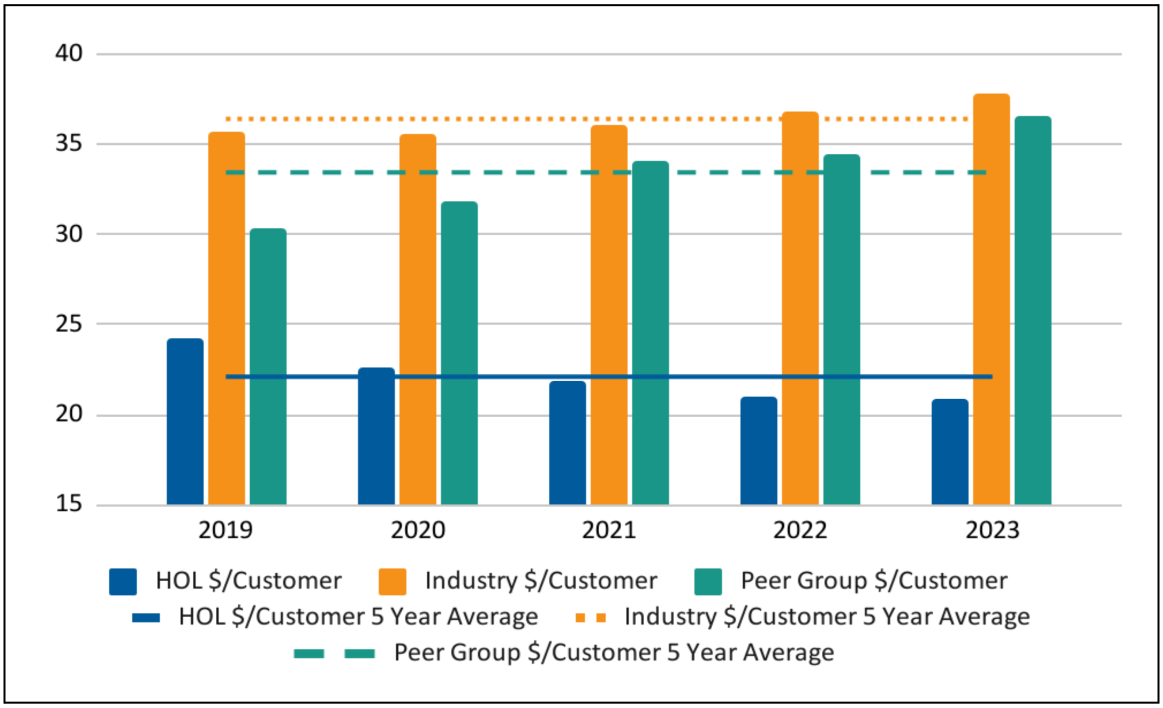
3 

Table 1 – Hydro Ottawa's 2019-2023 Billing O&M Cost per Customer

	2019	2020	2021	2022	2023	5 yr Avg.
Numerator						
USofA 5315 ($'000s)	8,224.5	7,851.5	7,708.9	7,525.1	7,607.4	7,783.5
USofA 5315 YoY Variance ($'000s)	-	(373.0)	(142.6)	(183.8)	82.3	(154.3)
USofA 5315 YoY Variance (%)	-	(4.5)%	(1.8)%	(2.4)%	1.1%	(1.9)%
Denominator						
Total Customers ('000s)	339.8	346.3	353.3	358.9	364.3	352.5
Total Customers YoY Variance ('000s)	-	6.5	7.0	5.6	5.4	6.1
Total Customers YoY Variance (%)	-	1.9%	2.0%	1.6%	1.5%	1.8%
Unit Cost						
Unit Cost $/Cust.	24.21	22.67	21.82	20.97	20.88	22.11
Unit Cost YoY Variance ($/Cust.)	-	(1.5)	(0.9)	(0.9)	(0.1)	(0.8)
Unit Cost YoY Variance (%)	-	(6.4)%	(3.7)%	(3.9)%	(0.4)%	(3.6)%

Table 2 – Hydro Ottawa vs. Industry and Peer Group 2019-2023 Billing O&M Cost per Customer

	2019	2020	2021	2022	2023	5 yr Avg.
Unit Cost						
HOL Unit Cost $/Cust.	24.21	22.67	21.82	20.97	20.88	22.11
Industry $/Cust.	35.69	35.52	36.13	36.88	37.83	36.41
Peer Group $/Cust.	30.31	31.87	34.02	34.51	36.51	33.44
HOL vs. Industry Var. ($/Cust.)	(11.48)	(12.85)	(14.31)	(15.91)	(16.95)	(14.30)
HOL vs. Industry Var. (%)	(32.2)%	(36.2)%	(39.6)%	(43.1)%	(44.8)%	(39.2)%
HOL vs. Peer Grp. Var. ($/Cust.)	(6.10)	(9.20)	(12.20)	(13.54)	(15.63)	(11.33)
HOL vs. Peer Grp. Var. (%)	(20.1)%	(28.9)%	(35.9)%	(39.2)%	(42.8)%	(33.4)%

2.2. METERING O&M

The Metering O&M unit cost is the sum of Hydro Ottawa's USofA 5065 - Meter Expenses, USoA 5175 - Maintenance of Meters, and USofA 5310 - Meter Reading Expenses, divided by customer counts.

$$\text{Unit Cost (\$/Customer)} = \frac{\text{UsoA [5065+5175+5310] (\$)}}{\text{Total Number of Customers}}$$

Metering O&M unit costs declined between 2019 and 2023, demonstrating increased efficiencies in meter installation, maintenance, and reading activities. The unit costs increased slightly in 2022 due to a one-time expenditure on preventative maintenance performed by outside services. Hydro Ottawa's five-year unit cost average is well below the industry and peer group. See Figure 2 and Tables 3 and 4 below for the variance analysis.

Hydro Ottawa intends to maintain its efficient, reliable, and accurate metering operations by investing in Advanced Metering Infrastructure (AMI) 2.0. With appropriate funding, the project aims to upgrade existing metering equipment and integrate advanced data analytics capabilities. The investments will enable real-time data collection, improved outage detection, and enhanced energy management tools for customers to improve efficiency and customer engagement. AMI 2.0 is expected to increase meter reading O&M once operational.

Please refer to Schedule 4-1-2 - Operations, Maintenance, and Administration Program Costs for more information.

Figure 2 - Hydro Ottawa vs. Industry and Peer Group 2019-2023 Metering O&M Cost per Customer

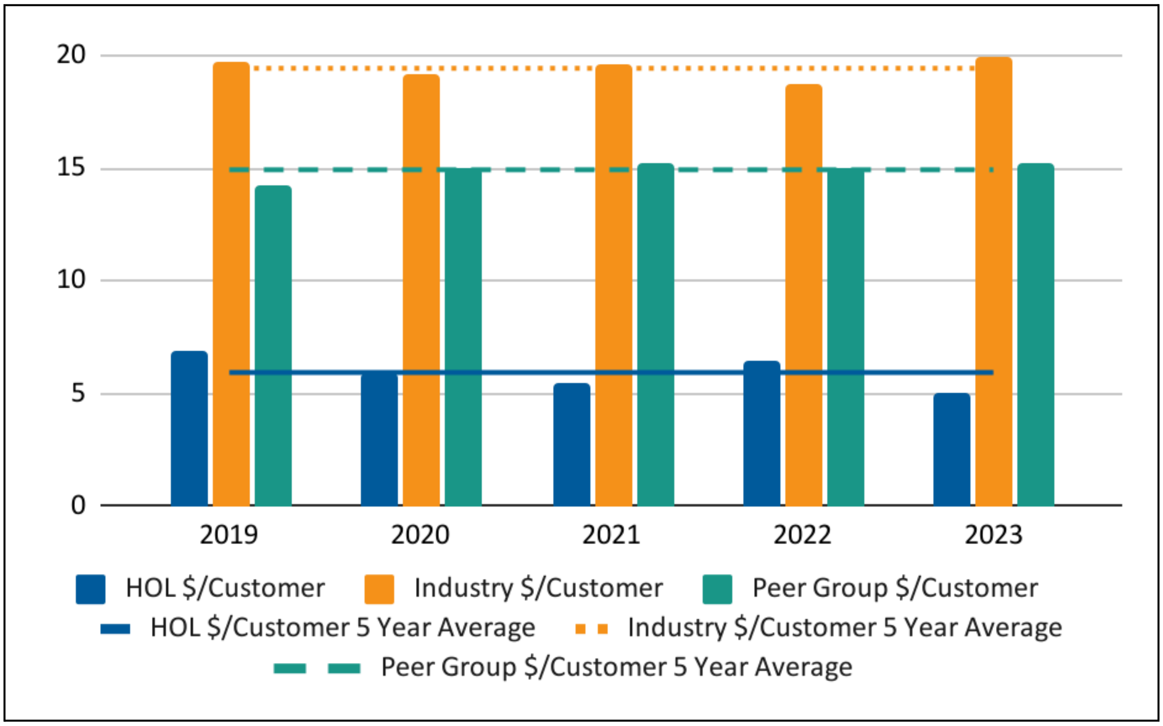


Table 3 – 2019-2023 Metering O&M Cost per Customer

	2019	2020	2021	2022	2023	5 yr Avg.
Numerator						
USofA 5065 + 5175 + 5310 ($'000s)	2,355.3	2,051.5	1,918.8	2,306.0	1,816.5	2,089.6
USofA 5065 + 5175 + 5310 YoY Variance ($'000s)	-	(303.8)	(132.7)	387.2	(489.5)	(134.7)
USofA 5065 + 5175 + 5310 YoY Variance (%)	-	(12.9)%	(6.5)%	20.2%	(21.2)%	(5.1)%
Denominator						
Total Customers ('000s)	339.8	346.3	353.3	358.9	364.3	352.5
Total Customers YoY Variance ('000s)	-	6.5	7.0	5.6	5.4	6.1
Total Customers YoY Variance (%)	-	1.9%	2.0%	1.6%	1.5%	1.8%
Unit Cost						
Unit Cost $/Cust.	6.93	5.92	5.43	6.43	4.99	5.94
Unit Cost YoY Variance ($/Cust.)	-	(1.0)	(0.5)	1.0	(1.4)	(0.5)
Unit Cost YoY Variance (%)	-	(14.6)%	(8.3)%	18.4%	(22.4)%	(6.7)%

Table 4 – Hydro Ottawa vs. Industry and Peer Group 2019-2023 Metering O&M Cost per Customer

	2019	2020	2021	2022	2023	5 yr Avg.
Unit Cost						
HOL Unit Cost $/Cust.	6.93	5.92	5.43	6.43	4.99	5.94
Industry $/Cust.	19.76	19.21	19.58	18.69	19.93	19.43
Peer Group $/Cust.	14.23	14.97	15.27	14.97	15.24	14.93
HOL vs. Industry Var. ($/Cust.)	(12.83)	(13.29)	(14.15)	(12.26)	(14.94)	(13.49)
HOL vs. Industry Var. (%)	(64.9)%	(69.2)%	(72.3)%	(65.6)%	(75.0)%	(69.4)%
HOL vs. Peer Grp. Var. ($/Cust.)	(7.30)	(9.05)	(9.84)	(8.54)	(10.25)	(8.99)
HOL vs. Peer Grp. Var. (%)	(51.3)%	(60.4)%	(64.4)%	(57.0)%	(67.3)%	(60.1)%

2.3. VEGETATION O&M

The Vegetation O&M unit cost is the sum of Hydro Ottawa's USofA 5135 - Overhead Distribution Lines and Feeders Right of Way, divided by pole counts. Vegetation management O&M includes costs incurred for tree trimming and for maintaining the right of way during line construction.

$$\text{Unit Cost (\$/Pole)} = \frac{\text{UsoA 5135 (\$)}}{\text{Total Number of Poles}}$$

Vegetation O&M unit costs increased between 2019 and 2023, with a notable increase in 2022 and 2023. Hydro Ottawa's vegetation O&M is volatile depending on the frequency and severity of weather events because this measure includes Emergency Vegetation Management, which makes it hard to forecast. The increases in 2022 and 2023 were due to the Derecho and April ice storms, respectively. The utility responded to immediate vegetation hazards and undertook ongoing maintenance programs to address hazardous trees weakened by the storms. These weather events were regional and, therefore, not reflected in other distributors' Vegetation O&M across the province. See Figure 3 and Tables 5 and 6 below for the variance analysis.

The City of Ottawa also has high tree coverage compared to Ontario cities such as Toronto or London, which requires increased resources from Hydro Ottawa to maintain its network within Distribution Service Code (DSC) standards.[1] Consequently, Hydro Ottawa's five-year unit cost average is above the industry and peer group.

Due to the weather's overt influence on expenditures and ecological differences between regions, Hydro Ottawa forecasts its vegetation management expenses to remain at or below 2023 levels and above industry averages. A higher expenditure is needed to execute a

[1] Based on Statistics Canada. Table 38-10-0158-01 Urban greenness and normalized difference vegetation index by 2021 population centre, https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3810015801

comprehensive tree-trimming program at a regular cycle, address off-cycle vegetation hazards, and respond to municipal and customer requests for vegetation management.

Please refer to Schedule 4-1-2 - Operations, Maintenance, and Administration Program Costs for more information.

Figure 3 - Hydro Ottawa vs. Industry and Peer Group 2019-2023 Vegetation O&M Cost per Pole

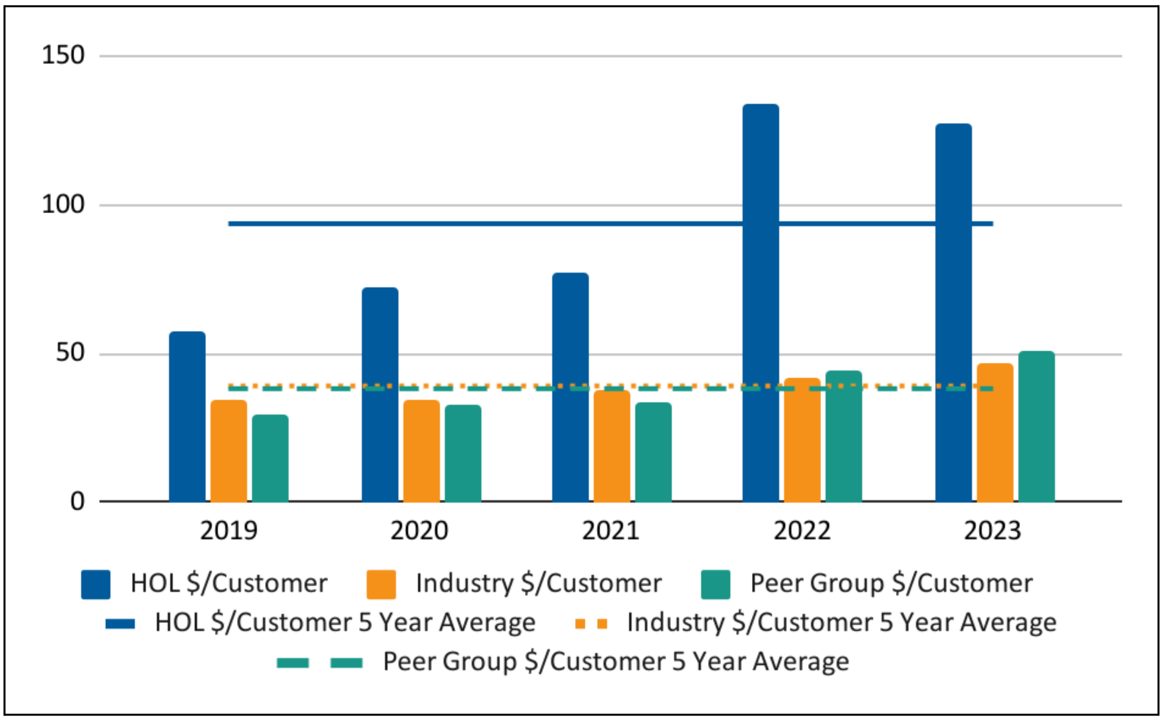


Table 5 – 2019-2023 Vegetation O&M Cost per Pole

	2019	2020	2021	2022	2023	5 yr Avg.
Numerator						
USofA 5135 ($'000s)	2,796.1	3,509.6	3,811.2	6,666.3	6,256.8	4,608.0
USofA 5135 YoY Variance ($'000s)	-	713.5	301.6	2,855.1	(409.5)	865.2
USofA 5135 YoY Variance (%)	-	25.5%	8.6%	74.9%	(6.1)%	25.7%
Denominator						
Total Poles ('000s)	48.9	48.8	49.2	49.7	49.0	49.1
Total Poles YoY Variance ('000s)	-	(0.1)	0.4	0.5	(0.7)	0.0
Total Poles YoY Variance (%)	-	(0.2)%	0.8%	1.0%	(1.4)%	0.1%
Unit Cost						
Unit Cost $/Poles	57.17	71.93	77.40	134.08	127.62	93.6
Unit Cost YoY Variance ($/Poles)	-	14.8	5.5	56.7	(6.5)	17.6
Unit Cost YoY Variance (%)	-	25.8%	7.6%	73.2%	(4.8)%	25.5%

Table 6 – Hydro Ottawa vs. Industry and Peer Group 2019-2023 Vegetation O&M Cost per Pole

	2019	2020	2021	2022	2023	5 yr Avg.
Unit Cost						
HOL Unit Cost $/Poles	57.17	71.93	77.40	134.08	127.62	93.64
Industry $/Poles	34.76	34.21	37.37	42.24	47.05	39.13
Peer Group $/Poles	29.57	32.83	33.34	44.08	51.20	38.21
HOL vs. Industry Var. ($/Poles)	22.41	37.72	40.03	91.84	80.57	54.51
HOL vs. Industry Var. (%)	64.5%	110.3%	107.1%	217.4%	171.2%	134.1%
HOL vs. Peer Grp. Var. ($/Poles)	27.60	39.10	44.06	90.00	76.42	55.43
HOL vs. Peer Grp. Var. (%)	93.3%	119.1%	132.1%	204.2%	149.3%	139.6%

2.4. LINES O&M

The Lines O&M unit cost is the sum of Hydro Ottawa's USofA 5020 to 5025 - Overhead Distribution Lines and Feeders Labour, and Supplies, USofA 5040 to 5045 - Underground

Distribution Lines and Feeders Labour, and Supplies, USofA 5125 to 5130 - Maintenance of Overhead Conductor and Devices, and Service, and USofA 5145 to 5155 - Maintenance of Underground Conduit, Conductors and Devices, and Services, divided by circuit kilometers of primary line. Lines O&M includes the cost of labour and expenses incurred in operating and maintaining distribution lines.

$$\text{Unit Cost (\$/Primary Circuit km)} = \frac{\text{USoA } [5020 + 5025 + 5040 + 5045 + 5090 + 5095 + 5125 + 5130 + 5145 + 5150 + 5155]\ (\$)}{\text{Total Primiary Circuit Kilometers}}$$

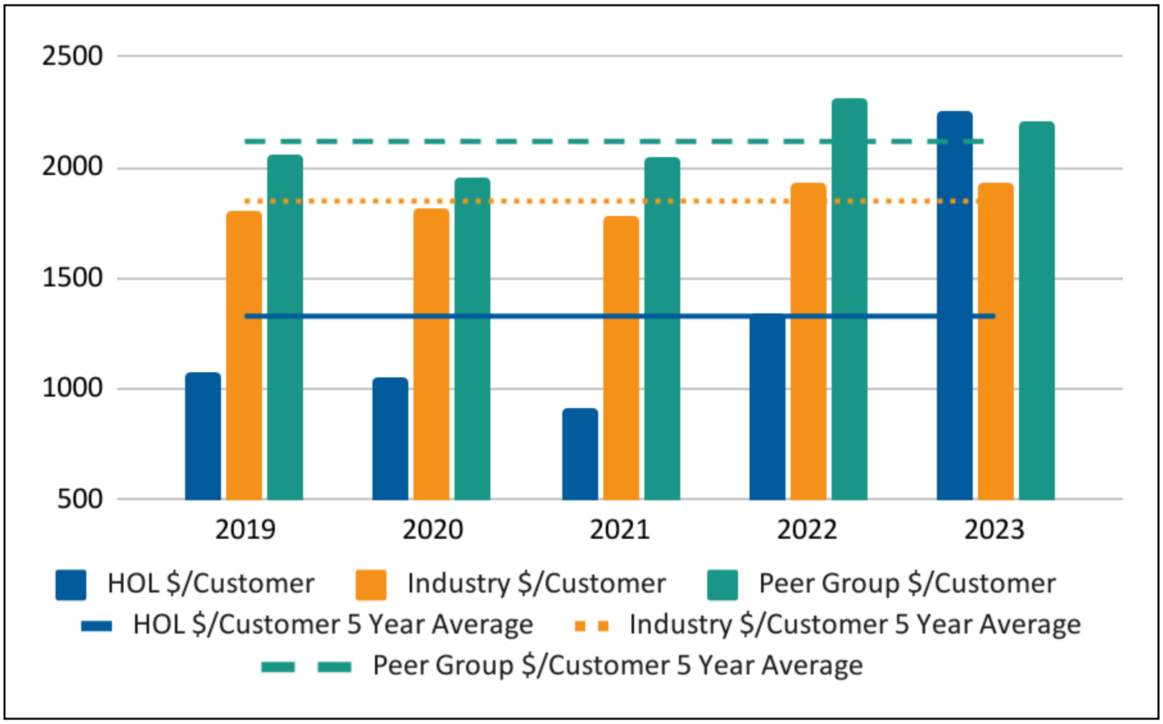
Lines O&M unit costs increased between 2019 and 2023. While many factors influence costs, the 2022 increase was primarily a result of the Derecho storm, and the 2023 increase was due to the increased use of outside services for line maintenance during the 84-day labour strike. Hydro Ottawa's five-year unit cost average is below the industry and peer group. See Figure 4 and Tables 7 and 8 below for the variance analysis.

Hydro Ottawa will prioritize adopting advanced inspection technologies, such as drones and predictive analytics to identify and respond to maintenance needs more efficiently. Maintenance expenses will also include improving network resilience to environmental impacts by incorporating climate adaptation measures, which can reduce reactive maintenance expenditures during extreme weather events.

For more information, please refer to Section 3.1 of Schedule 4-1-2 - Operations, Maintenance, and Administration Program Cost

Hydro Ottawa notes that its Lines O&M numerator includes primary and secondary line maintenance costs, while the denominator only includes primary circuit kilometers. This inclusion is due to the definition of the uniform system of accounts within the *Accounting Procedures Handbook for Electricity Distributors*, which does not provide separate classifications for primary and secondary line maintenance.[2] The inconsistency between the numerator and denominator may cause the unit costs to inaccurately summarize the relationship between primary line expenses and primary circuit kilometers. Therefore, Hydro Ottawa respectfully suggests that the Lines O&M unit cost, as designed, may not be the most effective metric for benchmarking purposes.

Figure 4 - Hydro Ottawa vs. Industry and Peer Group 2019-2023 Lines O&M Cost per Circuit km of Primary Line



[2] OEB, *Accounting Procedures Handbook for Electricity Distributors* (January 1, 2012).

Table 7 – 2019-2023 Lines O&M Cost per Circuit km of Primary Line

	2019	2020	2021	2022	2023	5 yr Avg.
Numerator						
USofA 5020:5030 + 5040:5050 + 5090:5095 + 5125:5130 + 5145:5155 ($'000s)	6,311.9	6,243.8	5,515.3	8,324.0	14,146.7	8,108.3
USofA 5020:5030 + 5040:5050 + 5090:5095 + 5125:5130 + 5145:5155 YoY Variance ($'000s)	-	(68.1)	(728.5)	2,808.7	5,822.7	1,958.7
USofA 5020:5030 + 5040:5050 + 5090:5095 + 5125:5130 + 5145:5155 YoY Variance (%)	-	(1.1)%	(11.7)%	50.9%	70.0%	27.0%
Denominator						
Total Circuit km of Primary Line	5,836.0	5,913.0	6,000.0	6,226.0	6,282.0	6,051.4
Total Circuit km of Primary Line YoY Variance	-	77	87	226	56	112
Total Circuit km of Primary Line YoY Variance (%)	-	1.3%	1.5%	3.8%	0.9%	1.9%
Unit Cost						
Unit Cost $/Circuit km of Primary Line	1,081.54	1,055.94	919.21	1,336.97	2,251.95	1,329.1
Unit Cost YoY Variance ($/Circuit km of Primary Line)	-	(25.6)	(136.7)	417.8	915.0	292.6
Unit Cost YoY Variance (%)	-	(2.4)%	(12.9)%	45.4%	68.4%	24.6%

Table 8 – Hydro Ottawa vs. Industry and Peer Group 2019-2023 Lines O&M Cost per Circuit km of Primary Line

	2019	2020	2021	2022	2023	5 yr Avg.
Unit Cost						
HOL Unit Cost $/Circuit km of Primary Line	1,081.54	1,055.94	919.21	1,336.97	2,251.95	1,329.12
Industry $/Circuit km of Primary Line	1,799.89	1,811.75	1,779.70	1,926.40	1,927.92	1,849.13
Peer Group $/Circuit km of Primary Line	2,064.84	1,954.71	2,047.70	2,317.82	2,207.19	2,118.45
HOL vs. Industry Var. ($/Circuit km of Primary Line)	(718.35)	(755.81)	(860.49)	(589.43)	324.03	(520.01)
HOL vs. Industry Var. (%)	(39.9)%	(41.7)%	(48.4)%	(30.6)%	16.8%	(28.8)%
HOL vs. Peer Grp. Var. ($/Circuit km of Primary Line)	(983.30)	(898.77)	(1,128.49)	(980.85)	44.76	(789.33)
HOL vs. Peer Grp. Var. (%)	(47.6)%	(46.0)%	(55.1)%	(42.3)%	2.0%	(37.8)%

2.5. STATION O&M

The Station O&M unit cost is the sum of Hydro Ottawa's USofA 5016 - Distribution Station Equipment Operation Labour, USofA 5017 - Distribution Station Equipment Operations Supplies and Expenses, and USofA 5114 - Maintenance of Distribution Station Equipment, divided by megavolt-amperes (MVA). Station O&M includes the cost of labour and expenses incurred in operating and maintaining distribution station equipment.

$$\boxed{\text{Unit Cost } \left(\frac{\$}{\text{MVA}}\right) = \frac{\text{USoA [5016+5017+5114] (\$)}}{\text{Total MVA}}}$$

Station O&M unit costs decreased between 2019 and 2023, in part due to increased MVA but also stable spending. Hydro Ottawa's five-year unit cost average is well below the industry and peer group. See Figure 5 and Tables 9 and 10 below for the variance analysis.

Hydro Ottawa has adopted a value-for-money approach to station O&M activities, which aims to reduce capital spending by increasing maintenance to extend asset life and sustain performance. This approach is expected to increase station O&M because the utility will prioritize maintenance on deteriorating stations going forward. However, by extending the useful life of its station assets, the utility will create savings for its customers while delivering reliable service.

For more information, please refer to Section 3.4 of Schedule 4-1-2 - Operations, Maintenance, and Administration Program Costs.

Figure 5 - Hydro Ottawa vs. Industry and Peer Group 2019-2023 Station O&M Cost per MVA

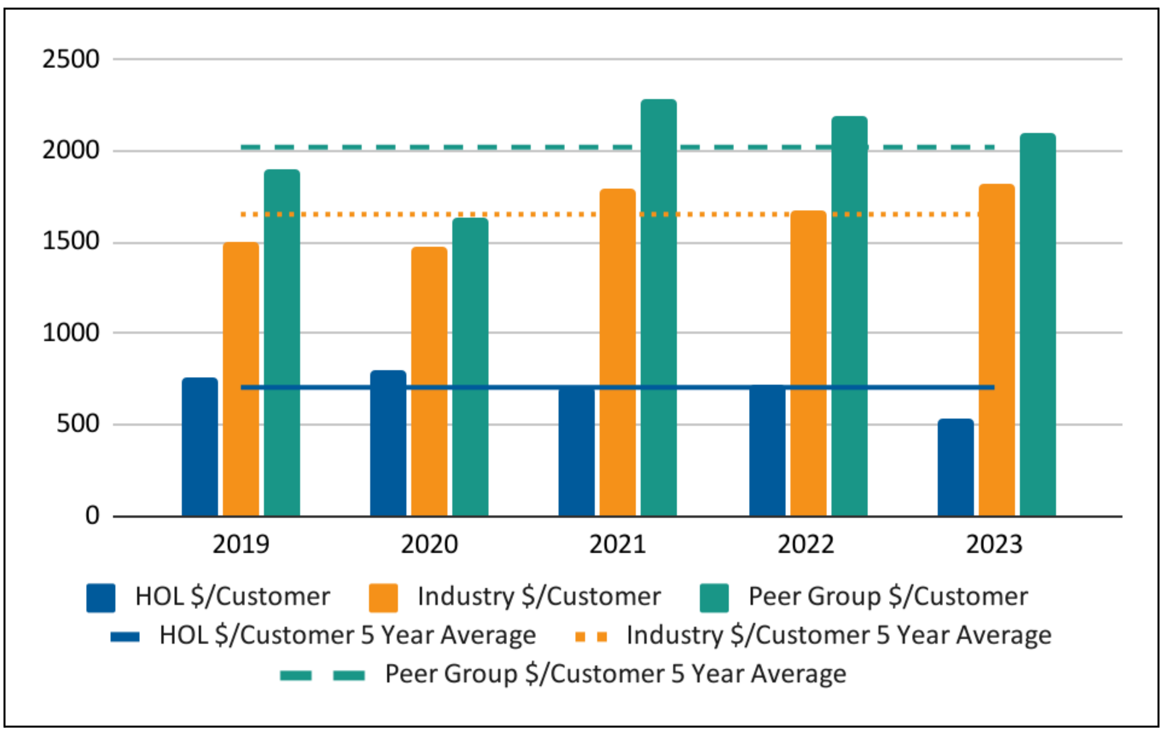


Table 9 – 2019-2023 Station O&M Cost per MVA

	2019	2020	2021	2022	2023	5 yr Avg.
Numerator						
USofA 5016 + 5017 + 5114 ($'000s)	918.2	1,849.7	1,596.3	1,800.8	1,466.8	1,526.4
USofA 5016 + 5017 + 5114 YoY Variance ($'000s)	-	931.5	(253.4)	204.5	(334.0)	137.2
USofA 5016 + 5017 + 5114 YoY Variance (%)	-	101.4%	(13.7)%	12.8%	(18.5)%	20.5%
Denominator						
Total MVA	1,201	2,298	2,273	2,506	2,723	2,200.2
Total MVA YoY Variance	-	1,097.0	(25.0)	233.0	217.0	380.5
Total MVA YoY Variance (%)	-	91.3%	(1.1)%	10.3%	8.7%	27.3%
Unit Cost						
Unit Cost $/MVA	764.51	804.90	702.30	718.60	538.65	705.79
Unit Cost YoY Variance ($/MVA)	-	40	(103)	16	(180)	(56)
Unit Cost YoY Variance (%)	-	5.3%	(12.7)%	2.3%	(25.0)%	(7.5)%

Table 10 – Hydro Ottawa vs. Industry and Peer Group 2019-2023 Station O&M Cost per MVA

	2019	2020	2021	2022	2023	5 yr Avg.
Unit Cost						
HOL $/MVA	764.51	804.90	702.30	718.60	538.65	705.79
Industry $/MVA	1,503.01	1,477.08	1,789.96	1,679.70	1,817.54	1,653.46
Peer Group $/MVA	1,902.20	1,635.96	2,281.22	2,192.84	2,095.98	2,021.64
HOL vs. Industry Var. ($/MVA)	(738.50)	(672.18)	(1,087.66)	(961.10)	(1,278.89)	(947.67)
HOL vs. Industry Var. (%)	(49.1)%	(45.5)%	(60.8)%	(57.2)%	(70.4)%	(56.6)%
HOL vs. Peer Grp. Var. ($/MVA)	(1,137.69)	(831.06)	(1,578.92)	(1,474.24)	(1,557.33)	(1,316)
HOL vs. Peer Grp. Var. (%)	(59.8)%	(50.8)%	(69.2)%	(67.2)%	(74.3)%	(64.3)%

2.6. POLES, TOWERS, AND FIXTURES O&M

The Poles, Towers, and Fixtures O&M unit cost is the sum of Hydro Ottawa's USofA 5120—Maintenance of Poles, Towers, and Fixtures divided by pole counts. Poles, Towers, and Fixtures O&M includes the cost of labour, materials, and expenses incurred in maintaining overhead line facilities.

$$\boxed{\text{Unit Cost (\$/Pole)} = \frac{\text{USoA 5120 (\$)}}{\text{Total Number of Poles}}}$$

Hydro Ottawa's poles, towers, and fixtures O&M unit cost remained flat between 2019 and 2023, except for an increase in 2022 due to increased emergency maintenance expenses resulting from the Derecho storm. Hydro Ottawa's five-year unit cost average is above the industry and peer group averages. However, when the outlier 2022 is removed, Hydro Ottawa's Poles, Towers, and Fixtures unit cost aligns with the industry average. See Figure 6 and Tables 11 and 12 below for the variance analysis.

The utility will continue to focus on testing, inspection, and maintenance of poles and identifying poles for replacement. Additionally, maintenance will include incorporating climate adaptation measures, such as reinforcing poles to improve system reliability.

For more information, please refer to Sections 3.1 and 3.5 of Schedule 4-1-2 - Operations, Maintenance, and Administration Program Costs.

1 **Figure 6 - Hydro Ottawa vs. Industry and Peer Group 2019-2023 Poles, Towers, and**
2 **Fixtures O&M Cost per Pole**

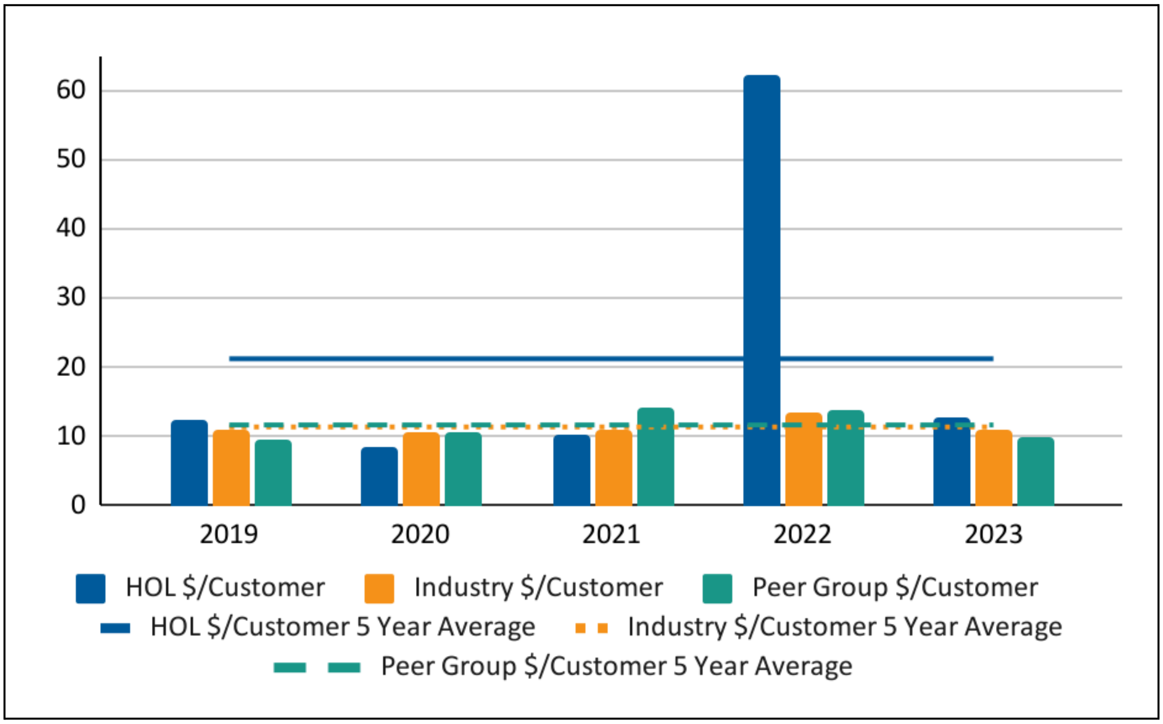


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Table 11 – 2019-2023 Poles, Towers, and Fixtures O&M Cost per Pole

	2019	2020	2021	2022	2023	5 yr Avg.
Numerator						
USofA 5120 ($'000s)	600.6	415.7	500.9	3,104.0	635.6	1,051.4
USofA 5120 YoY Variance ($'000s)	-	(184.9)	85.2	2,603.1	(2,468.4)	8.7
USofA 5120 YoY Variance (%)	-	(30.8)%	20.5%	519.7%	(79.5)%	107.5%
Denominator						
Total Poles ('000s)	48.9	48.8	49.2	49.7	49.0	49.1
Total Poles YoY Variance ('000s)	-	(0.1)	0.4	0.5	(0.7)	0.0
Total Poles YoY Variance (%)	-	(0.2)%	0.8%	1.0%	(1.4)%	0.1%
Unit Cost						
Unit Cost $/Pole	12.28	8.52	10.17	62.43	12.96	21.3
YoY Variance ($/Pole)	-	(4)	2	52	(49)	0.2
YoY Variance (%)	-	(30.6)%	19.4%	513.9%	(79.2)%	105.8%

Table 12 – Hydro Ottawa vs. Industry and Peer Group 2019-2023 Poles, Towers, and Fixtures O&M Cost per Pole

	2019	2020	2021	2022	2023	5 yr Avg.
Unit Cost						
HOL $/Pole	12.28	8.52	10.17	62.43	12.96	21.27
Industry $/Pole	11.05	10.53	11.00	13.65	10.88	11.42
Peer Group $/Pole	9.71	10.81	14.15	13.75	10.08	11.70
HOL vs. Industry Var. ($/Pole)	1.23	(2.01)	(0.83)	48.78	2.08	9.85
HOL vs. Industry Var. (%)	11.1%	(19.1)%	(7.5)%	357.3%	19.2%	72.2%
HOL vs. Peer Grp. Var. ($/Pole)	2.57	(2.29)	(3.98)	48.68	2.88	9.57
HOL vs. Peer Grp. Var. (%)	26.4%	(21.1)%	(28.1)%	354.1%	28.6%	72.0%

2.7. STATIONS CAPEX

The Stations Capital Expenditures (CAPEX) unit cost is the sum of Hydro Ottawa's USofA 1820 - Distribution Station Equipment Normally Primary Below 50 kV divided by MVA.[3] Station additions include the installation cost of transforming and switching equipment used for stepping down to distribution voltages.

$$\text{Unit Cost}\left(\frac{\$}{\text{MVA}}\right) = \frac{\text{USoA [1820] (\$)}}{\text{Total MVA}}$$

Hydro Ottawa's Station CAPEX unit cost dropped relative to 2019 due to expansion investments that increased MVA capacity, much of which became operational in 2020. Spending between 2019 and 2023 was largely driven by Overbook (2019), Moulton (2019), Bayswater (2021/22), and Bell Corners (2022/23) station additions. Hydro Ottawa's five-year unit cost average is below the industry average but above its peer group average. See Figure 7 and Tables 13 and 14 below for the variance analysis.

Hydro Ottawa's capital additions for stations are driven by the demand for system expansion and the replacement of aging assets. Unit cost variance is due to the timing of replacements and new installations of stations. Project complexity will also affect unit costs (projects spanning multiple years, etc).

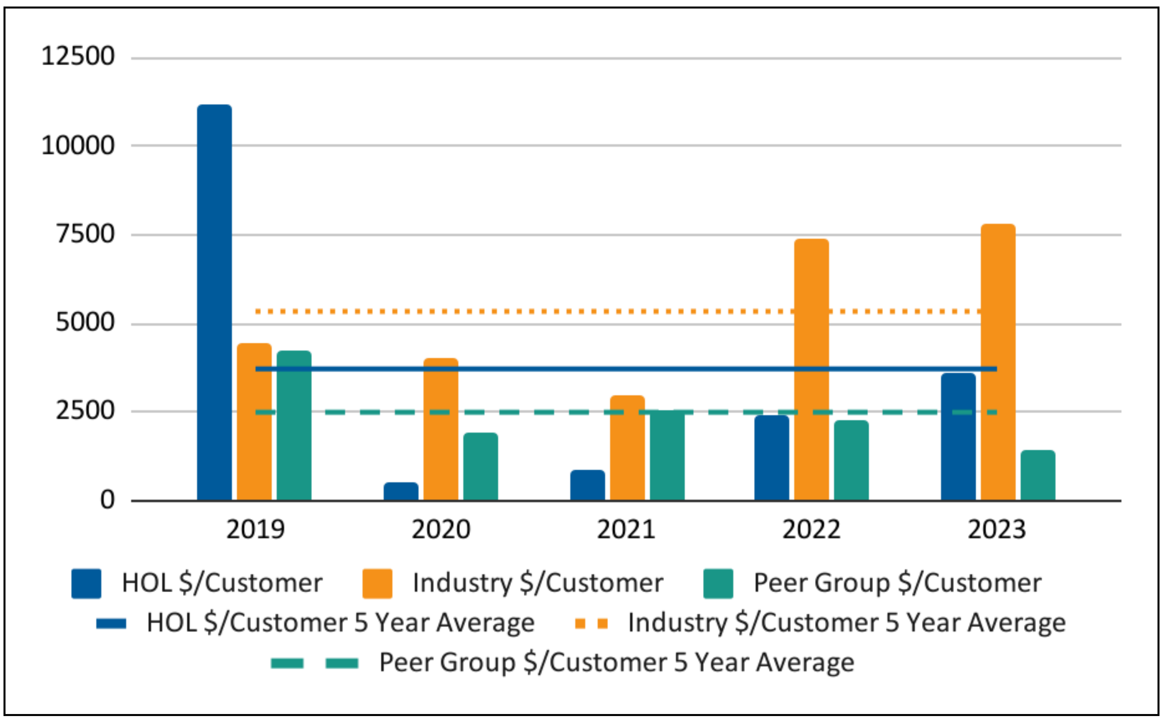
As noted in this Application, Hydro Ottawa is expected to significantly invest in station growth during the Test Years due to capacity constraints (e.g. new stations serving Ottawa's Zero Emission Bus project and the Department of National Defence) and infrastructure development for The Ottawa Hospital's new campus. These investments will result in increased capital expenditures but also increased MVA. Consequently, the unit costs are expected to reflect material and labour inflation because the increased costs will be offset by

[3] All APB references to "CAPEX" denote capital additions.

increased MVA. Please refer to Section 5.1.3 of Schedule 2-5-5 - Capital Expenditure Plan for more information.

Hydro Ottawa also notes that in the OEB's 2023 APB unit cost calculations, worksheet "7. Stations CAPEX", poor data is reported across distributors with many null values in years or no reported values at all from some distributors.[4] The poor data has produced incomplete industry and peer group averages that reduce the efficacy of those values for benchmarking purposes.

Figure 7 - Industry and Peer Group vs. Hydro Ottawa 2019-2023 Stations CAPEX Cost per MVA



[4] Ontario Energy Board, "Activity and Program-based Benchmarking Initiative - 2023 Unit Cost Report," https://www.rds.oeb.ca/CMWebDrawer/Record/868525/File/document.

Table 13 – 2019-2023 Stations CAPEX Cost per MVA

	2019	2020	2021	2022	2023	5 yr Avg.
Numerator						
USofA 1820 ($'000s)	13,434.8	1,116.0	2,043.0	6,002.4	9,851.9	6,489.6
USofA 1820 YoY Variance ($'000s)	-	(12,318.8)	927.0	3,959.4	3,849.5	(895.7)
USofA 1820 YoY Variance (%)	-	(91.7)%	83.1%	193.8%	64.1%	62.3%
Denominator						
Total MVA	1,201	2,298	2,273	2,506	2,723	2,200.2
Total MVA YoY Variance ('000s)	-	1,097.0	(25.0)	233.0	217.0	380.5
Total MVA YoY Variance (%)	-	91.3%	(1.1)%	10.3%	8.7%	27.3%
Unit Cost						
Unit Cost $/MVA	11,186.34	485.64	898.81	2,395.21	3,618.03	3,716.81
Unit Cost YoY Variance ($/MVA)	-	(10,701)	413	1,496	1,223	(1,892.1)
Unit Cost YoY Variance (%)	-	(95.7)%	85.1%	166.5%	51.1%	51.7%

Table 14 – Hydro Ottawa vs. Industry and Peer Group 2019-2023 Stations CAPEX Cost per MVA

	2019	2020	2021	2022	2023	5 yr Avg.
Unit Cost						
HOL $/MVA	11,186.34	485.64	898.81	2,395.21	3,618.03	3,716.81
Industry $/MVA	4,444.39	4,012.52	3,001.87	7,412.84	7,819.97	5,338.32
Peer Group $/MVA	4,246.80	1,945.11	2,582.75	2,273.75	1,407.29	2,491.14
HOL vs. Industry Var. ($/MVA)	6,741.95	(3,526.88)	(2,103.06)	(5,017.63)	(4,201.94)	(1,621.51)
HOL vs. Industry Var. (%)	151.7%	(87.9)%	(70.1)%	(67.7)%	(53.7)%	(25.5)%
HOL vs. Peer Grp. Var. ($/MVA)	6,939.54	(1,459.47)	(1,683.94)	121.46	2,210.75	1,225.67
HOL vs. Peer Grp. Var. (%)	163.4%	(75.0)%	(65.2)%	5.3%	157.1%	37.1%

2.8. POLES, TOWERS, AND FIXTURES CAPEX

The Poles, Towers, and Fixtures CAPEX unit cost is the sum of USofA 1830 - Poles, Towers, and Fixtures divided by pole installations in the same year. The Poles, Towers, and Fixtures additions include the installation cost of poles, towers, and appurtenant fixtures used to support overhead distribution conductors and wires.

$$\text{Unit Cost (\$/Pole)} = \frac{\text{USoA 1830 (\$) Capital Additions}}{\text{Number of Poles Installed}}$$

Poles, Towers, and Fixtures CAPEX unit cost increased between 2019 and 2023 due to the ongoing replacement of aging poles, Light Rail Transit Phase II relocation work, and emergency pole replacements resulting from the 2022 Derecho storm. Unit cost increases were driven by material inflation and increasingly complex replacements (poles carrying multiple circuits, located near major roadways, etc). The company's five-year unit cost average is above the industry and peer group averages. See Figure 8 and Tables 15 and 16 below for the variance analysis.

As part of this Application, Hydro Ottawa is proposing to invest in pole renewals at a higher rate when compared to historical periods. These investments are necessary to address assets at the end of their life and to enhance system reliability, safety, and operational efficiency. Hydro Ottawa expects unit costs to increase in line with material and labour inflation during the test period.

For more information, please refer to Section 5.2 of Schedule 2-5-5 - Capital Expenditure Plan.

Figure 8 - Industry and Peer Group vs. Hydro Ottawa 2019-2023 Poles, Towers and Fixtures CAPEX Cost per Customer

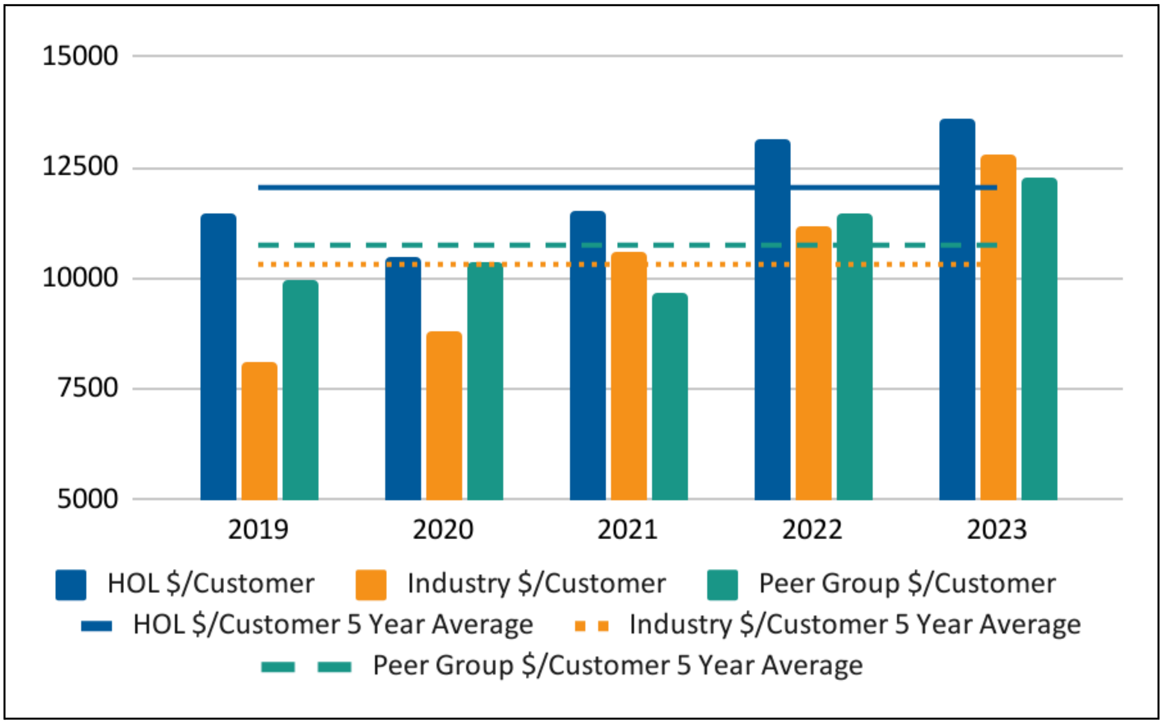


Table 15 – 2019-2023 Poles, Towers and Fixtures CAPEX Cost per Pole

	2019	2020	2021	2022	2023	5 yr Avg.
Numerator						
USofA 1830 ($'000s)	9,347.4	8,113.8	8,793.1	16,600.6	11,267.4	10,824.5
USofA 1830 YoY Variance ($'000s)	-	(1,233.6)	679.3	7,807.5	(5,333.2)	480.0
USofA 1830 YoY Variance (%)	-	(13.2)%	8.4%	88.8%	(32.1)%	13.0%
Denominator						
Total Poles Additions	814	772	764	1,262	828	888
Total Poles Additions YoY Variance	-	(42.0)	(8.0)	498.0	(434.0)	3.5
Total Poles Additions YoY Variance (%)	-	(5.2)%	(1.0)%	65.2%	(34.4)%	6.1%
Unit Cost						
Unit Cost $/Pole	11,483.29	10,510.10	11,509.29	13,154.20	13,607.97	12,052.97
Unit Cost YoY Variance ($/Pole)	-	(973)	999	1,645	454	531
Unit Cost YoY Variance (%)	-	(8.5)%	9.5%	14.3%	3.4%	4.7%

Table 16 – Hydro Ottawa vs. Industry and Peer Group 2019-2023 Poles, Towers and Fixtures CAPEX Cost per Pole

	2019	2020	2021	2022	2023	5 yr Avg.
Unit Cost						
HOL $/Pole	11,483.29	10,510.10	11,509.29	13,154.20	13,607.97	12,052.97
Industry $/Pole	8,141.33	8,799.96	10,621.93	11,202.39	12,824.65	10,318.05
Peer Group $/Pole	9,934.58	10,377.00	9,698.50	11,477.33	12,264.83	10,750.45
HOL vs. Industry Var. ($/Pole)	3,341.96	1,710.14	887.36	1,951.81	783.32	1,734.92
HOL vs. Industry Var. (%)	41.0%	19.4%	8.4%	17.4%	6.1%	18.5%
HOL vs. Peer Grp. Var. ($/Pole)	1,548.71	133.10	1,810.79	1,676.87	1,343.14	1,302.52
HOL vs. Peer Grp. Var. (%)	15.6%	1.3%	18.7%	14.6%	11.0%	12.2%

2.9. LINE TRANSFORMERS CAPEX

The Lines Transformers CAPEX unit cost is the sum of USofA 1850 - Line Transformers divided by new line transformer installations in the same year. The Lines Transformers additions include the installation cost of overhead and underground distribution line transformers for use in transforming electricity to the voltage used by customers.

$$\text{Unit Cost (\$/Line Transformer)} = \frac{\text{USoA 1850 (\$) Capital Additions}}{\text{Number of Line Transformers Installed}}$$

Line Transformers CAPEX unit cost grew from 2019 to 2023, largely due to material cost increases coming out of the pandemic and the Corrective Renewal Program discovering a higher volume of complex distribution transformer oil spills that required replacement. The company's five-year unit cost is above the industry and peer group averages. See Figure 9 and Tables 17 and 18 below for the variance analysis.

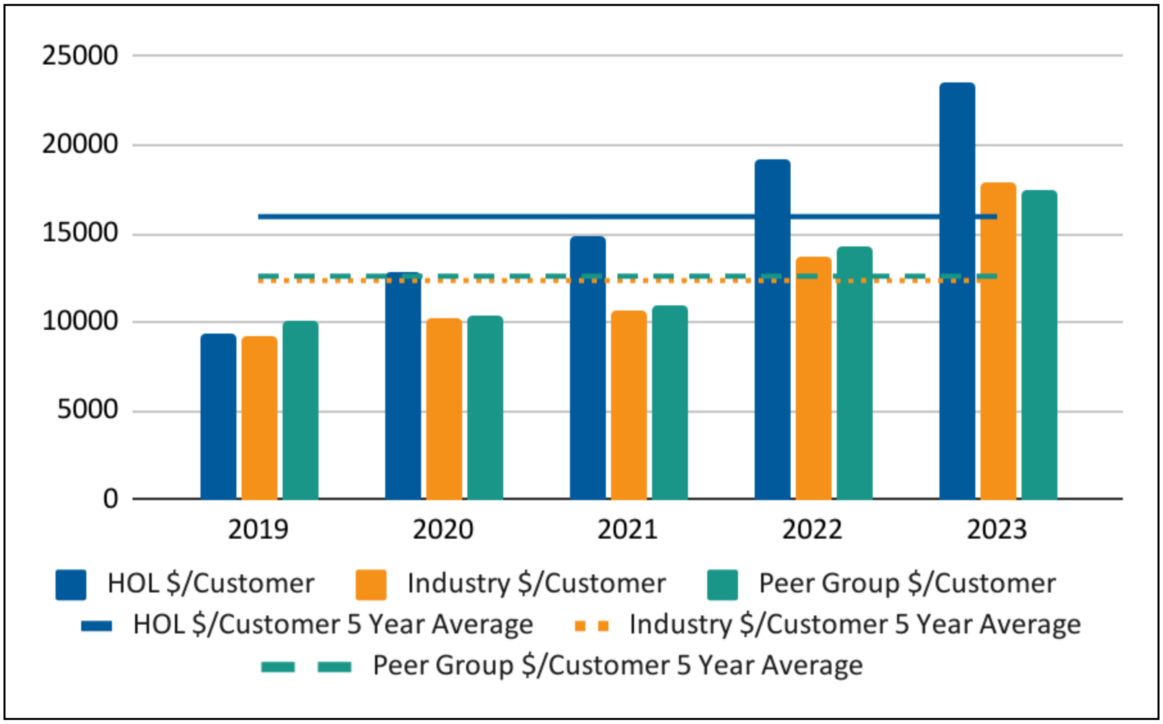
Inflation has been acute for transformers. In particular, grain-oriented electrical steel, used in the fabrication of transformers, experienced sharp price increases between 2020 and 2024 due to imbalances in supply and demand for these products. For more information on inflation, please refer to Schedule 1-2-5 - Impacts of Inflationary Pressures.

Hydro Ottawa also realized a higher volume of distribution transformer oil spills related to a specific manufacturer. The defective equipment was phased out and replaced, with new transformers requiring bigger foundations, resulting in increased spending. For more information on transformer additions, please refer to Section 5.2 of Schedule 2-5-5 - Capital Expenditure Plan.

Hydro Ottawa plans to continue to invest in its Corrective Renewal Program to replace aging or defective transformers and invest in expansion projects. Hydro Ottawa expects the Line

Transformers CAPEX unit cost to correlate with prices for transformers since the inflationary conditions described above continue to persist.

Figure 9 - Hydro Ottawa vs. Industry and Peer Group 2019-2023 Line Transformers CAPEX Cost per Line Transformer Addition



1 **Table 17 – 2019-2023 Line Transformers CAPEX Cost per Line Transformer Addition**

	2019	2020	2021	2022	2023	5 yr Avg.
Numerator						
USofA 1850 ($'000s)	9,114.2	9,332.0	11,197.6	11,227.8	12,095.9	10,593.5
USofA 1850 YoY Variance ($'000s)	-	217.8	1,865.6	30.2	868.1	745.4
USofA 1850 YoY Variance (%)	-	2.4%	20.0%	0.3%	7.7%	7.6%
Denominator						
Total Line Transformer Additions	976	723	756	585	513	710.6
Total Line Transformer Additions YoY Variance	-	(253.0)	33.0	(171.0)	(72.0)	(115.8)
Total Line Transformer Additions YoY Variance (%)	-	(25.9)%	4.6%	(22.6)%	(12.3)%	(14.1)%
Unit Cost						
Unit Cost $/Line Transformer Addition	9,338.32	12,907.33	14,811.64	19,192.82	23,578.75	15,965.77
Unit Cost YoY Variance ($/Line Transformer Addition)	-	3,569	1,904	4,381	4,386	3,560.1
Unit Cost YoY Variance (%)	-	38.2%	14.8%	29.6%	22.9%	26.4%

Table 18 – Hydro Ottawa vs. Industry and Peer Group 2019-2023 Line Transformers CAPEX Cost per Line Transformer Addition

	2019	2020	2021	2022	2023	5 yr Avg.
Unit Cost						
HOL $/Line Transformer Addition	9,338.32	12,907.33	14,811.64	19,192.82	23,578.75	15,965.77
Industry $/Line Transformer Addition	9,184.85	10,179.87	10,723.09	13,771.45	17,942.11	12,360.28
Peer Group $/Line Transformer Addition	10,028.43	10,346.86	10,924.86	14,267.14	17,459.86	12,605.43
HOL vs. Industry Var. ($/Line Transformer Addition)	153.47	2,727.46	4,088.55	5,421.37	5,636.64	3,605
HOL vs. Industry Var. (%)	1.7%	26.8%	38.1%	39.4%	31.4%	27.5%
HOL vs. Peer Grp. Var. ($/Line Transformer Addition)	(690.11)	2,560.47	3,886.78	4,925.68	6,118.90	3,360
HOL vs. Peer Grp. Var. (%)	(6.9)%	24.7%	35.6%	34.5%	35.0%	24.6%

2.10. METERS CAPEX

The Meters CAPEX unit cost is the sum of USofA 1860 - Meters divided by the total customer count. The Meters CAPEX includes installation costs for meters or devices used in measuring electricity delivery to customers.

$$\text{Unit Cost (\$/Customer)} = \frac{\text{USoA 1860 (\$) Capital Additions}}{\text{Total Number of Customers}}$$

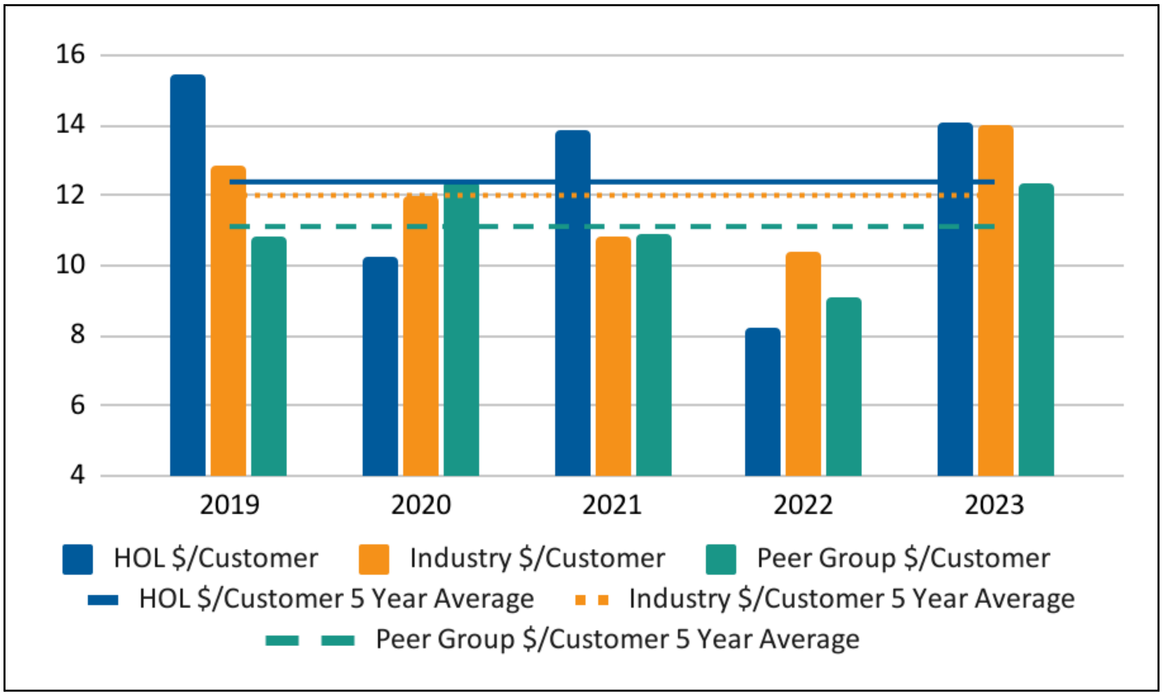
The Meters CAPEX unit cost decreased from 2019 to 2023 with some volatility from year to year, depending on capital additions. Customer demand for connections or replacing failed meters is driving spending in this category. The company's five-year unit cost average is slightly above the industry and peer group averages.

Hydro Ottawa plans to upgrade its outdated metering system (AMI 2.0) in phases. This upgrade will replace current infrastructure with advanced metering technology to enhance operational efficiency through remote meter management, grid feedback, and data collection. Improved data analytics will increase grid visibility, allowing for quicker issue identification and resolution. AMI 2.0's advanced technology will also improve outage detection, resulting in shorter outages and faster restoration times. These necessary investments will increase the unit cost during the test period because spending will exceed customer growth. See Figure 10 and Tables 19 and 20 below for the variance analysis.

Hydro Ottawa notes that this unit cost does not use meter additions as a denominator, which results in misrepresented unit costs because meter capital expenditures are not strongly correlated with customer growth. As described above, Hydro Ottawa plans to make a large capital investment in metering equipment, including replacing existing customers' aging equipment. This investment is unrelated to customer growth. Therefore, an increase in spending will not correspondingly be represented in the denominator, which negatively affects the unit cost.

For more information, please refer to Section 5.2 of Schedule 2-5-5 - Capital Expenditure Plan.

1 **Figure 10 - Industry and Peer Group vs. Hydro Ottawa 2019-2023 Meters CAPEX Cost**
2 **per Customer**



3

1 **Table 19 – 2019-2023 Meters CAPEX Cost per Customer**

	2019	2020	2021	2022	2023	5 yr Avg.
Numerator						
USofA 1860 ($'000s)	5,261.2	3,560.9	4,909.9	2,942.4	5,131.7	4,361.2
USofA 1860 YoY Variance ($'000s)	-	(1,700.3)	1,349.0	(1,967.5)	2,189.3	(32.4)
USofA 1860 YoY Variance (%)	-	(32.3)%	37.9%	(40.1)%	74.4%	10.0%
Denominator						
Total Customers ('000s)	339.8	346.3	353.3	358.9	364.3	352.5
Total Customers YoY Variance ('000s)	-	6.5	7.0	5.6	5.4	6.1
Total Customers YoY Variance (%)	-	1.9%	2.0%	1.6%	1.5%	1.8%
Unit Cost						
Unit Cost $/Cust.	15.48	10.28	13.90	8.20	14.09	12.39
Unit Cost YoY Variance ($/Cust.)	-	(5)	4	(6)	6	(0.3)
Unit Cost YoY Variance (%)	-	(33.6)%	35.2%	(41.0)%	71.8%	8.1%

1 **Table 20 – Industry and Peer Group vs. Hydro Ottawa 2019-2023 Meters CAPEX Cost per**
2 **Customer**

	2019	2020	2021	2022	2023	5 yr Avg.
Unit Cost						
HOL Unit Cost $/Cust.	15.48	10.28	13.90	8.20	14.09	12.39
Industry $/Cust.	12.82	11.98	10.82	10.38	14.02	12.00
Peer Group $/Cust.	10.81	12.41	10.91	9.10	12.35	11.12
HOL vs. Industry Var. ($/Cust.)	2.66	(1.70)	3.08	(2.18)	0.07	0.39
HOL vs. Industry Var. (%)	20.7%	(14.2)%	28.5%	(21.0)%	0.5%	2.9%
HOL vs. Peer Grp. Var. ($/Cust.)	4.67	(2.13)	2.99	(0.90)	1.74	1.27
HOL vs. Peer Grp. Var. (%)	43.2%	(17.2)%	27.4%	(9.9)%	14.1%	11.5%

ELECTRICITY UTILITY SCORECARD BENCHMARKING ANALYSIS

1. INTRODUCTION

This Attachment summarizes Hydro Ottawa's performance on the OEB's Electricity Utility Scorecard (OEB Scorecard) from 2019 to 2023. It compares the utility's historical performance against itself and other utilities in Ontario. Per the OEB's Renewed Regulatory Framework (RRF), the metrics measure outcomes in service quality, customer satisfaction, safety, system reliability, asset management, cost control, and financial performance. The RRF's objective is for regulated utilities to deliver customer-focused services, improve operational effectiveness, respond to public policy actions, and produce sustainable financial performance. Where applicable, the analysis discusses key targets for improvement. The results summarize Hydro Ottawa's operational and financial performance, highlighting achievements, areas for improvement, and the utility's commitment to building customer value.

Unless otherwise noted, the analysis in this section is focused on 2019-2023 and will use the peer groups established in Table 1 of Schedule 1-3-3 - Benchmarking.

2. CUSTOMER FOCUS

2.1. SERVICE QUALITY

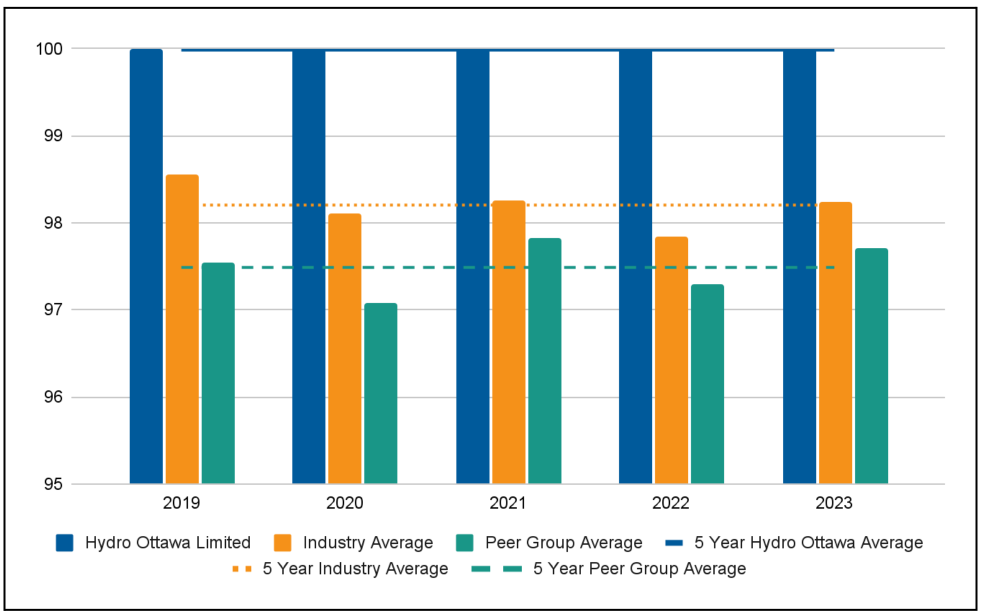
2.1.1. New Residential and Small Business Services Connected on Time

Section 7.2 of the OEB's Distribution System Code (DSC) requires that new service connection requests for low-voltage customers (less than 750 volts) must be completed within five business days after all applicable service conditions are satisfied, or at a later date agreed upon by the customer and distributor.

As displayed in Figure 1 and Table 1 below, Hydro Ottawa exceeded its 90% target between 2019 and 2023. The utility connected an average of 4,807 low-voltage customers per year, 8.9% more than the 2014 to 2018 average of 4,414. These connections were completed 100% of the time within a five-day timeframe or as scheduled with the customer. Hydro Ottawa's procedure is to schedule a new connection within five days, or at a later date as agreed to by the customer and distributor.

Hydro Ottawa expects that requests for new connections will increase between 2026 and 2030 as the City of Ottawa grows.[1] This expectation is consistent with Ottawa's municipal housing targets, which pledged 151,000 new homes by 2031.[2] Hydro Ottawa aims to meet its target of connecting new low-voltage customers within DSC standards during the test period.

Figure 1 - Industry and Peer Group vs. Hydro Ottawa New Residential and Small Business Services Connected on Time



[1] City of Ottawa, "Official Plan - Section 3. Growth Management Framework," https://documents.ottawa.ca/sites/default/files/section3_op_en.pdf. According to the City of Ottawa's Official Plan, its population is expected to increase by 15% from 2021 to 2031.
[2] CBC, "City of Ottawa to Pledge to Help Build 151,000 Homes in Next Decade," https://www.cbc.ca/news/canada/ottawa/city-ottawa-municipal-housing-pledge-151000-units-1.6784756

Table 1 - Industry and Peer Group vs. Hydro Ottawa New Residential and Small Business Services Connected on Time

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Industry Average	98.55%	98.11%	98.26%	97.85%	98.24%	98.20%
Peer Group Average	97.54%	97.07%	97.82%	97.30%	97.70%	97.49%

2.1.2. Scheduled Appointments Met On Time

Section 7.4 of the OEB's DSC states that when a customer must be present for an appointment, the distributor must offer to schedule the appointment during regular business hours, within a four-hour window, and arrive during that time frame.

Hydro Ottawa met its 90% target between 2019 and 2023, completing an average of 98.55% of scheduled appointments within the allotted time frame. Between 2019 and 2023, the utility scheduled an average of 8,668 appointments, double the previous five-year average of approximately 4,000. Customer counts have continued to grow, increasing demand for appointments. See Figure 2 and Table 2 below for details.

In 2023, Hydro Ottawa's percentage of scheduled appointments completed on time dropped due to the 84-day strike and the utility's reallocation of resources to essential services. In other years, the utility scored high and was consistent with historical trends, even as scheduled appointments grew from 6,883 in 2019 to 9,376 in 2023. Apart from the strike, missed appointments were predominantly a result of significant emergencies or inclement weather events that redirected resources to power restoration efforts.

In 2024, Hydro Ottawa expects that its scheduled appointments completed on time will improve in line with historical results. The utility's investment in its service desk tool and further planned enhancements over the test period will continue to deliver exceptional performance in service request responses.

Figure 2 - Industry and Peer Group vs. Hydro Ottawa Scheduled Appointments Met On Time

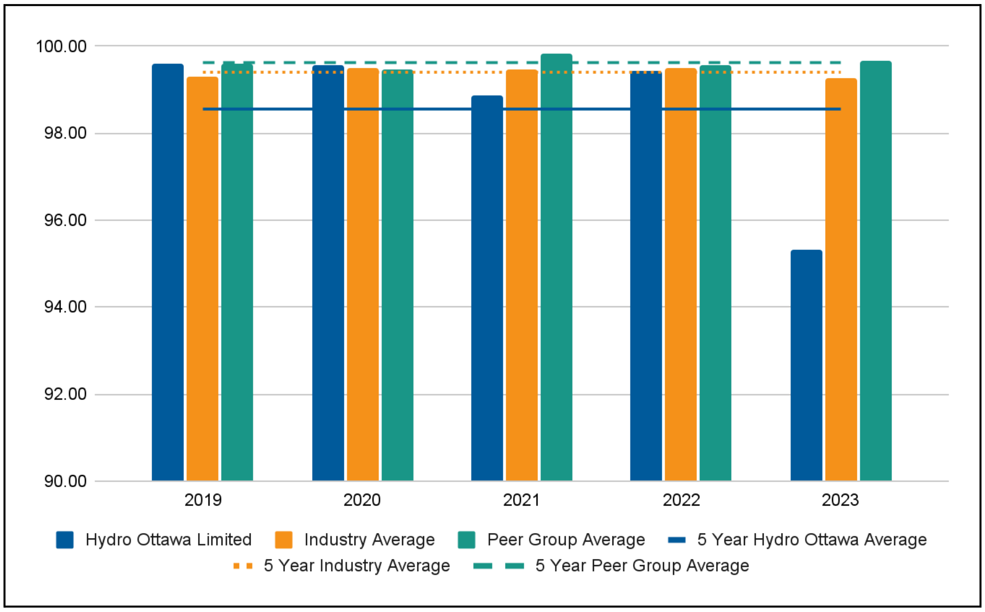


Table 2 - Industry and Peer Group vs. Hydro Ottawa Scheduled Appointments Met On Time

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	99.59%	99.56%	98.86%	99.43%	95.32%	98.55%
Industry Average	99.30%	99.49%	99.45%	99.49%	99.28%	99.40%
Peer Group Average	99.60%	99.47%	99.82%	99.56%	99.65%	99.62%

2.1.3. Telephone Calls Answered on Time

Section 7.6 of the DSC requires that qualified incoming calls to the distributor's contact centre must be answered within 30 seconds.

Between 2019 and 2023, Hydro Ottawa answered an annual average of 193,000 calls. Customer care calls were responded to within 30 seconds 81.54% of the time. This result exceeds the industry target of 65%.

Hydro Ottawa's call volume decreased from an average of 276,000 calls annually between 2014 and 2018 to 193,000 between 2019 and 2023. Call volumes were stable during the later period, even though customer counts increased. Details can be seen in Figure 3 and Table 3 below.

The reduction in average call volumes is due to the utility's investment in improved self-serve options, streamlined online experience, and web chat options. Hydro Ottawa has improved its MyAccount service, a digital customer portal, that will continue to drive operational efficiency through enhanced self-service options, automation, and personalization. In 2023, the utility initiated a multi-year redesign that will improve and update the user interface. Upon completion of the redesign, MyAccount will offer a user experience tailored to customer needs. Customers will be better able to personalize their communication preferences, and the portal will offer expanded outage reporting capabilities, which are expected to streamline communications. Hydro Ottawa is also working towards releasing MyAccount full mobile application functionality, eliminating the need to navigate to the website for some services and providing another resource for customer inquiries.

As a result of these improvements in self-serve options, Hydro Ottawa expects to continue to exceed the industry target during the test period.

Figure 3 - Industry and Peer Group vs. Hydro Ottawa Telephone Calls Answered on Time

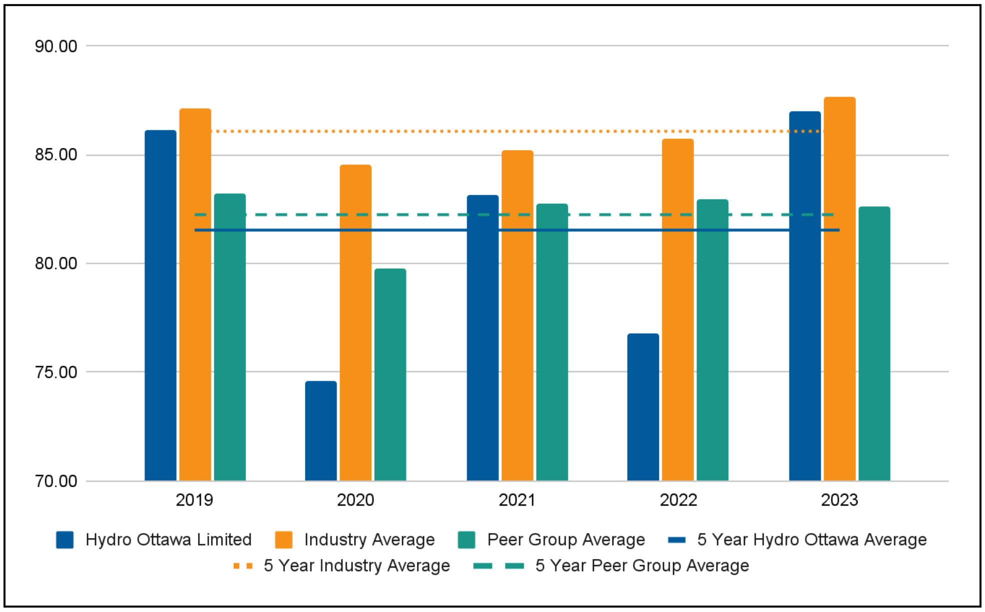


Table 3 - Industry and Peer Group vs. Hydro Ottawa Telephone Calls Answered on Time

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	86.15%	74.60%	83.14%	76.81%	86.99%	81.54%
Industry Average	87.16%	84.57%	85.24%	85.76%	87.69%	86.08%
Peer Group Average	83.21%	79.75%	82.73%	82.94%	82.60%	82.25%

2.2. CUSTOMER SATISFACTION

2.2.1. First Contact Resolution

The OEB allows distributors discretion in reporting the First Contact Resolution metric. Hydro Ottawa conducts a random survey throughout the year of customers who contact the utility by phone. Customer responses are tallied to derive the metric. Customers who indicate that their issues were resolved on first contact are included under First Contact Resolution.

According to its survey, Hydro Ottawa resolved an average of 88% of its customers' issues upon first contact between 2019 and 2023. The 2022 Derecho storm produced a lower score in that year due to increased customer call volume that could not be resolved on first contact. However, the utility improved its five-year average compared to its 2014 to 2018 average of 84.7%.

As discussed in Section 2.2.1 and throughout this Application, Hydro Ottawa continues to invest in digital solutions and its Customer Relationship Management (CRM) platform to enhance customer experience and overall satisfaction.

Table 4 - Hydro Ottawa Customer First Contact Resolution

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	89.32%	89.88%	89.04%	86.03%	85.65%	87.98%

2.2.2. Billing Accuracy

Section 7.1 of the DSC defines an accurate bill as one that contains correct customer information, meter readings, and rate information.

Hydro Ottawa issued an average of 99.9% accurate bills between 2019 and 2023. The utility exceeded its 98% target in each of those years. Inaccurate bills can generally be attributed to circumstances beyond Hydro Ottawa’s control, where customers were rebilled due to meter communication issues and out-of-date customer information. See Figure 5 and Table 5 below for details on Hydro Ottawa’s Billing Accuracy results over the 2019-2023 period.

Hydro Ottawa is investing in its customer interface and digital billing to ensure that customers have the most accurate and up-to-date information when making billing decisions. In 2023, interface design enhancements to the mobile app empowered customers to access electricity usage data, billing information, data downloads, and new payment functionality. Hydro Ottawa plans to build upon its existing MyAccount and mobile app platforms to ensure that billing accuracy remains high and exceeds industry targets. Hydro

Ottawa is also investing in Advanced Metering Infrastructure (AMI) 2.0, which aims to upgrade existing metering equipment and integrate advanced data analytics to support customer billing accuracy and reduce meter communication issues.

Figure 4 - Industry and Peer Group vs. Hydro Ottawa Billing Accuracy

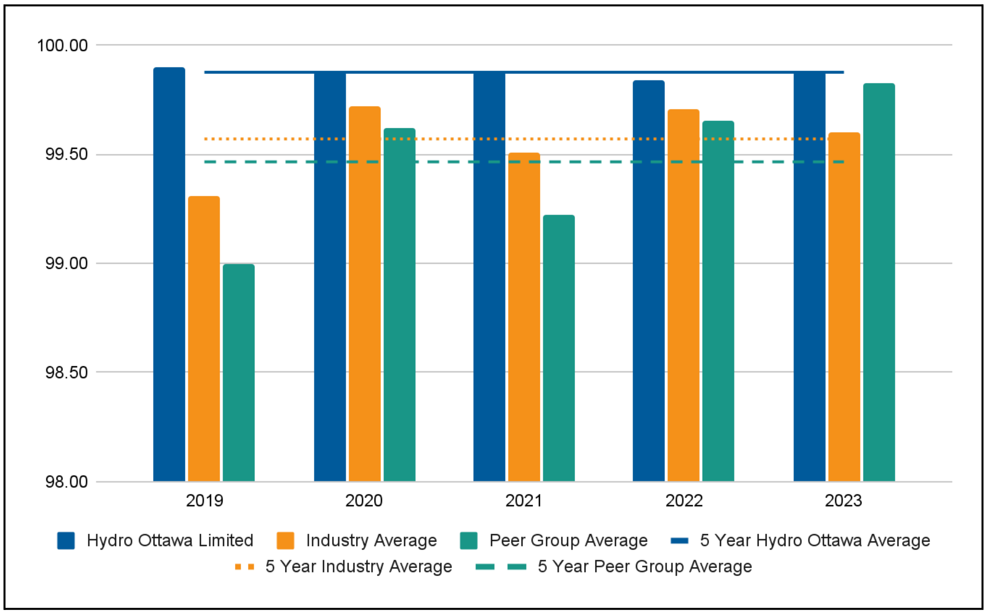


Table 5 - Industry and Peer Group vs. Hydro Ottawa Billing Accuracy

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	99.90%	99.88%	99.88%	99.84%	99.88%	99.88%
Industry Average	99.31%	99.72%	99.51%	99.71%	99.60%	99.57%
Peer Group Average	99.00%	99.62%	99.22%	99.66%	99.83%	99.47%

2.2.3. Customer Satisfaction Survey Results

The OEB allows distributors discretion in measuring customer satisfaction. Hydro Ottawa contracts a third party to conduct its customer satisfaction survey on topics ranging from 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 distribution rate applications. Further details on Hydro Ottawa's Customer Satisfaction surveys are available in Schedule 1-4-1 - Customer Engagement Ongoing.

Hydro Ottawa scored above 90% in customer satisfaction between 2019 and 2023. This result demonstrates Hydro Ottawa's core commitment to driving customer value. It also represents an improvement over the 2014 to 2018 period, when customer satisfaction survey results reached a low of 81% in 2016.

Hydro Ottawa continues to refine its customer value by investing in tools to improve efficiency, expand automation, and leverage evolving customer preferences. Some of these tools include online billing enhancements, encouraging online billing adoption, and ongoing investments into the MyAccount customer portal and mobile application. The utility also engaged its customers in the preparation of this Application to identify customer needs and preferences, which were incorporated into decisions on system investments. For more information on Hydro Ottawa's customer engagement, please see Schedule 1-4-2 - Customer Engagement on the 2026-2030 Application.

Table 6 - Hydro Ottawa Customer Satisfaction Survey

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	94.00%	95.00%	95.00%	93.00%	91.00%	93.60%

3. OPERATIONAL EFFECTIVENESS

3.1. SAFETY

3.1.1. Level of Public Awareness

The OEB requires distributors to conduct a safety survey every two years. In collaboration with distributors, the Electrical Safety Authority (ESA) developed a standardized survey to measure public awareness of electrical safety. Hydro Ottawa completed its biennial safety survey in March 2024 and scored 72% for public safety awareness. The survey included 917 respondents. This score is consistent with results from the previous years. See Figure 7 and Table 7 below for details.

Helping customers understand the importance of staying safe and using electricity wisely is a priority for Hydro Ottawa. The utility works to continuously enhance public awareness of electrical safety through three primary vehicles: (a) its corporate website and social media platforms; (b) a well-established student education program; and (c) active participation in hazard-specific education campaigns, such as the utility's annual promotion of the Ontario Regional Common Group Alliance's (ORCGA) Dig Safe Month, the Electrical Safety Authority's (ESA) Powerline Safety Month, Smart-as-a-Fox videos and the ESA's Holiday Safety Campaign.

Hydro Ottawa aims to position itself as a reliable and trusted source of safety information for Ottawa's residents, communities, and businesses while ensuring a reliable electricity supply throughout its service territory.

The utility has leveraged the power of social media and its website to expand customer safety awareness. The Internet is a vital tool for interacting and informing customers. Hydro Ottawa uses multiple social media platforms to engage with customers daily. The channels post various types of content covering topics such as emergency preparedness and public safety tips.

Hydro Ottawa is also refining its website using tools like Google Analytics and customer feedback to streamline the experience and produce more effective messaging. As part of this process, the Electrical Safety and Emergency Preparedness content has been compiled into an easily accessible portal for customers.

For more information on the survey results and Hydro Ottawa's safety programs, please refer to Schedule 1-4-1 - Customer Engagement Ongoing.

Figure 5 - Industry and Peer Group vs. Hydro Ottawa Level of Public Awareness

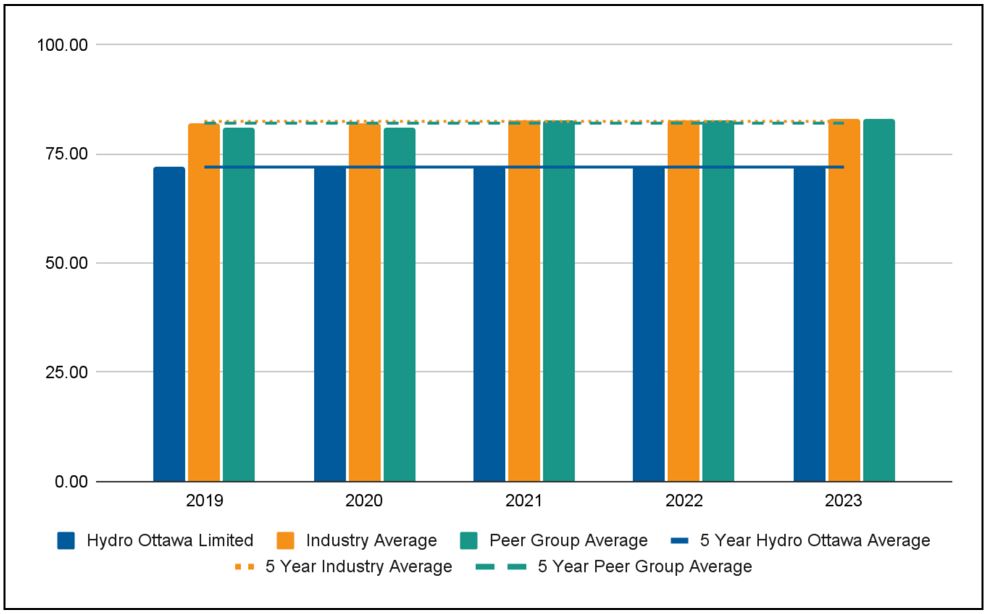


Table 7 - Industry and Peer Group vs. Hydro Ottawa Level of Public Awareness

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	72.00%	72.00%	72.00%	72.00%	72.00%	72.00%
Industry Average	82.03%	81.91%	82.71%	82.56%	83.09%	82.46%
Peer Group Average	80.91%	81.18%	82.58%	82.62%	82.91%	82.04%

3.1.2. Compliance with Ontario Regulation 22/04

The Electrical Distribution Safety Regulation, Ontario Regulation 22/04, establishes objective-based electrical safety requirements of distributors for the design, construction, and maintenance of their networks. Hydro Ottawa was deemed compliant with Electrical Distribution Safety, O. Reg 22/04 for each year between 2019 and 2023, which meets the target.

Hydro Ottawa intends to remain compliant with Electrical Distribution Safety, O. Reg 22/04 during the test period.

3.1.3. Serious Electrical Incident Index

The Electrical Distribution Safety Regulation, Ontario Regulation 22/04, requires that distributors report all serious electrical incidents to the ESA.

The number of serious electrical incidents involving the general public in Hydro Ottawa's service territory remained low. Hydro Ottawa set the target at zero which it strives to achieve each year. However, if a serious electrical incident occurs, as defined by Section 12 of O. Reg 22/04, Hydro Ottawa will miss its target.

A serious electrical incident occurs when the ESA determines that a member of the public was involved in an incident that caused death or critical injury or had the potential to cause death or critical injury. The OEB scorecard displays the actual number and normalized rate of serious electrical incidents.

In 2020 and 2022, Hydro Ottawa missed its target of zero. In 2020, a serious electrical incident occurred when a conductor sleeve failed, allowing a medium voltage overhead wire to fall on the metal roof of a homeowner's garage. The incident did not result in any injuries. In 2022, a serious electrical incident occurred when a piece of electrical equipment was left in a public right-of-way. Again, no injuries were caused by the incident.

Given Hydro Ottawa's performance, it has set a target of zero serious electrical incidents during the test period. Thus, any incident deemed serious by the ESA within Hydro Ottawa's territory will result in the target not being met.

3.2. SYSTEM RELIABILITY

3.2.1. Average Number of Hours that Power to a Customer is Interrupted

The OEB scorecard includes a System Average Interruption Duration Index (SAIDI). SAIDI is an industry standard that measures the average number of hours power to a customer is interrupted annually. This scorecard metric is adjusted for Loss of Supply and Major Event

Days. This scorecard metric uses a distributor-specific target, which is based on the utility's historical performance.

See Figure 8 and Table 8 below for Hydro Ottawa's SAIDI performance relative to its peer group and the industry over the 2019-2023 period.

In 2023, the utility completed a Climate Risk Reaffirmation and Resilience Investment Business Case assessment.[3] The study results were incorporated into system planning to account for increasingly frequent severe weather events. The data-driven approach identifies and prioritizes vulnerable infrastructure for undergrounding and system-hardening to improve grid resilience and service reliability. Hydro Ottawa expects that with appropriate funding and the use of these studies in system planning, the average number of interrupted hours to customers will continue to decrease.

[3] See Attachment 2-5-4(B) - Addendum Report to Distribution System Climate Vulnerability Risk Assessment and Climate Change Adaptation Plan and Attachment 2-5-4(E) - Resilience Investment Business Case Report.

Figure 6 - Industry and Peer Group vs. Hydro Ottawa Average Number of Hours that Power to a Customer is Interrupted[4]

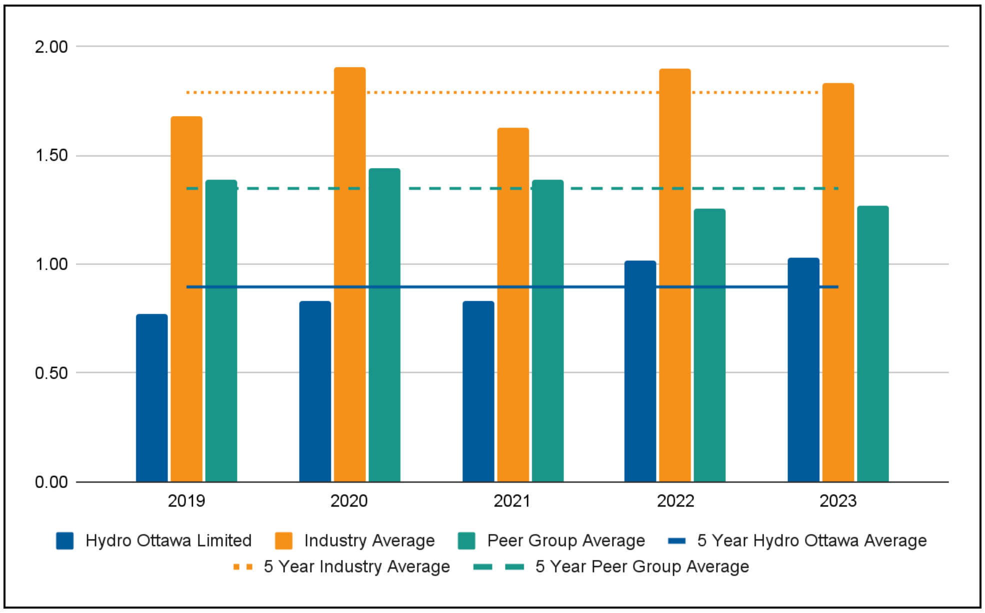


Table 8 - Industry and Peer Group vs. Hydro Ottawa Average Number of Hours that Power to a Customer is Interrupted[5]

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	0.77	0.83	0.83	1.02	1.03	0.90
Industry Average	1.68	1.90	1.63	1.90	1.83	1.79
Peer Group Average	1.39	1.44	1.39	1.25	1.27	1.35

3.2.2. Average Number of Times that Power to a Customer is Interrupted

The OEB scorecard includes a System Average Interruption Frequency Index (SAIFI), which is an industry-wide standard measurement of the average number of times that power to a customer is interrupted annually. This scorecard metric is adjusted for Loss of Supply and

[4] Excluding Loss of Supply and Major Event Days.
[5] Excluding Loss of Supply and Major Event Days.

Major Event Days. This scorecard metric uses a distributor-specific target, which is based on the utility's historical performance.

Hydro Ottawa's five-year average SAIFI of 0.68 met its distributor-specific target of 0.74. The lower SAIFI score demonstrates that the frequency of power interruptions decreased while the duration of outages (SAIDI) increased due to the severity of damage and increased restoration times during weather events. Overall, the utility's network provided more consistent and reliable service. This SAIFI result is an improvement over its previous five-year average between 2014 and 2018 of 1.02. Refer to Figure 9 and Table 9 below for details.

As discussed, Hydro Ottawa is proactively adopting climate risk mitigation strategies into its system planning by identifying high-risk assets for failure and investing in system hardening initiatives. With appropriate funding, the utility expects its SAIFI to continue to improve between 2026 and 2030.

Figure 7 - Industry and Peer Group vs. Hydro Ottawa Average Number of Times that Power to a Customer is Interrupted[6]

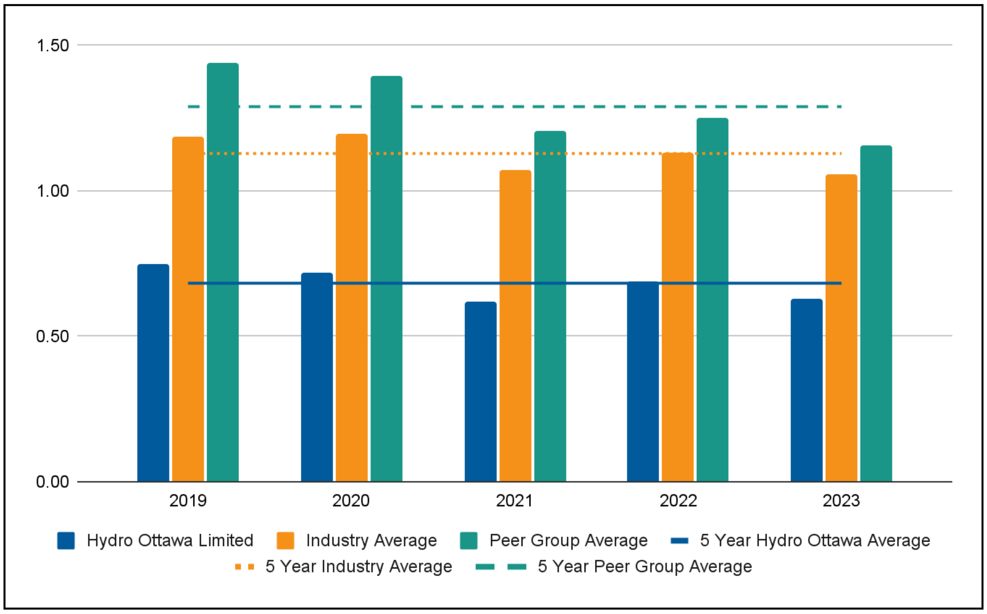


Table 9 - Industry and Peer Group vs. Hydro Ottawa Average Number of Times that Power to a Customer is Interrupted[7]

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	0.75	0.72	0.62	0.69	0.63	0.68
Industry Average	1.18	1.19	1.07	1.13	1.06	1.13
Peer Group Average	1.44	1.39	1.21	1.25	1.15	1.29

3.3. ASSET MANAGEMENT

3.3.1. Distribution System Plan Implementation Progress

The OEB Scorecard includes an Asset Management measure. Distributors are required to measure and report the Distribution System Plans (DSP) implementation progress annually. Distributors are given discretion regarding how this measure is implemented and must

[6] Excluding Loss of Supply and Major Event Days.
[7] Excluding Loss of Supply and Major Event Days.

describe their methodology annually in the scorecard's Management Discussion and Analysis. Targets are not set for this measure.

Hydro Ottawa's DSP forecasts capital expenditures required to maintain and expand its system to serve current and future customers. The DSP details the utility's prioritization process, tools, and methods that direct the capital expenditure planning process.

Hydro Ottawa measures the progress of its DSP implementation as a ratio of actual total capital expenditures made in a calendar year over the total amount of planned capital expenditures for that calendar year in the System Renewal and System Service categories. The measure excludes unplanned asset failures (plant failures), System Access, and General Plant investments. Hydro Ottawa's 2019-2023 results are outlined in Table 10 below.

Hydro Ottawa faced challenges in achieving its 100% implementation progress target between 2019 and 2023. Extreme weather events, COVID-19, and an 84-day labour strike primarily contributed to the lower DSP implementation progress. The utility had to divert resources to emergency repairs following severe weather events in 2019 and 2022. The effects of COVID-19 created labour constraints in 2020, which required the deferral of planned work to 2021. Material and labour shortages continued into 2021. In 2023, the labour strike created obstacles across planned programs that necessitated the deferral of projects to 2024.

Hydro Ottawa targets its DSP implementation progress measure to be as close to 100% as possible between 2026 and 2030. With appropriate funding, the utility can execute its data-driven and customer-focused DSP to support its customers' growth and electrification needs.

For more information, please refer to Hydro Ottawa's DSP schedules in Exhibit 2, Tab 5 of the Application.

Table 10 - Hydro Ottawa's Distribution System Plan Implementation Progress

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	84.69%	89.00%	92.00%	90.00%	75.00%	86.14%

3.4. COST CONTROL

3.4.1. Efficiency Assessment

The Pacific Economics Group (PEG) assessed Hydro Ottawa as being in Cohort 4 between 2019 and 2023. Cohort 4 is defined as actual costs being between 10% and 25% above predicted costs. This result began in 2015 when PEG assessed Hydro Ottawa's actual costs to be 12.1% above predicted costs when averaging the trailing three years, pushing the utility into Cohort 4.

PEG evaluates distributors' total costs on behalf of the OEB. A distributor's total actual costs are compared to its total predicted costs. The total cost performance is expressed as the percentage difference between the two costs (actual and predicted) and stratified into one of five cohort groups. As of 2023, the number of Ontario distributors in each cohort is as follows:

- Cohort 1 (actual costs are more than 25% below predicted costs): 17
- Cohort 2 (actual costs are between 10% and 25% below predicted costs): 15
- Cohort 3 (actual costs are within 10% of predicted costs): 17
- Cohort 4 (actual costs are between 10% and 25% above predicted costs): 3
- Cohort 5 (actual costs are more than 25% above predicted costs): 2

In 2024, Hydro Ottawa conducted a comprehensive analysis to understand and compare its PEG model results with other Ontario utilities. This analysis concluded that Hydro Ottawa had omitted secondary circuit line kilometers from the OEB's Reporting and Record Keeping Requirement (RRR) filings and that doing so had a substantial negative impact on the utility's total predicted costs. PEG uses the RRR filings as inputs in its econometric model;

thus, not submitting secondary kilometers placed the utility in a higher cohort than it would otherwise have been if it had.

In response, Hydro Ottawa updated its total circuit kilometers to include secondary lines in its PEG model forecast submission for this Application. As a result, the utility's efficiency score was lowered to Cohort 3 from 2019 to 2023.

The PEG model predicts Hydro Ottawa will stay in Cohort 3 into 2028. A thorough explanation and analysis of these results can be found in Attachment 1-3-3(A) - PEG Benchmarking Forecast Analysis.

3.4.2. Total Cost per Customer

PEG evaluates the Total Cost per Customer on behalf of the OEB. This metric is calculated as the sum of a distributor's capital and operating costs according to the PEG model divided by the total number of customers the distributor serves.

Hydro Ottawa's total cost per customer increased from $733 in 2019 to $935 in 2023, as shown in Figure 8 and Table 9 below. The metric remained stable between 2019 and 2021, even registering a slight decrease. In 2022 and 2023, however, it increased due to inflation, severe weather events, and the 84-day labour strike (the latter of which resulted in additional contractors, security, and legal costs).

The utility maintains that its unique operational conditions produced a higher-than-average unit cost when compared to the industry and will continue to do so. Hydro Ottawa is the only utility of its size that serves a large population across urban and rural territory. For example, Hydro Ottawa's service territory has 326 customers per square kilometer, while Toronto Hydro has 1,258 customers per square kilometer.[8] Hydro Ottawa's dispersed customer base also spans the National Capital Greenbelt. Further, significant portions of the network were

[8] Hydro Ottawa's 364,334 customers / 1,116km2 = 326 customers per square kilometer and Toronto Hydro's 792,734 customers / 630 km2 = 1, 258 customers per square kilometer.

constructed between 1960 and 1980, requiring increased OM&A to maintain aging assets. Ottawa is also an expanding city with one of the highest growth rates (8.5%) among large municipalities between 2016 and 2021, according to Statistics Canada's national censuses.[9] This growth puts more demand on the utility's services from housing, commercial, public, and industrial customers, and requires corresponding investments by the utility to meet that demand.

Figure 8 - Industry and Peer Group vs. Hydro Ottawa Total Cost per Customer

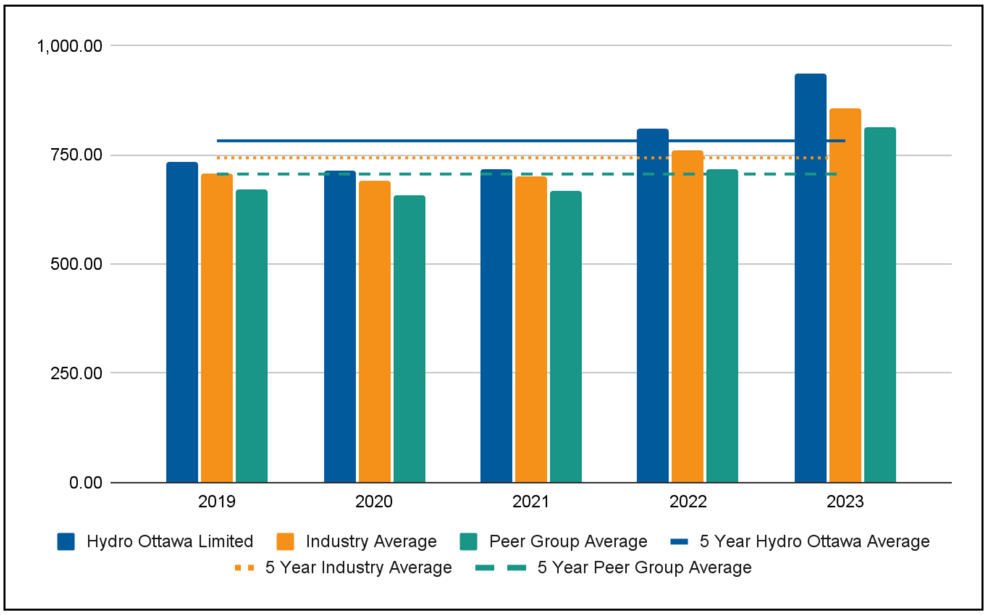


Table 11 - Industry and Peer Group vs. Hydro Ottawa Total Cost per Customer

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	733.00	714.00	719.00	811.00	935.00	782.40
Industry Average	706.86	691.31	700.44	760.54	857.50	743.33
Peer Group Average	671.55	658.45	666.82	718.75	814.75	706.06

[9] Statistics Canada, "Focus on Geography Series, 2021 Census of Population: Ottawa - Gatineau Census Metropolitan Area," https://www12.statcan.gc.ca/census-recensement/2021/as-sa/fogs-spg/page.cfm?lang=E&topic=1&dguid=2021S0503505

3.4.3. Total Cost per Kilometer of Line

Total Cost per Kilometer of Line is also evaluated by PEG on behalf of the OEB. This metric is calculated as the sum of a distributor's capital and operating costs according to the PEG model, and divided by the total circuit kilometers of distribution line within the distributor's service territory.

Hydro Ottawa's Total Cost per Kilometer of Line increased between 2019 and 2023, with much of the cost increase occurring in 2022 and 2023. Again, a large portion of these increases can be explained by extreme weather events and the 84-day labour strike. See Figure 9 and Table 10 below for Hydro Ottawa's 2019-2023 results.

However, as discussed above in Section 3.4.1, Hydro Ottawa had omitted reporting its secondary line circuit kilometers, which negatively affects this unit cost. Once the missing secondary lines are accounted for, the unit cost drops below industry averages, demonstrating the utility's efficiency. That adjusted Total Cost per Kilometer of Line, which includes secondary lines in the denominator, has been added to Table 9.[10]

Hydro Ottawa emphasizes that it only reported primary lines to the OEB. Thus, the PEG model excludes any secondary lines within Hydro Ottawa's service territory. Legacy information from the utility's predecessors presented complexities in reporting full secondary line information. These complexities have been largely addressed, but there remain sections of the secondary overhead network unsurveyed in the utility's geographic information system (GIS). Hydro Ottawa is continually surveying and updating its secondary line lengths when lines are replaced or work is performed. As a result, Hydro Ottawa intends for its secondary line data to be fully integrated into GIS in the coming years. Refer to Attachment 1-3-3(A) - PEG Benchmarking Analysis for further details.

[10] Secondary lines are quantified in Attachment 1-3-3(A): PEG Benchmarking Forecast Analysis.

Figure 9 - Industry and Peer Group vs. Hydro Ottawa Total Cost per km of Line

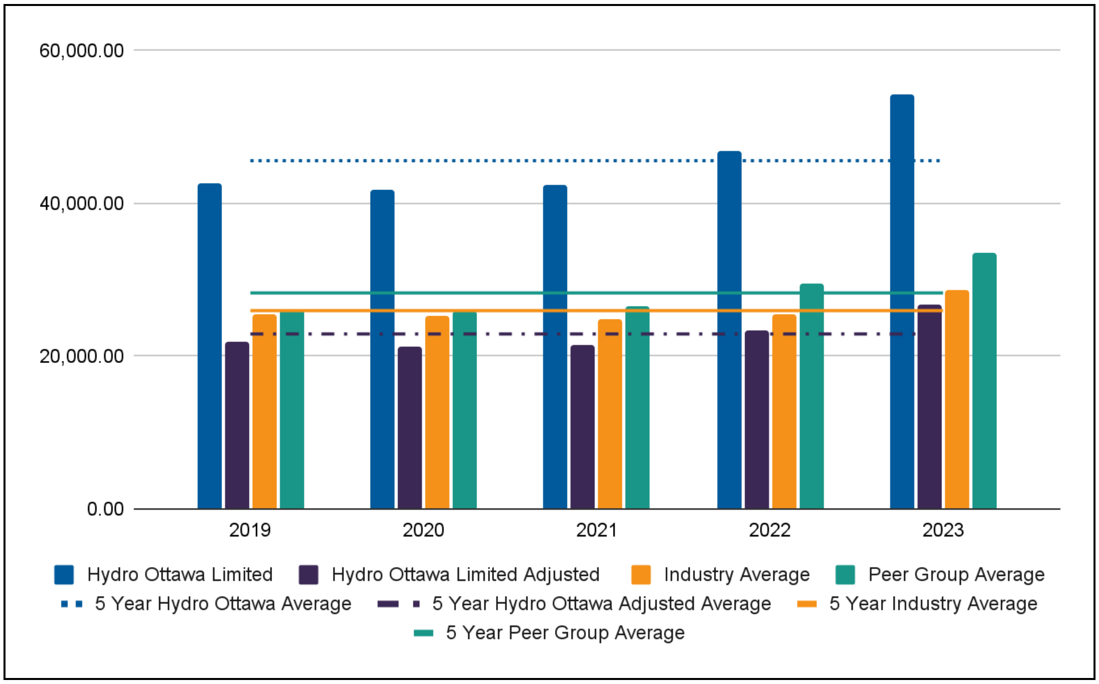


Table 12 - Industry and Peer Group vs. Hydro Ottawa Total Cost per km of Line[11]

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	42,694	41,819	42,365	46,747	54,210	45,567
Hydro Ottawa Adjusted	21,802	21,208	21,379	23,311	26,726	22,885
Industry Average	25,422	25,180	24,906	25,492	28,719	25,944
Peer Group Average	26,195	25,789	26,423	29,434	33,464	28,261

*

[11] Adjusted total circuit kilometers used in this calculation can be found in Attachment 1-3-3(A) - PEG Benchmarking Forecast Analysis.

4. PUBLIC POLICY RESPONSIVENESS

4.1. CONNECTION OF RENEWABLE GENERATION

4.1.1. New Micro-embedded Generation Facilities Connected on Time

Per the DSC, the connection of new micro-embedded generation facilities must be completed within five business days, or at such a later date as agreed to by the customer and the distributor. This service condition must be met at least 90% of the time. Between 2019 and 2023, Hydro Ottawa connected 280 micro-embedded generation facilities (less than 10 kW), all of which were connected within the prescribed time frame or at an agreed-upon date with the customer (i.e. 100% timely completion rate). Hydro Ottawa anticipates that it will continue to connect any micro-embedded generation facilities per the OEB timelines.

Table 13 - Hydro Ottawa New Micro-embedded Generation Facilities Connected on Time

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

5. FINANCIAL PERFORMANCE

5.1. FINANCIAL RATIOS

5.1.1. Liquidity: Current Ratio

The Current Ratio is a liquidity ratio that measures a company's ability to pay short-term obligations, or those due within one year. Liquidity ratios indicate what a company has in current assets to cover current liabilities.

In 2023, Hydro Ottawa's liquidity current ratio was 0.94 and fluctuated between 0.81 and 1.14 between 2019 and 2023. Reduced liquidity can be attributed to a reduction in accounts receivable and an increase in accrued liabilities.

Figure 10 - Industry and Peer Group vs. Hydro Ottawa Current Ratio

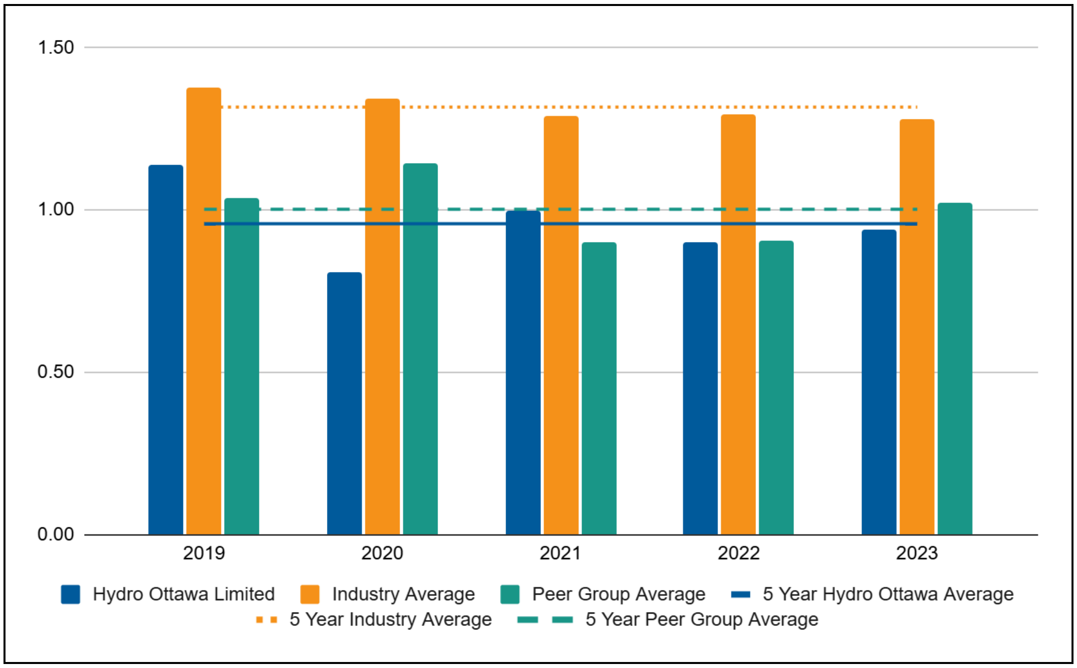


Table 14 - Industry and Peer Group vs. Hydro Ottawa Current Ratio

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	1.14	0.81	1.00	0.90	0.94	0.96
Industry Average	1.38	1.34	1.29	1.30	1.28	1.32
Peer Group Average	1.04	1.14	0.90	0.91	1.02	1.00

5.1.2. Leverage: Total Debt-to-Equity Ratio

The OEB uses a deemed capital structure of 60% debt and 40% equity for electricity distributors when establishing rates. A debt-to-equity ratio of more than 1.5 indicates that a distributor is more leveraged than the deemed capital structure. Hydro Ottawa seeks to maintain its financial health and the viability of its assets for the ultimate benefit of its customers.

Since 2019, Hydro Ottawa has carried a higher debt-to-equity ratio due to its significant capital expenditures required to replace aging infrastructure. In 2023, the debt-to-equity ratio was 1.94. Although Hydro Ottawa is more leveraged than the generic capital structure, it has managed its cost of borrowing through the issuance of long-term debt.

Hydro Ottawa targets a 60:40 debt-to-equity range.

Figure 11 - Industry and Peer Group vs. Hydro Ottawa Debt-to-Equity Ratio

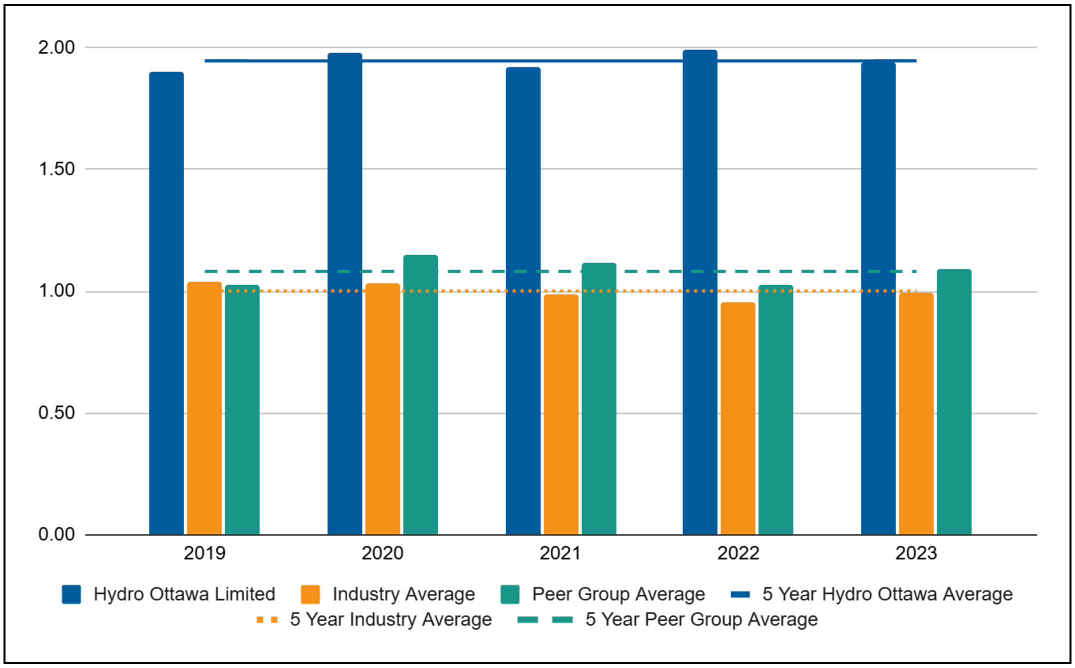


Table 15 - Industry and Peer Group vs. Hydro Ottawa Debt-to-Equity Ratio

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	1.90	1.98	1.92	1.99	1.94	1.95
Industry Average	1.04	1.03	0.99	0.96	0.99	1.00
Peer Group Average	1.03	1.15	1.12	1.03	1.09	1.08

5.1.3. Profitability: Regulatory Return on Equity

The regulatory model allows distributors to earn a deemed Return on Equity (ROE). The OEB may trigger a regulatory review when a distributor performs +/- 3% outside of its deemed range (whether under-earning or over-earning).

Between 2019 and 2023, Hydro Ottawa's Achieved ROE remained within the +/- 3% allowable range. Hydro Ottawa's Achieved ROE in 2023 was 6.15%, which was below the deemed return of 8.34% set for that year. Cost increases due to the 84-day labour strike and severe weather events lowered the achieved ROE in recent years. See Figure 14 and Table 15 below for details.

Figure 12 - Industry and Peer Group[12] vs. Hydro Ottawa Profitability: Achieved Regulatory Return on Equity

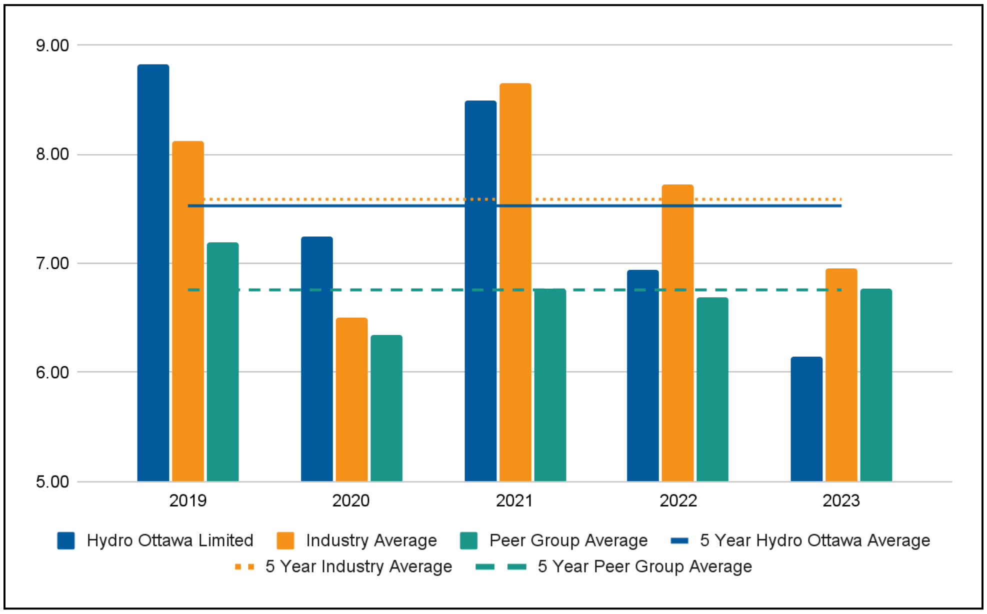


Table 16 - Industry and Peer Group vs. Hydro Ottawa Profitability: Achieved Regulatory Return on Equity

	2019	2020	2021	2022	2023	5 Yr Avg.
Hydro Ottawa	8.82%	7.24%	8.49%	6.94%	6.15%	7.53%
Industry Average	8.12%	6.50%	8.65%	7.72%	6.95%	7.59%
Peer Group Average	7.20%	6.35%	6.77%	6.69%	6.77%	6.76%

[12] Note that a utility's deemed ROE is set in its rate application, resulting in variations depending on the year and the OEB's specific determination for each application.

SUPPLEMENTAL INDUSTRY BENCHMARKING ANALYSIS

1. INTRODUCTION

This Attachment provides supplemental benchmarking metrics not supplied in the Activity-Based Program Benchmarking (APB) or the OEB's Electricity Utility Scorecard. It intends to supplement the existing APB results, which focus on program-level benchmarking, by adopting metrics that measure performance at a company level. The benchmarking is divided into five sections: Utility Characteristics, Labour Force, Operations, Maintenance, and Administrative (OM&A) costs, Financial, and System Reliability. Each section contains metrics derived from data reported to the OEB through the Reporting and Record Keeping Requirements (RRRs).[1] The metrics are presented in figures and tables to illustrate Hydro Ottawa's performance and characteristics alongside the industry and peer groups between 2019 and 2023.

Unless otherwise noted, the analysis in this section is focused on 2019-2023 and will use the peer groups established in Table 1 of Schedule 1-3-3 - Benchmarking.

2. SUPPLEMENTAL BENCHMARKING RESULTS

2.1. UTILITY CHARACTERISTICS BENCHMARKING

2.1.1. System Load Megawatt-Hour Per Customer

The system load megawatt-hour (MWh) per customer is the sum of Hydro Ottawa's annual metered consumption (RRR s.2.1.5.4) divided by its customer counts (RRR s.2.1.2), as reported in OEB open source data. This metric provides operational insights into customers' consumption behaviours.

Hydro Ottawa's load per customer has decreased between 2019 and 2023 and is consistently lower than its peer group. Many factors influence consumption behaviours, such as customer mix, weather, and government policies (conservation and demand management, tiered pricing,

[1] Data inventory.

distributed energy resources, etc). Overall, the utility's customers have trended downward in consumption, and consumption per customer is lower than that of its peer group, as can be seen in Figure 1 and Table 1 below.

Figure 1 - Hydro Ottawa vs. Industry and Peer Group System Load (MWh) Per Customer

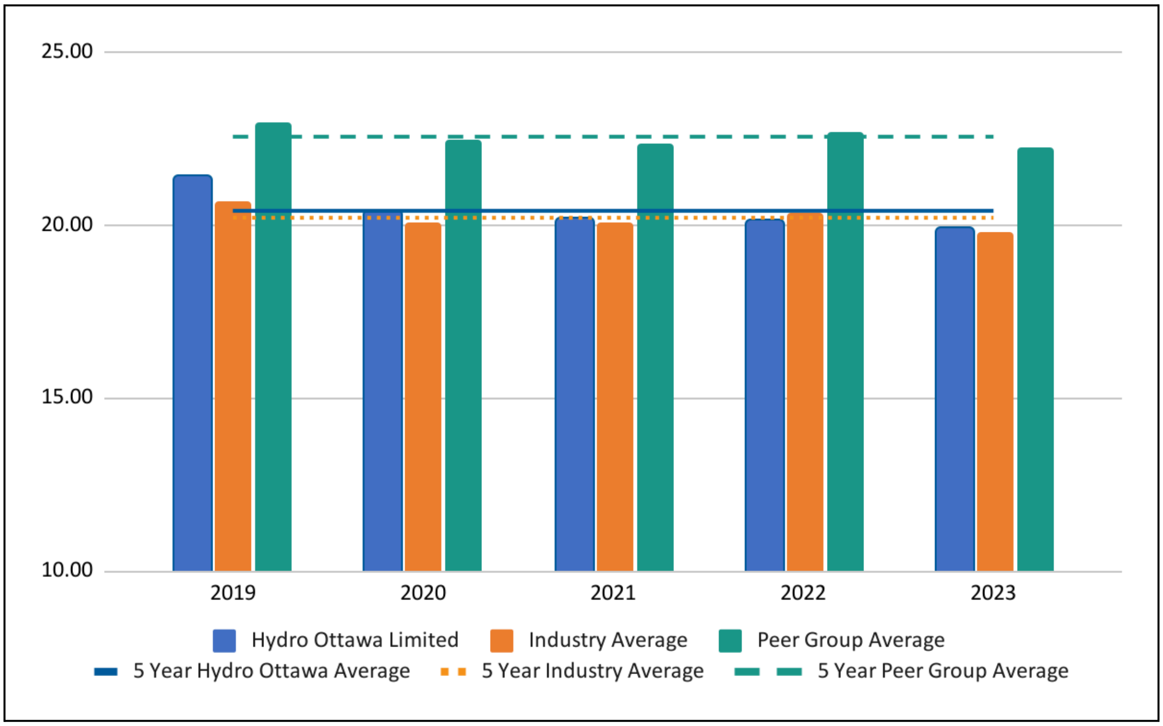


Table 1 - Hydro Ottawa vs. Industry and Peer Group System Load (MWh) Per Customer

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	20.68	20.10	20.10	20.36	19.81	20.21
Peer Group Average	22.94	22.50	22.38	22.69	22.27	22.56
Hydro Ottawa	21.39	20.40	20.20	20.15	19.93	20.42

2.1.2. Primary Circuit Kilometers Per 1,000 Customers

The primary circuit kilometers per 1,000 customers is the sum of primary circuit kilometers (RRR s.2.1.5.5) divided by total customer counts (RRR s.2.1.2) converted into one thousand, as reported in the OEB's open source data. This metric provides operational insights into the quantity of primary circuit kilometers needed to serve customers.

Hydro Ottawa's primary circuit kilometers per 1,000 customers remained flat between 2019 and 2023, suggesting that a proportionate amount of primary line was added as customers were added. These results are consistent with industry and peer group trends, as displayed in Figure 2 and Table 2 below.

Figure 2 - Hydro Ottawa vs. Industry and Peer Group Primary Circuit Kilometers per 1,000 Customers

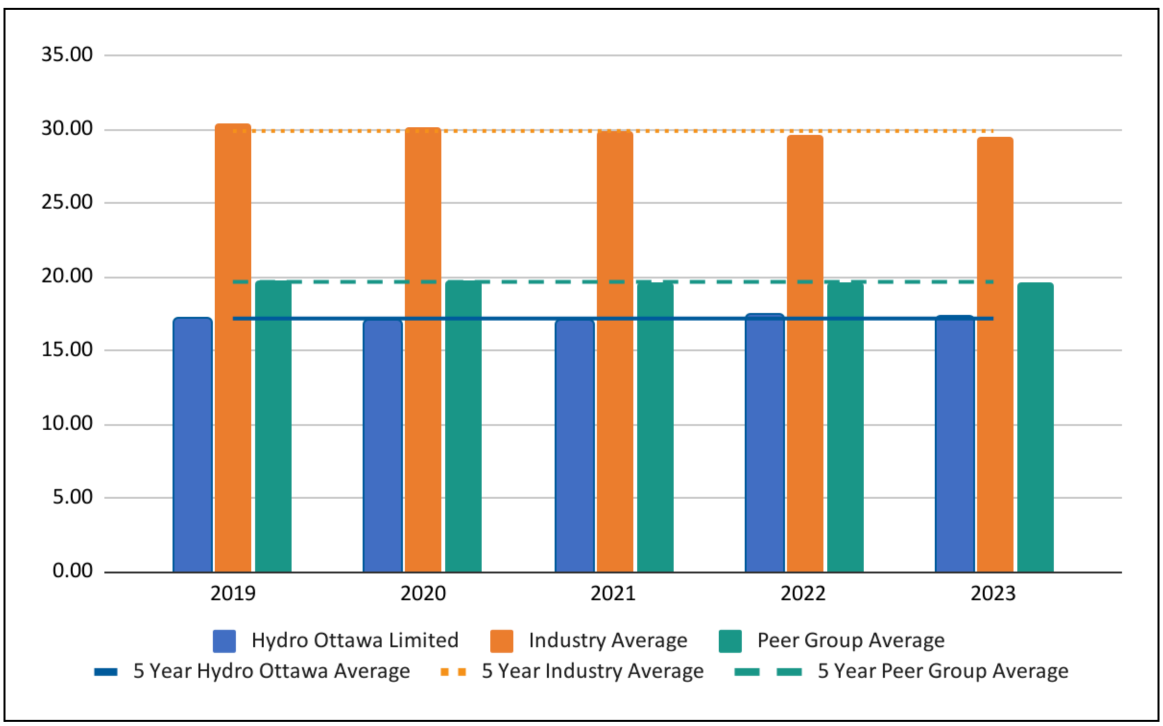


Table 2 - Hydro Ottawa vs. Industry and Peer Group Primary Circuit Kilometers per 1,000 Customers

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	30.42	30.10	29.82	29.59	29.51	29.89
Peer Group Average	19.75	19.69	19.66	19.58	19.58	19.65
Hydro Ottawa	17.18	17.07	16.98	17.35	17.24	17.16

2.1.3. Severe Weather Event Frequency Per Year

The severe weather event frequency per year is the sum of the annual reported severe weather events (RRR s.2.1.4.2.10) as reported in OEB open source data. This metric provides insights into the frequency of severe weather events for Ontario distributors.

Hydro Ottawa experienced a high frequency of severe weather events between 2019 and 2023, exceeding the industry and its peer group, as can be seen in Figure 3 and Table 3 below. These events included the 2022 Derecho and the April 2023 ice storm. More details on major weather events can be found in Schedule 2-5-3 - Performance Measurement for Continuous Improvement.

An increase in the frequency of severe weather strains the network and increases costs because the utility must reallocate resources to restore power. For example, the Derecho storm caused over 1,000 individual outages, disrupted power for over half of Hydro Ottawa's customer base, and resulted in costs equivalent to four years of emergency repairs. It also impacted the utility's capital program. The cost increases resulting from these storms are captured in the OM&A metrics.

Figure 3 - Hydro Ottawa vs. Industry and Peer Group Severe Weather Event Frequency Per Year

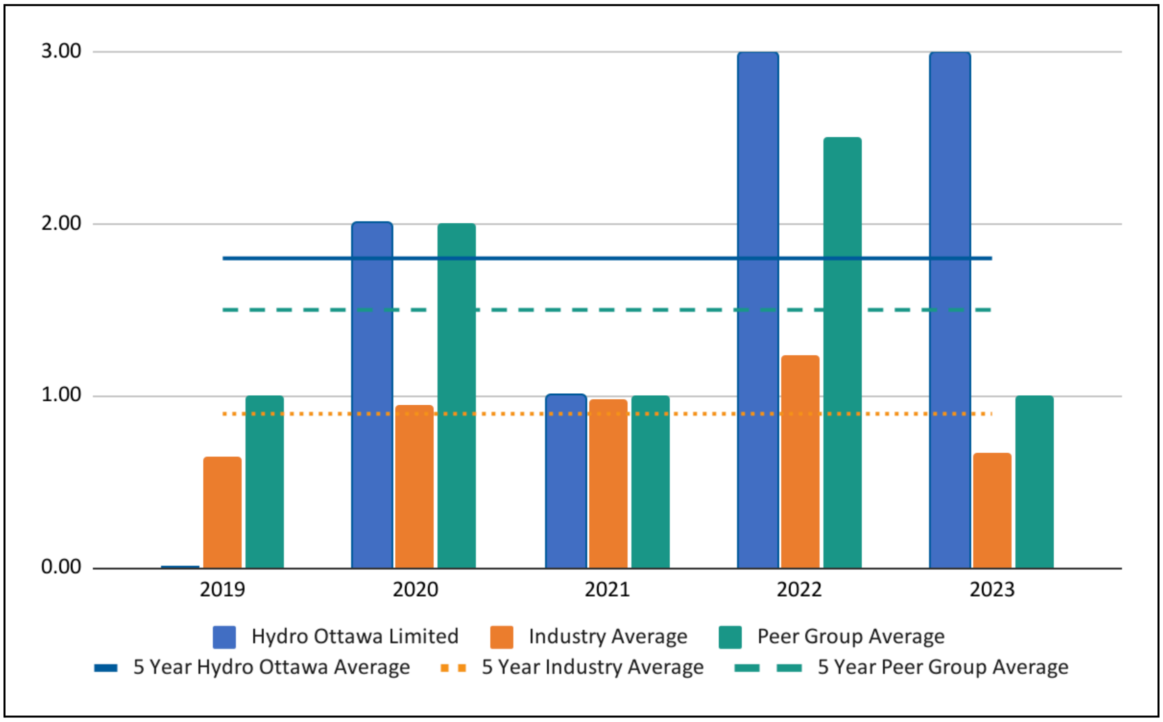


Table 3 - Hydro Ottawa vs. Industry and Peer Group Severe Weather Event Frequency Per Year

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	0.64	0.95	0.98	1.24	0.67	0.90
Peer Group Average	1.00	2.00	1.00	2.50	1.00	1.50
Hydro Ottawa	3.00	2.00	1.00	3.00	3.00	2.40

2.1.4. Loss Factor Percentage

The loss factor percentage is the annual total distribution losses divided by total purchases. This metric is the proportion of energy lost in the distribution and transmission of electricity before it reaches the final customer.

Hydro Ottawa's line loss factor percentage remained stable between 2019 and 2023. The utility's score was lower than its peer group and the industry average, demonstrating its network efficiencies. As shown in Figure 4 and Table 4 below, Hydro Ottawa has lower line losses than its peer group average and the industry average, and thus produces a lower monthly line loss cost per customer, providing tangible savings.

Figure 4 - Hydro Ottawa vs. Industry and Peer Group Loss Factor Percentage

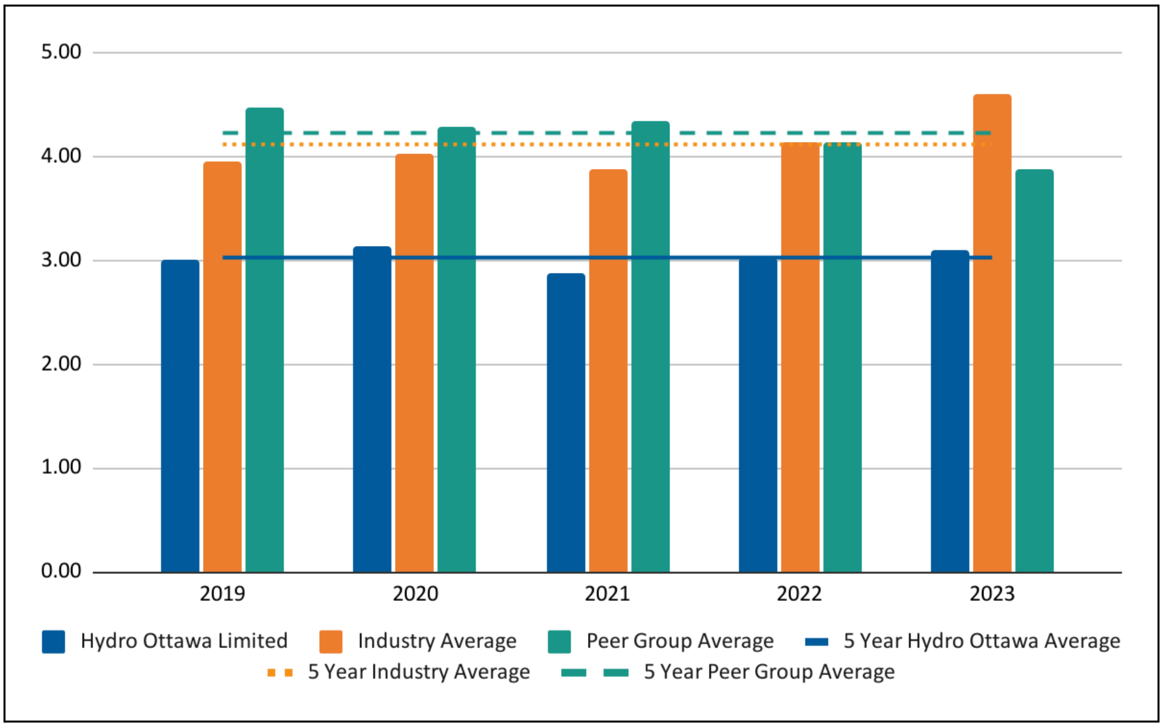


Table 4 - Hydro Ottawa vs. Industry and Peer Group Loss Factor Percentage

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	3.95%	4.03%	3.87%	4.13%	4.60%	4.12%
Peer Group Average	4.48%	4.29%	4.34%	4.14%	3.88%	4.23%
Hydro Ottawa	3.01%	3.14%	2.87%	3.02%	3.10%	3.03%

2.2. LABOUR FORCE BENCHMARKING

2.2.1. Full-Time Equivalent Per Primary Circuit Kilometer

The full-time equivalent (FTE) per primary circuit kilometer is the annual FTEs (RRR s. 2.1.5.1) divided by the total primary circuit kilometers (RRR s.2.1.5.5). This metric provides insight into the FTEs required to maintain and operate a utility's network of lines.

Hydro Ottawa's FTEs per primary circuit kilometer decreased between 2019 and 2023, as shown in Figure 5 and Table 5 below. The steeper reduction in 2023 resulted from the 84-day strike, which reduced FTEs in that year.

Hydro Ottawa's FTEs per primary circuit kilometer metric is higher than its peer group and industry average, which demonstrates Hydro Ottawa's lower FTE per 1,000 customers. Please see Attachment 4-1-3(C) Workforce Growth for Hydro Ottawa's 2026-2030 for more details regarding 2026-2030.

Figure 5 - Hydro Ottawa vs. Industry and Peer Group FTE per Primary Circuit Kilometer

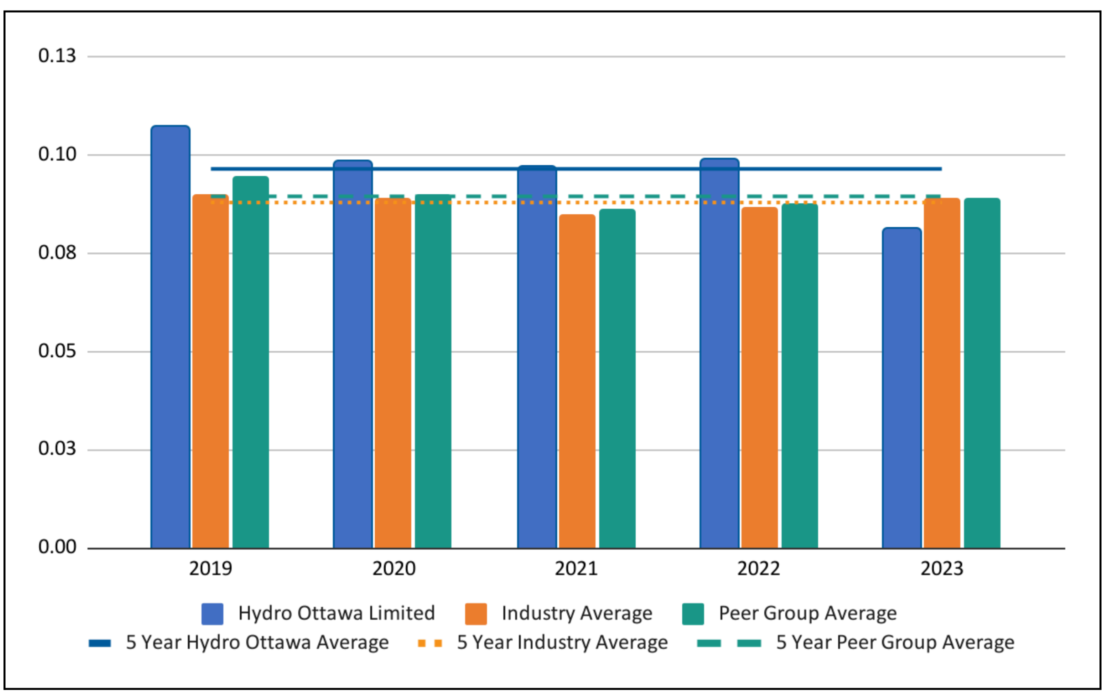


Table 5 - Hydro Ottawa vs. Industry and Peer Group FTE per Primary Circuit Kilometer

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	0.09	0.09	0.09	0.09	0.09	0.09
Peer Group Average	0.09	0.09	0.09	0.09	0.09	0.09
Hydro Ottawa	0.11	0.10	0.10	0.10	0.08	0.10

2.2.2. Full-Time Equivalent Per 1,000 Customers

The FTE per 1,000 customers is the annual FTEs (RRR s.2.1.5.1) divided by the total customer counts (RRR s.2.1.2) converted into thousands, as reported in OEB open source data. This metric provides operational insight into how effectively a utility can allocate its human resources to serve its customers.

Hydro Ottawa's FTE per 1,000 customers decreased between 2019 and 2023, which can largely be attributed to the utility's stabilized headcount over the same period. The dip in 2023 was due to the 84-day strike, which decreased FTEs among unionized employees. Hydro Ottawa's five-year average is closely aligned with its peer group and well below the industry average, demonstrating that staffing is appropriately sized. See Figure 6 and Table 6 below for details. Please see Attachment 4-1-3(C) Workforce Growth for Hydro Ottawa's 2026-2030 for more details regarding 2026-2030.

Figure 6 - Hydro Ottawa vs. Industry and Peer Group FTE per 1,000 Customers

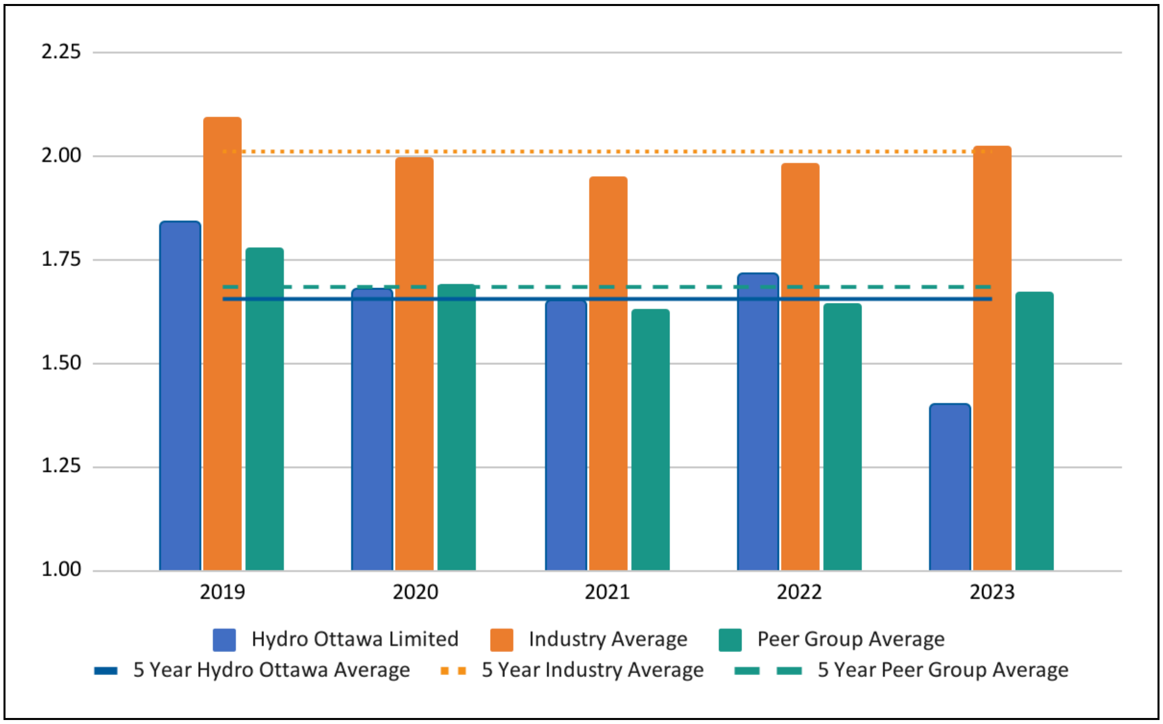


Table 6 - Hydro Ottawa vs. Industry and Peer Group FTE per 1,000 Customers

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	2.10	2.00	1.95	1.98	2.03	2.01
Peer Group Average	1.78	1.69	1.63	1.65	1.67	1.68
Hydro Ottawa	1.84	1.68	1.65	1.72	1.40	1.66

2.2.3. Full-Time Equivalent Per Gigawatt Hour

FTEs per gigawatt hour (GWh) are the annual FTEs (RRR s.2.1.5.1) divided by the total metered consumption in GWh (RRR s.2.1.5.4), as reported in the OEB's open source data. This metric is an operational measure of how effectively a utility can allocate its human resources to meet its customers' electricity demands.

Hydro Ottawa's FTEs per GWh decreased from 2019 to 2023, as displayed in Figure 7 and Table 7 below. Again, the 2023 dip was due to the 84-day strike. Since 2019, customer electricity demand has stayed flat, which means that the variations in Hydro Ottawa's results are largely due to changes in FTEs.

Hydro Ottawa performed better than the industry but worse than the peer group because, as demonstrated by the system load MWh per customer metric, its customers consume less electricity on average than the peer group. Overall, the utility is consistent with the industry and the peer group, demonstrating appropriate staffing levels.

Figure 7 - Hydro Ottawa vs. Industry and Peer Group FTE Per Gigawatt Hour (GWh)

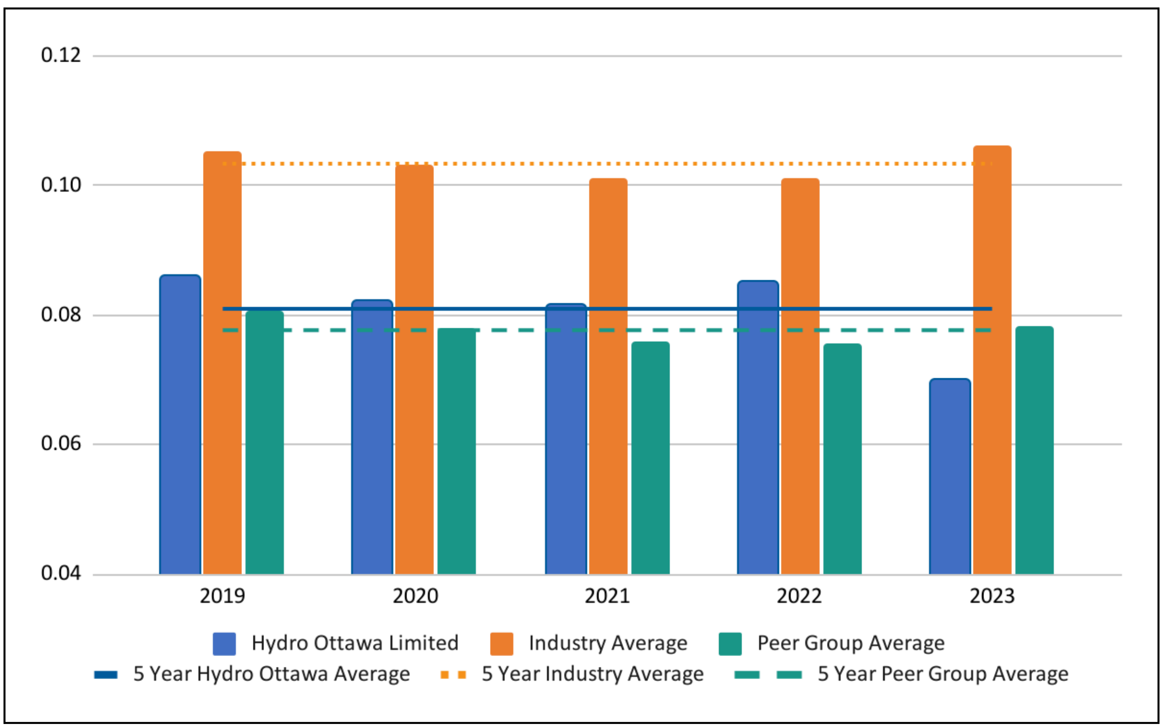


Table 7 - Hydro Ottawa vs. Industry and Peer Group FTE Per Gigawatt Hour (GWh)

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	0.11	0.10	0.10	0.10	0.11	0.10
Peer Group Average	0.08	0.08	0.08	0.08	0.08	0.08
Hydro Ottawa	0.09	0.08	0.08	0.09	0.07	0.08

2.2.4. Full-Time Equivalent Per $1,000,000 Capital Additions

FTEs per $1,000,000 capital additions are the annual FTEs (RRR s.2.1.5.1) divided by the total gross capital additions less high voltage capital additions (RRR s.2.1.5.2), as reported in the OEB's open source data. This labour metric measures the size of a utility's workforce relative to its capital spending.

Hydro Ottawa has a low FTE per $1,000,000 capital additions compared to the peer group and industry, as shown in Figure 8 and Table 8 below. This result demonstrates that the utility's staffing levels can effectively manage larger capital programs than its peers and the industry.

Figure 8 - Hydro Ottawa vs. Industry and Peer Group FTE Per $1,000,000 Capital Additions

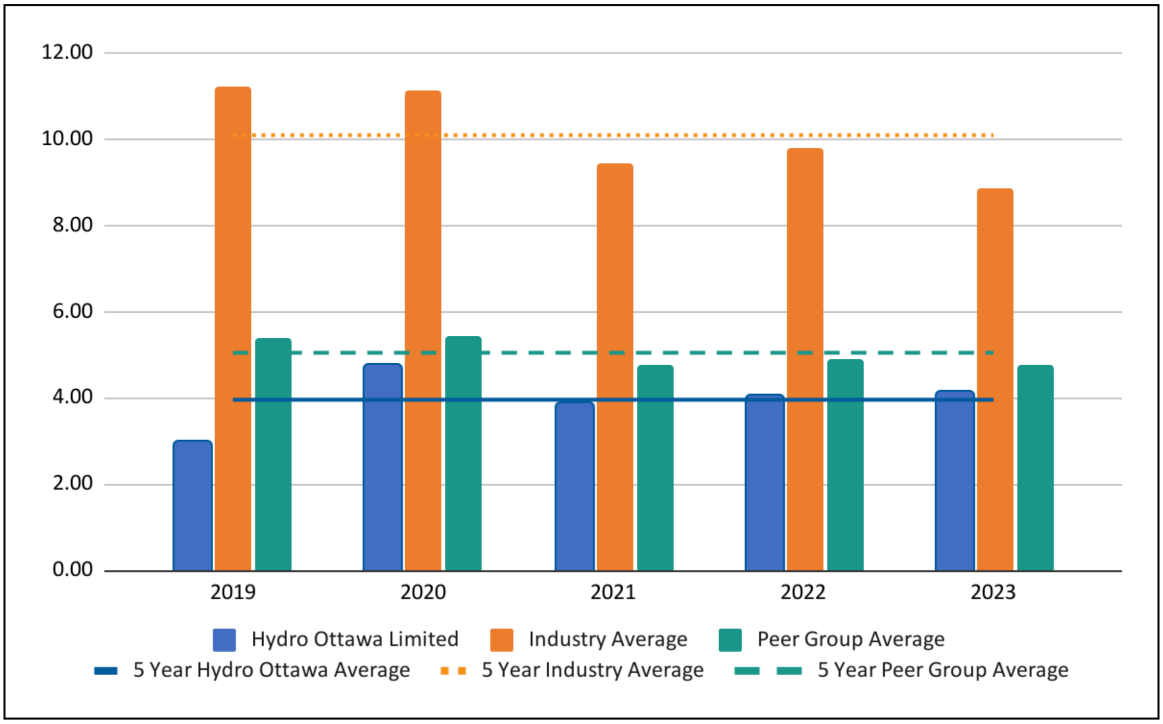


Table 8 - Hydro Ottawa vs. Industry and Peer Group FTE Per $1,000,000 Capital Additions

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	11.23	11.14	9.44	9.81	8.87	10.10
Peer Group Average	5.39	5.42	4.75	4.92	4.75	5.05
Hydro Ottawa	2.97	4.76	3.88	4.03	4.14	3.96

2.3. OPERATIONS, MAINTENANCE, AND ADMINISTRATIVE BENCHMARKING

2.3.1. Operations, Maintenance, And Administrative Costs Per Customer

The operations, maintenance, and administrative (OM&A) costs per customer are the sum of OM&A expenses (RRR s.2.1.7) divided by the total customer count (RRR s.2.1.2) as reported in the OEB's open source data. This metric measures the utility's cost efficiency in operating its network to serve its customers.

Hydro Ottawa's OM&A per customer increased between 2019 and 2023. The increase matched similar industry and peer group increases, indicating that macro conditions raised utility costs. Generally, the economies of scale allowed larger utilities in Ontario to supply electricity to their customers at lower costs when compared to the industry average, as demonstrated by the peer group and Hydro Ottawa's results, as detailed in Figure 9 and Table 9 below.

Hydro Ottawa's OM&A rose in 2022 due to the Derecho storm increasing expenses for emergency maintenance. Some of those maintenance costs persisted into 2023. Additionally, the 84-day strike in 2023 further increased OM&A as more resources were spent on contractors, security, and legal fees to ensure the safe operation of the network. Hydro Ottawa's five-year average remained below its industry and peer group, demonstrating the value Hydro Ottawa delivered to its customers.

Figure 9 - Hydro Ottawa vs. Industry and Peer Group OM&A Costs Per Customer

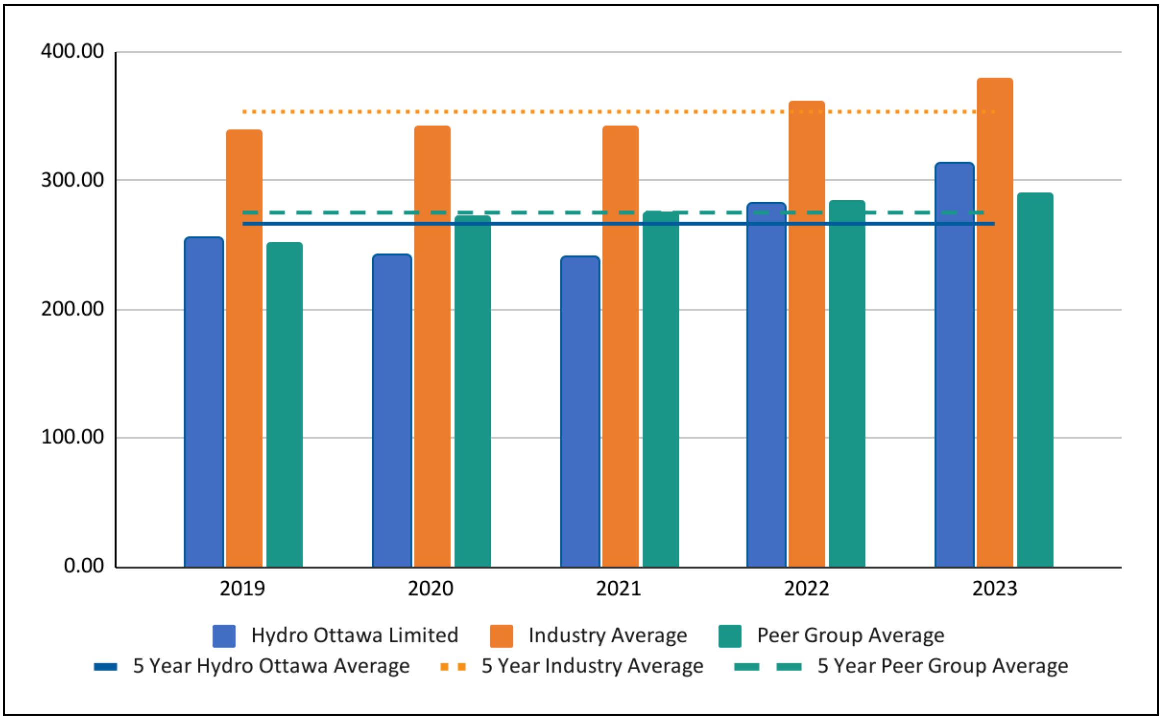


Table 9 - Hydro Ottawa vs. Industry and Peer Group OM&A Costs Per Customer

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	340.16	342.81	342.95	362.40	380.24	353.71
Peer Group Average	251.76	273.74	275.71	284.72	290.48	275.28
Hydro Ottawa	254.69	241.99	240.64	282.53	313.07	266.59

2.3.2. Operations, Maintenance, and Administrative Cost Per Primary Circuit Kilometer

OM&A costs per primary circuit kilometer are the sum of OM&A expenses (RRR s.2.1.7) divided by the total primary circuit kilometers (RRR s. 2.1.5.5) as reported in the OEB's open source data. This metric measures a utility's OM&A spending in the operation and maintenance of its primary lines.

Hydro Ottawa's spending per primary circuit kilometer increased between 2019 and 2023. Hydro Ottawa's results aligned with the industry and peer group, except for 2022 and 2023. The latter years had extreme weather events, which increased emergency restoration spending, and a labour strike, which increased third-party contractor expenses. Apart from the overt impact of external events, the utility's benchmarking demonstrates that OM&A spending has been efficiently executed. See Figure 10 and Table 10 below for details.

Figure 10 - Hydro Ottawa vs. Industry and Peer Group OM&A Costs Per Primary Circuit Kilometer

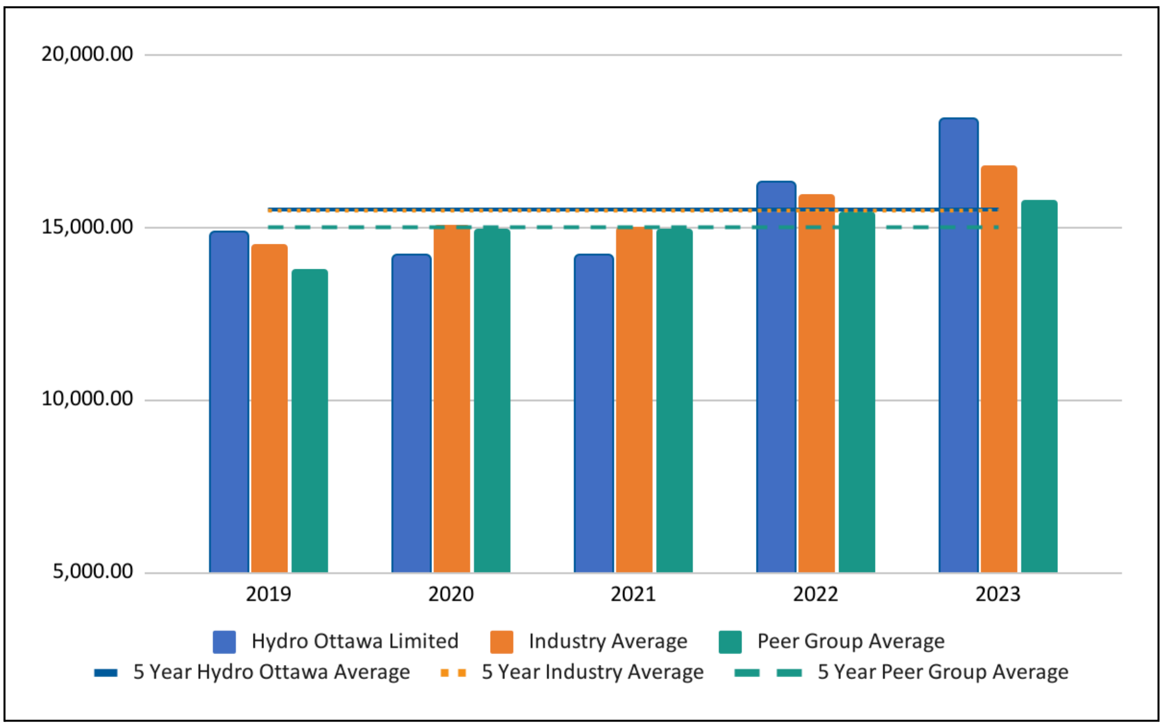


Table 10 - Hydro Ottawa vs. Industry and Peer Group OM&A Costs Per Primary Circuit Kilometer

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	14,537.37	15,070.87	15,043.03	15,985.27	16,817.13	15,490.73
Peer Group Average	13,807.53	14,945.79	14,991.33	15,478.05	15,809.67	15,006.48
Hydro Ottawa	14,828.07	14,174.25	14,170.53	16,286.87	18,156.87	15,523.32

2.3.3. Operations, Maintenance, and Administrative Cost Per Full-Time Equivalent

The OM&A cost per FTE is the sum of OM&A expenses (RRR s.2.1.7) divided by the annual FTE (RRR s.2.1.5.1) as reported in the OEB's open source data. This metric indicates how efficiently OM&A is allocated over the utility's workforce to serve its customers.

Hydro Ottawa's OM&A per FTE increased between 2019 and 2023. The metric is expected to increase over time due to inflation, which is demonstrated by the industry and peer group trending upwards. However, Hydro Ottawa's severe weather events in 2022 and the labour disruption in 2023 produced growth in OM&A per FTE that exceeded the peer group and industry in those years. The utility reported fewer FTEs in 2023 due to the strike, which increased the metric in that year. Nevertheless, the utility's OM&A spending efficiency outperformed the industry and peer group when averaged over five years. See Figure 11 and Table 11 below for details.

Figure 11 - Hydro Ottawa vs. Industry and Peer Group OM&A Costs Per FTE

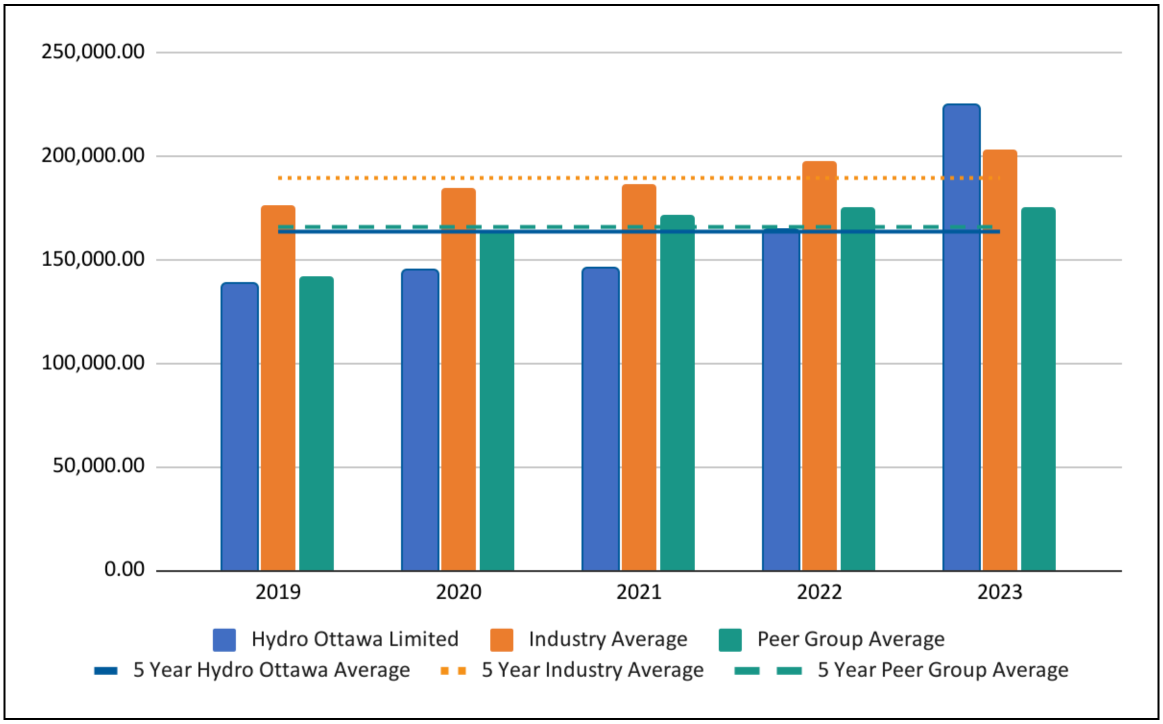


Table 11 - Hydro Ottawa vs. Industry and Peer Group OM&A Costs Per FTE

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	176,270	184,266	186,292	197,476	202,974	189,456
Peer Group Average	142,269	164,267	171,476	175,192	175,772	165,795
Hydro Ottawa	138,583	144,355	145,912	164,694	224,085	163,526

2.3.4. Operations, Maintenance, and Administrative Cost Per Megawatt Hour

The OM&A cost per MWh is the sum of OM&A expenses (RRR s.2.1.7) divided by the total system load metered consumption in MWh (RRR s.2.1.5.4) as reported in the OEB's open source data. This metric indicates how efficiently OM&A is allocated to deliver electricity to the utility's customers.

Hydro Ottawa's OM&A per MWh grew in line with the industry and peer group, except in 2022 and 2023. The utility's metered electricity demand was relatively stable between 2019 and 2023. As a result, the metric increases correspond to increased OM&A driven by extreme weather, the 84-day strike, and macro inflationary conditions. Hydro Ottawa's five-year average remains below the industry average, as shown in Figure 12 and Table 12 below.

Figure 12 - Hydro Ottawa vs. Industry and Peer Group OM&A Costs Per MWh

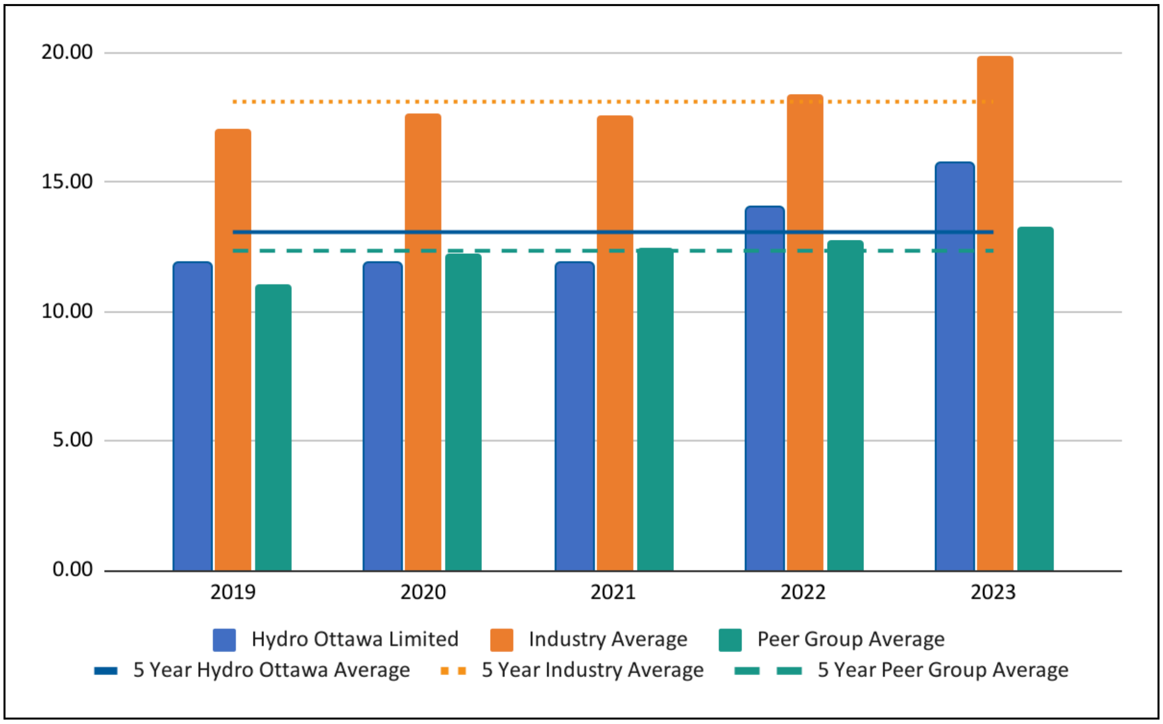


Table 12 - Hydro Ottawa vs. Industry and Peer Group OM&A Costs Per MWh

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	17.08	17.68	17.58	18.40	19.86	18.12
Peer Group Average	11.04	12.24	12.48	12.76	13.28	12.36
Hydro Ottawa	11.91	11.86	11.91	14.02	15.70	13.08

2.3.5. Operations, Maintenance, and Administrative Cost, and Capital Additions Ratio

The OM&A cost per capital additions is a ratio between the sum of OM&A (RRR s.2.1.7) and annual capital additions less high voltage additions (RRR s.2.1.5.2) as reported in the OEB's open source data. This metric illustrates the relationship between a utility's expenditure on OM&A versus capital.

Hydro Ottawa's ratio between OM&A and capital additions has been variable between 2019 and 2023 due to external events ranging from the COVID-19 pandemic to increased extreme weather.

Figure 13 - Hydro Ottawa vs. Industry and Peer Group OM&A Cost and Capital Additions Ratio

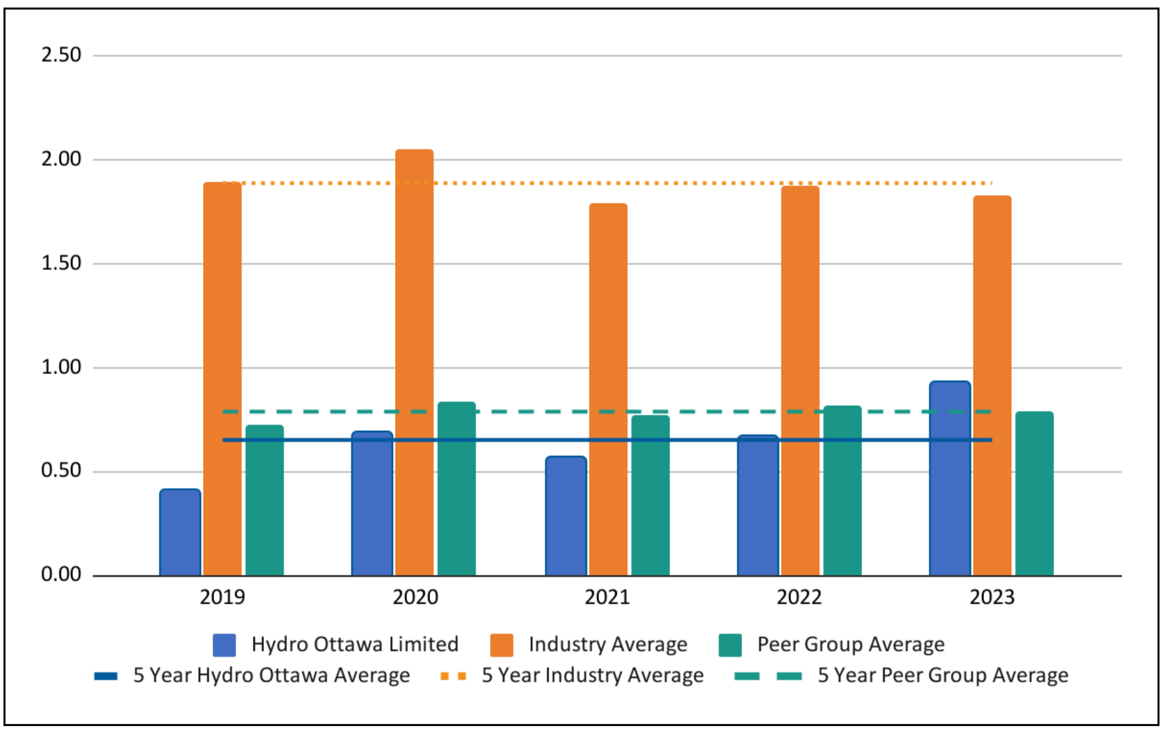


Table 13 - Hydro Ottawa vs. Industry and Peer Group OM&A Cost and Capital Additions Ratio

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	1.90	2.05	1.79	1.87	1.83	1.89
Peer Group Average	0.72	0.83	0.77	0.82	0.79	0.79
Hydro Ottawa	0.41	0.69	0.57	0.66	0.93	0.65

2.3.6. Total Cost Per Full-Time Equivalent

The total cost per FTE is the sum of OM&A (RRR s.2.1.7), as reported in OEB source data, and the Pacific Economics Group (PEG) capital costs, as reported in the OEB's 2024 PEG total cost benchmarking model, divided by FTEs (RRR s.2.1.5.1).[2]

Hydro Ottawa's total cost per FTE grew between 2019 and 2023, as shown in Figure 14 and Table 14 below. Again, extreme weather events increased OM&A in 2022 and 2023. Lower FTE counts also caused the metric to increase in 2023 due to the labour disruption.

Larger utilities typically exhibit higher total costs per FTE due to their capacity to efficiently manage and execute larger capital programs, which are necessary to serve rapidly expanding and densely populated urban areas. Hydro Ottawa's results demonstrate that its total costs and FTEs are comparable to similarly sized utilities within its peer group.

[2] OEB, "Performance Assessment: Total Cost Benchmarking - Benchmarking Update Calculations," https://www.oeb.ca/sites/default/files/Benchmarking%20Update%20Calculation%202024.xlsx

Figure 14 - Hydro Ottawa vs. Industry and Peer Group Total Cost per FTE

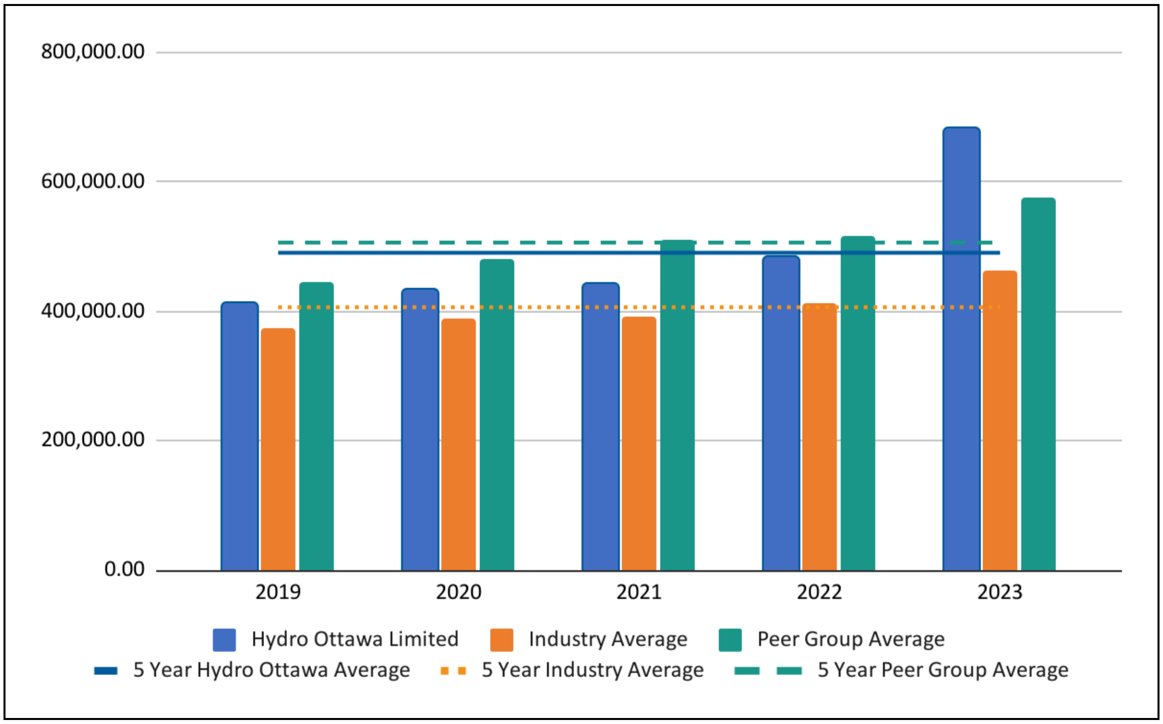


Table 14 - Hydro Ottawa vs. Industry and Peer Group Total Cost per FTE

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	374,647.28	388,351.60	392,480.88	413,979.63	462,691.10	406,430.10
Peer Group Average	446,612.00	482,335.91	510,608.09	516,106.45	576,978.94	506,528.28
Hydro Ottawa	412,151.96	432,154.84	442,732.10	483,576.86	683,136.36	490,750.42

2.4. FINANCIAL BENCHMARKING

2.4.1. Weighted Average Cost Of Debt (%)

The weighted average cost of debt is the total income statement financing cost (RRR section 2.1.7) divided by the short and long-term debt and intercompany long-term debt advances found on the balance sheet (RRR section 2.1.7). This metric illustrates the effective interest rate a utility pays on its borrowed funds.

Hydro Ottawa's weighted average cost of debt has remained stable between 2019 and 2023, as shown in Figure 15 and Table 15 below. Financing is received via intercompany loans from its parent company, Hydro Ottawa Capital Corporation, on a pass-through basis. The utility has prudently managed its cost of debt through an arrangement with Hydro Ottawa Capital Corporation, which provides financing to Hydro Ottawa in tranches to meet its capital structure requirements. For more information, please refer to Schedule 5-1-1 - Cost of Capital and Capital Structure.

Figure 15 - Hydro Ottawa vs. Industry and Peer Group Weighted Average Cost Of Debt

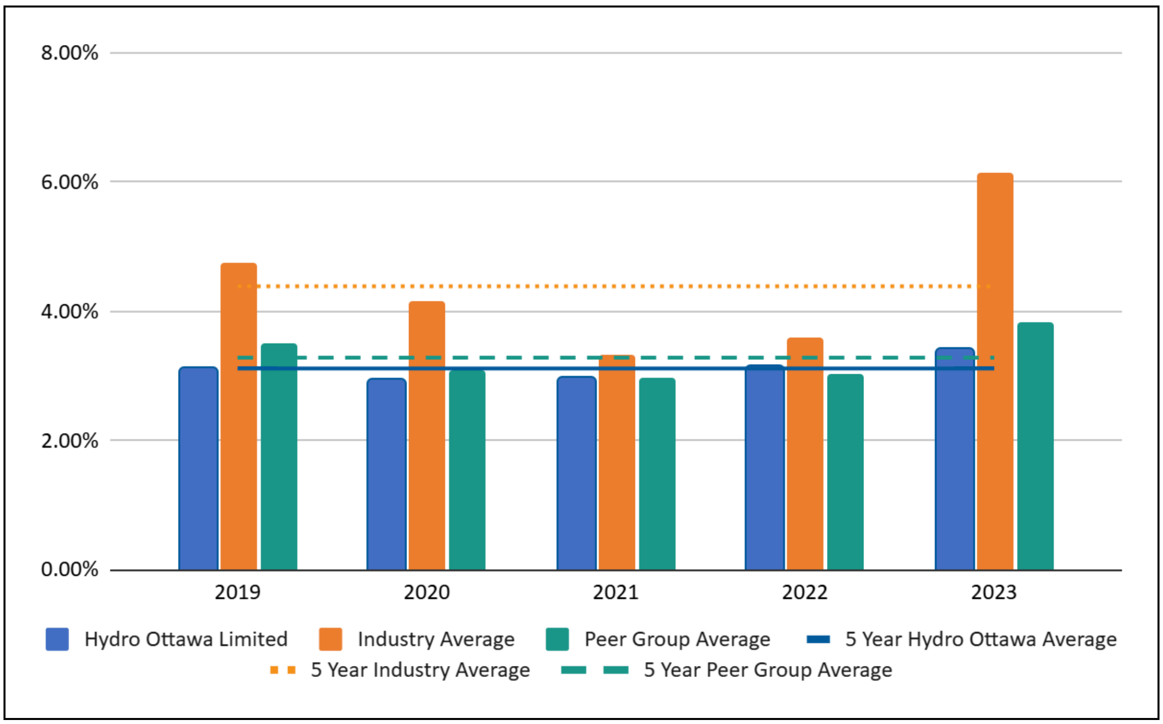


Table 15 - Hydro Ottawa vs. Industry and Peer Group Weighted Average Cost Of Debt

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	4.74%	4.16%	3.34%	3.58%	6.13%	4.39%
Peer Group Average	3.50%	3.09%	2.97%	3.02%	3.84%	3.28%
Hydro Ottawa	3.11%	2.95%	2.96%	3.13%	3.41%	3.11%

2.4.2. Operating Ratio

The operations ratio is the sum of total operating expenses (RRR s.2.1.7) divided by total distribution revenue (RRR s.2.1.7). This is a financial measure of how efficiently a company uses its assets to generate revenues.

Hydro Ottawa's operating ratio outperformed the industry and its peer group between 2019 and 2023. The utility's ratio fluctuated between a low of 70% and a high of 77% in that period, with 2023 recording an increase due to extreme weather and labour disruptions. See Figure 16 and Table 16 below for details.

Figure 16 - Hydro Ottawa vs. Industry and Peer Group Operating Ratio

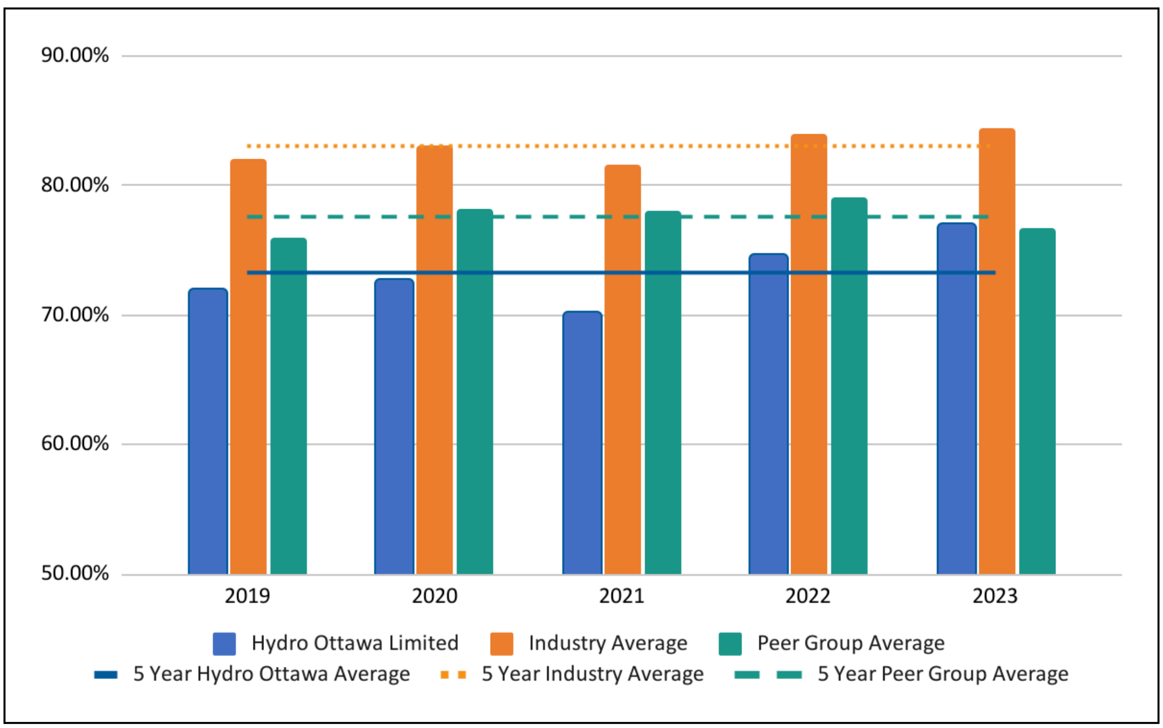


Table 16 - Hydro Ottawa vs. Industry and Peer Group Operating Ratio

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	82.08%	83.17%	81.65%	83.94%	84.47%	83.06%
Peer Group Average	75.97%	78.19%	78.02%	79.05%	76.72%	77.59%
Hydro Ottawa	71.94%	72.74%	70.17%	74.60%	76.98%	73.28%

2.4.3. Total Monthly Cost to Customer for Loss Factor

The line loss factor percentage was transformed into a monthly cost to the customer using the OEB's distribution rate database.[3] This metric measures the cost to the customer due to utility line losses.

Hydro Ottawa's total monthly cost to customers for the loss factor is lower than the industry and peer group. The lower line loss percentage translates into lower charges to its customers compared to other Ontario utilities. See Figure 17 and Table 17 below.

[3] Ontario Energy Board, *Electricity Distribution Rates Database* https://www.oeb.ca/applications/applications-oeb/electricity-distribution-rates.

Figure 17 - Hydro Ottawa vs. Industry and Peer Group Monthly Loss Factor Cost Per Customer

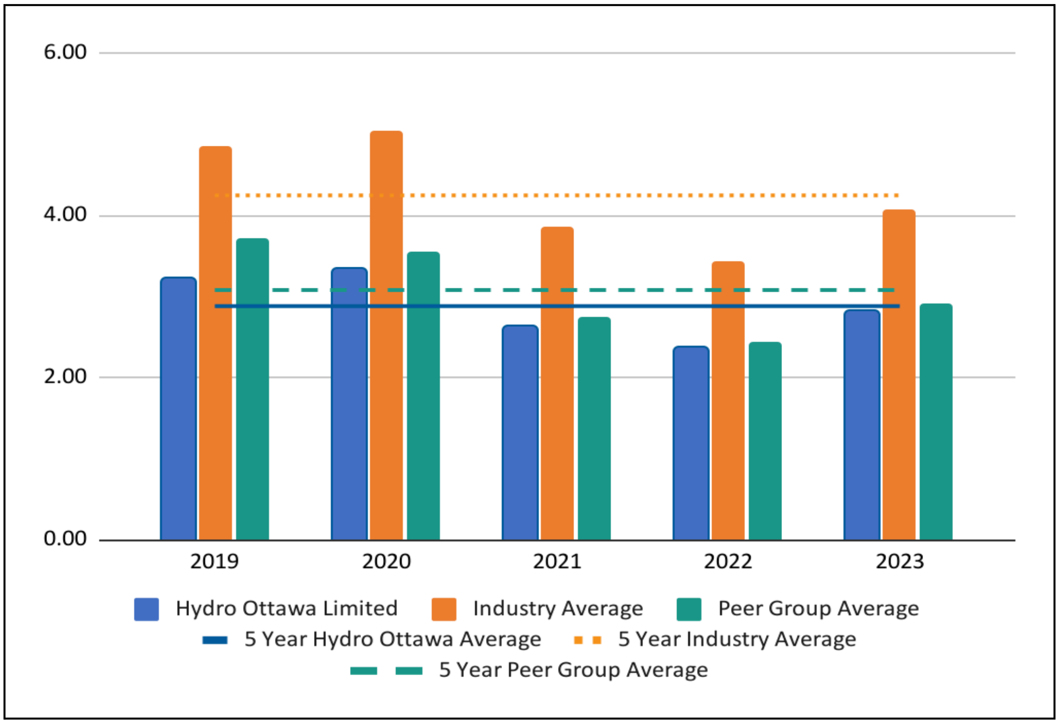


Table 17 - Hydro Ottawa vs. Industry and Peer Group Monthly Loss Factor Cost Per Customer

	2019	2020	2021	2022	2023	5 Yr Avg.
Industry Average	$ 4.85	$ 5.03	$ 3.85	$ 3.43	$ 4.06	$ 4.25
Peer Group Average	$ 3.72	$ 3.55	$ 2.75	$ 2.45	$ 2.91	$ 3.08
Hydro Ottawa	$ 3.21	$ 3.35	$ 2.63	$ 2.38	$ 2.83	$ 2.88

2.5. SYSTEM RELIABILITY BENCHMARKING

2.5.1. Outage Cause Codes

The System Average Interruption Frequency Index (SAIFI) and the System Average Interruption Duration Index (SAIDI) are industry-wide standard measurements of interruption frequency and duration. SAIFI and SAIDI interruptions are classified into cause codes, with each cause contributing to an overall value reported on the Electricity Utility Scorecard. In Figures 18 through 23 below, SAIFI and SAIDI are broken out by outage cause codes to illustrate which factors contributed to Hydro Ottawa's reliability results, as compared to the peer group and industry averages.

For more information on system reliability, please refer to Schedule 2-5-3 - Performance Measurement for Continuous Improvement.

Figure 18 - Hydro Ottawa SAIFI by Outage Cause Codes

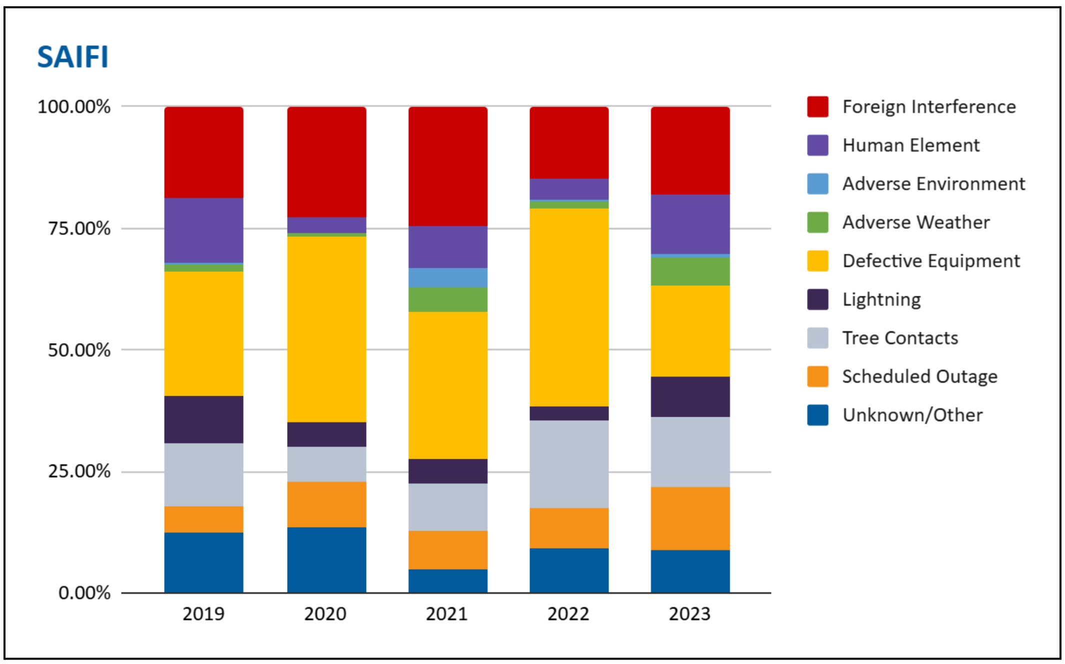


Figure 19 - Industry Average SAIFI by Outage Cause Codes

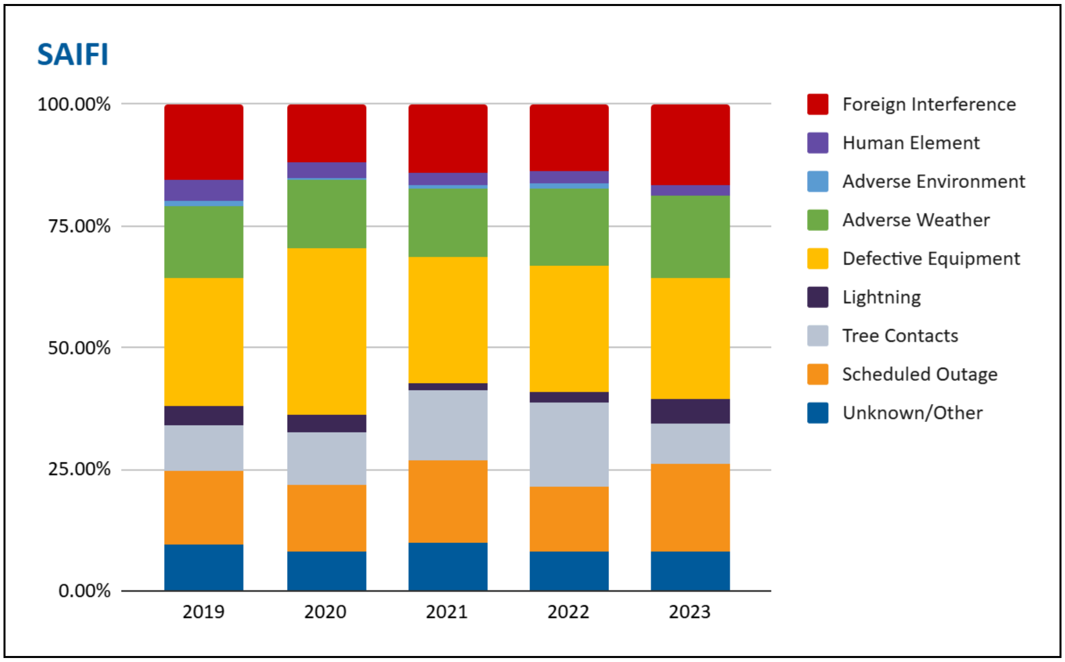


Figure 20 - Peer Group Average SAIFI by Outage Cause Codes

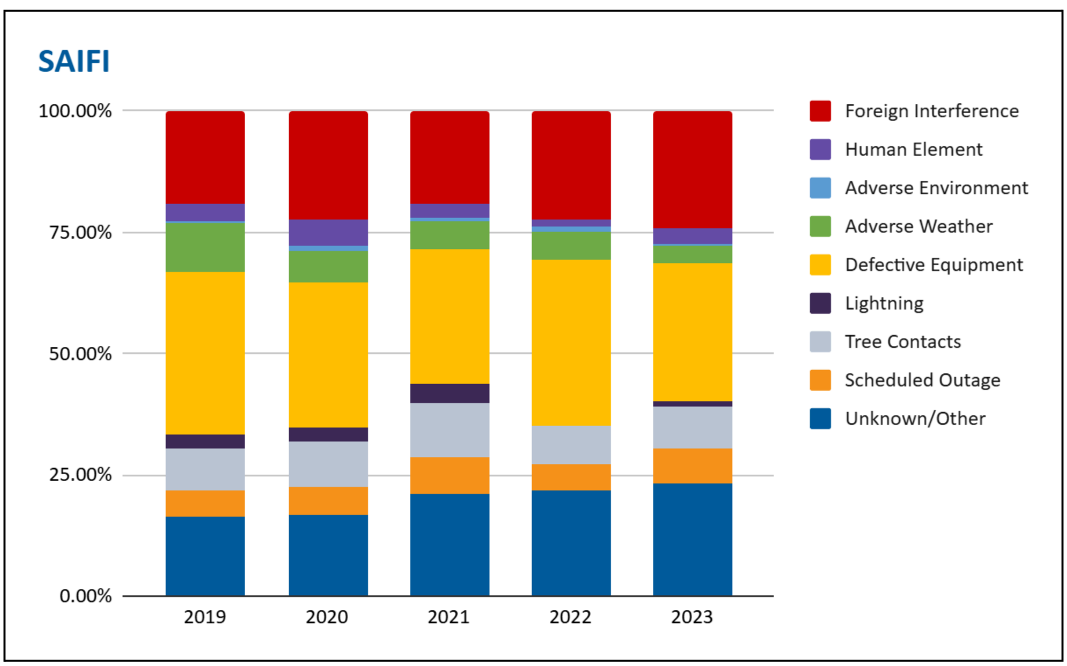


Figure 21 - Hydro Ottawa SAIDI by Outage Cause Codes

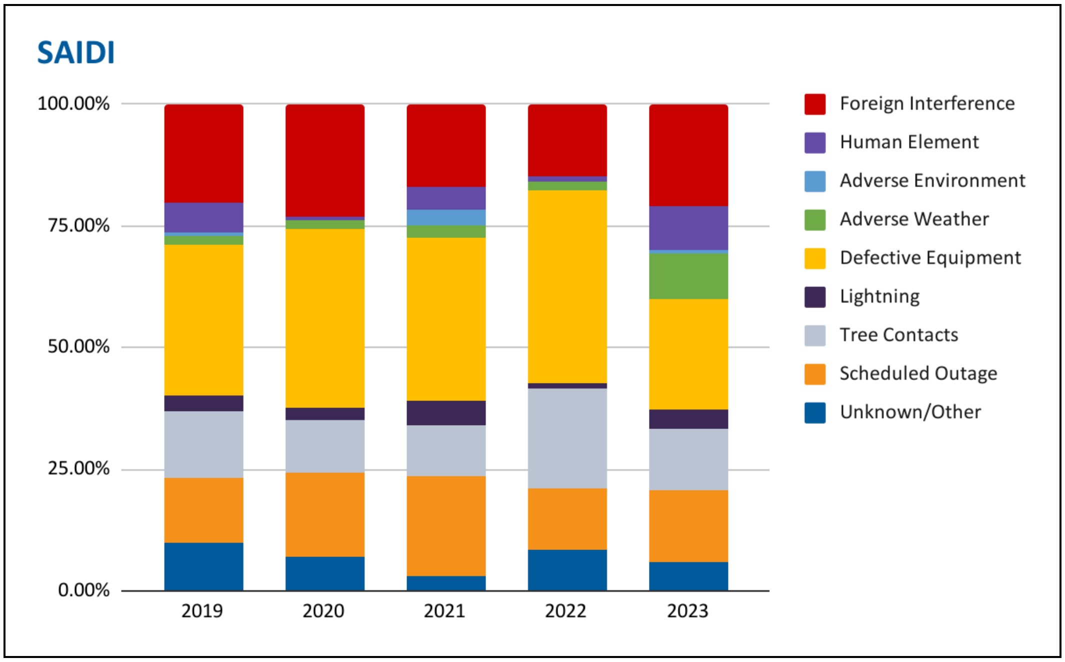
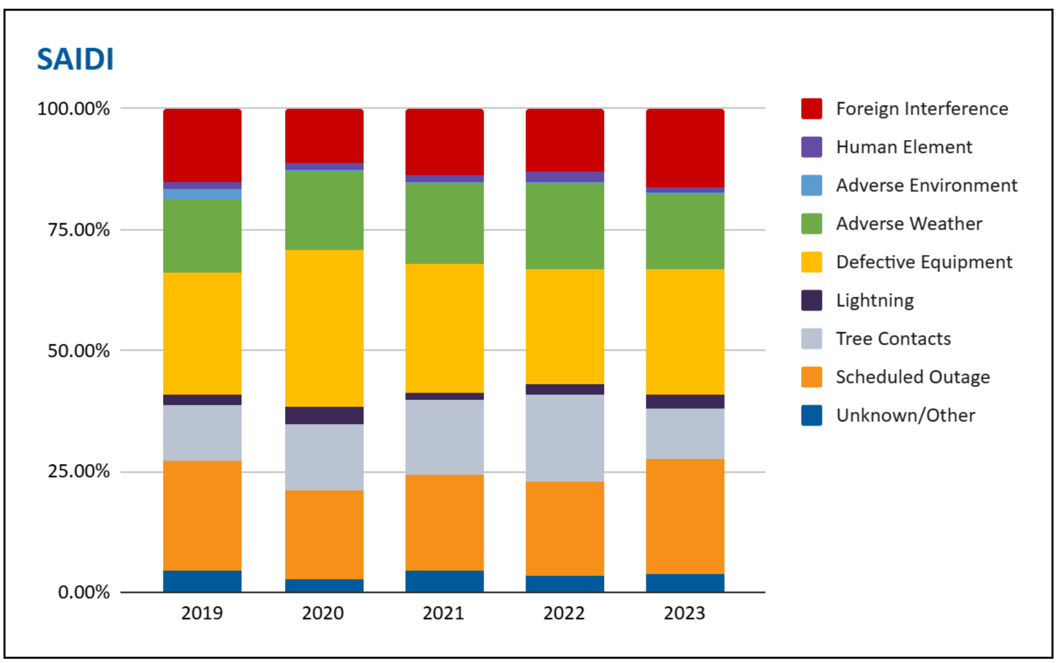
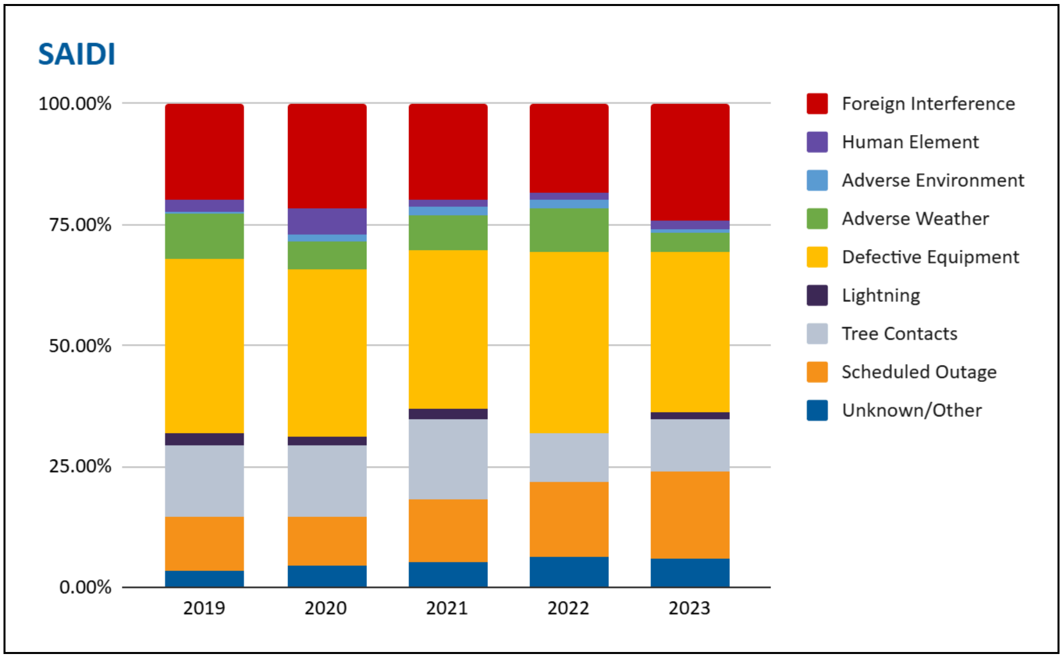


Figure 22 - Industry Average SAIDI by Outage Cause Codes



1 **Figure 23 - Peer Group Average SAIDI by Outage Cause Codes**



2

Hydro Ottawa

Enterprise IT Spending & Staffing Benchmark

Final Report

June 3, 2024

Engagement Number: 330087697

HydroOttawa

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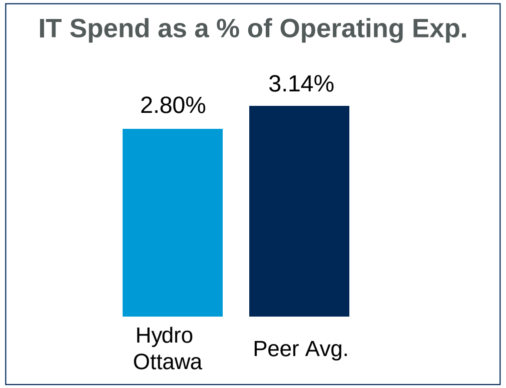
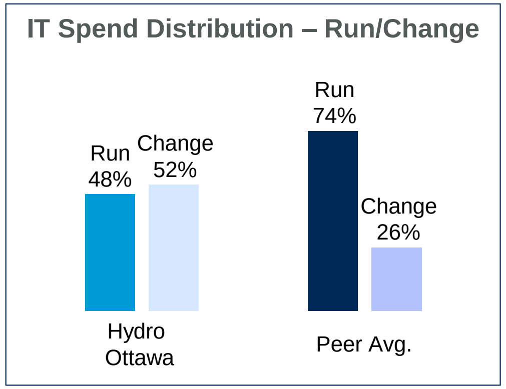
Table of Contents

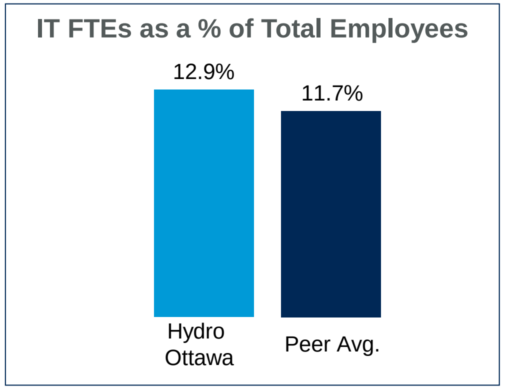
1.0
Executive Summary

Hydro Ottawa's 2023 IT Spend was slightly lower to similar electric utility organizations, and much more spend was allocated to Growth & Transformation ("change the business")

- For benchmarking purposes, Hydro Ottawa was compared to a custom peer group of 9 electric utility organizations and Gartner's IT Key Metrics Data for the broader Utilities industry. **Hydro Ottawa's total IT spend for 2023 was $27.2 million.**
- **IT Spending was 11% less than the custom peer group average**; IT Spend as a % of Operating Expense was 2.80% compared to an average of 3.14% for the peer group. The slightly lower level of spend can be attributed to lower levels of Run spend. Real dollar spending on IT Run costs were significantly less than peers ($1.34 for Hydro Ottawa vs. $2.32 for peers per $100 in total operating expenses).
- **Hydro Ottawa allocated double the spend to "change the business" activities than the peer group average** (52% of IT Spending vs. 26%). These investments were aligned to Hydro Ottawa's strategic priorities, specifically to "accelerate digital transformation to enable sustainable business practices" and "continue to provide best-in-class customer service".
- **Hydro Ottawa's IT staffing levels were slightly higher than the peer group average** (12.9% IT FTEs as a % of Total Employees vs. 11.7%). In addition to internal IT FTEs, Hydro Ottawa relies on an ecosystem of vendor partners for specialized skills, largely for Applications Development work.







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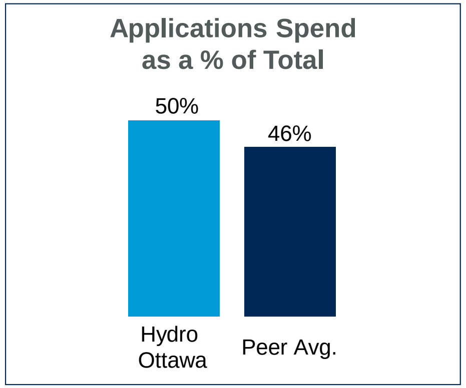
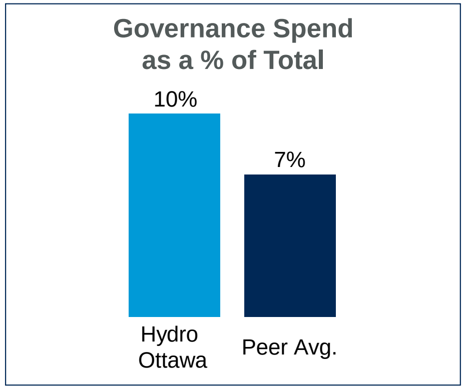
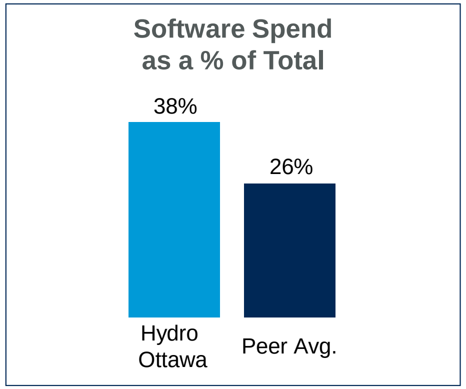
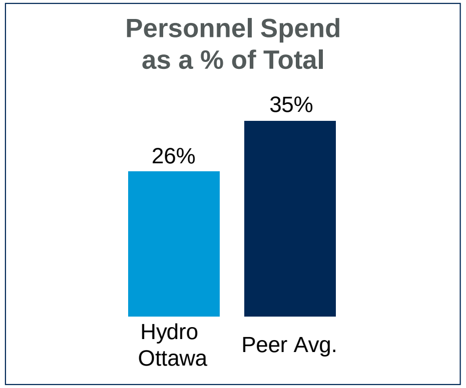
Hydro Ottawa has aggressively moved Applications to the cloud, yet allocation to Application spending remains in-line with peers; allocation to software is materially higher than peers

- **Hydro Ottawa allocated a similar amount of spend to Applications than the peer group** average (50% of IT spend vs. 46%). Over the last several years, Hydro Ottawa has taken a cloud-first approach by replacing legacy on-prem solutions with cloud-based solutions with vendors such as Workday and Salesforce. During these periods of transition, Applications costs can trend higher, however Hydro Ottawa has managed the transition in a cost-effective manner.
- **Allocation to Governance & Business Management is higher** than the peer group (10% of IT spending vs. 7%). This category of spend includes Enterprise Architecture and Business Relationship Management which are important in managing relations with the business. Hydro Ottawa reported that the relationship with the business has been improving towards “partnership” over the last several years.
- **Allocation to Infrastructure (Data Center & Network) is lower** than the peer group (23% of IT spending vs. 27%).
- **Overall allocation to Software spending is materially higher than the peer group** (38% of IT spend vs. 26%). This is likely the result of the period of transition from moving from an on-premises to a Software-as-a-Service licensing model in support of the cloud-first strategy.
- Overall allocation to **Personnel spending is significantly less** than the peer group average (26% vs. 35%), even though the allocation to External Services is also lower (28% versus 31%). This suggests that Hydro Ottawa is receiving good “value for money” from its ecosystem of partners. Personnel spending was lower than planned in 2023 due to a 3-month labour disruption.









Hydro Ottawa should leverage key findings from this assessment to optimize technology spend to support investments in digital

Sourcing View of IT Spend

Peers	Hydro Ottawa
65%	**74%** of IT Spend **Vendors and Contracts** Renegotiate contracts, optimize service models and consolidate vendors
35%	**26%** of IT Spend **IT Staffing and Maturity** Shift labor to lower-cost scenarios, right-size teams and automate manual processes
100%	100%

Technology View of IT Spend

Hydro Ottawa	Peers
60% of IT Spend **Applications*** Rationalize the portfolio, prioritize demand and investments and optimize development and support delivery	53%
40% of IT Spend **Infrastructure and IT Management** Consolidate data centres, shift to the cloud, and align service models to business needs	47%
100%	100%

*Includes Application Support, Applications Development and Governance & Business Management

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2.0
Objectives & Approach

Business context and engagement objectives

Business Context

- Hydro Ottawa is seeking an independent and objective expert benchmark of its overall IT spend and staffing position relative to comparable peer organizations.
- In the short-term, this spending and staffing benchmark will provide data driven insights for the organization's regulatory filing and provide inputs for developing a roadmap of initiatives for Hydro Ottawa's IT Leaders to drive improvements.
- Longer term, these spending and staffing benchmarking insights can inform the IT strategy and future direction.

Engagement Objectives

Gartner combined several unique and proprietary assets and capabilities that will give Hydro Ottawa a fact-based, objective starting point for its ongoing strategic direction. These capabilities include Gartner's world-leading IT Benchmark database to build a custom peer group for Hydro Ottawa, to understand the current state in key IT enterprise-level spending and staffing measures.

Outcomes of the engagement include:

- A current state summary of Hydro Ottawa's IT spend and staffing levels relative to peers with a comparable environment that will identify optimization opportunities to focus future strategic efforts.
- A set of recommendations based on the comparative analysis that will advance Hydro Ottawa in areas directly impactful to the to IT and business objectives.
- Guidance on appropriate re-measurement periods and the foundation to measure progress objectively.

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Spending & Staffing Benchmark Methodology Overview

Gartner used its industry-leading benchmarking consensus models to evaluate total IT Spending and Staffing relative to a hand selected group of industry peers and IT Key Metrics Data for the Utilities industry.

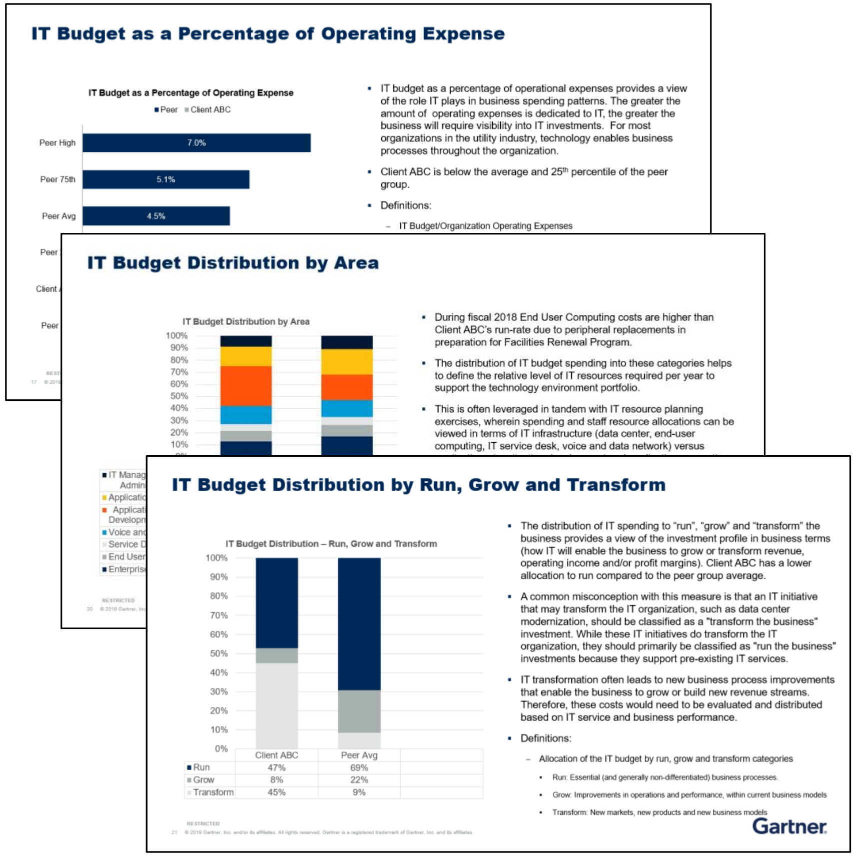
The Enterprise View: IT Spending and Staffing Assessment analysis will provide and compare the following metrics:

Spending Measures

- IT Spending as a % of Revenue
- IT Spending as a % of Operating Expense
- IT Spending Per Employee
- Capital vs. Operational Spending
- Run vs. Grow vs. Transform Spending
- Distribution of IT Spend—Hardware, Software, Personnel, Outsourcing, Other
- Distribution of IT Spend—by IT Function

Staffing Measures

- IT Staff as a % of Company Employees
- IT Contractor Usage
- Distribution of IT Support—by IT Function



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Enterprise IT Spending & Staffing Benchmark

Approach Overview

	0 Project Preparation	1 Project Kickoff	2 Data Collection	3 Data Validation & Analysis	4 Preliminary Report	5 Final Report and Executive Briefings
Objectives	▪ Mutual objectives ▪ Engagement plan	▪ Confirmed scope ▪ Stakeholder alignment	▪ Gather Hydro Ottawa data required for analysis	▪ Confirm Hydro Ottawa data	▪ Consolidate analysis and develop recommendations	▪ Finalize report ▪ Conduct briefings
Key Activities	▪ Pre-Kickoff planning call. ▪ Preview all relevant client information requirements and stakeholders. ▪ Discuss high-level approach and key steps to prepare for a formal kickoff.	▪ Hold kickoff meeting to ensure a common understanding of objectives, scope, schedule, roles and responsibilities. ▪ Participate in any broader socialization efforts agreed to during project preparation. ▪ Distribute and review any data collection materials.	▪ Conduct data collection kick off workshop, distribute IT spending and staffing data collection template and explain text documents ▪ Support Hydro Ottawa's data collection activities ▪ Conduct up to 6 IT Leadership interviews to discuss current state, opportunities, etc.	▪ Develop peer group based on industry, scale, scope and nature of operations. ▪ Verify information gathered and compare verify for accuracy / completeness. ▪ Complete a comparative analysis and develop a materials for data validation workshop. ▪ Review summary of preliminary analysis (key observations and strategic implications) with project team	▪ Leverage Gartner IP (research and benchmark data) to conduct analysis and develop recommendations based on findings ▪ Conduct workshop with core Hydro Ottawa team to get feedback on analysis and recommendations. ▪ Develop a re-measurement plan to assess progress over time	▪ Finalize major work products including the Final report. ▪ Develop executive summary briefing version. ▪ Brief executives.
Deliverables	▪ N/A	▪ Project Kick Off Materials	▪ Data collection templates ▪ Interview guides	▪ Benchmark data validation workshop materials	▪ Summary of Key Findings and Implications (IT spending and staffing and maturity) ▪ Preliminary Report	▪ Final report, including Executive Summary ▪ Briefing(s)

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3.0
Enterprise IT Spending & Staffing Analysis

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Analysis Notes

- Hydro Ottawa’s data submission for this benchmarking engagement includes:
  - 2023 actuals for Revenue, Operating Expenses (including power recovery and cost of power) and Total Employees
  - 2023 actuals for IT Spending & Staffing
  - Operational Technology spending and staffing is not included
- Peer Group data is from 2022-2023
- Gartner’s IT Key Metrics Data (ITKMD) is from 2023

Peer Group Profiles

Primary peer group for comparative analysis

Selection Criteria	
Primary Criteria	Utilities Industry
Secondary Criteria	Electrical Utilities, Total Revenue, Total Operating Expenses, # of Employees and Geography

Secondary peer group for additional context

Custom Peer Group Profile			2023 IT Key Metrics Data (ITKMD) Utilities
Number of Organizations	9		140
Geographical Location	Canada, USA, Europe, New Zealand		Global
	Hydro Ottawa*	**Peer Group Average**	
Total Revenue	**$1.1 Billion**	**$1.5 Billion**	$4.9 Billion
Total Operating Expense	**$0.97 Billion**	**$1.2 Billion**	
Total Employees	**641**	**1,096**	4,000
			2023 ITKMD

* Hydro Ottawa data is for fiscal year ending December 31, 2023 (12 months actuals)
** All analysis is in Canadian dollars, using the exchange rate of 1 USD = 1.35 CAD

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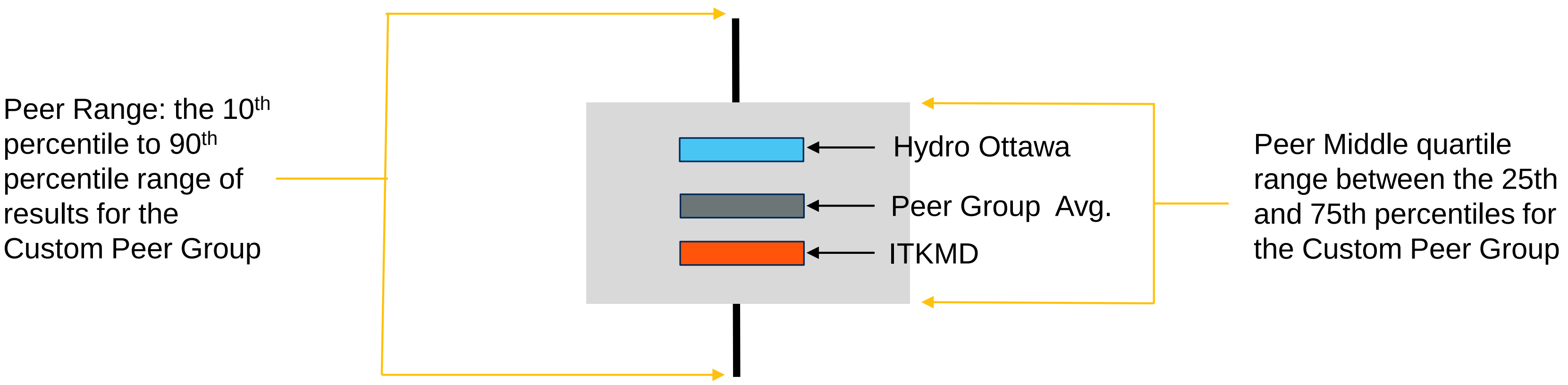
Benchmark Analysis Methodology
Peer Comparisons

Hydro Ottawa's results are displayed in comparison with the following reference points:



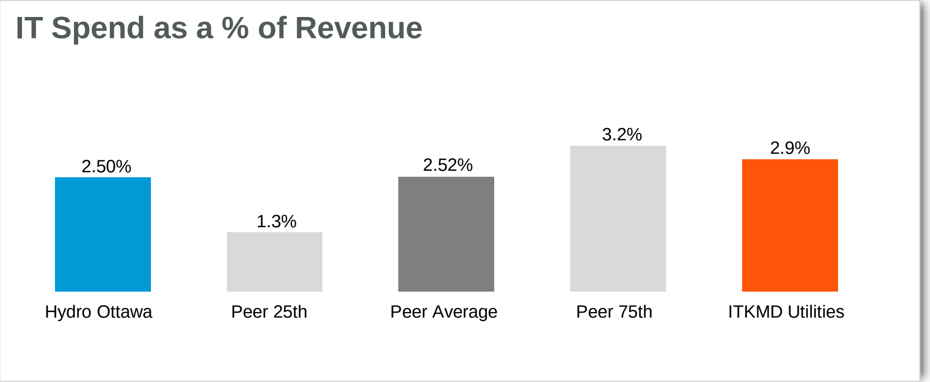
There are not necessarily "good" or "bad" results for any individual metric.

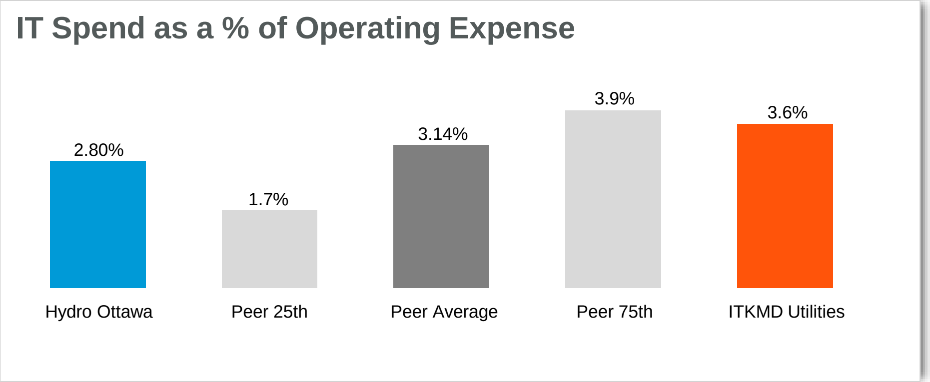
Differences in spending and staffing metrics derived from this analysis provide insight into current strategic IT investment levels versus your competitive landscape.

These measures should also be considered within the context of your future state organizational objectives.

3.1
IT Spending

Hydro Ottawa's overall 2023 IT Spend was slightly lower than industry peers





Observations / Implications

- Hydro Ottawa's 2023 IT Spending was $27.2 million. IT Spend as a % of Revenue was 2.50% compared to an average of 2.52% for the peer group average. IT Spending as a % of Operating Expenses was 2.80% compared to an average of 3.14% for the peer group. Both these metrics indicate that Hydro Ottawa's overall IT spend level was slightly lower than the peer group average and Gartner's IT Key Metrics Data for the Utilities industry.

- The "right" level of IT spend is the level that will deliver the necessary IT solutions that will enable Hydro Ottawa to deliver on its business objectives, in a cost-effective manner. Investing an additional dollar in IT makes sense if it can reduce operational costs elsewhere in the business.

- To ensue value for money from all IT investments, it will be important for Hydro Ottawa focus on continuing to develop Strategic Cost Optimization capabilities.

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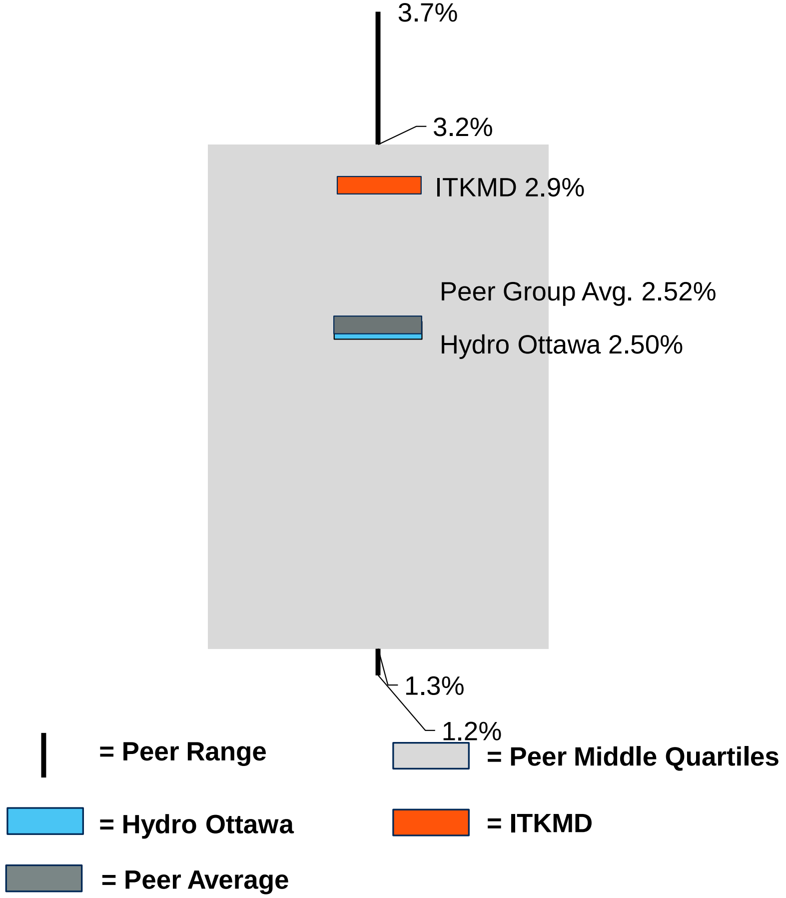
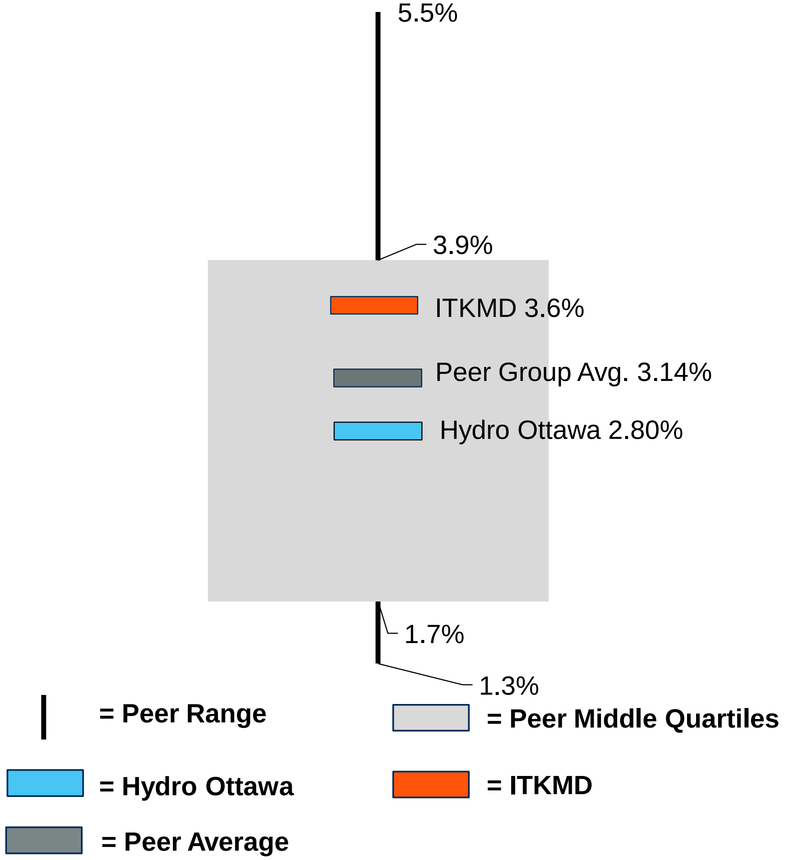
IT Spend as a Percentage of Revenue



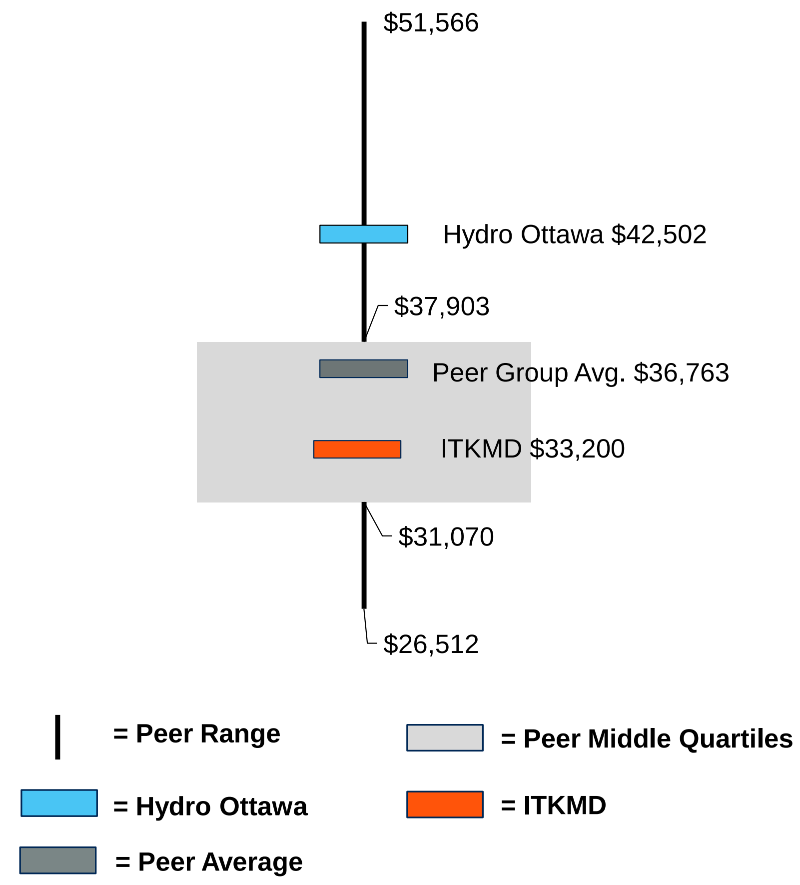
Description	• IT spending as a percentage of revenue provides a view of the role IT plays in the spending patterns of the organization. The greater the amount of the operational expenses that is dedicated to IT, typically the greater need for visibility into the IT investments the organization will require.	
Definition	IT Spending includes capital and operations spending for technology during the study period, including labour, software, hardware, telecommunications expenses; includes project spending	
Calculation	IT Spend / Revenue	**Hydro Ottawa: $27,225,895 / $1,089,452,264**

IT Spend as a Percentage of Operational Expense



Description	• IT spending as a percentage of operational expenses provides a view of the role IT plays in the spending patterns of the organization. The greater the amount of the operational expenses that is dedicated to IT, typically the greater need for visibility into the IT investments the organization will require.	
Definition	IT Spending includes capital and operations spending for technology during the study period, including labour, software, hardware, telecommunications expenses; includes project spending	
Calculation	IT Spend / Operational Expense	**Hydro Ottawa: $27,225,895 / $973,530,264**

IT Spend per Employee

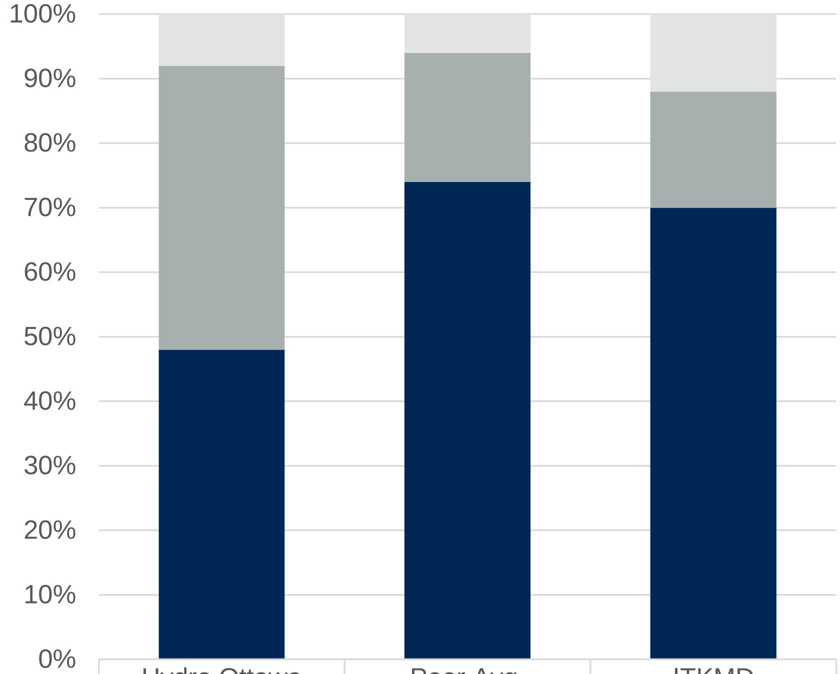


Observations / Implications

- IT Spend per Employee for Hydro Ottawa ($42,502) is higher than the peer group average of $36,763, this is largely the result of Hydro Ottawa's lower number of employees than the peer group average (641 versus 1,096)
- This metric is calculated using Hydro Ottawa's 641 organizational employees, and does not consider any contractor workforce
- Hydro Ottawa should continue to evaluate IT investments that will enable all staff and business functions to improve productivity and modernize their operations. This could lead to reduced costs in other parts of the organization (i.e., Finance, HR)

Description	• IT spending per employee provides insight into the amount of technology support an organization's workforce receives. • High spending can imply higher levels of automation and/or higher investment in IT in general. Low spending levels can be related to higher overall staffing levels and or lower IT investment than peers. • Large variations within industry groups can represent different business models for service or product delivery.	
Definition	IT Spending includes capital and operations spending for technology during the study period, including labour, software, hardware, telecommunications expenses and includes project spending. Organization Employees includes staff, exclusive of Contractors.	
Calculation	IT Spending / Organization Employees	**Hydro Ottawa: $27,225,895 / 641**

IT Spend Distribution by Run, Grow and Transform



	Hydro Ottawa	Peer Avg.	ITKMD
Transform	8%	6%	12%
Grow	44%	20%	18%
Run	48%	74%	70%

Observations / Implications

- In 2023, Hydro Ottawa allocated 52% of IT Spending to Growth / Transformation (i.e., “change the business” activities), two times more than the peer group average of 26%.
- This is the result of significant investments made in “change the business” activities. These investments are aligned to Hydro Ottawa’s strategic priorities, specifically to “accelerate digital transformation to enable sustainable business practices” and “continue to provide best-in-class customer service”.
- Grow / Transform spending does not include investments in updating aging infrastructure, this is included in Run spending (i.e., OMS upgrade, Windows upgrade).

Description	• The distribution of IT spending provides a view of the investment profile in business terms (how IT will enable the business to grow or transform revenue, operating income and/or profit margins)
Definition	Allocation of IT Spending by Run, Grow and Transform, where: • Run: Essential (and generally non-differentiated) business processes. • Grow: Improvements in operations and performance, within current business models • Transform: new services and new operating models

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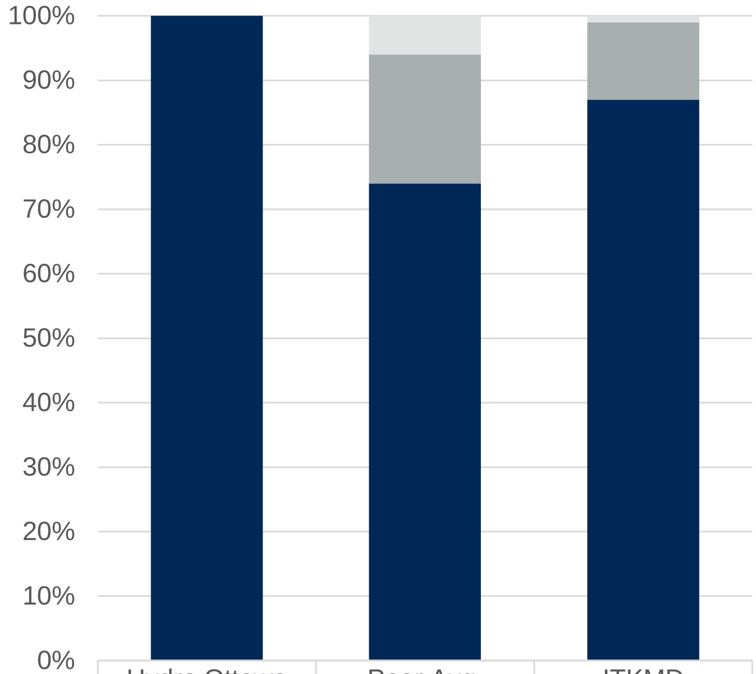
IT Spend Distribution by Funding Source



	Hydro Ottawa	Peer Avg.	ITKMD
Shadow IT		6%	1%
Business Unit IT		20%	12%
Formal IT Budget	100%	74%	87%

Note: some Shadow IT exists at Hydro Ottawa, however it is relatively small and difficult to identify for inclusion in IT spend

Observations / Implications

- Hydro Ottawa's IT spend is more centralized than the peer group average with IT controlling 100% of the spend, compared to an average of 74% for centralized IT within the peer group.
- In organizations with highly centralized IT spend, it is important that there is a high level of transparency with the business, so they understand the allocation of IT resources and the impact of their decisions on IT spending.

Description	• IT spending can come from various sources within an organization and is not restricted to the formal IT budget. Additional spending can occur within business unit budgets and be what is known as "shadow IT."
Definition	Allocation of IT Spending by: • IT Organization • Business Unit (formally outside IT) • Shadow IT (informally outside IT)

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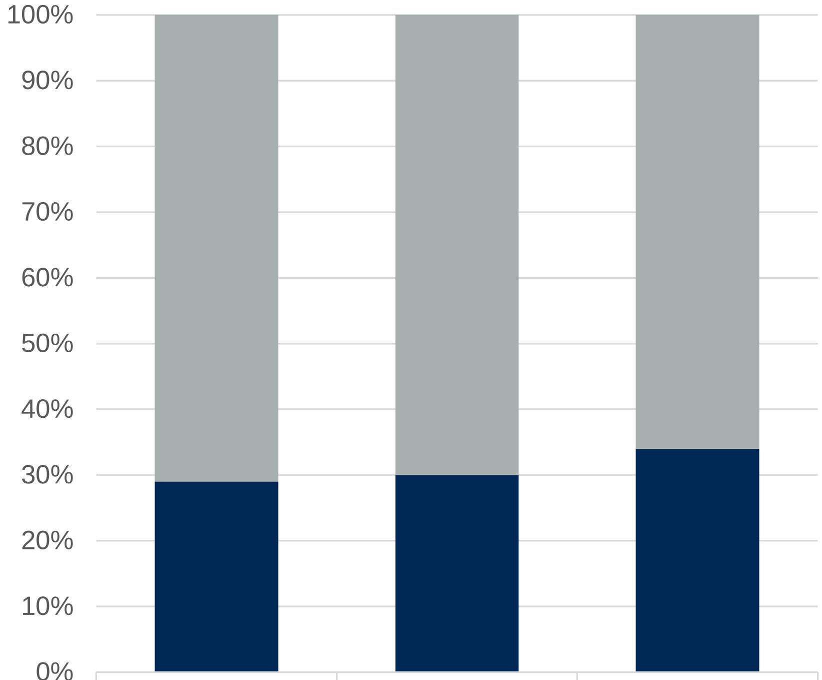
IT Spend Distribution – Operations vs. Capital



	Hydro Ottawa	Peer Avg.	ITKMD
Operational	71%	70%	66%
Capital	29%	30%	34%

Observations / Implications

- Hydro Ottawa allocated a similar amount of its IT spending to capital (29%) than the peer group average of 30%.
- Applications and Infrastructure are increasingly cloud-based, creating an escalating shift away from more traditional capital-based models to operational funding. Hydro Ottawa has seen a 6-7% increase in OpEx over the last several years.
- There can be unanticipated or overlooked operating budget increases as a result of SaaS and IaaS contracts. The resultant shift from capital expenditure (CapEx) to operating expenditure (OpEx) can cause budgetary and cost management pressures.

Description	• IT capital expenses vs. operational expenses helps to portray the investment profile for an organization in a given year.
	• Organizations with a higher capital spending may…
	  ○ Be investing heavily in strategic IT infrastructure
	  ○ Have reached a planned point of investment in their infrastructure lifecycle
	  ○ Not have been managing asset investments well (i.e., “catching up”)
	  ○ Simply have a more aggressive capitalization policy
	• The break out of Run, Grow, Transform spending that follows may provide more insight

Definition	Distribution of IT Operational spending versus Capital spending

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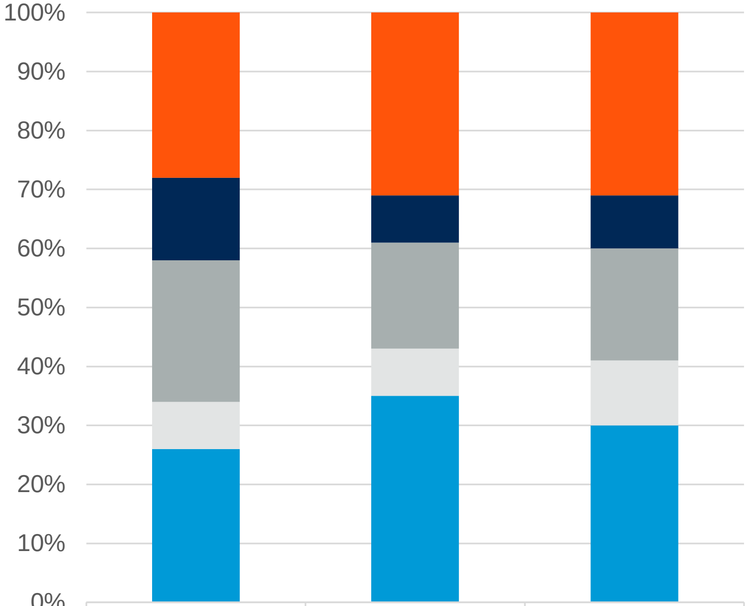
IT Spend Distribution by Cost Category



	Hydro Ottawa	Peer Avg.	ITKMD
External Services	28%	31%	31%
Software (SaaS)	14%	8%	9%
Software (On-Prem)	24%	18%	19%
Hardware	8%	8%	11%
Personnel	26%	35%	30%

Observations / Implications

- Hydro Ottawa relies less on Personnel (26% of IT spend) than the peer group (35%). Typically, a lower allocation to Personnel results in a higher allocation to External Services, however this is not the case for Hydro Ottawa (28% versus an average of 31% for the peer group). Personnel spending was lower than planned in 2023 due to a 3-month labour disruption.
- Leveraging External Services is an important element of Hydro Ottawa's delivery model. A strong ecosystem of vendor partners is used to access highly skilled resources.
- Hydro Ottawa's overall allocation to software is materially higher than the peer group (38% versus 26%) and has appeared to have adopted the SaaS licensing model much more quickly, while consolidating / transitioning on-prem systems.
- Allocation to hardware is same as the peer group average.

Description	• This measure can be helpful in adding context to the IT investment strategy from a sourcing perspective, in terms of accounting-based resources that may be insourced versus services delivered by a third party. • As an organization increases or decreases the level of outsourced services, it may find an inverse effect in its associated personnel, hardware and/or software expenditures, depending on the scope of services retained and on requirements.
Definition	Allocated IT Spending among the different cost categories

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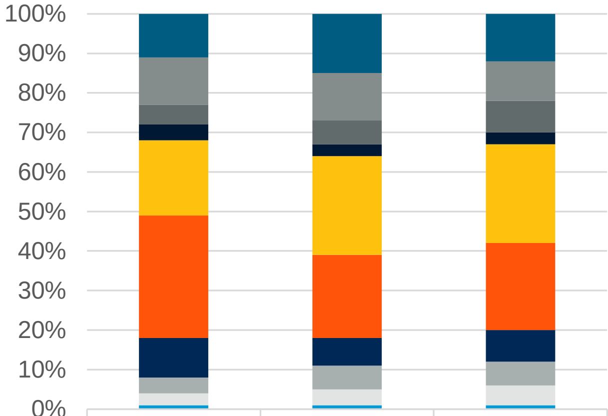
IT Spend Distribution by IT Functional Area



	Hydro Ottawa	Peer Avg.	ITKMD
Data Center	11%	15%	12%
Network	12%	12%	10%
Workplace Services	5%	6%	8%
IT Service Desk	4%	3%	3%
Application Development	19%	25%	25%
Application Support	31%	21%	22%
Governance & Business Management	10%	7%	8%
IT Security*	4%	6%	6%
IT Ops. Mgmt	3%	4%	5%
Ser. Con't / DR	1%	1%	1%

*Some IT Security costs are embedded in Data Center & Network which could not be isolated.

Observations / Implications

- Hydro Ottawa allocated a similar amount of spend to Applications than the peer group average (50% of IT spend vs. 46%). Over the last several years, Hydro Ottawa has taken a cloud-first approach by replacing legacy on-prem solutions with cloud-based solutions with vendors such as Workday and Salesforce. During these periods of transition, Applications costs can trend higher, however Hydro Ottawa has managed the transition in a cost-effective manner.
- Hydro Ottawa allocated 43% more IT spending to Governance & Business Management than the peer group average (10% vs. 7%). This spend includes Enterprise Architecture & Business Relationship Management which are important in managing relations with the business. Hydro Ottawa reported that it has transitioned from a “Service” model to a business-centric “Partnership” model.
- IT domains with materially lower spend allocation than the peer group average include IT Security (-33%) and Data Center (-27%)
- Network, Workplace Services, IT Service Desk, IT Operations Management and Service Continuity / Disaster Recovery spend allocations are comparable to the peer group.

Description	• This information is often leveraged in tandem with IT resource planning exercises, wherein resource allocations can be viewed in terms of IT infrastructure versus applications versus IT overhead. • While this measure is helpful in identifying relative volumes of IT resource consumption by IT functional area, as compared to Peers, it does not aid in identifying whether resources are being leveraged in a cost-effective or productive manner.
Definition	Allocated IT Spending among the different functional areas

From a real dollar perspective, Hydro Ottawa's "Run" spend is materially lower than Peers, which is offset by a higher level of investment in Growth / Transformation

IT Spend per $100 of Operating Expense

Enterprise View	IT Spend as % of Operating Expense		IT Spend per $100 of Operating Expense		
	Hydro Ottawa	Peer Avg	Hydro Ottawa	Peer Avg	Variance
	2.80%	3.14%	$ 2.80	$ 3.14	($0.34)

Investment View	Run / Change Distribution		Run / Change per $100 of Operating Expense		
	Hydro Ottawa	Peer Avg	Hydro Ottawa	Peer Avg	Variance
Run	48%	74%	$ 1.34	$ 2.32	($0.98)
Grow / Transform	52%	26%	$ 1.46	$ 0.82	$0.64
Total	**100%**	**100%**	**$ 2.80**	**$ 3.14**	**($0.34)**

Technical View	IT Functional Area Distribution		IT Functional Area Spend per $100 of Operating Expense		
	Hydro Ottawa	Peer Avg	Hydro Ottawa	Peer Avg	Variance
Data Center	11%	15%	$ 0.31	$ 0.47	($0.16)
Voice and Data Network	12%	12%	$ 0.34	$ 0.38	($0.04)
Workplace Services	5%	6%	$ 0.14	$ 0.19	($0.05)
IT Service Desk	4%	3%	$ 0.11	$ 0.09	$0.02
Application Development	19%	25%	$ 0.53	$ 0.79	($0.25)
Application Support	31%	21%	$ 0.87	$ 0.66	$0.21
Governance & Business Mgmt.	10%	7%	$ 0.28	$ 0.22	$0.06
IT Security	4%	6%	$ 0.11	$ 0.19	($0.08)
IT Ops Mgmt.	3%	4%	$ 0.08	$ 0.13	($0.04)
Service Con't. / DR	1%	1%	$ 0.03	$ 0.03	($0.00)
Total	**100%**	**100%**	**$ 2.80**	**$ 3.14**	**($0.34)**

From a real dollar perspective "Run" spending is materially lower than peer group levels

Application Support and Governance & Business Management and IT Service Desk have higher real dollar spending that the peer group average.

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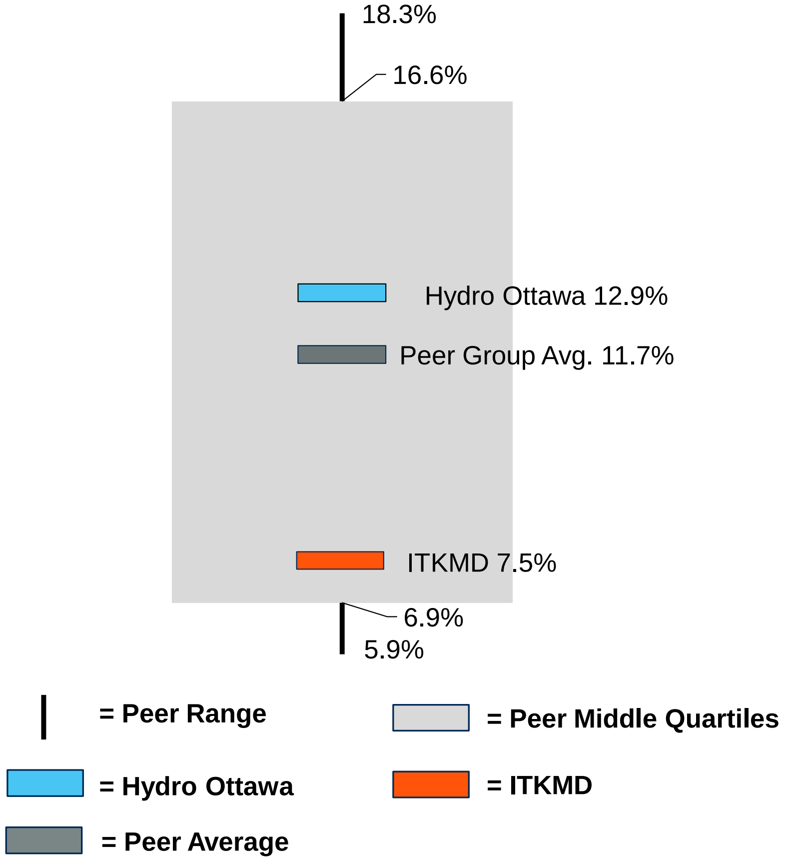
3.1
IT Staffing

IT FTEs as a Percentage of Total Employees

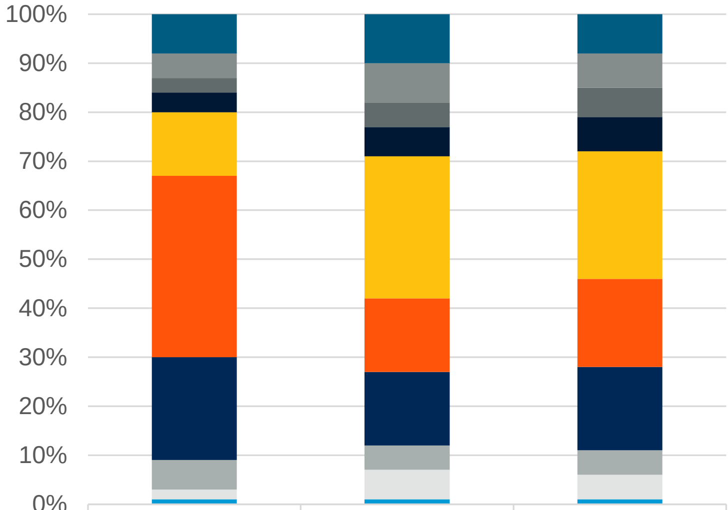


Observations / Implications

- Hydro Ottawa's level of IT staffing is slightly higher than the peer group average, with IT FTEs as a % of Total Employees at 12.9% compared with 11.7%, this is largely the result of Hydro Ottawa's lower number of employees than the peer group average (641 versus 1,096).
- Given Hydro Ottawa's use of External Services is slightly lower than the peer group's, this would suggest the overall IT workforce has higher levels of productivity / efficiency.

Description	• The percentage of IT FTEs in the organization compared to the total number of employees is a key measure of how critical IT support is to the business. This measure can be heavily influenced, however, by the level of outsourcing an organization may have. • Organizations with high levels of manageability and automation should require fewer operations staff. Manual processes and lack of standards will increase the number of IT FTEs needed.	
Definition	IT FTEs includes in-house and contractor FTEs, does not include managed services adjusted FTEs. Organization Employees includes employees, exclusive on Contractors.	
Calculation	IT FTEs / Organization Employees	**Hydro Ottawa: 83 / 641**

IT FTEs Distribution by Area



	Hydro Ottawa	Peer Avg.	ITKMD
Data Center	8%	10%	8%
Network	5%	8%	7%
Workplace Services	3%	5%	6%
IT Service Desk	4%	6%	7%
Application Development	13%	29%	26%
Application Support	37%	15%	18%
Governance & Business Management	21%	15%	17%
IT Security	6%	5%	5%
IT Ops. Mgmt	2%	6%	5%
Ser. Con't / DR	1%	1%	1%

Observations / Implications

- Hydro Ottawa's IT FTE allocations are materially higher than the peer group average for Application Support (+146%) and Governance & Business Management (+40%)
- Hydro Ottawa's IT FTE allocation to Application Development is significantly less than the peer group average (-55%), largely because most development activities are outsourced.
- Infrastructure functions (i.e., Data Center, Network, IT Operations Management) have lower IT FTE allocations than the peer group average.

Description	• By viewing human resources (IT FTEs) within the context of the total portfolio, organizations are able to identify which environment is the most labour- intensive as a % of the IT labour pool. Typically, application activities (development and support) demand the most resources from both cost and staffing perspectives. The degree to which an organization outsources should be considered alongside such staffing metrics.
Definition	Distributes In House and Contractor IT FTEs among the different functional areas

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Overall IT staffing levels are comparable to peers, however, allocation to Applications Support and Applications Development vary greatly

IT FTEs per 100 Total Employees

Enterprise View	IT FTEs as % of Total Ees. (incl. Partners)		IT FTEs Per 100 Employees (incl. Partners)		
	Hydro Ottawa	Peer Avg	Hydro Ottawa	Peer Avg	Variance
	12.9%	11.7%	12.90	11.70	1.20

Technical View	IT Functional Area Distribution		IT FTEs Per 100 Employees (incl. Partners)		
	Hydro Ottawa	Peer Avg	Hydro Ottawa	Peer Avg	Variance
Data Center	8%	10%	1.03	1.17	(0.14)
Voice and Data Network	5%	8%	0.65	0.94	(0.29)
Workplace Services	3%	5%	0.39	0.59	(0.20)
IT Service Desk	4%	6%	0.52	0.70	(0.19)
Application Development	13%	29%	1.68	3.39	(1.72)
Application Support	37%	15%	4.77	1.76	3.02
Governance & Business Mgmt.	21%	15%	2.71	1.76	0.95
IT Security	6%	5%	0.77	0.59	0.19
IT Ops Mgmt.	2%	6%	0.26	0.70	(0.44)
Service Con't. / DR	1%	1%	0.13	0.12	0.01
Total	**100%**	**100%**	**12.90**	**11.70**	**1.20**

The real number of Application Development FTEs is significantly lower than peers, as most of this activity is outsourced

The real number of Application Support & Governance and Business Management FTEs are materially higher than the peer group

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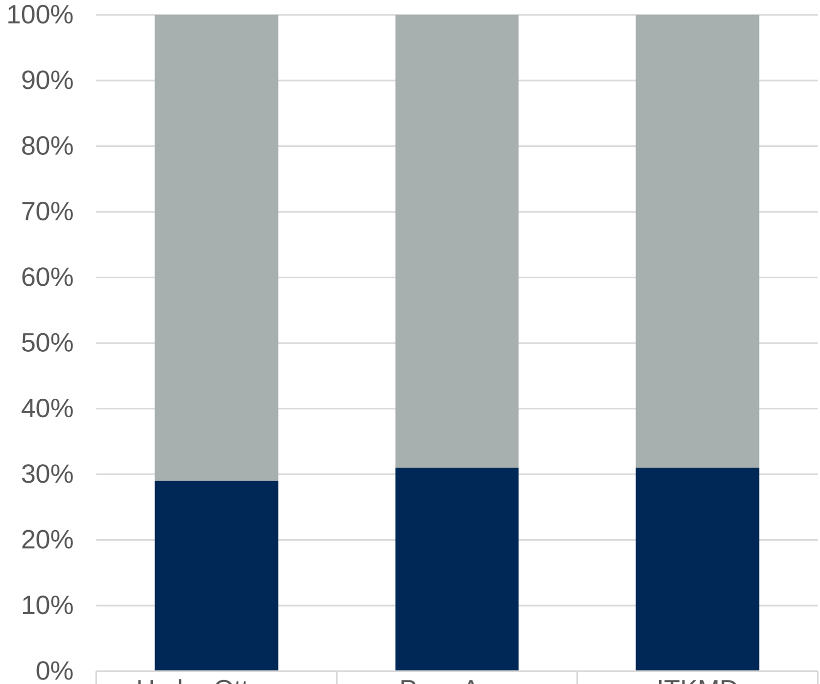
IT FTEs Distribution by Inhouse and Contractor



	Hydro Ottawa	Peer Avg.	ITKMD
Inhouse	71%	69%	69%
Contractors	29%	31%	31%

Observations / Implications

- The mix of Inhouse and Contract IT FTEs at Hydro Ottawa is comparable to the peer group average (29% of IT FTEs versus 31%)
- Leveraging contractors for specialized skills and/or staff augmentation can be an alternative to hiring full-time employees, but it generally costs more and comes with some risk (i.e. sense of team, commitment to organization, knowledge retention, etc.)

Description	• The distribution of IT FTEs (insourced versus contractor) provides a view of the IT staffing strategy. • IT Contract labour or Contractor usage can be an effective approach to maintaining flexibility and agility when business conditions are changing. However, keeping Contractors for extended periods can be costly and limit process standardization.
Definition	Distribution of Contractor FTEs and In House FTEs

4.0
IT Spending & Staffing Benchmarking Definitions

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IT Budget Benchmark Methodology — Key Definitions

- The IT Budget Assessment follows the Gartner Benchmarking chart of accounts. In order to match the Gartner Benchmark chart of accounts, the data presented in the benchmark will not completely align with the official Information Technology budget or organization. For example, the Gartner Benchmark chart of accounts has historically excluded operational technology.
- IT Budget Definition
  - The total spend for a twelve month budget period for information technology to support the enterprise. IT spend can come from anywhere in the enterprise that incurs IT costs, and it is not limited to the IT organization. It is calculated on an annualized “cash out” basis and therefore contains capital budget, and operational expenses. Gartner definitions for IT spend include all IT services, for example:
    - Hardware, software, personnel (including travel and benefits and training), contractors and consultants, outsourcing, disaster recovery, occupancy, data and voice communications/transmission, associated with supporting information technology within the enterprise.
    - Costs for the facilities being used by the staff supporting the enterprise. Some examples include office space, furniture, electricity, maintenance, property taxes, security, and office supplies. Occupancy costs for space dedicated to IT functions such as the data center and IT service desk are also included.
    - The data center (servers, storage etc), Hydro Ottawa devices (desktops, laptops, tablets, thin Hydro Ottawas, handhelds), voice and data networks (including but not limited to voice and data transmission, fixed and mobile telephony, Internet access services), IT service desk, application development and maintenance. IT Support functions such as the office of the CIO, supervisory management, finance and administrative costs, such as purchasing, asset management, process management, and marketing of IT services.

IT Domain Definitions (1 of 3)

Enterprise Computing (Data Center)

- *Compute:* includes the provisioning of the full life cycle management of processing/hosting services on both mainframe and midrange (UNIX, Windows, Linux, iSeries etc.) platforms including acquisition, deployment, maintenance, change management and disposal.
- *Storage:* includes the provisioning of the full life cycle management of storage services utilizing online, near-line and offline technologies including acquisition, deployment, maintenance, change management and disposal.
- *Facilities/Hosting:* includes the full life cycle management of the physical data center premises, and other facilities and services associated with the premises such as furniture, power supply, heat management, climatization services, access security, floor space, office space, design and consulting.
- *Database:* includes the full life cycle management of relational, non-relational and pre-relational databases including the tools for monitoring and diagnosing problems with databases, analyzing and improving the performance of databases, and routine administration of databases, including configuration changes.
- *Middleware:* is the software "glue" that helps programs and databases (which may be on different computers) work together. Its most basic function is to enable communication between different pieces of software. Integration middleware is software that enables independently designed applications, software components or services to work together, by supporting data consistency, composite application and multistep process styles of integration. It includes multi-enterprise (B2B) integration capabilities and internal integration, as well as those products that enable existing applications to become part of a new multistep process. Platform middleware is system software that provides the runtime hosting environment (a container) for application program logic. It uses embedded or external communications middleware to help programs interact with other programs. It also provides resource management services for hosting application program logic at runtime.

Network

- Network (data and voice) is comprised of: Local-Area Network Service (this subservice provides network access within the office premises), Wide-Area Network Service (this subservice helps in the management and supply of inter-site connections and network infrastructure), Remote Access Service (this subservice helps to connect the internal network from a remote location with broadband or phone line access using a security token), Internet Connectivity Service (this subservice provides access to the internet) and Intranet Connectivity Service (this subservice helps in the provision of the global network provided by third parties. This also includes management of network optimization devices).

IT Domain Definitions (2 of 3)

End-User Computing

- End-User Computing includes provisioning of the full life cycle management of desktop, laptop, tablet, thin Hydro Ottawa, handheld and peripheral assets including acquisition, deployment, maintenance, change management and disposal.

IT Service Desk

- An IT Service Desk is defined as any single location that evenly distributes the receipt and/or placement of technical support calls or contacts to a predetermined group of support staff. The IT service desk assessment examines IT efficiency and effectiveness with respect to the provisioning of remote Tier 0/Tier 1 support provided to end users by the technical support centers (e.g., network, data center, PC and consolidated).
- Because IT service desks may be organized differently across enterprises, you may be required to capture some information that is beyond your specific budget lines to ensure consistent comparisons. Examples include telecommunications equipment used specifically by the IT service desk, transmission expenses attributable to the inbound support calls and remote user support resources that may physically reside in other support groups (e.g. network operations or applications support).

Applications

- *Development*
  - New code for a new application
  - Functional enhancements to current code that take more than two person-weeks or typically add greater than eight function points (see notes below)

- *Support*
  - Programming maintenance of currently operational computer applications. This will include some enhancements to these applications as well.
  - Bug fixes of any size or duration
  - Maintenance of hard-coded data or tables (including field size changes) embedded within the programs (any size or duration)
  - Functional enhancements to current code that take less than two person-weeks and typically add fewer than eight function points
  - Any project that produces no new business functionality for the user

IT Domain Definitions (3 of 3)

Governance & Service Management

- Identifies service-optimized IT organizations which are growth enablers and a source of both operational and strategic differentiation. Here, the IT organizations constructively and proactively engage with the business to improve business operations to enrich enterprise performance.
  - In order to drive business value, these IT organizations themselves run like a business, bringing out front-office capabilities. IT demonstrates financial discipline, transparency, and delivery of business value by managing an integrated view of technology cost and performance against defined business outcomes, which are formally captured in a strategic service portfolio. These IT organizations exhibit the following key characteristics of an implicit business-oriented consumer/provider relationship:
  - Understand customer's needs
  - Manage service and solution life cycle
  - Deliver solutions and services to customers
  - Governs internal IT operations and architecture to ensure strategic success

IT Operations Management

- Provides on-site and/or remote IT Operations monitoring to gain insight into the historical, current and future availability and performance of IT systems, networks and applications, while also performing root cause analysis. Monitoring typically is performed in four categories: IT Infrastructure Monitoring (ITIM), Applications Performance Monitoring (APM), Artificial Intelligence for IT Operations (AIOps) and Network Performance Monitoring and Diagnostics (NPMD).

IT Security

- The discipline of designing, implementing and maturing security practices to protect critical business processes and IT assets across the enterprise. It covers:
  - Developing and maintaining effective program governance
  - Communicating and engaging successfully with all stakeholders
  - Defining a vision promoting desired security, risk management and business outcomes
  - Defining, communicating and enforcing security policies across the organization
  - Planning budgets and resourcing, including talent management and professional services
  - Assessing and improving program maturity and performance

IT Service Continuity/Disaster Recovery

- The use of alternative network circuits to re-establish communications channels if the primary channels are disconnected or malfunctioning.
- The methods and procedures for returning a data center to full operation after a catastrophic interruption (e.g., including recovery of lost data).

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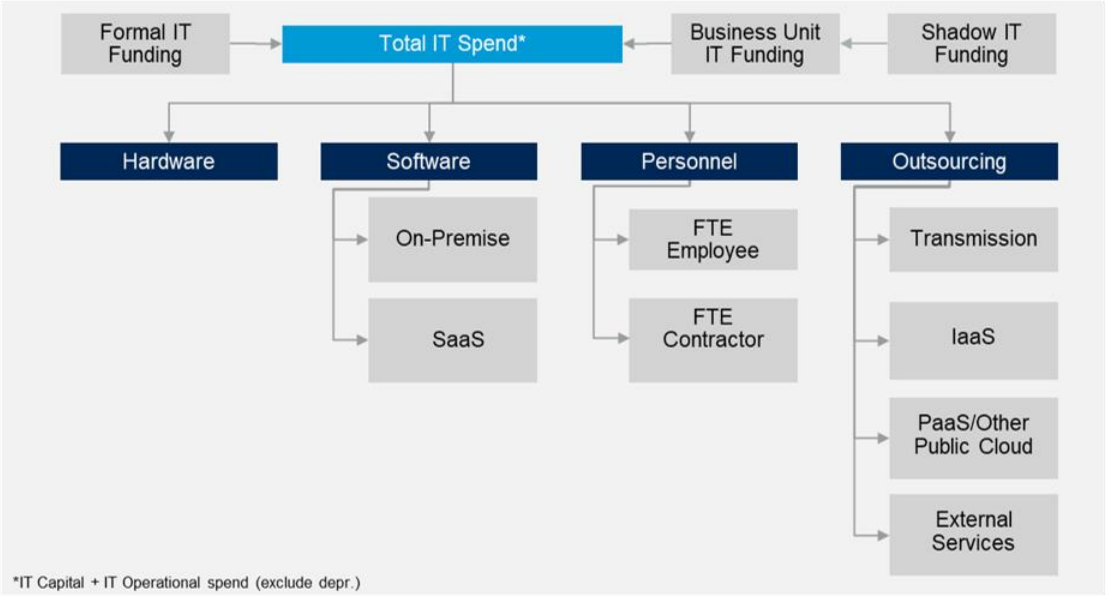
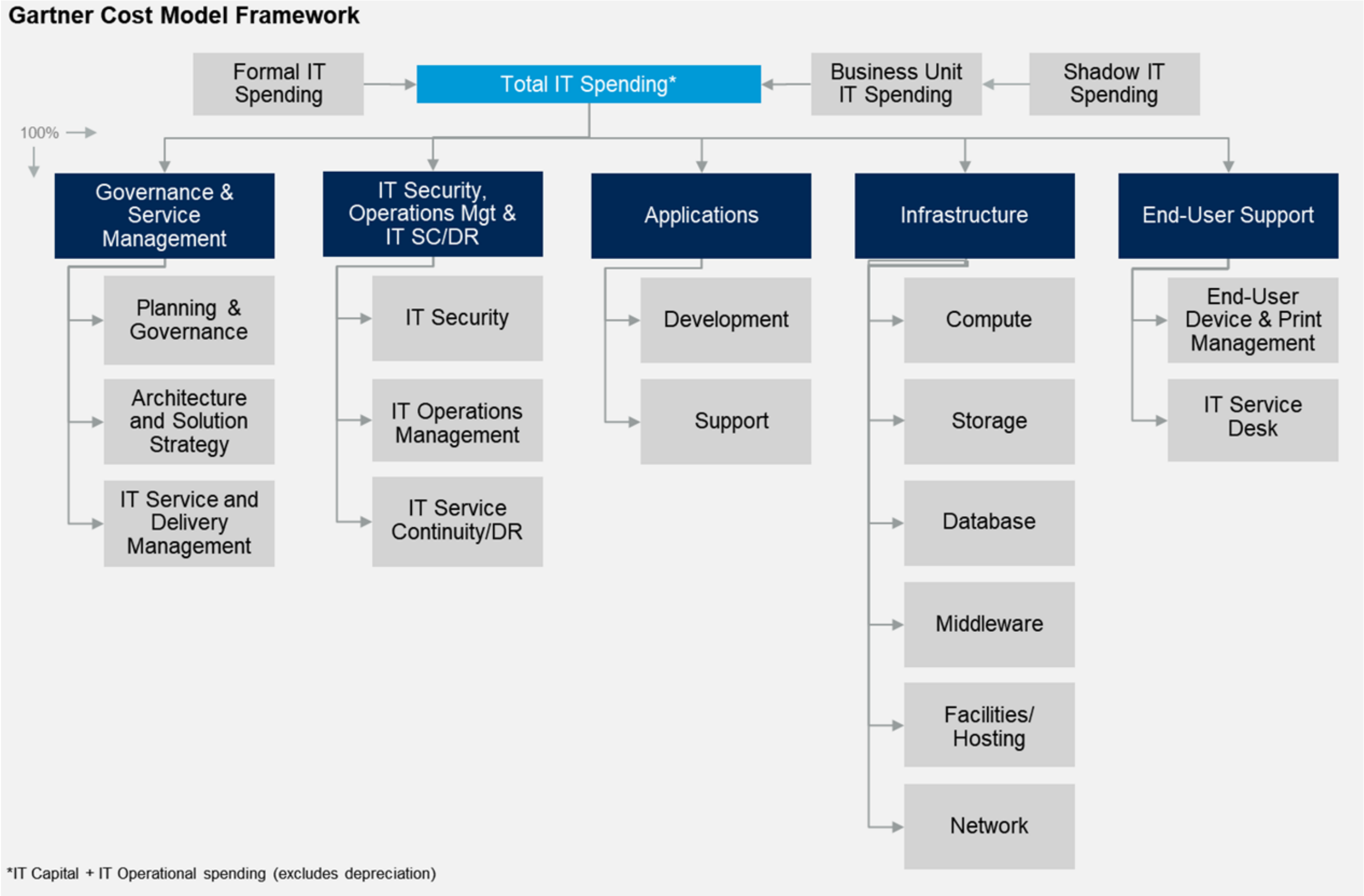
Consensus Model Overview

Total IT Spending: Asset-Based Cost Management View

IT Spending includes (From a resource or accounting perspective): Hardware, software, personnel for IT FTEs including IT contractors, network transmission, outsourced IT services e.g., consulting, system integration, infrastructure etc.), public cloud services, occupancy and utilities spending associated data centers, taxes other than value added taxes where it is recovered and refunded to the organization.



IT Total IT Spending: IT Functional Cost Management View



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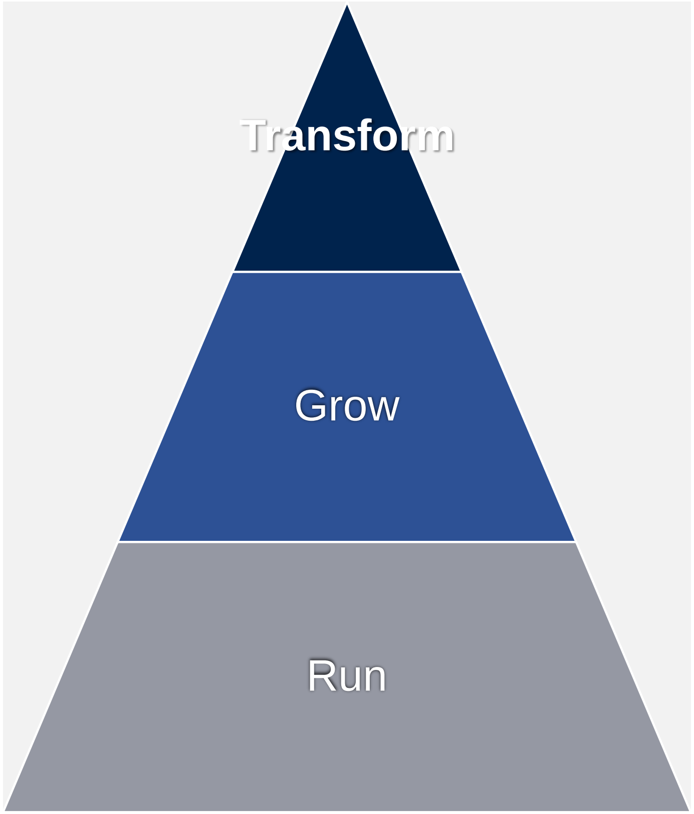
Run, Grow, Transform Describes IT's role



Is it Revolutionary?

For Everyone?
There is potential for new markets or industries, or displacement or elimination of existing industries.

For the Hydro Ottawa?
There is potential to move the Hydro Ottawa's business into entirely new markets or

YES → **Transform the Business**

Does it Make Money?

The situation is about enhancing, extending or differentiating existing business capabilities related to products, services, or markets.

YES → **Grow the Business**

Does it Keep the Lights on?

The situation is about supporting or improving essential, non-differentiated business functions that do not directly produce revenue.

YES → **Run the Business**

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Data Center

Compute

- Compute includes the provisioning of the full life cycle management of processing/hosting services on both mainframe and midrange (UNIX, Windows, Linux, iSeries etc.) platforms and racks including acquisition, deployment, maintenance, change management and disposal.
- Expenses, staffing and workload related to data center facilities management are included in the Facilities/Hosting service.
- Annual Compute costs include the annual capital and operational expense, maintenance, installation and taxes, as appropriate, for all of hardware, software and outsourcing, in addition to personnel costs.

Hardware	Software	Personnel	Outsourcing
▪ Processors (mainframe, servers) ▪ Internal Disk Storage	▪ Operating Systems ▪ Virtualization ▪ System Utilities ▪ Communications ▪ SaaS	▪ Engineering ▪ Management and Administration	▪ Traditional and Cloud (Private and Public)

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Storage

- Storage includes the provisioning of the full life cycle management of storage services utilizing online, near-line and offline technologies including acquisition, deployment, maintenance, change management and disposal.
- Annual Storage costs include the annual capital and operational expense, maintenance, installation and taxes, as appropriate, for all of hardware, software and outsourcing, in addition to personnel costs.

Hardware

- Storage Controllers
- Storage Arrays

Software

- Storage Maintenance
- Replication
- Backup/Restore
- Archival
- Media Handling/ Migration
- SaaS

Personnel

- Engineering
- Management and Administration

Outsourcing

- Traditional and Cloud (Private and Public)

Facilities/Hosting

- Facilities/Hosting includes the full life cycle management of the physical data center premises, and other facilities and services associated with the premises such as furniture, power supply, heat management, climatization services, access security, floor space, office space, design and consulting.
- Annual Facilities costs include the annual capital and operational expense, maintenance, installation and taxes, as appropriate, for all of hardware, software, utilities and outsourcing, in addition to personnel costs.

Hardware
- Building and Maintenance
- Environmental Systems
- Electrical Systems
- Other Systems

Software
- Building Management Systems
- Data Center Infrastructure Management
- SaaS

Utilities
- Electricity
- Gas
- Water

Personnel
- Engineering
- Management and Administration

Outsourcing
- Traditional and Cloud (Private and Public)

Database

- Database includes the full life cycle management of relational, non-relational and pre-relational databases including the tools for monitoring and diagnosing problems with databases, analyzing and improving the performance of databases, and routine administration of databases, including configuration changes.
- Annual Database costs include the annual capital and operational expense, maintenance, installation and taxes, as appropriate, for all of software and outsourcing, in addition to personnel costs.

Software	Personnel	Outsourcing
▪ Database Management Systems ▪ SaaS	▪ Engineering ▪ Management and Administration	▪ Traditional and Cloud (Private and Public)

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Middleware

- Middleware is the software “glue” that helps programs and databases (which may be on different computers) work together. Its most basic function is to enable communication between different pieces of software. This includes Integration middleware and Platform middleware.
- Integration middleware is software that enables independently designed applications, software components or services to work together, by supporting data consistency, composite application and multistep process styles of integration. It includes multi-enterprise (B2B) integration capabilities and internal integration, as well as those products that enable existing applications to become part of a new multistep process.
- Platform middleware is system software that provides the runtime hosting environment (a container) for application program logic. It uses embedded or external communications middleware to help programs interact with other programs. It also provides resource management services for hosting application program logic at runtime.
- Annual Middleware costs include the annual capital and operational expense, maintenance, installation and taxes, as appropriate, for all of software and outsourcing, in addition to personnel costs.

Software	Personnel	Outsourcing
▪ Application Integration Suites ▪ Data Integration Tools ▪ Message-oriented Middleware ▪ SaaS	▪ Engineering ▪ Management and Administration	▪ Traditional and Cloud (Private and Public)

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End-User Support

End-User Device and Print Management

- End-User Device & Print Management includes provisioning of the full life cycle management of personal computing devices, peripheral assets and fixed telephones including acquisition, deployment, maintenance, change management and disposal.
- Annual End-User Device & Print Management costs include the annual capital and operational expense, installation and taxes, as appropriate, for all of hardware, software and outsourcing, in addition to personnel costs.

Hardware

- Desktops, Laptops, Tablets, Thin Clients, Smartphones, Handhelds
- Local and Shared Printers
- Handsets
- Videoconferencing
- MAC Supplies

Software

- PC Operating Systems
- Utilities
- Print Management Tools
- Personal Productivity and Databases
- Mobile Device Management
- Email and Messaging
- Collaboration
- Content Services
- Softphones
- SaaS

Personnel

- Incident Resolution/ Prevention
- Service Request Fulfillment
- Engineering
- Management and Administration

Outsourcing

- Traditional and Cloud (Private and Public)

Gartner

End-User Applications

This includes the annual license and maintenance costs, as well as capital costs associated with new purchases and upgrades, for all software specified below:

- Personal Productivity
- Email/Messaging
- Unified Communications & Collaboration
- Mobility Management
- Content Services
- Softphones
- Software as a service (SaaS)
- Other Personal Applications

IT Service Desk

- An IT Service Desk is defined as any single location that evenly distributes the receipt and/or placement of technical support calls or contacts to a predetermined group of support staff. The IT Service Desk consensus model examines IT efficiency and effectiveness with respect to the provisioning of remote Tier 0/Tier 1 support provided to end-users of IT services.
- Web-based self-help / self-healing intranet knowledgebase (T0) enables users to resolve their own problems, submit request for service, reset passwords etc. Fixed IT Service Desk (T1/T2) functions include call-taking agents and supervisors, with potentially tiered structure for passing contacts to more technical root cause investigators within the IT Service Desk team. Function handles all contacts from authorized end-users including calls, emails, web-based queries and requests and chat support for Tier 0 users.
- Annual IT Service Desk costs include the annual capital and operational expense, maintenance, installation and taxes, as appropriate, for all of hardware, software and outsourcing, in addition to personnel costs.

Hardware
- Automated Call Distribution
- Interactive Voice Response
- Computer Telephony Integration
- Web-based Self-help/Self-healing

Software
- Expert Knowledge Tools
- Management Tools
- Chat Software/Web Software
- Voice/IVR Software
- SaaS

Personnel
- Agents
- Second-line Support
- Engineering
- Management and Administration

Outsourcing
- Traditional and Cloud (Private and Public)

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Network

Wide-Area Network (Data & Voice)

- Wide-Area Network Service: This subservice helps in the management and supply of inter-site connections and network infrastructure.
- Remote Access Service: This subservice helps to connect the internal network from a remote location with broadband or phone line access using a security token.
- Internet Connectivity Service: This subservice provides access to the internet.
- Intranet Connectivity Service: This subservice helps in the provision of the global network provided by third parties. This also includes management of network optimization devices.
- Annual Network cost includes the annual capital and operational expense, maintenance, installation and taxes, as appropriate, for all of hardware, software, transmission and outsourcing, in addition to personnel costs.

Hardware	Software	Transport	Personnel	Outsourcing
▪ Routers ▪ WAN Appliances ▪ PBX and IPT	▪ Data and Voice Network Management ▪ IP Address Management ▪ SaaS	▪ MPLS, Internet Access, Ethernet, Hybrid/xDSL/ Leased Lines, DWDM/Dark Fiber/ Satellite, Secure VPN Access ▪ Outbound and Inbound Usage ▪ Private Voice Networks ▪ Inter-data Center Connectivity	▪ Engineering ▪ Management and Administration	▪ Traditional and Cloud (Private and Public)

Transport

Includes TO:

- Connectivity Bandwidth
- Voice Circuits
- DIDs
- Inbound 0800/0300
- Outbound
- Mobility Plans
- Private Network Connectivity

Hardware

- Routers
- WAN Appliances
- PBX and IPT

Software

- Data and Voice Network Management
- IP Address Management
- SaaS

Transport

- MPLS, Internet Access, Ethernet, Hybrid/xDSL/ Leased Lines, DWDM/Dark Fiber/ Satellite, Secure VPN Access
- Outbound and Inbound Usage
- Private Voice Networks
- Inter-data Center Connectivity

Personnel

- Engineering
- Management and Administration

Outsourcing

- Traditional and Cloud (Private and Public)

Local-Area Data Network

- Local-Area Network Service: This subservice provides network access within the office premises.

Hardware	Software	Personnel	Outsourcing
▪ Switches and Appliances (Office LAN and Data Center LAN) ▪ Wireless Access Points/Controllers ▪ Load Balancers ▪ Network Management	▪ Network Management ▪ SaaS	▪ Engineering ▪ Management and Administration	▪ Traditional and Cloud (Private and Public)

Applications

Application Development & Support

Application Development and Support is comprised of:

- Software
  - Business Functionality Software Traditional Licenses, embedded maintenance and SaaS for software including but not limited to enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM), data management and analytics, and digital and externally focused applications.
  - Development and Support Software Traditional Licenses, embedded maintenance and SaaS for software including but not limited to languages/compilers/databases, development/testing tools and IT management software
- Personnel
  - Personnel includes developers, quality assurance and testing, and management and administration.
- Outsourcing
  - Application Development Outsourcing: Any situation in which the full operational responsibility for IT services is completely handed over to an external service provider.
  - Application Support Outsourcing — Stand-alone maintenance agreements, application management services)

Software

- Compilers
- Test Databases
- Development Tools
- Test Tools
- SaaS

Personnel

- Developers
- Quality Assurance and Testing
- Management and Administration

Outsourcing

- Traditional and Cloud (Private and Public)

Application Development & Support

- Application Development and Support examines the efficiency of the IS programming groups that are creating or implementing new applications, adding new functionality to existing applications and providing programming support for these applications after they are installed and running in the production environment.
- Application Development
  - New code for a new application
  - Functional enhancements to current code that take more than two person-weeks
- Application Support
  - Support refers to the programming maintenance of currently operational computer applications.
  - Bug fixes of any size or duration
  - Maintenance of hard-coded data or tables (including field size changes) embedded within the programs (any size or duration)
  - Functional enhancements to current code that take less than two person-weeks
  - Any project that produces no new business functionality for the user.

Governance & Service Management

Governance & Service Management

- Governance & Service Management identifies service-optimized IT organizations which are growth enablers and a source of both operational and strategic differentiation. Here, the IT organizations constructively and proactively engage with the business to improve business operations to enrich enterprise performance.
- In order to drive business value, these IT organizations themselves run like a business, bringing out front-office capabilities. IT demonstrates financial discipline, transparency, and delivery of business value by managing an integrated view of technology cost and performance against defined business outcomes, which are formally captured in a strategic service portfolio. These IT organizations exhibit the following key characteristics of an implicit business-oriented consumer/provider relationship:
  - Understand customer's needs
  - Manage service and solution life cycle
  - Deliver solutions and services to customers
  - Governs internal IT operations and architecture to ensure strategic success

Software	Personnel	Outsourcing
▪ Architecture Tools ▪ IT Financial Management ▪ IT Service Management Tools ▪ Project Management and Planning Tools ▪ SaaS	▪ Planning and Governance ▪ Architecture and Solution Strategy ▪ IT Service and Delivery Management	▪ Traditional and Cloud (Private and Public)

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Governance & Service Management (1 of 3)

Governance and service management includes planning and governance, architecture and solution strategy, and IT service and delivery management.

- **Planning and Governance**
  - Executive Office & Administration: Office of the CIO, other cross-functional IT executives and their administrative support.
  - However, this excludes those IT managers that fit logically within the other Gartner service areas such as the CISO in IT Security, Data Center Managers, Network Managers, End-User Support Managers or Application Development and Support Managers.
  - Program Management: Orchestrates an active process of managing multiple workstreams or projects that need to meet business expectations according to a consistent methodology and standards, by focusing on tighter integration, proactive communication, control over resources and priorities.
  - Sourcing: Establishes practices and coordinates multiple suppliers of services (business services as well as IT services) and integrates them to provide a single business-facing IT organization. This function acts as the general contractor, and will assume strategic sourcing and vendor management responsibilities, including contract management, procurement policy and procedure administration, negotiation and performance management, including reporting.
  - Financial Management: Establishes the transparency of the relationship among cost, quality and business value so that it can be consistently measured and managed. This function is key to running IT like a business ensuring an understanding of IT delivery cost and competitiveness to external market offerings, competitive pricing of offerings, visibility to process and labor costs to price products and services, and communicates the value of IT.

Governance & Service Management (2 of 3)

Governance and service management includes planning and governance, architecture and solution strategy, and IT service and delivery management.

- **Architecture and Solution Strategy**
  - Enterprise Architecture & Design: This function develops an overall vision for technology capabilities and requirements that is consistent with business needs and constraints while advancing the agenda of innovation.
  - Business Analysis: A key function to the IT business value proposition of the IT organization because of their ability to translate business ideas to implementable requirements. To optimize the effectiveness of this group, it is important to align them into a centralized structure with established standards, processes, and tools that fosters cross-unit knowledge and ideas.
  - This function participates in strategic activities such as conducting research, assessing viable innovation opportunities, collecting necessary information for prioritization decisions, managing business expectations during execution, and measuring business benefit after deployment.
  - Research and Development: This team performs activities in connection with technology innovation that align with business needs. Working very closely with business teams, other members of the Architecture and Solution Strategy function, as well as the Program Management function, the R&D function is tasked to focus on applied research and development of working prototypes for targeted priorities.
  - R&D is not often intended to yield immediate profit, and generally carries greater risk and an uncertain return on investment but aligned to enterprise strategy.

Governance & Service Management (3 of 3)

Governance and service management includes planning and governance, architecture and solution strategy, and IT service and delivery management.

- **IT Service and Delivery Management**
  - Business Relationship Management: This is a senior team within the IT organization that has extensive business and industry experience. The business relationship managers are embedded in the business, typically aligned to specific business units or geographical regions and locations and expected to be the business optimization and innovation champions for their particular responsibilities, whether BU or location. They maintain a close, trusted relationship with the business to understand and provide input into strategy, plans and needs. They advise on innovation and technology enablement opportunities. In addition, they facilitate matching of business needs to product/service offerings and are catalysts in helping IT evolve its offerings. They work closely with the Planning & Governance office and the Architecture office on direction and planning. They engage the customers throughout the life cycle — from marketing of services/products, through demand and planning process, to delivery and support of product/service. In traditional business terms, they are analogous to an account executive function.
  - Product/Service Management: While Governance and Architecture functions set the overall direction, the execution of plans, products and services is part of the IT Service and Delivery Management function. This role must ensure that products and services are what the customers actually want and are willing to pay for. This group is responsible for determining the portfolio of products and services that IT will offer and at what price and quality levels to meet the needs of its market (for example, the enterprise). It owns the service portfolio, pricing (for chargebacks), establishes service-level agreements (SLAs), creates and manages the transactional catalog and generally conducts any benchmarking around IT organizational competitive-ness, efficiency and performance that might drive continuous improvement or outsourcing decisions.
  - Performance/Process Management: As a service broker and a business, IT needs to manage both its own performance and that of its suppliers in delivering needed services/products. This cross-organizational function is key to helping IT optimize change adoption, realize planned for benefits, and help the enterprise get the best possible return on its IT investment. Key responsibilities include improving visibility into service performance and more accurately measuring progress toward defined objectives and ensure compliance to SLAs through continuous assessment, evaluation, and refinement of core IT service processes.
  - Delivery Management: Delivery management in this context is the high level, executive function which operates cross-functionally to provide functional, technical and process leadership. This group is charged with leading the delivery effort to ensure solutions meet customer time frame, quality and outcome expectations. They collaborate with the Enterprise Architecture office to mitigate cross-platform technical and delivery risks before they become issues while preventing errors, omissions, defects and costly rework.

IT Security, IT SC/DR, IT Operations Management

IT Security

- IT Security is the discipline of designing, implementing and maturing security practices to protect critical business processes and IT assets across the enterprise. It covers:
  - Developing and maintaining effective program governance
  - Communicating and engaging successfully with all stakeholders
  - Defining a vision promoting desired security, risk management and business outcomes
  - Defining, communicating and enforcing security policies across the organization
  - Planning budgets and resourcing, including talent management and professional services
  - Assessing and improving program maturity and performance

Hardware

- Firewall/Unified Threat Management Devices
- IDS/IPS Devices
- Radius/Proxy Servers
- Encryption Concentrators
- Email/Web Security Gateways

Software

- Identity and Access Management
- Security Information and Event Management
- Antivirus/ Anti-spam/ Anti-malware
- URL/Content Filtering
- End-user Encryption
- Host IDS/IPS
- Firewall Software
- Vulnerability and Threat Detection
- Application Testing/ Scanning/Shielding
- SaaS

Personnel

- Infrastructure Security
- Application Security
- Vulnerability Management and Security Analytics
- Security Governance, Risk Management and Compliance Management
- Management and Administration

Outsourcing

- Traditional and Cloud (Private and Public)

IT Service Continuity & Disaster Recovery (IT SC/DR)

IT Service Continuity/Disaster Recovery is defined as:

- The use of alternative network circuits to re-establish communications channels if the primary channels are disconnected or malfunctioning.
- The methods and procedures for returning a data center to full operation after a catastrophic interruption (e.g., including recovery of lost data).
- Note: For assets to be considered as in-scope for IT Service Continuity/Disaster Recovery (IT SC/DR), they are required to be in an active/passive state whereby production failover occurs to idle standby systems/location.

Hardware
- IT Service Continuity/Disaster Recovery Assets: Mainframes, Servers, Storage, Facilities, Personal Computers and Telephones, Network Circuits and Equipment

Software
- IT Service Continuity/Disaster Recovery Testing and Reporting Tools
- SaaS

Personnel
- Engineering
- Management and Administration

Outsourcing
- Traditional and Cloud (Private and Public)

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IT Service Continuity & Disaster Recovery (IT SC/DR)

IT Service Continuity/Disaster Recovery includes:

- Engineering
  - Functions include producing recovery plans for data center, workplace and network services designed to ensure that, following any major incident or sudden, unplanned calamitous event causing or potentially causing disruption of the service, IT services are provided to an agreed level within an agreed schedule.
  - It should be recognized also that IT SC/DR is only one component of Business Continuity Planning (BCP). The objective is to assist the business and BCP to minimize the disruption of essential business processes during and following a major incident. The process includes such activities as business impact analysis, risk analysis and risk management exercises, maintaining disaster recovery documentation, conducting periodic tests and audits, and negotiating contingency site arrangements. However, only include costs/FTEs related to IT personnel.
  - While there are other functions around disaster recovery/business continuity such as developing manual processes, and ensuring business unit personnel are able to function, they are not within the scope of this definition.

IT Operations Management

- IT Operations Management provides on-site and/or remote IT Operations monitoring to gain insight into the historical, current and future availability and performance of IT systems, networks and applications, while also performing root cause analysis. Monitoring typically is performed in four categories: IT Infrastructure Monitoring (ITIM), Applications Performance Monitoring (APM), Artificial Intelligence for IT Operations (AIOps) and Network Performance Monitoring and Diagnostics (NPMD).

Software	Personnel	Outsourcing
▪ Data Center/Network Management ▪ Application Performance Monitoring Tools ▪ IT Infrastructure Monitoring Tools ▪ SaaS	▪ Service Monitoring ▪ Remote Monitoring ▪ Management and Administration	▪ Traditional and Cloud (Private and Public)

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IT Operations Management

Service Monitoring

- On-site operations monitoring and management including such tasks as system start/stops, monitoring system jobs, responding to console messages, detecting and recording of data center and network incidents and correction of production failures.
- Production control duties which maintain the integrity of the production environment, including turnover of applications from test into production after the systems have been developed and tested, ensuring that systems to be placed in the production environment meet certain standards, providing job procedural documentation such as scheduling requirements and rerun procedures, establishing and adjusting the batch job schedule, providing ongoing job monitoring and reviewing the service level of production jobs to improve quality and/or efficiency.
- Capacity management duties which ensure that adequate data center and network capacity is available at all times to meet the requirements of the business by balancing business demand with IT supply.

Remote Monitoring

- This is the same job description as Service Monitoring above but performed by staff in a remote location.

Gartner

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Mercer

welcome to brighter

Hydro Ottawa

Market Compensation Review

January 2025

A business of Marsh McLennan

Introduction

- As part of the Total Compensation Program Review, Hydro Ottawa has asked Mercer Canada ("Mercer") to conduct a market benchmarking review to assess the competitiveness of Hydro Ottawa's average salaries and target total cash compensation for its unionized and management group roles against relevant market comparators.

- This review has been conducted as a part of Hydro Ottawa's rate application process (every five years) which was last done in 2019.

- Mercer utilized the following data sources for the review:
  - 2024 Canadian Mercer benchmark databases
  - MEARIE data from 2022 (provided by Hydro Ottawa) for management positions
  - MEARIE unionized positions data from 2018, 2019, 2020, 2021, 2022, 2023 and 2024

- In addition, Mercer conducted a comprehensive review of the employer-paid portion of insurance and wellness benefits, as well as pension, paid to all positions within the organization. This information was used to calculate the cost of benefits as a percentage of payroll and compared to typical market norms.

Benchmarking Review

1

Methodology

Data Sources and Reference Market

- **Data Source:** Mercer Benchmarking Database (MBD) and MEARIE Survey Data ("MEARIE")
- **Reference Market:** Compensation peer groups should be representative of the company's market for talent (i.e., where the talent could be recruited from and/or lost to)
  - In determining the market for talent for Hydro Ottawa, Mercer gave consideration to the following:

Factors	Mercer's comment	Selection criteria retained for Hydro Ottawa
Geography	• Regions where Hydro Ottawa could source qualified talent when recruiting and where talent could potentially leave to join other organizations, as well as the location of company operations	• MBD – National (Canada) • MEARIE – Ontario
Industry	• A primary consideration in selecting appropriate peers; organizations operating in the same or similar industries likely have jobs that require similar skills and capabilities • Remain consistent with the 2019 compensation review	• All data excluding Mining and Retail • MEARIE - All Organizations **Note: Since the last review, Mercer has integrated OSPE survey data into MBD All Data survey*
Size	• Drives span of control, scope of accountability, and magnitude of decision-making, which directly correlate to pay levels	• All sizes

- Mercer Benchmark Databases are effective as of April 1, 2024.

Methodology

Data Confidentiality

- Mercer Benchmark Databases are effective as of April 1, 2024.
- MEARIE survey data has been aged to reflect the annual median salary increases since 2018 (as reported in Mercer's Compensation Planning Surveys)

YEAR	2018	2019	2020	2021	2022	2023	2024
Aging Factor	20.09%	16.82%	13.75%	10.87%	7.64%	3.5%	Point of Comparison

- Throughout this report, data is incumbent-weighted and reported in thousands of dollars
- Mercer generally considers compensation to be **competitive** if it **falls within +/-10%** of the market median (P50)

Hydro Ottawa Data

- The average salary for each position at Hydro Ottawa has been used to compare positions to the market median job rate (P50)

Definition of Statistics

- 25th Percentile (%ile) (P25): Twenty-five percent of observations are less than this amount
- 50th Percentile (%ile) or Median (P50): Fifty percent of observations are less than this amount
- 75th Percentile (%ile) (P75): Seventy-five percent of observations are less than this amount

Data Confidentiality

- To preserve confidentiality and ensure data reliability, Mercer requires a certain minimum number of data points to report the following statistics:

Statistics	Number of data points needed
Average ("Avg")	• 4 data points
50th percentile/median ("P50")	• 4 data points
25th/75th percentile ("P25"/"P75")	• 5 data points

- In cases where insufficient data is available, a "--" is shown

Executive Summary

- Twenty (20) jobs were reviewed including those core to the business, as well as technical, professional and para-professional roles that support the business. The jobs included in the study are representative of both management and non-management with seven (7) management jobs and thirteen (13) non-management jobs at different levels of each category reviewed.
- The jobs that are core to the operational business – Manager, Distribution Operations, Supervisor, Distribution Operations, Distribution Engineer and the trades jobs like System Operator were all found to be very well aligned with the utility market comparators as well as with the general industry market comparators, however, in the case of the Systems Designer, it is above market when compared to both general industry market comparators and utility market comparators.
- Some jobs, generally unionized support roles, were found to be higher than the general industry market comparators but in most cases were still at market (+/-10%) of P50 of the utility market comparators.
- Employer-paid benefits (i.e. insurance and wellness benefits and pension contributions) are generally aligned with what is typically seen in the market for non-executive employees. Specifically, when compared to the Ontario Public Sector where such benefits account for 20% to 25% of base salary, Hydro Ottawa’s benefits were found to be within 19% to 24% of base salary.

Detailed Findings

2

Benchmarking Results *(1/4)*

Incumbent(s) below market (< 10%) | Incumbent(s) within +/- 10% of the market | Incumbent(s) above market (> 10%)

- The table below present the positioning for Hydro Ottawa's roles on Base Salary and Target Total Cash (base salary + short-term incentives) basis:

All compensation data in $CAD 000s

					HOL	Base Salary						As % of P50	HOL	Target Total Cash Compensation						As % of P50
Job #	**HOL Position Title**	**Benchmark Title**	**Survey**	**Market Scope**	**Actual**	**Orgs #**	**Obs #**	**P25**	**P50**	**P75**	**Avg**	**Actual**	**Target TCC**	**Orgs #**	**Obs #**	**P25**	**P50**	**P75**	**Avg**	**Target TCC**
1	Manager, Distribution Operations	--	MBD	National	**$134**	--	--	--	--	--	--	**--**	**$147**	--	--	--	--	--	--	**--**
1	Manager, Distribution Operations	Manager Operations	MEARIE	Provincial (Ont)	**$134**	20	35	$131	$135	$151	$140	**99%**	**$147**	20	35	$131	$146	$166	$149	**101%**
2	Supervisor, Distribution Operations	--	MBD	National	**$123**	--	--	--	--	--	--	**--**	**$123**	--	--	--	--	--	--	**--**
2	Supervisor, Distribution Operations	Line Supervisor	MEARIE	Provincial (Ont)	**$123**	24	113	$115	$117	$124	$119	**105%**	**$123**	24	113	$116	$121	$134	$125	**102%**
3	Distribution Engineer	Electrical Engineering - Senior Professional (P3)	MBD	National ex Mining	**$113**	97	578	$106	$116	$127	$117	**98%**	**$113**	81	495	$109	$122	$132	$121	**93%**
3	Distribution Engineer	Project Engineer	MEARIE	Provincial (Ont)	**$113**	16	34	$104	$110	$122	$111	**103%**	**$113**	16	34	$105	$111	$132	$115	**102%**
4	System Operator	--	MBD	National	**$112**	--	--	--	--	--	--	**--**	**$112**	--	--	--	--	--	--	**--**
4	System Operator	System Control Operator	MEARIE	Provincial (Ont)	**$112**	12	12	$100	$104	$108	$106	**108%**	**$112**	--	--	--	--	--	--	**--**
5	Network Administrator	IT Data/Voice Network Administration - Senior Professional (P3)	MBD	National ex Mining	**$108**	86	689	$89	$100	$110	$101	**108%**	**$108**	78	632	$93	$103	$117	$105	**105%**
5	Network Administrator	Systems/Program Administrator or Applications/Systems Support Professional	MEARIE	Provincial (Ont)	**$108**	15	21	$94	$99	$110	$100	**109%**	**$108**	15	21	$98	$103	$116	$105	**105%**

Notes:

- **Generally, compensation benchmarking is well aligned to comparative market.**

Mercer

Benchmarking Results *(2/4)*

Incumbent(s) below market (< 10%) | Incumbent(s) within +/- 10% of the market | Incumbent(s) above market (> 10%)

- The table below present the positioning for Hydro Ottawa's roles on Base Salary and Target Total Cash (base salary + short-term incentives) basis:

All compensation data in $CAD 000s

					HOL	Base Salary						As % of P50	HOL	Target Total Cash Compensation						As % of P50
Job #	HOL Position Title	Benchmark Title	Survey	Market Scope	Actual	Orgs #	Obs #	P25	P50	P75	Avg	Actual	Target TCC	Orgs #	Obs #	P25	P50	P75	Avg	Target TCC
6	Powerline Technician	--	MBD	National ex Mining	$104	--	--	--	--	--	--	--	$104	--	--	--	--	--	--	--
6	Powerline Technician	Lineperson	MEARIE	Provincial (Ont)	$104	30	30	$97	$101	$104	$100	103%	$104	--	--	--	--	--	--	--
7	Management Accountant	Accounting - Senior Professional (P3)	MBD	National ex Mining	$95	433	2128	$89	$100	$115	$102	96%	$95	383	1914	$96	$109	$126	$109	87%
7	Management Accountant	Accountant	MEARIE	Provincial (Ont)	$95	3	3	$90	$107	$111	$103	89%	$95	--	--	--	--	--	--	--
8	System Designer	Electrical Engineering Technologist/Technician - Specialist Para-Professional (S4)	MBD	National ex Mining	$113	12	65	--	$85	--	$87	132%	$113	10	63	--	$86	--	$87	131%
8	System Designer	[(1)] Design Technician / Engineering Technician / Engineering Technologist	MEARIE	Provincial (Ont)	$113	27	27	$96	$101	$106	$101	112%	$113	--	--	--	--	--	--	--
9	Communications Officer	General Communications & Corporate Affairs - Experienced Professional (P2)	MBD	National ex Mining	$85	144	386	$75	$83	$92	$84	102%	$85	133	351	$78	$88	$97	$89	97%
9	Communications Officer	Communications Specialist	MEARIE	Provincial (Ont)	$85	14	18	$81	$87	$94	$88	98%	$85	14	18	$82	$89	$97	$91	95%
10	Supervisor, Billing	Billing & Invoicing - Team Leader (Para-Professionals) (M1)	MBD	National ex Mining	$92	32	54	$74	$84	$93	$83	110%	$92	23	36	$76	$91	$98	$91	102%
10	Supervisor, Billing	Supervisor Customer Service and/or Billing and/or Collections	MEARIE	Provincial (Ont)	$92	20	40	$92	$103	$116	$104	89%	$92	20	40	$96	$109	$124	$110	85%

Notes:

1. Blend of Design Technician / Engineering Technician / Engineering Technologist

Benchmarking Results *(3/4)*

Incumbent(s) below market (< 10%) | Incumbent(s) within +/- 10% of the market | Incumbent(s) above market (> 10%)

- The table below present the positioning for Hydro Ottawa's roles on Base Salary and Target Total Cash (base salary + short-term incentives) basis:

All compensation data in $CAD 000s

Job #	HOL Position Title	Benchmark Title	Survey	Market Scope	HOL	Base Salary						As % of P50	HOL	Target Total Cash Compensation						As % of P50
					Actual	Orgs #	Obs #	P25	P50	P75	Avg	Actual	Target TCC	Orgs #	Obs #	P25	P50	P75	Avg	Target TCC
11	Senior Procurement Agent	Procurement - Experienced Professional (P2)	MBD	National ex Mining	$92	332	1862	$70	$79	$89	$80	116%	$92	303	1721	$72	$82	$94	$84	112%
12	Warehouse Attendant	Warehouse Shipping & Receiving - Senior Para-Professional (S3)	MBD	National ex Mining	$89	128	1322	$54	$60	$67	$61	150%	$89	120	1305	$55	$60	$68	$62	148%
12	Warehouse Attendant	(2) Stockkeeper Material Handler Stockperson	MEARIE	Provincial (Ont)	$89	38	38	$51	$78	$59	$79	114%	$89	--	--	--	--	--	--	--
13	IT Service Desk Technician	General IT User Support - Entry Professional (P1)	MBD	National ex Mining	$85	124	796	$56	$61	$70	$64	139%	$85	113	692	$59	$65	$72	$67	131%
13	IT Service Desk Technician	--	MEARIE	Provincial (Ont)	$85	--	--	--	--	--	--	--	$85	--	--	--	--	--	--	--
14	GIS/CAD Technician	Geographic Information Systems (GIS) - Entry Professional (P1)	MBD	National ex Mining	$75	16	56	$62	$70	$78	$70	107%	$75	14	44	$61	$67	$78	$70	112%
14	GIS/CAD Technician	(3) Technical DraftsPerson Draftsperson	MEARIE	Provincial (Ont)	$75	4	4	--	--	--	--	--	$75	--	--	--	--	--	--	--
15	Customer Contact Agent	General Customer Service - Experienced Para-Professional (S2)	MBD	National ex Mining	$78	114	1785	$46	$51	$57	$51	152%	$78	105	1691	$46	$53	$58	$53	147%
15	Customer Contact Agent	(4) Customer Service Rep. / Customer Service Clerk	MEARIE	Provincial (Ont)	$78	29	29	$64	$70	$75	$70	111%	$78	--	--	--	--	--	--	--

Notes:

2. Blend of Stockkeeper/ Material Handler/ Stockperson
3. Blend of Technical DraftsPerson / Draftsperson
4. Blend of Customer Service Rep. / Customer Service Clerk

Benchmarking Results *(4/4)*

Incumbent(s) below market (< 10%)

Incumbent(s) within +/- 10% of the market

Incumbent(s) above market (> 10%)

- The table below present the positioning for Hydro Ottawa's roles on Base Salary and Target Total Cash (base salary + short-term incentives) basis:

All compensation data in $CAD 000s

					HOL	Base Salary						As % of P50	HOL	Target Total Cash Compensation						As % of P50
Job #	**HOL Position Title**	**Benchmark Title**	**Survey**	**Market Scope**	**Actual**	**Orgs #**	**Obs #**	**P25**	**P50**	**P75**	**Avg**	**Actual**	**Target TCC**	**Orgs #**	**Obs #**	**P25**	**P50**	**P75**	**Avg**	**Target TCC**
16	Billing Service Associate	Billing & Invoicing - Experienced Para-Professional (S2)	MBD	National ex Mining	**$75**	67	553	$53	$59	$65	$59	**129%**	**$75**	61	477	$54	$60	$66	$60	**125%**
16	Billing Service Associate	Billing Clerk/ Cust Accts Rep	MEARIE	Provincial (Ont)	**$75**	21	21	$68	$72	$77	$72	**105%**	**$75**	--	--	--	--	--	--	**--**
17	Collection Agent	Credit & Collections - Experienced Para-Professional (S2)	MBD	National ex Mining	**$75**	67	295	$51	$55	$62	$56	**138%**	**$75**	63	265	$52	$57	$64	$58	**133%**
17	Collection Agent	Collection Clerk	MEARIE	Provincial (Ont)	**$75**	14	14	$67	$73	$77	$72	**103%**	**$75**	--	--	--	--	--	--	**--**
18	Director, Distribution Operations	[5] Engineering Operations Management - Manager (M3) and Physical Asset Management - Manager (M3)	MBD	National ex Mining	**$157**	28	61	$134	$152	$174	$155	**103%**	**$189**	23	50.5	$155	$178	$209	$182	**106%**
18	Director, Distribution Operations	Director Operations	MEARIE	Provincial (Ont)	**$157**	11	15	$143	$154	$184	$164	**102%**	**$189**	11	15	$146	$183	$220	$187	**103%**
19	IT Systems Support	Enterprise Data Architecture - Experienced Professional (P2)	MBD	National ex Mining	**$94**	4	8	--	$100	--	$97	**95%**	**--**	4	8	--	$100	--	$98	**--**
19	IT Systems Support	[6] Computer Programmer IT/Analyst / System Analyst / Technical Support Analyst	MEARIE	Provincial (Ont)	**$94**	11	11	--	$102	--	$104	**93%**	**--**	--	--	--	--	--	--	**--**
20	Vehicle and Utility Equipment Technician	Heavy Equipment Mechanic - Experienced Para-Professional (S2)	MBD	National ex Mining	**$100**	29	436	$75	$89	$103	$91	**112%**	**$97**	26	412	$75	$89	$101	$90	**109%**
20	Vehicle and Utility Equipment Technician	Trans. / Work Equip Mechanic	MEARIE	Provincial (Ont)	**$100**	15	15	$92	$96	$103	$97	**103%**	**$97**	--	--	--	--	--	--	**--**

Notes:

5. Blend of Engineering Operations Management - Manager (M3) and Physical Asset Management - Manager (M3)

6. Blend of Computer Programmer IT/Analyst / System Analyst / Technical Support Analyst

Employer Paid Benefits

3

Benefits Costing

- Hydro Ottawa provided Mercer with the employer-paid portion of insurance and wellness benefits, as well as pension, paid to all positions within the organization. As seen below, the positions have been grouped by their level and as a result, benefit costs and base salaries have been averaged accordingly.

Benefit	Employee Group			
	Upper Management - Levels 5 and 6	Middle Management - Levels 3 and 4	Individual Contributors - Union Levels 5, 6, and 7	Individual Contributors - Union levels 2, 3, and 4
Average Insurance (Health, Dental, Vision, etc.)	$9,101	$8,504	$8,527	$8,177
Average Wellness Spending	$123	$108	$73	$49
Average Contribution to Pension Plan	$17,395	$11,280	$11,464	$8,067
Average Total Cost of Benefits	**$26,619**	**$19,891**	**$20,064**	**$16,292**
As a Percentage (%) of Median Base Salary	**19%**	**22%**	**23%**	**24%**

Normative Comparative Reference Point (as a % of base salary)

Ontario Public Sector:
- Non-executive employees ~ 20-25%

Observations:

Hydro Ottawa benefits offerings are generally aligned with what we typically see in the market.

Appendix

4

MBD Benchmark Matches

HOL Position Title	MBD Match Code	Match Title	Match Description
Distribution Engineer	ENS.03.015.P30	Electrical Engineering - Senior Professional (P3)	Electrical Engineering researches, develops, designs, and tests electrical components, equipment, systems, and networks. Designs electrical equipment, facilities, components, products, and systems for commercial, industrial, and domestic purposes. Level: A Senior Professional (P3) applies advanced knowledge of job area typically obtained through advanced education and work experience. Responsibilities typically include: • Managing projects / processes, working independently with limited supervision. • Coaching and reviewing the work of lower level professionals. • Problems faced are difficult and sometimes complex. Typical Title: Electrical Engineer
Network Administrator	ITC.08.031.P30	IT Data/Voice Network Administration - Senior Professional (P3)	IT Data/Voice Network Administration work focuses on planning the network implementation, determining physical and logical layouts, installing, configuring, and maintaining ICT data and voice networks including: •Meeting end user needs by ensuring the uptime, performance, resource availability, and security of the networks managed within established budgets and operational guidelines •Determining and diagramming the physical layout which illustrates the physical location of and the connections between devices participating on the network •Determining and diagramming the logical layout which documents the communication protocols (e.g., IP, TCP, POP3, etc.) and type of service/application (email, file transfer, web browsing, etc.) for each segment of the network •Automating routine tasks using scripting and writing basic computer programs to address more complex systems software configuration and enhancement Level: A Senior Professional (P3) applies advanced knowledge of job area typically obtained through advanced education and work experience. Responsibilities typically include: • Managing projects / processes, working independently with limited supervision. • Coaching and reviewing the work of lower level professionals. • Problems faced are difficult and sometimes complex. Typical Title: IT Network Administrator, Network Administrator

MBD Benchmark Matches

HOL Position Title	MBD Match Code	Match Title	Match Description
Management Accountant	FIN.06.001.P30	Accounting - Senior Professional (P3)	Accounting includes work across multiple areas of Accounting including: •Ensuring compliance with financial transaction recording standards (e.g., general ledger, cash payments/collections, tax transactions, etc.) •Control/reconciliation of accounts and records (balance sheet, P&L, bank accounts, etc.) •Accounting reports/schedules for internal audiences (management reporting) and/or for external audiences (compliance reporting) including consolidation of financial statements, cash flow reporting, budget reporting, etc.) In some organizations, Accounting work may also include: •Cost accounting/budgeting (allocation of direct/indirect costs, variance analysis, budget preparation, etc.) •Accounts Payable/Receivable and/or Credit & Collections Level: A Senior Professional (P3) applies advanced knowledge of job area typically obtained through advanced education and work experience. Responsibilities typically include: • Managing projects / processes, working independently with limited supervision. • Coaching and reviewing the work of lower level professionals. • Problems faced are difficult and sometimes complex. Specialization Match Note: Para-Professional incumbents are responsible for accounting transaction/data entry, data verification, and records maintenance. The following types of incumbents should be matched to the Accounting Specialization: •Incumbents with a primary focus on general transaction recording and control/reconciliation of accounts who work in organizations with separate specialists performing some or all of the budgeting, cost accounting, internal management and/or external financial reporting work. •Incumbents in positions that focus solely on the accounting aspects of tax, treasury, etc. (i.e., tax or treasury transaction recording and records maintenance). This type of highly specialized accounting work is typically found in a shared services or outsourcing environment. Typical Title: Accountant, General Accountant
System Designer	ENS.10.038.S40	Electrical Engineering Technologist/Technician - Specialist Para-Professional (S4)	Responsible for supporting the development, design, and testing of electrical components, equipment, systems, and network that includes facilities, components, products, and systems for commercial, industrial, and domestic purposes. Level: A Specialist Para-Professional (S4) requires advanced knowledge of operational procedures and tools obtained through extensive work experience and may require vocational or technical education. Responsibilities typically include: • Working under limited supervision for non-routine situations and may be responsible for leading daily operations. • Training, delegating and reviewing the work of lower level employees. • Problems are typically difficult and non-routine but not complex. Specialization Match Note: Technologists apply engineering principles in the implementation of products, systems, and processes. This differs from Engineers who use theoretical aspects of engineering principles to research and conceptually design products, systems, processes, etc. Some countries may require Technologists to have a formal certification or registration and/or a formal Technologist Degree to practice as a Technologist. Professional Technicians have a Technical Degree and some incumbents have a combination of both education/experience. Para-Professional Technicians are responsible for maintenance, repair, and troubleshooting, and may not have any certifications/education but experience. Typical Title: Electrical Engineering Technician

MBD Benchmark Matches

HOL Position Title	MBD Match Code	Match Title	Match Description
Communications Officer	CCA.02.001.P20	General Communications & Corporate Affairs - Experienced Professional (P2)	General Communications & Corporate Affairs includes work managed or performed across multiple Communications & Corporate Affairs sub-families. Specializations in this sub-family typically perform work related to both internal and external communications, including developing the content for and producing written and visual communications. The internal portion of the work is focused on company-wide communications to employees related to organization values/strategy/performance and employee programs, policies, and tools. The external communications portion of the work includes aspects of one or more of the following: •Public Relations •Government Relations •Community Relations/Corporate Responsibility •Investor Relations In some organizations, incumbents may also develop materials for marketing/advertising communications. Level: An Experienced Professional (P2) applies practical knowledge of job area typically obtained through advanced education and work experience. Responsibilities typically include: • Works independently with general supervision. • Problems faced are difficult but typically not complex. • May influence others within the job area through explanation of facts, policies and practices. Typical Title: Communications & Corporate Affairs Analyst, Communications & Corporate Affairs Officer, Corporate Communications Analyst, Corporate Communications Officer
Supervisor, Billing	FIN.09.005.M10	Billing & Invoicing - Team Leader (Para-Professionals) (M1)	Billing & Invoicing work is focused on designing and ensuring compliance with billing and invoicing processes including: •Information verification (e.g., ensure accuracy of billing information, negotiated terms and compliance with current legislation) •Monitoring customer accounts (e.g., ensure payments made on time, report on overdue accounts, etc.) •Resolving billing discrepancies (e.g., investigate and resolve billing & invoicing errors, recommend process improvements to avoid future errors, etc.) •May include collections activities Level: A Team Leader (M1) supervises para-professional employees. Responsibilities typically include: • Setting day-to-day operational objectives for team. • Problems faced may be difficult but typically are not complex. • Ensures policies, practices and procedures are understood and followed by direct reports, customers and stakeholders. Specialization Match Note: Para-Professional incumbents verify information (e.g., ensure accuracy of billing information, negotiated terms, etc.) and complete invoice data entry. Typical Title: Billing & Invoicing Manager, Billing & Invoicing Supervisor
Senior Procurement Agent	SCN.03.001.P20	Procurement - Experienced Professional (P2)	Accountable for obtaining goods/services required by the organization including: •Indirect Operations (e.g., Office Supplies, Computers, Travel, Maintenance, Machine Parts, etc.) •Direct Operations (e.g., Raw Materials and Services for Manufacturing, Production or Construction; Products for Retail, etc.) Procurement processes include: •Product/Service Sourcing •Supplier Selection •Pricing/Terms Negotiation •Order Processing •Contract Administration •Supplier Performance Management •May include Strategic Sourcing Level: An Experienced Professional (P2) applies practical knowledge of job area typically obtained through advanced education and work experience. Responsibilities typically include: • Works independently with general supervision. • Problems faced are difficult but typically not complex. • May influence others within the job area through explanation of facts, policies and practices. Specialization Match Note: Para-Professional incumbents administer the transactions associated with obtaining goods and services and do not negotiate pricing or terms. Typical Title: Procurement Officer, Procurement Buyer, Procurement & Purchasing Officer

MBD Benchmark Matches

HOL Position Title	MBD Match Code	Match Title	Match Description
Warehouse Attendant	SCN.05.029.S30	Warehouse Shipping & Receiving - Senior Para-Professional (S3)	Warehouse Shipping & Receiving includes: •Receiving/inspecting goods and verifying items against the shipment record •Gathering, verifying, and packing items for shipment according to specifications and the applicable transportation method •Recording received and shipped items Level: A Senior Para-Professional (S3) requires broad knowledge of operational procedures and tools obtained through extensive work experience and may require vocational or technical education. Responsibilities typically include: • Works under limited supervision for routine situations. • Provides assistance and training to lower level employees. • Problems typically are not routine and require analysis to understand. Typical Title: Warehouse Worker, Warehouseperson, Warehouse Technician, Warehouse Operator, Shipping/Receiving Clerk, Billing & Shipping Clerk, Shipping Coordinator
IT Service Desk Technician	ITC.10.001.P10	General IT User Support - Entry Professional (P1)	Responsible for providing day-to-day technical support to employees for a range of hardware and software related systems. Responds to and diagnoses problems through discussion with users, which includes trouble shooting, fault rectification and problem escalation. Provides effective and timely resolution of users' problems, queries or complaints. Assists in hardware and software evaluation and recommends upgrades or improvements to IT infrastructure. Level: An Entry Professional (P1) applies broad theoretical job knowledge typically obtained through advanced education. Responsibilities typically include: • Work is closely supervised. • Problems faced are not typically difficult or complex. • Explains facts, policies and practices related to job area. Typical Title: IT Support Analyst, IT Helpdesk Analyst, IT Service Desk Analyst
GIS/CAD Technician	ENS.08.001.P10	Geographic Information Systems (GIS) - Entry Professional (P1)	Designs, analyzes and develops geo-spatial solutions and product specifications for infrastructure, hydrographic and physiographic features for global geo-spatial images and vector products. Develops and maintains geospatial databases. Uses GIS to perform spatial analysis, database development, extraction and manipulation. Converts data received from internal and external sources to make them usable in the GIS. Maintains metadata and documentation, performs topology checks and other data quality checks to identify and correct errors or omissions in data. Level: An Entry Professional (P1) applies broad theoretical job knowledge typically obtained through advanced education. Responsibilities typically include: • Work is closely supervised. • Problems faced are not typically difficult or complex. • Explains facts, policies and practices related to job area. Typical Title: Geographic Information Systems Analyst, GIS Analyst, Geographic Information Systems Data Administrator, GIS Engineer

MBD Benchmark Matches

HOL Position Title	MBD Match Code	Match Title	Match Description
Customer Contact Agent	CSV.02.001.S20	General Customer Service - Experienced Para-Professional (S2)	General Customer Service includes post-sale technical and/or non-technical customer service and support across multiple sub-families for business and/or end-consumer customers including: Remote Customer Service: Providing customer service and support via phone, online chat, or text including: •Call center-based customer support in response to a high volume of low complexity inquiries •Customer issues analysis and resolution (typically performed in an office environment) in response to a lower volume of higher complexity inquiries Distribution Center Customer Service: Performed in a distribution center, product returns/repair center, or field walk-in customer service facility including: •Acting as liaison between customers, production and distribution departments related to specific customer orders •Providing technical and non-technical customer support in a walk-in service center Incumbents matching to this specialization are not compensated based on achievement of sales targets. Level: An Experienced Para-Professional (S2) requires basic knowledge of job procedures and tools obtained through work experience and may require vocational or technical education. Responsibilities typically include: •Works under moderate supervision. •Problems are typically of a routine nature, but may at times require interpretation or deviation from standard procedures. •Communicates information that requires some explanation or interpretation. Typical Title: Customer Service Assistant
Billing Service Associate	FIN.09.005.S20	Billing & Invoicing - Experienced Para-Professional (S2)	Billing & Invoicing work is focused on designing and ensuring compliance with billing and invoicing processes including: •Information verification (e.g., ensure accuracy of billing information, negotiated terms and compliance with current legislation) •Monitoring customer accounts (e.g., ensure payments made on time, report on overdue accounts, etc.) •Resolving billing discrepancies (e.g., investigate and resolve billing & invoicing errors, recommend process improvements to avoid future errors, etc.) •May include collections activities Level: An Experienced Para-Professional (S2) requires basic knowledge of job procedures and tools obtained through work experience and may require vocational or technical education. Responsibilities typically include: •Works under moderate supervision. •Problems are typically of a routine nature, but may at times require interpretation or deviation from standard procedures. •Communicates information that requires some explanation or interpretation. Specialization Match Note: Para-Professional incumbents verify information (e.g., ensure accuracy of billing information, negotiated terms, etc.) and complete invoice data entry. Typical Title: Billing & Invoicing Clerk, Billing & Invoicing Assistant
Collection Agent	FIN.10.001.S20	Credit & Collections - Experienced Para-Professional (S2)	Credit & Collections work is focused on administering, designing, and ensuring compliance with credit and collections processes including: Credit •Researching credit history (e.g., collect personal/business data for analysis, run credit reports, etc.) •Applying acceptable credit lines and payment terms to new customer and/or supplier accounts Collections •Collection and maintenance of customer accounts (e.g., track account status, report on outstanding balances, prioritize collection activity) •Follow up overdue accounts (e.g., initiate demand letters, outbound phone calls to delinquent accounts, external debt collection, etc.) Level: An Experienced Para-Professional (S2) requires basic knowledge of job procedures and tools obtained through work experience and may require vocational or technical education. Responsibilities typically include: •Works under moderate supervision. •Problems are typically of a routine nature, but may at times require interpretation or deviation from standard procedures. •Communicates information that requires some explanation or interpretation. Typical Title: Credit & Collections Clerk, Credit & Collections Assistant

MBD Benchmark Matches

HOL Position Title	MBD Match Code	Match Title	Match Description
IT Systems Support	ITC.03.002.P20	Enterprise Data Architecture - Experienced Professional (P2)	Enterprise Data Architecture work involves developing standards, tools, and governance for capturing, modeling, storing, and delivering data for the enterprise including: •Identifying data-related business requirements and service standards (e.g., transaction processing speed, data mining and reporting capabilities, data security, scalability, etc.) •Developing a high level enterprise data model and conceptual views of related data sub-architectures (e.g., database, data integration, data warehouse/business intelligence, reporting, metadata, and content management architectures) •Optimizing overall data/information flow by reducing redundancy and enabling accessibility within security boundaries Level: An Experienced Professional (P2) applies practical knowledge of job area typically obtained through advanced education and work experience. Responsibilities typically include: • Works independently with general supervision. • Problems faced are difficult but typically not complex. • May influence others within the job area through explanation of facts, policies and practices. Typical Title: Enterprise Data Architect
Vehicle and Utility Equipment Technician	PSK.06.040.S20	Heavy Equipment Mechanic - Experienced Para-Professional (S2)	Undertakes preventative maintenance inspections and repairs of heavy mobile equipment. Conducts safety inspections of maintenance tools and equipment. Diagnoses malfunctions using computerized and other testing equipment to determine extent of repair required. Adjusts equipment and repairs defective parts, components or systems, using hand and power tools. Completes service, maintenance, and repair documentation as required. Ensures all work is carried out according to environmental regulations and licenses. Level: An Experienced Para-Professional (S2) requires basic knowledge of job procedures and tools obtained through work experience and may require vocational or technical education. Responsibilities typically include: •Works under moderate supervision. •Problems are typically of a routine nature, but may at times require interpretation or deviation from standard procedures. •Communicates information that requires some explanation or interpretation. Typical Title: Heavy Duty Mechanic

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Important Notices

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Attachment 1-3-3(G) - OEB Benchmarking Spreadsheet Forecast Model

(Refer to the attachment in Excel format)

FACILITATING INNOVATION AND CONTINUOUS IMPROVEMENT

1. INTRODUCTION

Hydro Ottawa is committed to fostering a culture of innovation and continuous improvement across its operations. Over the course of successive rate cycles, the utility has cultivated a robust track record with respect to the following: applying innovative practices and solutions to serving customers and to planning and operating the distribution system; prioritizing productivity, savings, efficiencies and cost reductions in the execution of its programs and projects; and pursuing continuous improvement in all aspects of its business activity.

During the 2021-2025 rate term, Hydro Ottawa enhanced its operational efficiency and productivity in a host of different ways. The utility is likewise planning a similar suite of actions for the 2026-2030 period, with the aim of maintaining its high standard of performance excellence. This Schedule provides a comprehensive overview of these initiatives and the accompanying financial benefits (both in terms of operations, maintenance and administration (OM&A) as well as capital expenditures and the associated depreciation). Table 1 summarizes the quantifiable productivity benefits associated with these initiatives, which are outlined in greater detail in section 3 below.

Table 1 - Summary of Productivity Benefits of 2021-2025 and 2026-2020 Initiatives ($'000 000s)

	2021-2025	2026-2030
Capital Expense	$ 23.2	$ 35.1
Capital Depreciation	$ 1.1	$ 3.0
OM&A	$ 14.5	$ 27.2
Services to Third Parties	$ 0.9	$ 1.9

1.1. OEB REQUIREMENTS

The inclusion of this Schedule in the Application is responsive to several requirements and expectations that have been established by the OEB for all electricity distributors:

- Section 2.1.7 (Facilitating Innovation) of the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications* states the following:

  > *"Distributors are encouraged to include in their cost-based applications a description of the ways that their approach to innovation has shaped the application. This could include explanations of their approach to innovation or keeping up with innovation in their business more generally; of specific projects or technologies for enhancing the provision of distribution services in a way that benefits customers or facilitating their customer's ability to innovate in how they receive electricity services; and of enabling characteristics or constraints in their ability to undertake innovative solutions.*
  >
  > *Distributors should include an explanation of how innovative alternatives have been considered in place of traditional investments. Distributors should include information about the costs, expected benefits and associated risks of these innovative alternatives."*[1]

- In its description of the second core category of performance outcomes under the Renewed Regulatory Framework (RRF), Operational Effectiveness, the OEB articulates its vision that "continuous improvement in productivity and cost performance is achieved; and utilities deliver on system reliability and quality objectives."[2]

[1] OEB, *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications - 2025 Edition for 2026 Rate Applications* (December 9, 2024), page 14.
[2] OEB, *Report of the Board - Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach* (October 18, 2012), page 2.

- In its *Handbook for Utility Rate Applications*, the OEB reinforces the understanding that "a key objective of incentive regulation is to drive productivity improvements within the utilities."[3]
- The various rate-setting methods that are made available under the RRF apply a productivity factor to 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.

1.2. OTHER RELEVANT APPLICATION EVIDENCE

In order to form a holistic understanding of innovation, productivity and continuous improvement at Hydro Ottawa, this Schedule should be read in conjunction with the following other key pieces of evidence:

- Schedule 1-3-1 - Rate Setting Framework - this Schedule provides details on Hydro Ottawa's Custom Incentive Rate-setting (Custom IR) framework that is proposed for the 2026-2030 period. The productivity initiatives set forth within this Schedule have been incorporated into Hydro Ottawa's capital expenditure forecast and productivity factor applied to OM&A costs.
- Schedule 1-3-2 - Proposed Annual Reporting – 2026-2030 - this Schedule provides details on the framework for performance measurement and reporting that Hydro Ottawa is proposing for its next Custom IR rate term. A critical component of this framework is a Custom Performance Scorecard consisting of 22 measures which will track the utility's performance across key RRF outcome categories.
- Schedule 1-3-3 - Benchmarking - this Schedule includes internal and external benchmarking analyses that assess specific measures and programs against industry standards, peer

[3] OEB, *Handbook for Utility Rate Applications* (October 13, 2016), page 27.

comparator groups and Hydro Ottawa's own historical performance, and serves to evaluate the utility's continuous improvement efforts over time.

- Schedule 2-5-3 - Performance Measurement for Continuous Improvement – this segment of Hydro Ottawa's Distribution System Plan (DSP) outlines a specific approach to tracking continuous improvement and driving performance outcomes in relation to the execution of the utility's capital investment program. Section 6 of the Schedule identifies key performance indicators (KPIs) that will be applied to evaluate performance at the Material Investment Plan (MIP) level and ensure alignment with RRF outcome categories.

1.3. REPORTING OBLIGATION IN 2021-2025 RATE PLAN

This Schedule ensures responsiveness to a specific directive previously issued to Hydro Ottawa by the OEB. In the Settlement Agreement governing the utility's 2021-2025 distribution rate plan, provision was made for a Capital Stretch Factor that would apply to the capital-related revenue requirement. In its decision approving the Settlement Agreement, the OEB directed that "Hydro Ottawa's efforts and achievements with respect to productivity improvements in its capital programs and projects, undertaken during the 2021-2025 term, should be reported as part of Hydro Ottawa's next rebasing application."[4] By way of this Schedule, the utility is fulfilling this particular reporting obligation.

1.4. OTHER CONTEXT

Finally, with respect to productivity and continuous improvement initiatives from the 2021-2025 period, it should be noted that these were achieved notwithstanding an unprecedented series of unforeseen challenges which rigorously tested the utility's resilience. These challenges included the COVID-19 pandemic and its associated supply chain disruptions; inflationary pressures; a historic storm (the May 2022 Derecho) that caused extensive damage to the electricity grid; 11 other major weather events requiring emergency response; and an 84-day labour strike in 2023

[4] Hydro Ottawa Limited, *2021-2025 Custom Incentive Rate-Setting Approved Settlement Agreement*, EB-2019-0261 (September 18, 2020).

(which was preceded by a near strike in 2021). Despite these disruptions, Hydro Ottawa was still able to advance innovative projects and solutions, and achieve efficiencies and cost reductions in its program and service delivery.

1.5. SCHEDULE ORGANIZATION

The remainder of this Schedule is organized as follows:

- **Section 2** – describes Hydro Ottawa's overall approach to innovation, productivity and continuous improvement.
- **Section 3** – provides details on Hydro Ottawa's productivity initiatives for which the financial benefits are quantifiable (including those that are relevant to its capital-related reporting requirement for the 2021-2025 rate term).
- **Section 4** – describes other continuous improvement and innovation initiatives undertaken by Hydro Ottawa, for which the benefits are not quantifiable or easily quantified.

2. APPROACH TO INNOVATION, PRODUCTIVITY & CONTINUOUS IMPROVEMENT

2.1. KEY PARAMETERS AND PRACTICES

Hydro Ottawa's ongoing efforts to enhance productivity, achieve continuous improvement and leverage innovation are carried out within a broader set of parameters and practices, as described below.

2.1.1. Guidelines for Five-Year Budgets and Priorities

Over the course of successive rate-setting cycles, Hydro Ottawa has maintained the practice of circulating a set of formal guidelines from the Chief Financial Officer which govern the preparation of five-year budgets for the subsequent distribution rate period. Included within the guidance is a provision pertaining to productivity, continuous improvement and cost control. The applicable provision within the version of this memorandum prepared for the 2026-2030 rate period reads as follows:

> *"Productivity, continuous improvement and cost effectiveness remain a key corporate priority across each area: capital, technology, compensation and other OM&A. Each program area should consider a focus on cost effective delivery of outcomes that matter to customers, with appropriate pacing and prioritization to control costs and manage risks."*[5]

The inclusion of this provision provides assurance that productivity, cost control and continuous improvement objectives have been firmly integrated into Hydro Ottawa's business planning process, and the resultant capital and operational plans, for the upcoming rate term.

In addition, the utility prepares an annual business plan and budget, which identifies priorities and allocates resources for capital and OM&A in a given year within the five-year rate period, consistent with OEB-Approved spending levels. The annual budget, which is subject to approval from the utility's Board of Directors, includes a dedicated section highlighting innovation, productivity and cost control initiatives.

2.1.2. Custom IR Rate-Setting

As noted above, a central premise and requirement in rate-setting under the RRF is the application of a productivity or stretch factor, which is intended to ensure the achievement of incremental productivity gains by the utility. Hydro Ottawa has embedded a stretch directly into its five year capital spending and OM&A base year spending, in addition to including a stretch factor into its custom annual adjustment for operational spending. Additionally, to further manage capital-related risks associated with inflation, Hydro Ottawa plans to maintain its capital forecast throughout the term without annual adjustments for experienced inflation over the term. These mechanisms will help contain costs and ensure that efficiency improvements translate

[5] Please see Attachment 1-2-3(A) - Corporate Memorandum - 2024-2030 Priorities and Budget Guidelines for more information.

into tangible benefits for customers. For more details, please see Schedule 1-3-1 - Rate Setting Framework.

2.1.3. Performance Measurement and Reporting

As noted above, Hydro Ottawa is proposing a customized performance measurement and reporting framework for the upcoming rate term, comprising two components: (1) a Custom Performance Scorecard, consisting of 22 measures which will track the utility's performance across key RRF outcome categories; and (2) updates on capital spending in key programs. Alongside these elements, Hydro Ottawa will continue to administer an internal mechanism that ensures accountability in the monitoring and reporting of corporate productivity against a defined set of targets and metrics. This will involve the sustained use of a customized corporate productivity scorecard, wherein the utility establishes relevant KPIs that are monitored for the purpose of measuring continuous improvement in areas of focused interest. A copy of the productivity scorecard is included as Attachment 1-3-4(A).

2.1.4. Digital Strategy

Mirroring an approach taken for the current rate term, Hydro Ottawa has formulated a specific strategy for leveraging information and operational technology in support of core business objectives over the coming five-year rate period. One of the principal themes anchoring the strategy is increasing productivity and operational effectiveness through digitization, automation and integration. This serves as a continuation of the business process optimization that the utility has undertaken in recent years, with manual processes and legacy platforms being replaced by more advanced digital solutions. For more information, and to view a copy of the Digital Strategy, please see Attachment 1-3-4(B).

2.2. INNOVATIVE ALTERNATIVES TO TRADITIONAL DISTRIBUTION INVESTMENTS

As noted above, the Chapter 2 Filing Requirements oblige distributors to explain how innovative alternatives have been considered in the place of traditional investments in distribution infrastructure and equipment.

Hydro Ottawa is a strong proponent of innovative alternatives to traditional infrastructure investments and as part of the five-year DSP for the upcoming rate period includes an expanded non-wires solutions (NWSs) program. These NWSs will help cost-effectively mitigate immediate capacity constraints, provide flexibility during peak demand periods and benefit customers interested in adopting DERs. Foremost among these NWSs are the following:

- **Non-Wires Customer Solutions Programs** – Hydro Ottawa will collaborate with the Independent Electricity System Operator (IESO) to develop and implement a portfolio of programs in targeted areas where there is overlap between local distribution system and bulk system needs, building on province-wide incentive offers available within IESO's Electricity Demand-Side Management (eDSM) Framework, where applicable.
- **Battery Energy Storage Systems (BESS)** – the utility will deploy four separate systems in regions which are expected to exceed their ratings by the early 2030s as a result of electrification, thereby improving reliability during contingency conditions.
- **Ottawa DER Accelerator (ODERA) Project** – this project will utilize predictive analytics and advanced integration of customer-owned distributed energy resources (DERs)/assets to forecast grid loading and assess available load curtailment potential. This information will enable granular scheduling and deployment of load curtailment to mitigate predicted equipment overload and optimize grid capacity.
- **EV Everywhere** – this pilot project, which is being funded in part through the IESO's Grid Innovation Fund, forecasts the impacts of electric vehicle (EV) charging on the distribution system at the transformer level, and uses artificial intelligence (AI) solutions to optimize EV charging during periods of peak demand. The project pairs predictive analytics with local

demand response programming for EVs, as well as battery storage, with the aim of testing how the technology can help address localized system needs as EV adoption increases.

Additional information on these and other NWS-related initiatives are available in Section 9 of Schedule 2-5-4 - Asset Management Process.

3. QUANTIFIABLE PRODUCTIVITY RESULTS

This section outlines the quantifiable productivity results spanning the achieved and expected results for Hydro Ottawa's current rate term (2021-2025) as well as planned productivity efforts for the upcoming rate period (2026-2030). The corresponding initiatives which yielded these results are organized into three categories: (1) Labour and Supply Chain Optimization; (2) Innovation and Digital Transformation; and (3) Infrastructure and Equipment Efficiencies.

For each category, a table is included which summarizes the financial benefits associated with the various initiatives. Hydro Ottawa notes the following, with respect to interpreting the data presented in these tables (i.e. Tables 2, 4 and 6):

- **"Total" rows :** these rows represent the sum of financial benefits associated with the capital expense, capital depreciation, OM&A and third-party service costs of corresponding productivity initiatives.

  Capital Expenses are an important dataset, as their inclusion alongside Capital Depreciation serves to fulfill the reporting obligation referenced in Section 1.3 above – i.e. the OEB directive for Hydro Ottawa to report on its efforts and achievements during the 2021-2025 rate term with respect to productivity improvements in its capital programs and projects.

3.1. LABOUR AND SUPPLY CHAIN OPTIMIZATION

This category encompasses initiatives that streamline operations, enhance efficiency, reduce manual interventions, reduce waste and automate administrative processes to minimize overhead costs. Additionally, this area includes strategic sourcing, standardization of materials, and process refinements that optimize material usage, leading to cost savings.

Table 2 below provides an overview of the financial benefits associated with 2021-2025 and 2026-2030 initiatives, respectively, within this category.

Table 2 - Labour and Supply Chain Optimization Initiatives (Quantifiable)[6] ($'000s)

Initiative	Description			Productivity Benefits	
				2021-2025	2026-2030
3.1.1 Distribution Capital Program Delivery Optimization	Implemented operational changes, including team realignment, dedicated construction technicians, and seasonal shift adjustments, to enhance collaboration, efficiency, and productivity	*Regular Time*	*Capital Expense*	*$ 12,936*	*$ 20,337*
			Capital Depreciation	$ 431	$ 678
		Overtime	*Capital Expense*	*$ 3,982*	*$ 4,146*
			Capital Depreciation	$ 133	$ 138
3.1.2 Fleet Pooling	Fleet pooling pilot program, allowing for more effective and extensive sharing of corporate vehicles by field crews, supervisors and administrative employees		*Capital Expense*	*n/a*	*$ 3,901*
			Capital Depreciation	n/a	$ 1,155
			OM&A	n/a	$ 870
3.1.3 Cable Locates Efficiency	Implemented automated clearing processes and Alternate Locate Agreements to reduce field visits		OM&A	$ 2,425	$ 3,694
3.1.4 Service Layout Process Improvements	Used Salesforce analytics and targeted training to improve service layout efficiency and reduce backlogs		*Capital Expense*	*$ 472*	*$ 1,534*
			Capital Depreciation	$ 16	$ 51
			Services to Third Parties	$ 315	$ 1,023
3.1.5 Major Projects Consulting Procurement	Consolidated civil and electrical engineering services under a single consultant to streamline project coordination and reduce costs		*Capital Expense*	*$ 770*	*$ 1,500*
			Capital Depreciation	$ 61	$ 295
3.1.6 Vendor and Supplier Engagement	Fostered strong relationships with vendors and suppliers, resulting in favourable pricing for critical equipment relative to industry averages		*Capital Expense*	*$ 2,618*	*n/a*
			Capital Depreciation	$ 436	$ 436
Total Capital Expense				**$ 20,778**	**$ 31,418**
Total Capital Depreciation				**$ 1,077**	**$ 2,754**
Total OM&A				**$ 2,425**	**$ 4,564**
Total Services to Third Parties				**$ 315**	**$ 1,023**

[6] Totals may not sum due to rounding

3.1.1. Distribution Capital Program Delivery Optimization[7]

In the current rate term, Hydro Ottawa took a number of actions to enhance efficiency and optimize the delivery of its distribution capital programs. There was a concentrated focus on overhead (OH) distribution programs, with benefits accruing to other programs following more widespread implementation of targeted reforms.

These actions in part help support the utility's response to the aforementioned OEB directive in Section 1.3, which required Hydro Ottawa to achieve productivity improvements in its capital programs and projects. Consistent with that directive, the utility is reporting on the results of its efforts in this specific section of the Schedule.

3.1.1.1. Strategic Operational and Project Management Enhancements

Beginning in 2021, Hydro Ottawa launched a series of ongoing strategic initiatives focused on improving operational efficiency and project delivery. These efforts have involved targeted restructuring, role refinement, and process improvement, all designed to enhance the utility's overall performance. These initiatives include the following:

- **Operational Restructuring:** In 2022, a significant operational restructuring was executed within the Distribution Construction and Maintenance groups. This involved the strategic realignment of resources based on distinct lines of business: construction and reliability. The objective was to foster enhanced focus, oversight, and ownership across execution streams, thereby promoting consistency in operational processes. Concurrently, physical relocations were implemented to co-locate resources within unified facilities in both the east and west service territory regions. This centralization facilitated improved collaboration, expedited problem resolution, and strengthened intra-team communication, mitigating the potential for

[7] This encompasses all capital programs within the System Access, System Service and System Renewal categories, with the exception of stations-related programs. In addition, as per the Description for item 3.1.1 in Table 2 above, the explanation in this subsection applies to both Regular Time and Overtime.

misinterpretation inherent in fragmented communication channels. Furthermore, the consolidation of construction teams optimized resource utilization and reduced travel times.

- **Construction Technician:** In 2021, Hydro Ottawa moved away from utilizing non-dedicated individuals for construction oversight and introduced the dedicated Construction Technician role. This role is a specialized position designed to provide consistent planning, coordination, and site leadership support for heavy construction crews. This role has demonstrably increased supervisory capacity for performance management, staff development, and project oversight. Consequently, field personnel have been able to dedicate more time to on-site activities, leading to quantifiable improvements in outcome metrics, such as cost per pole, and a reduction in responsibility pay expenditures. The establishment of this role has also yielded qualitative benefits, including enhanced communication and stakeholder relationships. This position was subsequently made permanent in early 2023, with a current complement of eight full-time personnel. These positions are funded through redistributing vacancies from support functions as detailed in Attachment 4-1-3(B) - Workforce Planning Strategy.
- **Seasonal Construction Shifts:** Hydro Ottawa has also begun employing seasonal construction shift adjustments to leverage extended daylight hours during peak periods, thereby maximizing crew productivity. These adjustments are implemented on a project-specific basis, with considerations for site conditions and municipal regulations.
- **Project Delivery Model:** A pivotal initiative, Project X, was launched to refine Hydro Ottawa's project delivery model for distribution design projects. Project X aims to establish standardized project management practices, enhance reporting mechanisms, and facilitate data-driven decision-making. The project encompasses a comprehensive review of existing processes, the development of a revised project delivery model, and the implementation of a robust change management strategy. Key activities include defining strategic objectives, establishing stage gates, standardizing project artifacts, reviewing infrastructure, developing reporting mechanisms, and creating training and change management plans.

Implementation of improvements began in 2023 and continues through 2025. Long-term anticipated impacts of Project X include improved project management expertise, enhanced project delivery efficiency, increased organizational effectiveness, and enhanced productivity. Through standardized processes and improved reporting, Hydro Ottawa aims to optimize resource allocation and ensure alignment with strategic objectives. The project is being implemented in a phased approach, with ongoing evaluation and refinement based on pilot project outcomes and feedback.

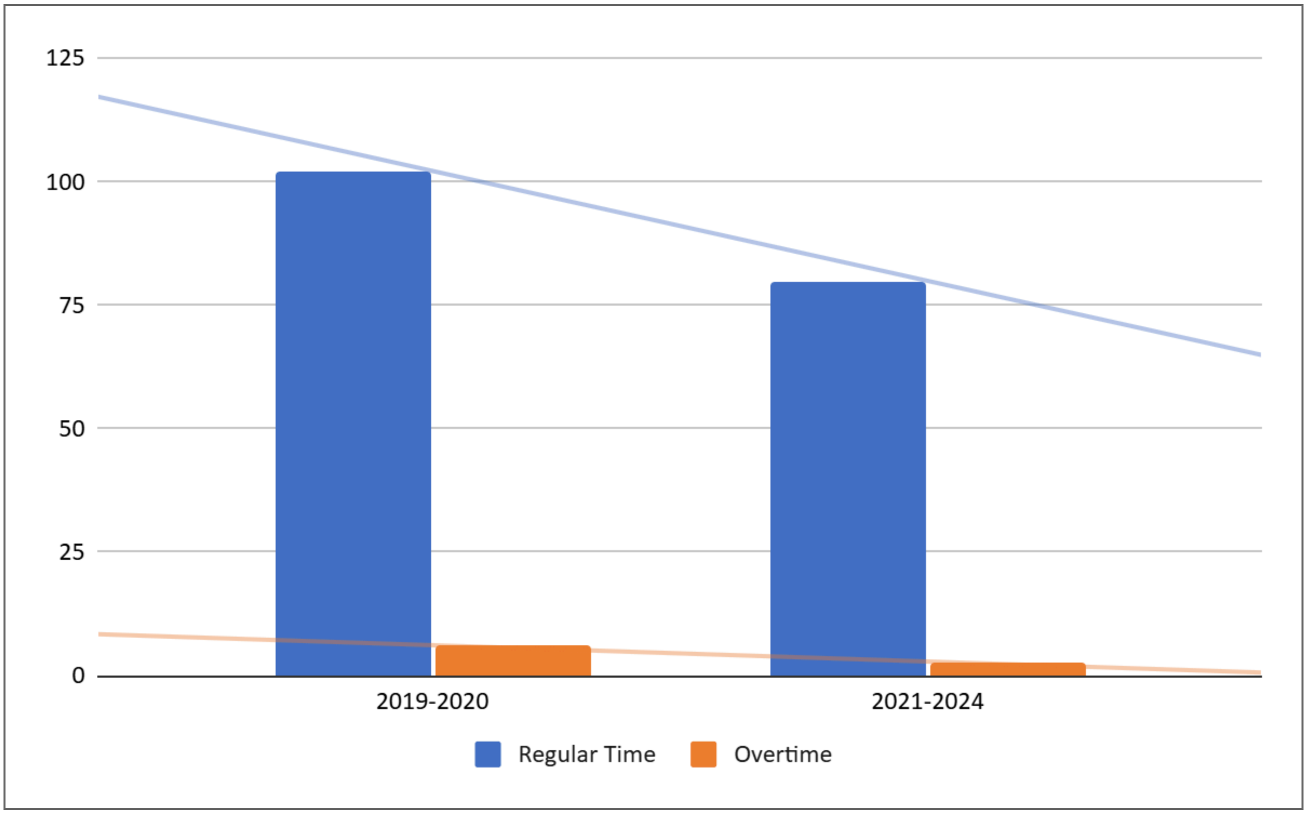
3.1.1.2. Cost Reductions and Avoided Costs

Through the foregoing organizational and operational enhancements, Hydro Ottawa was able to achieve a significant reduction in average annual labour hours during the current rate term.

The planned pole renewal program serves as an effective example of the labour efficiencies achieved by the utility. This program is one of the few capital programs that Hydro Ottawa executes which is conducive to a comparative analysis from a labour efficiency perspective, on account of the repetitive and predictable nature of pole installations. Project complexity, influenced by location, number of circuits and devices installed, can generally be normalized utilizing a complexity factor.

Insights yielded through an in-depth analysis reveal how Hydro Ottawa has reduced its capital costs in pole renewal through labour efficiencies. The results of the analysis presented in Figure 1 below demonstrate a 23.6% decrease in the average annual labour hours per pole between 2019-2020 and 2021-2024.

Figure 1 - Average Annual Labour Hours per Pole Installation



Hydro Ottawa wishes to emphasize the following, to help ensure proper interpretation of the data presented in Figure 1:

- Labour hours have been separated into regular hours (blue) and overtime hours (orange).
- The downward sloping trend line (blue) for regular hours signifies the aforementioned 23.6% decrease in average annual labour hours per pole installation.
- Labour hours encompass the full lifecycle of a pole renewal project (e.g. planning, engineering, sourcing materials, construction, etc.)
- Significant year-over-year swings may be influenced by one or more factors:

- ○ Project completion dates determine when the full costs of an individual pole replacement project are recognized and capitalized. This will impact the accounting for projects which straddle two different calendar years.
- ○ There are varying levels of complexity for pole renewal projects. More complex projects may require more labour hours to complete.
- ○ Disruptions or challenges in the external operating environment (e.g. COVID-19 pandemic, 2023 labour strike) may impact timelines for certain projects.

Hydro Ottawa has selected the planned pole renewal program as a suitable proxy for quantifying productivity gains across its diverse capital programs. Accurately measuring percentage improvements for each project is complex due to variations in scope and complexity. The pole renewal program, however, offers a repetitive and predictable workflow, providing a robust dataset for analysis. Therefore, improvements realized in this program serve as a representative model, reflecting the utility's commitment to enhancing efficiency and optimizing resource allocation across all capital programs.[8]

In addition, these efficiency gains directly translate into cost savings for our System Access program customers. Specifically, efficiency gains resulted in $4.7 million in labour cost reductions that did not materialize as customer contributions during the 2021-2025 period, and are projected to avoid an additional $5.5 million in customer contributions for 2026-2030.

A summary of the capital cost reductions related to capital efficiency improvements, using planned pole renewal as a proxy, is provided in Figure 2 and Table 3 below, both in terms of efficiencies realized during the 2021-2025 period and the 2026-2030 Test Years as a result of sustained efficiency improvements.

[8] With the exception of station-related programs, as noted in footnote 6 above.

Figure 2 - Distribution Capital Program Labour Efficiency 2021-2030

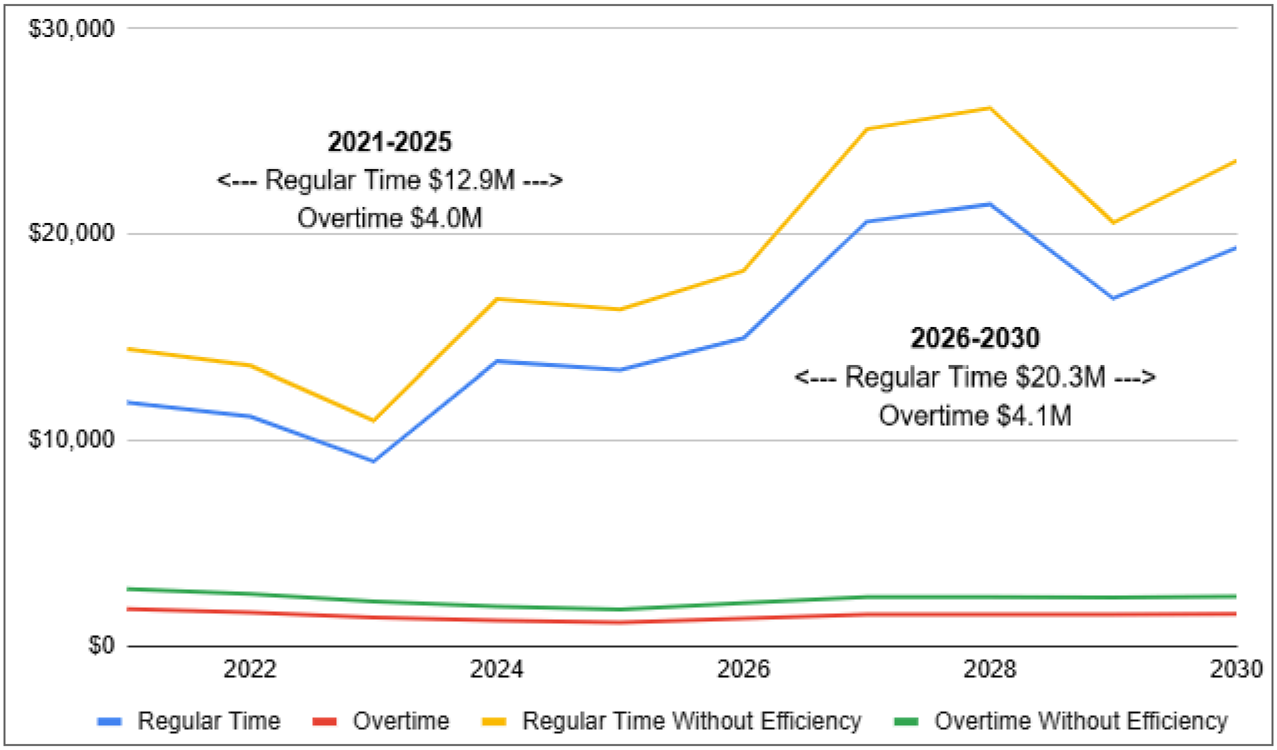


Table 3 - Distribution Capital Program Labour Efficiency 2021-2030 ($'000s)

	2021-2025 Actual	2021-2025 Without Efficiency	Variance	2026-2030 Test Years	2026-2030 Without Efficiency	Variance
Internal Labour Savings						
Regular Time	$ 59,393	$ 72,329	$ 12,936	$ 93,374	$ 113,711	$ 20,337
Overtime	$ 7,442	$ 11,425	$ 3,982	$ 7,748	$ 11,894	$ 4,146
TOTAL	**$ 66,836**	**$ 83,754**	**$ 16,918**	**$ 101,122**	**$ 125,605**	**$ 24,483**
Depreciation						
Regular Time			$ 431			$ 678
Overtime			$ 133			$ 138
TOTAL	**-**	**-**	**$ 564**	**-**	**-**	**$ 816**

3.1.2. Fleet Pooling

To enhance efficiency and optimize vehicle utilization, Hydro Ottawa will pilot an expanded vehicle pooling program during the 2026-2030 rate period. While some field crews and administrative staff already utilize shared vehicles, the possibility of implementing an expanded vehicle pooling program has been under evaluation since the move to the utility's new administrative and operational facilities in 2019. However, several factors prevented its earlier implementation. The onset of the COVID-19 pandemic in 2020 understandably led to concerns about shared vehicle use, impacting the feasibility of such a program. Furthermore, the current fleet management software lacked the necessary tools for efficient booking, scheduling, and overall management of a shared vehicle pool. These limitations made it difficult to effectively coordinate vehicle availability and usage.

Hydro Ottawa is scheduled to upgrade its fleet management software in 2025, which will introduce enhanced functionality to address these logistical challenges. The expanded pooling program, particularly in the light-duty category, represents an ambitious target and will necessitate significant change management, including adjustments to work processes, scheduling, and tool storage.

The fleet pooling program will impact both capital and operating expenses. By maximizing vehicle sharing, Hydro Ottawa is minimizing fleet growth, resulting in fuel, maintenance, and capital expense savings. Notably, this strategy is avoiding the purchase of 17 new light-duty vehicles in 2026 and four new heavy-duty vehicles in 2028. The financial impact of this avoidance is shown in Table 2 above. These values take into consideration the offset of the annual subscription expenses for the software's pooling module. Please see Section 11 of Schedule 2-5-9 - General Plant Investments for more details.

3.1.3. Cable Locates Efficiency

In 2022, the Ontario government enacted Bill 93, the *Getting Ontario Connected Act*, which aimed to speed up construction projects by requiring faster location of underground infrastructure. The legislation necessitates a five-day turnaround for locates and imposes penalties for non-compliance, forcing utilities to invest heavily in staffing and resources. The result of this bill has been increased costs for Hydro Ottawa, largely as a result of increased labour costs to complete work within the mandated timeline. The Underground Cable Locates Program is discussed in greater detail in Schedule 4-1-2 - Operations, Maintenance and Administration Program Costs.

To proactively address the escalating volume and cost of locate requests, Hydro Ottawa has implemented the following strategies:

- **Clearing House Implementation:** Hydro Ottawa onboarded a clearing house in 2022 to analyze locate requests and automatically clear those without electrical infrastructure, eliminating unnecessary field visits. This approach has increased Hydro Ottawa's remote clear rate from 10% to 24%.

- **Expansion of Alternate Locate Agreements (ALAs):** ALAs allow approved excavators to proceed without a traditional field locate under specific conditions, such as digging without mechanical methods. ALAs were implemented prior to the enactment of Bill 93 and have proven to be an effective tool for helping to manage locate requests and control program costs. Hydro Ottawa expects to receive a sustained level of ALA-eligible locate requests during the 2026-2030 period.

Table 2 above identifies the productivity benefits associated with these efforts.

3.1.4. Service Layout Process Improvements

The Engineering and Design program has optimized the Electrical Service Request process, which handles requests from contractors and customers for residential upgrades, non-commercial EV connections, and land rights inquiries. These improvements were aimed at enhancing efficiency, reducing backlogs, and improving the customer experience.

In particular, the program focused on enhanced training for customer-facing employees and superior tools for data-driven decision making. Cross-training Service Layout Agents to operate city-wide, rather than within assigned zones, has enabled Hydro Ottawa to expeditiously address fluctuations or spikes in the number of service requests received. By strengthening its ability to strategically reallocate staff to busier areas, the utility has significantly improved its response time and ensured consistent service delivery. This flexible approach, enabled by Salesforce tracking, has minimized backlogs and optimized resource utilization, including during periods of high demand or employee transitions.

These process enhancements, implemented in 2024, have yielded a 19% reduction in service request completion time, categorized by layout type. This quantifiable improvement in labour efficiency has enabled precise calculation of overtime hour reductions necessary to fulfill annual request volumes. As shown in Table 2 above, productivity benefits are expected during the 2021-2025 and 2026-2030 periods, respectively, on account of decreases in overtime costs.

3.1.5 Major Projects Consulting Procurement

Hydro Ottawa improved efficiency and reduced costs by consolidating civil and electrical engineering services under a single consulting firm for substation projects. Previously, separate firms handled each discipline, leading to coordination challenges. In the 2021-2025 rate application period, for the Piperville Municipal Transformer Station (MTS) and Brian Coburn MTS projects, one firm was engaged for both scopes of work, streamlining project management and reducing administrative overhead.

Additionally, Hydro Ottawa standardized and reused design components across projects, minimizing re-engineering efforts. These initiatives led to a reduction in engineering consulting. The projected benefits of these efforts are visible in Table 2 above.

3.1.6. Vendor and Supplier Engagement

As part of our commitment to responsible business practices and its efforts to manage an extensive inventory of assets that are essential to maintaining and operating the grid, Hydro Ottawa has fostered strong relationships over the years with vendors and suppliers. These partnerships continue to yield significant benefits, especially in relation to ensuring the availability of necessary inventory and services and securing pricing on favourable terms.

Comparing Hydro Ottawa’s cost increases from 2021-2024 with the average inflationary increases for specific classes of essential equipment such as wood poles, electric cable, switchgear and transformers (as outlined in Schedule 1-2-5 - Impacts of Inflationary Pressures) reveals that, in the aggregate, Hydro Ottawa’s increases have typically been lower. These cost reductions relative to market inflationary increases for this period are outlined in Table 2 above.

However, due to the volatile nature of market pricing for these materials, forward-looking projections of this nature for the 2026-2030 rate term are not feasible.

3.2. INNOVATION AND DIGITAL TRANSFORMATION

Falling under the scope of this category are initiatives which involve the deployment of technological solutions to improve the customer experience, optimize operations, enhance efficiency and collaboration, automate business processes, and drive data-driven decision-making.

Table 4 below summarizes the productivity benefits associated with the initiatives within this category for the 2021-2025 and 2026-2030 rate terms.

Table 4 - Innovation and Digital Transformation Initiatives (Quantifiable)[9] ($’000s)

Initiative	Description		Productivity Benefits	
			2021-2025	2026-2030
3.2.1 Net Metering Automation	Streamlined net metering billing processes, saving significant labor hours per month.	OM&A	n/a	$ 6,751
3.2.2 Online Billing Enhancements	Expanded online billing, reducing mailing and printing costs (with ancillary savings related to Account Overdue Notices)	OM&A	$ 6,274	$ 5,375
3.2.3 Remote Disconnection Technology	Expanded use of remote disconnect meters, reducing labor costs for service terminations and reconnections.	OM&A	$ 2,869	$ 4,941
3.2.4 Customer Relationship Management (CRM) Platform Implementation	Replacement of legacy service desk with a comprehensive CRM system to automate workflows and improve efficiency	*Capital Expense*	*$ 834*	*$ 1,248*
		Capital Depreciation	$ 28	$ 42
		Services to Third Parties	$ 556	$ 832
3.2.5 Disconnection Notification Automation	Replacement of manual delivery of disconnection notices with automated notifications	OM&A	$ 1,849	$ 2,202
3.2.6 Satellite Imaging for Vegetation Management	Used satellite data to identify high-risk vegetation areas and optimize trimming schedules.	OM&A	n/a	$ 1,637
3.2.7 Blue Beam for Plant Inspectors	Digitalized project documentation and plant inspections, reducing paper use and improving workflow efficiency.	*Capital Expense*	$ 1,095	$ 1,313
		Capital Depreciation	$ 36	$ 44
3.2.8 Move-In Move-Out Automation	Automated customer move-in/move-out requests to reduce manual processing and errors.	OM&A	$ 502	$ 923

[9] Totals may not sum due to rounding.

Initiative	Description		Productivity Benefits	
			2021-2025	2026-2030
3.2.9 Salesforce Field Service for Reliability Operations	Centralized work requests and scheduling, reducing reliance on manual communication and increasing productivity.	OM&A	$ 141	$ 769
3.2.10 Damage to Plant Process Automation	Implemented a Google Form-based system for faster and more efficient reporting of infrastructure damage.	*Capital Expense*	*$ 21*	*$ 25*
		Capital Depreciation	$ 1	$ 1
3.2.11 Customer Information System Reduced Fees	Reduced managed service costs	OM&A	$ 480	n/a
Total Capital Expense			**$ 1,950**	**$ 2,586**
Total Capital Depreciation			**$ 65**	**$ 86**
Total OM&A			**$ 12,115**	**$ 22,597**
Total Services to Third Parties			**$ 556**	**$ 832**

3.2.1. Net Metering Automation

Hydro Ottawa has positioned itself for productivity improvements through the automation of its net metering billing for residential and small commercial customers. Although automation started with Tiered rate customers, as net metering adoption grew (rising 36% in 2023 and 75% in 2024) the complexity of billing also increased with the introduction of new rate options (i.e. Time-of-Use and Ultra-Low Overnight), leading to the implementation of further automation in 2024. These automation efforts are set to yield the following benefits:

- **Tiered Rate Customers:** automation will save over 20 minutes per account per month and reduced error rates. This scalable solution will result in an estimated 8,000 hours of annual manual work avoided by 2030, when anticipated growth in the number of net metered customers is factored in.
- **Non-Tiered Customers:** approximately 60 minutes per account per month of manual work will not be required for non-Tiered customers, ensuring scalable efficiency gains as more

customers enroll and choose their preferred rate plans. This scalable solution will result in an estimated 16,000 hours of annual manual work avoided by 2030 (again, taking into consideration anticipated growth in net metered customers).

Table 4 above shows the impact of these improvements, which is calculated based on the reduction in manual work for processing net metering bills less depreciation of the billing system enhancement. Such automation eliminates the need for hiring additional staff to cover the estimated annual 24,000 additional hours by 2030.

3.2.2. Online Billing Enhancements

Hydro Ottawa is driving productivity and customer convenience through digital solutions like online billing. This program significantly reduces printing and postage costs by decreasing reliance on paper billing, while also promoting environmental sustainability by saving approximately 6 million pieces of paper annually. Online billing enrollment was 55% as of the end of 2020, and is projected to reach 80% by the end of 2025, with that level being maintained through 2030 (inclusive of customer growth). Table 4 above details the incremental productivity benefits in printing and postage subsequent to 2020, after deducting targeted communication campaigns to increase enrollment.

What's more, with the introduction of *Ontario Regulation 391/21* (Blue Box Regulation), producers of blue box waste (e.g. paper bills) will be financially responsible as of January 1, 2026 for lifecycle management of waste generated from their products. Hydro Ottawa's online billing program and the utility's overall high adoption rates will therefore likewise help reduce the costs associated with complying with this provincial requirement.

Additionally, this program improves efficiency and reduces costs in Account Overdue Notice (AON) delivery. Incremental savings in printing and postage associated with AON letters subsequent to 2020 are included in the figures listed in Table 4 above. Table 5 offers a more detailed breakdown of the respective cost reductions associated with online billing and AON correspondence.

Table 5 - Breakdown of Productivity Benefits for Online Billing and Account Overdue Notices ($'000 000s)

	Historical/ Bridge Years	Test Years
	2021-2025	2026-2030
Online Billing	$ 5.8	$ 4.2
Account Overdue Notices (AON)	$ 0.5	$ 1.2
TOTAL	**$ 6.3**	**$ 5.4**

3.2.3 Remote Disconnection Technology

Hydro Ottawa leverages remote disconnect/reconnect meters to enhance operational efficiency and reduce costs associated with service disconnections and reconnections. Integrated into the Advanced Metering Infrastructure (AMI) network, these meters allow secure remote control, minimizing the need for manual fieldwork. This approach has led to several key benefits:

- **Increased Efficiency:** as of the end of 2023, approximately 63,500 premises (17% of all customers served) were equipped with this technology, streamlining service operations.
- **Targeted Deployment:** installations are prioritized in hard-to-access locations and high turnover areas, in addition all new residential meters since January 2023 include remote disconnect capabilities.
- **Cost and Fee Reductions:** the benefits outlined in Table 4 above reflect the use of remote disconnections, which has reduced associated labour and vehicle costs. This initiative has also enabled Hydro Ottawa to propose lower customer reconnection fees starting in 2026. For more information, please see Schedule 8-4-1 - Specific Service Charges.

3.2.4. CRM Platform Implementation

Hydro Ottawa previously replaced its service desk tool with a CRM platform, streamlining service request management and enhancing efficiency. The system automates workflows, integrates with core systems, and centralizes cross-functional case management, reducing manual effort and errors while improving data accuracy. Key productivity gains include the following:

- **Automated Service Requests:** redesigned website forms integrate directly with CRM, improving accuracy and processing efficiency.
- **System Integration and Data Accuracy:** real-time integration with Enterprise Resource Planning (ERP), Customer Care and Billing (CC&B), and Geographic Information (GIS) systems minimizes manual data entry and optimizes resource allocation.
- **Workflow Automation:** automated notifications and task assignments reduce processing time, allowing staff to focus on higher-value activities.
- **Centralized Case Management:** real-time tracking and reporting enable better prioritization, cross-team collaboration, and productivity monitoring.
- **Proactive Customer Communication:** automated updates keep customers informed, reducing inquiries and improving satisfaction.

Additional enhancements will further optimize efficiency by automating email management, deepening ERP-CRM integration for financial reporting, enabling real-time field activity updates, and improving cross-team case transfers for faster issue resolution.

The productivity benefits in Table 4 above reflect achieved and anticipated reductions in workload. In turn, these have reduced the need for hiring additional staff to cover the estimated 5,000 hours of additional annual work by 2030.

3.2.5. Disconnection Notification Automation

Hydro Ottawa optimized its disconnection notification process in response to the OEB's 2019 Customer Service Rules, improving efficiency and reducing costs. By eliminating hand-delivered disconnection notices, which previously consumed 50% of Field Collection Representatives' time, Hydro Ottawa reduced staff resources within the Collections program and reallocated them to other areas of the business where resourcing was needed.

Key improvements of automating disconnection notices include the following:

- **Automation and Accuracy:** enhanced customer contact data and expanded use of the autodialer system which replaced manual notice delivery.
- **Customer Communication:** a new AON provides an additional touchpoint, helping customers address outstanding balances before escalation.
- **Process Optimization:** proactive contact verification through Contact Centre agents and the MyAccount Profile Update Campaign ensure accurate customer data for automated notifications.

These enhancements have streamlined operations and reduced labour costs for collections activity, as outlined in Table 4 above, while maintaining regulatory compliance.

3.2.6. Satellite Imaging for Vegetation Management

In 2023, with the aim of enhancing its Vegetation Management program and after the devastating impact of the May 2022 Derecho storm, Hydro Ottawa implemented Overstory, a satellite imaging software that enhances efficiency by prioritizing high-risk areas while reducing unnecessary trimming. The software provides the following benefits:

- **Encroachment Risk Analysis:** identifies vegetation near power lines for proactive trimming.
- **Trimming Optimization:** uses tree species and growth rate data to adjust trimming cycles.
- **Reliability Insights:** predicts outages based on vegetation conditions.

- **Hazard Tree Identification:** detects declining trees near infrastructure, enabling proactive removal and coordination with City planners.

By using Overstory, Hydro Ottawa expects to avoid some unplanned and emergency vegetation management costs, as shown in Table 4 above. The avoided costs presented reflect the net benefit after the annual Overstory subscription cost is factored in.

Controlling costs within the Vegetation Management program is a priority for Hydro Ottawa for several reasons. First, the majority of tree trimming is performed by third-party contractors, whose costs continue to rise in light of the pressures and effects associated with recent levels of inflation.[10] Second, as part of its broader efforts on grid resilience and storm hardening, the utility is planning to shift its posture, with greater emphasis on planned trimming as opposed to unplanned/emergency work. More details on the use of Overstory are available in Section 3 of Schedule 4-1-2 - Operations, Maintenance and Administration Program Costs.

3.2.7. Blue Beam for Plant Inspectors

Hydro Ottawa previously implemented Blue Beam to streamline design workflows, improve collaboration and enhance project management. Its adoption by Plant Inspectors resulted in improvements to the Plant Inspection Process and Construction Verification Program. Through expanded use of this tool, Hydro Ottawa has derived the following benefits:

- **Reduced Travel:** reduced need for inspectors to drive between work centers for project packages and paper drawings.
- **Centralized Digital Workflow:** enabled electronic data collection, markups, reviews, and approvals in one location.
- **Seamless GIS Updates:** ensured accurate field change documentation, preventing lost records.

[10] Reference Schedule 1-2-5 - Impacts of Inflationary Pressure for more information.

Expanding the use of Blue Beam has boosted efficiency, reduced costs and improved sustainability. The corresponding figures in Table 4 represent Hydro Ottawa's estimated productivity benefits based on 2,600 hours annually.

3.2.8. Move-in/Move-Out Automation

In 2022, Hydro Ottawa introduced an automated system to process move-in/move-out requests. The new system integrates with the billing system, streamlining the workflow. Key benefits of the automation are as follows:

- **Increased Automation:** as of the end of 2023, 61% of online move requests were fully automated and 20% were semi-automated, reducing manual intervention.
- **Improved Accuracy:** automation minimizes human errors, ensuring accurate customer information and linking of accounts.
- **Enhanced Communication:** customers receive timely, automated notifications regarding their move requests.
- **Enhanced Data Monitoring:** the system allows for improved data tracking and reporting, identifying further optimization opportunities.
- **Cost Reduction and Avoidance:** Table 4 above shows the net reduction and avoidance in Contact Centre costs, which are the result of automation-driven time reductions minus the depreciation of the billing system enhancement.

3.2.9. Salesforce Field Service for Reliability Operations

In 2024, Salesforce Field Service (SFS) was expanded to the entire Reliability Operations group. This mobile workforce management system centralizes work requests, standardizes workflows and improves scheduling by prioritizing tasks based on urgency. By reducing reliance on informal communication, SFS enhances accountability and operational performance. Crews gain real-time visibility into work packages, reducing downtime and enabling more efficient job execution.

The improved scheduling capabilities are particularly valuable given the dynamic nature of Reliability work, where crews must quickly pivot between planned jobs and emergency responses. With SFS, smaller filler jobs can be identified and assigned seamlessly, ensuring that crews remain productive throughout the day. Additionally, enhanced situational awareness and data-driven decision-making contribute to a safer work environment.

The projected 1,100 annual hours of efficiency gains offset by additional software licenses, as shown in Table 4 above, will improve the group's ability to ensure system reliability and optimize resource utilization.

3.2.10. Damage to Plant Process Automation

The introduction of an automated tool integrating a Google Form with AODocs (an online document management platform) in 2021 has improved productivity in assessing and managing third-party damage to Hydro Ottawa's infrastructure. By centralizing data storage and streamlining communication, the tool eliminates lost documentation, enhances accountability and accelerates response times.

Field crews save time by using the Google Form to submit damage reports, while supervisors can quickly assess repair needs through readily available photos and videos, reducing unnecessary site visits. Automated notifications ensure all stakeholders are informed, leading to faster repairs and power restoration. The streamlined billing process improves contractor tracking, holds supervisors accountable for timely documentation, and generates valuable analytics for continuous improvement.

From a financial perspective, process automation has led to faster invoicing, increasing the speed and likelihood of cost recovery from third parties. Improved customer communication and service further enhance efficiency.

Productivity benefits in Table 4 above reflect an estimated savings of 20 minutes per Damage to Plant report from centralizing data storage and streamlining communication, totaling approximately 50 hours per year.

3.2.11. Customer Information System Reduced Fees

Hydro Ottawa's Customer Information System (CIS) is a critical component of the utility's meter-to-cash information technology infrastructure, encompassing applications that support AMI and the billing and settlement system. Hydro Ottawa's support contract for CIS was renegotiated in 2019, resulting in a cost reduction through strategic contract negotiation. Table 4 above identifies the associated cost reductions for the 2021-2025 rate period.

3.3. INFRASTRUCTURE AND EQUIPMENT EFFICIENCIES

The initiatives in this category involve optimizing infrastructure and equipment efficiencies to reduce costs, improve operational reliability and resilience, and enhance sustainability. Examples include asset lifecycle management, investments in energy-efficient equipment and programs, and adoption of advanced monitoring technologies and networked devices.

The Table below outlines relevant initiatives from the 2021-2025 and 2026-2030 periods.

Table 6 - Infrastructure and Equipment Efficiencies Initiatives (Quantifiable) ($'000s)

Initiative	Description		Productivity Benefits: Historical / Bridge Years 2021-2025	Productivity Benefits: Test Years 2026-2030
3.3.1 Protection Relays Design Standard	Optimized the placement of protection relays in substations, reducing wiring costs and eliminating the need for separate relay buildings.	*Capital Expense*	*$500*	*$1,073*
		Capital Depreciation	$0	$186

3.3.1. Protection Relays Design Standard

Hydro Ottawa has updated its construction standards for the placement of protection relays in substations. Previously, these relays were housed in separate buildings from switchgear due to arc rating limitations, requiring extensive wiring for reliable communication and control.

By working with vendors, Hydro Ottawa identified a solution where the upper cabinets of switchgear meet arc rating requirements, allowing relays to be installed directly within. The end result of this innovation is the elimination of two separate needs: first, for long wiring runs in switchgear, replacing them with a single fiber optic cable; and two, for a dedicated Protection & Control (E-House) structure at the substation site.

This new design standard is being initially deployed in the Riverdale Transformer Station upgrade project, resulting in an estimated $0.5M cost reduction within the 2021-2025 rate period. Subsequent application of this design to eight future substation projects during the 2026-2030 rate period is anticipated to avoid $134,000 in costs per station through decreased wiring and termination expenses. These figures are reflected in Table 6 above.

4. OTHER INNOVATION, PRODUCTIVITY AND CONTINUOUS IMPROVEMENT INITIATIVES

This section includes initiatives undertaken by Hydro Ottawa over the 2021-2025 rate period and which are (1) planned for continuation during the 2026-2030 rate period and (2) are not quantifiable or cannot be easily quantified. While the cost impact is not directly measurable, these efforts nevertheless help to strengthen Hydro Ottawa's operational performance and enhance the customer experience. For ease of reference, these initiatives are organized into separate tables, employing the same categorization scheme in the preceding section (i.e. Labour and Supply Chain Optimization; Innovation and Digital Transformation; and Infrastructure and Equipment Efficiencies).

1 **Table 7 - Labour and Supply Chain Optimization Initiatives (Non-Quantifiable)**

Initiatives	Description
Mentorship Programs	Structured mentorship for trades, system operations and engineering to ensure knowledge transfer and workforce readiness. The program accelerates onboarding, enhances skill development through hands-on training and minimizes knowledge gaps due to retirements. By fostering professional growth, Hydro Ottawa ensures a skilled and adaptable workforce.
Streamlining Project Intake with CRM Integration	Integrated Salesforce CRM into a centralized project intake to improve workflow, case tracking, and regulatory compliance. This transition streamlined commercial project requests, residential subdivisions and EV connections by automating workflows. Enhanced tracking and centralized communication reduced administrative workload and improved project turnaround times.
Outage Database Replacement	Transitioned from Access to APEX database, enhancing data accuracy, retrieval speed, and collaboration. The new system reduces inefficiencies by automating data validation and improving reporting capabilities. This upgrade ensures faster outage response times and better internal coordination.
Inspection Improvements	Expanded data collection using visual inspections and infrared scanning for better asset condition assessments. By introducing advanced testing methods, Hydro Ottawa improved its ability to detect potential failures before they occur. These enhancements contribute to more informed maintenance planning and reduced infrastructure downtime.
Dedicated Inspector Model	Hydro Ottawa has assigned single inspectors to large projects to increase productivity and efficiency in project execution. This initiative will reduce miscommunication, improve coordination, lead to faster issue resolution, and enhance project oversight.

1 **Table 8 - Innovation and Digital Transformation Initiatives (Non-Quantifiable)**

Initiatives	Description
Data Visualization & Analytics	Automated dashboards and real-time data insights improved decision-making, customer service, and fraud detection. These tools help to analyze customer behavior, uncover customer service improvement opportunities, optimize resource allocation, and detect potential scams in real-time. By leveraging data strategically, Hydro Ottawa enhances both operational and customer-facing efficiencies.
Customer Contact Centre Enhancements	Routine customer service inquiries have decreased through process improvements and digital self-serve options, despite rising call volumes. A streamlining effort centralized routine requests and automating email distribution based on agent skills further reduced manual workload and improved response times. By optimizing the telephone system for outages, providing clear wait-time expectations and self-serve options, agents handled 16,000 outage calls in 2023, while 31,000 outage reports were managed through self-service.
Cloud-Based Contact Centre & AI Interactive Voice Response	Integrating AI-driven tools within a cloud-based Contact Centre will enable Hydro Ottawa to leverage its CRM integrations to provide an omnichannel, personalized customer experience. Planned for 2025, this migration will optimize service delivery, improve responsiveness to call volume fluctuations and meet evolving customer needs.
Outage Communication Enhancements	Hydro Ottawa launched a new outage map, automated SMS/email notifications and improved social media communication related to outages. These tools provide real-time updates on restoration times and outage causes, even over poor cell phone data signal strength, reducing customer uncertainty and the number of inquiry calls to the Contact Centre.
Expanded Outage Reporting	Enabled non-account holders to report outages online and via text, improving service accessibility. The streamlined process allows tenants, landlords and business managers to report disruptions without account authentication. This enhancement results in faster issue resolution and improved outage response accuracy.
Battery Loan Program	Provides portable battery packs for planned outages, ensuring uninterrupted power for critical needs. Customers can keep essential devices like medical equipment and communication devices operational, mitigating the impact of planned work. This initiative has received positive customer feedback and is under evaluation for long-term implementation.
EV Initiatives	EV charging behavior studies, expanded charging infrastructure, and predictive analytic pilots aim to mitigate grid impacts. Data from pilot programs informs demand management strategies and supports infrastructure expansion. With growing EV adoption, Hydro Ottawa is proactively preparing for increased grid load.
Drone Inspection Pilot	AI-powered drone inspections improve efficiency and reduce inspection costs for overhead assets. By capturing high-resolution images and infrared data, drones

Initiatives	Description
Program	can detect equipment issues more accurately. The automated analysis allows for proactive maintenance, reducing labour costs and service disruptions.
Accounts Payable Automation	The software solution Esker uses AI-driven technology to speed up accounts payable (AP) processing. The first-time recognition, machine learning and teaching allows Hydro Ottawa to eliminate the pain of manual AP invoice processing. And automated workflows, dashboards and integration with Hydro Ottawa's ERP system streamline tasks, provide a full audit trail, and maintain electronic records of AP documents.
eLearning	Hydro Ottawa modernized its learning and development programs to meet the needs of today's digital learner and adapt to industry changes. Leveraging its human capital management system, a variety of mobile-friendly, on-demand learning resources have resulted in better eLearning engagement and a wider range of training topics.
Virtual Reality Training	Hydro Ottawa uses virtual reality (VR) to train tradespeople, particularly apprentices and students in the Power Line Technician program. These VR programs allow simulations of real-world scenarios in a safe environment before working with live electricity. This method enables multiple learners to train simultaneously with one instructor, rather than on a one-to-one basis as is required in the field.
Rate Optionality Estimator & Automation	Developed an online tool allowing customers to compare electricity rate plans using their personalized consumption data, supporting informed choices and simplifying rate selection. This tool streamlined, integrated and automated rate selection workflows and enhanced customer experience across multiple touchpoints.
Google Workspace	By enabling simultaneous editing and real-time collaboration, this cloud-based office productivity platform streamlines administrative work regardless of location. This results in reduced meeting times, simplified information technology management and increased organizational efficiency. The addition of generative AI capabilities further optimizes research and document creation.
Copperleaf Predictive Analytics Initiative	The Predictive Analytics (PA) module within Hydro Ottawa's asset management solution (Copperleaf) was implemented to improve asset management and optimize system renewal investment planning. By integrating asset condition data, failure probability curves and risk assessments, the PA module streamlines decision-making and enables proactive risk management, minimizing downtime and extending asset lifecycles. The initiative has reduced service disruptions, enhancing system reliability, and prioritized projects based on value and risk exposure.
Energy and Water Reporting and Benchmarking Data Requests	Semi-automated reporting reduced processing times for energy and water benchmarking requests. This system transition allowed Key Accounts to process standard requests independently, reducing dependency on manual interventions and shortening customer wait times.

Table 9 - Infrastructure and Equipment Efficiencies Initiatives (Non-Quantifiable)

Initiatives	Description
Maple Grove Work Centre	Centralized resources, tools and equipment that support field operations in the west region of our service territory at the Maple Grove facility. In the process, all emergency and reliability inventory was relocated to the main warehouse at the Dibblee facility. This resulted in streamlined inventory control, enhanced visibility into inventory levels, and improved forecasting and replenishment. Construction crews are also able to access materials more efficiently, leading to faster project execution.
Meter Inventory Reorganization	Streamlined material kitting and automated tracking to optimize meter installations. Technicians receive pre-packed kits, reducing time spent gathering materials and bolstering on-site productivity. This improvement also minimized inventory holding costs and enhanced workflow efficiency.
Major Equipment Purchasing	Required vendors to provide spare parts lists, reducing downtime and improving maintenance response times. By ensuring critical spare parts are readily available, Hydro Ottawa mitigates risks associated with supply chain delays. This proactive approach enhances equipment reliability and reduces long lead times for replacements.
Metering Enhanced Tooling	Equipped technicians with specialized tools to enhance efficiency, accuracy, and safety. Investments in advanced power tools reduced physical strain, improved installation speed and minimized errors. Vehicle modifications, such as custom shelving, have further optimized workflow and job-site organization.
Asset Health Indexing	Integrated advanced testing and data analysis to improve asset condition assessments and risk-based planning. By refining its health index scoring, Hydro Ottawa prioritizes infrastructure investments more effectively. This approach ensures long-term reliability while optimizing maintenance and capital expenditures.
Streamlined EV Charger Connection Process	Implemented standardized procedures for faster EV charger installations. Customers benefit from clearer requirements and faster approvals, accelerating the deployment of charging infrastructure. Compliance with provincial regulations ensures a smooth and efficient connection process.

2024 Productivity Performance Measures

	Measures	Description	2022A	2023A	2024 Target	Q3 YTD Target	Q3 YTD Actual	Assessment	2024 Q3 Explanation
Labour Utilization	Productive Time	% of Billable Hours / Total Regular Hours	69%	73%	≥ 73%	≥ 73%	73%	●	Achieved target
	Regular Labour Allocation to Maintenance & Admin	% of Labour Time on Mtnce & Admin / Total Productive Time	35%	35%	≤ 33%	≤ 33%	34%	X	Missed target due to increase in metering and stations maintenance.
	Average Sick Days per FTE (annualized)	Total Sick Days / Total Employees	8.1	6.0	≤ 6.0	≤ 6.0	6.1	X	Missed target but improved from Q1 and unchanged from Q2. Similar to same time last year.
	e-Learning Training per employee (annualized)	Number of hours of e-learning / Total Employees	4.9	6.2	≥ 6.0	≥ 6.0	6.7	●	Surpassed target
OM&A	Bad Debt as a % of Total Electricity Revenue	Bad Debt / Total Electricity Revenue	0.18%	0.20%	≤ 0.16%	≤ 0.13%	0.16%	X	Missed target. September bad debt expenses rose due to an increase in provision for unbilled revenue
Asset Efficiency	Technology Infrastructure Cost per Employee (annualized)	(External IT support costs + computer hardware & software depn) / # of FTE	$30.0K	$32.7K	≤ $32.3K	≤ $32.0K	$32.5K	X	Missed target. Although costs below budget, the number of employees continues to be below budget.
	[redacted]								
Profitability Metrics	EBITDA as a % Revenue	[redacted]							
		EBITDA $ / Total Revenue - Hydro Ottawa Limited	50%	48%	≥ 49%	≥ 49%	52%	●	Surpassed target. Reduced expenses drove an increase in EBITDA
	Inventory Turnover Ratio and Value	Cost of Materials Used / Average Inventory *	1.07	1.01	≥ 1.5	≥ 1.5	0.64	X	Missed target. Ordered more transformers last year due to longer lead times and repeated shortages.

** Starting 2023, Inventory Turnover ratio excludes capital spares that HOL is required to hold in safety stock*

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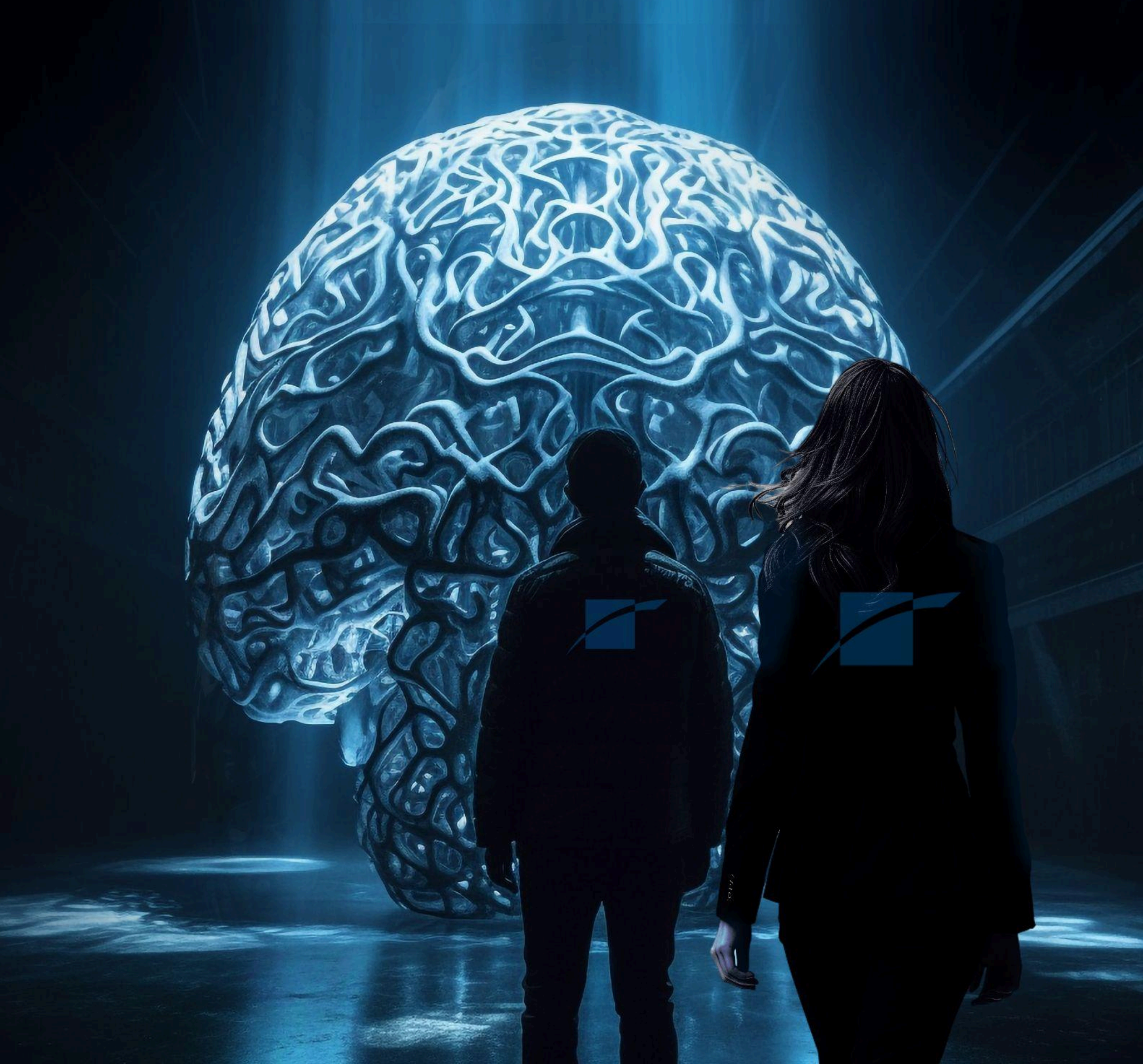
Digital Strategy

2026 - 2030



Summary

The 2026-2030 Digital Strategy is built on the overarching Strategic Direction of Hydro Ottawa. The Strategic Direction represents both a continuation and an expansion of the robust foundation that Hydro Ottawa has built in its strategic planning framework.

Hydro Ottawa's mission is "to create long-term value for our shareholders, benefiting customers and the communities we serve and its vision is to be a "leading partner in a smart energy future".

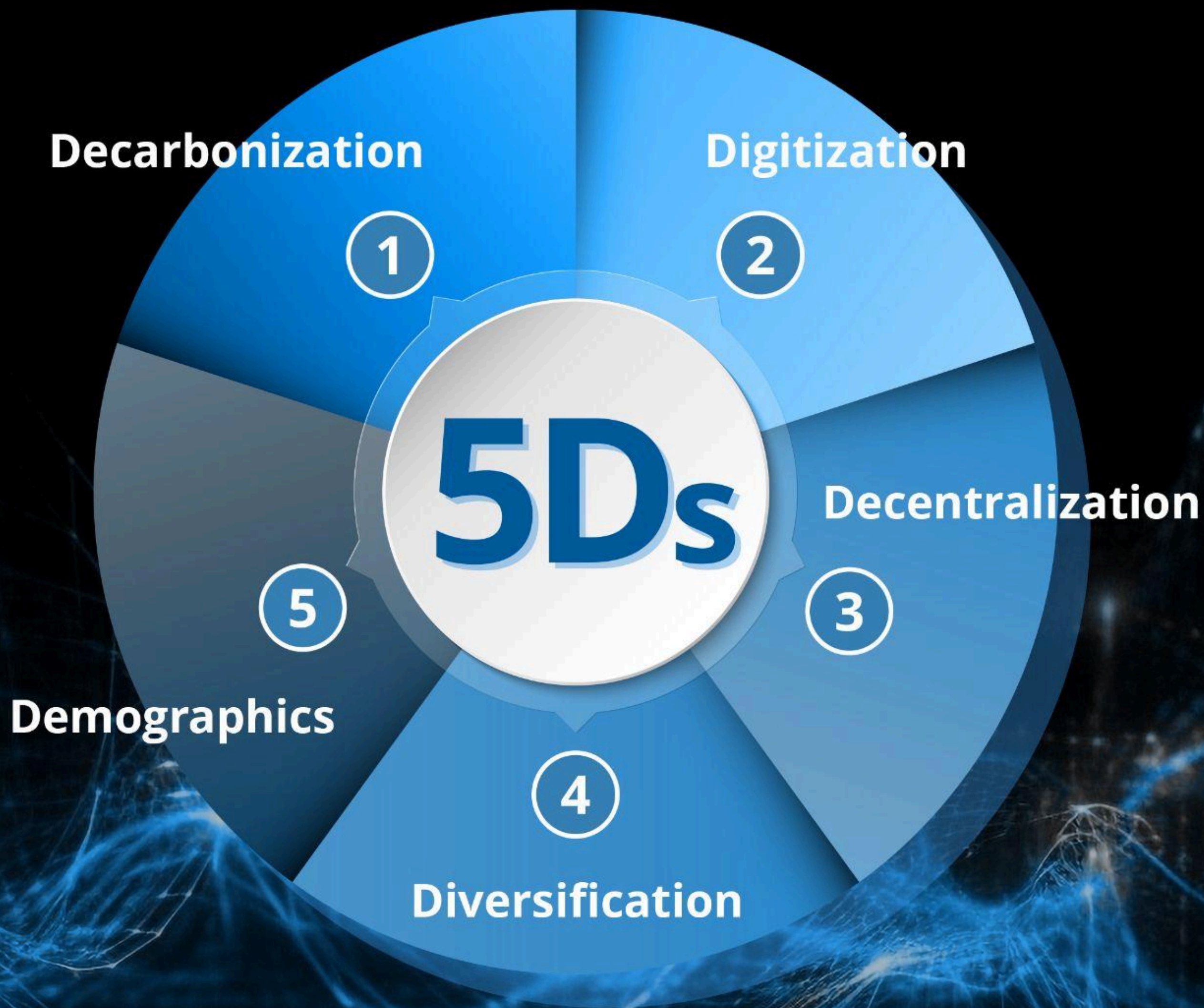
Hydro Ottawa uses four performance categories to guide its activity and monitor results. These have been referred to as the Four Key Areas of Focus:

1. Customer Value
2. Financial Strength
3. Organizational Effectiveness
4. Corporate Citizenship

These four areas of performance help emphasize how delivering value for customers is a central driver of the business strategy and how sustainability is integrated across its business practices.

Strategic Context

Hydro Ottawa's business, operating and political environment has shifted significantly. There are five key change drivers called the "**5 Ds**" that define its strategic context: decarbonization; digitization; decentralization; diversification; and demographics. Collectively, and in varying measures these drivers are shaping the landscape within which it will seek out opportunity and measure its performance, while mitigating risk and executing on transformation.



Decarbonization

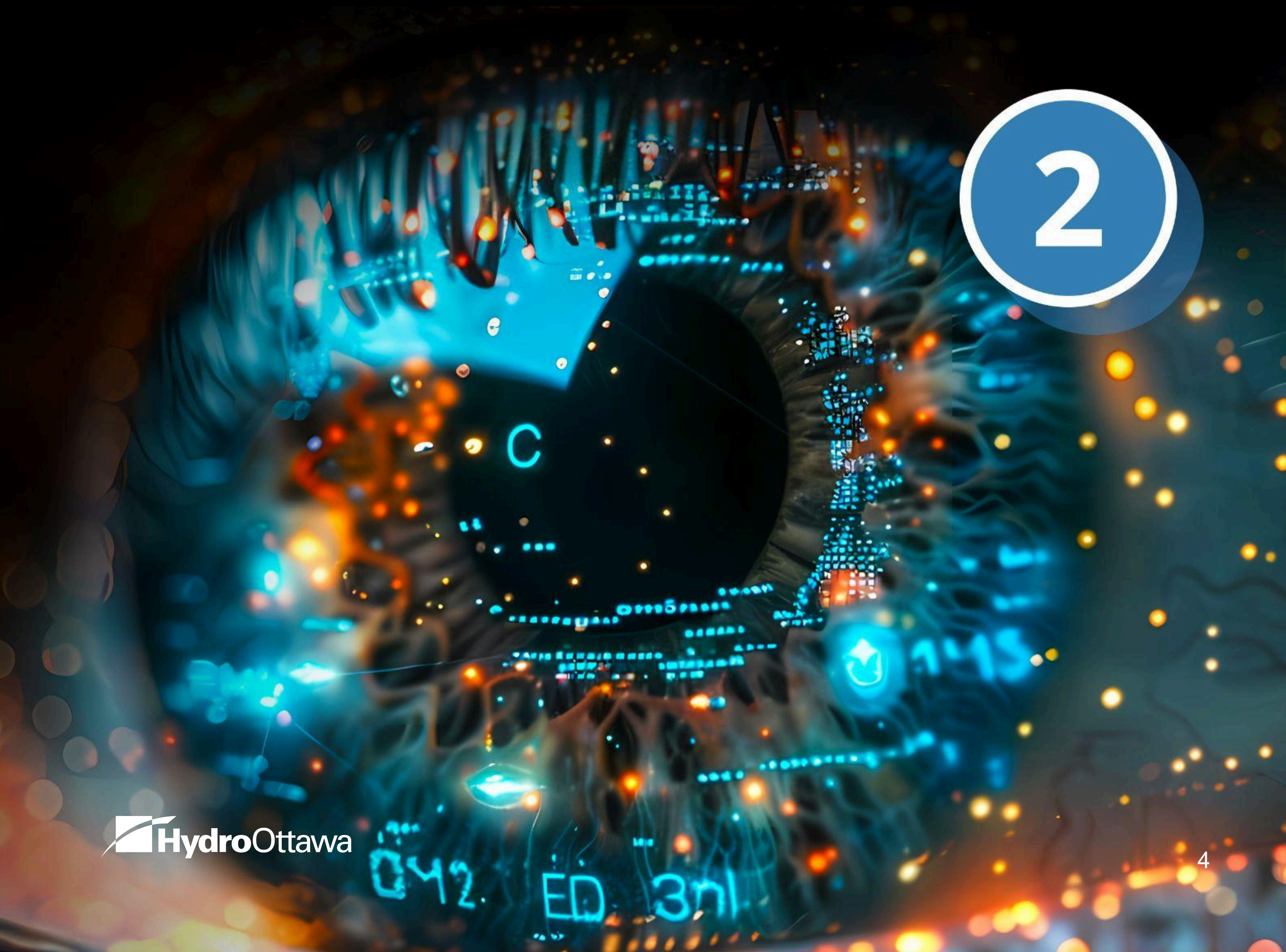
"The removal or reduction of carbon dioxide emissions; the switch to usage of low-carbon energy sources".

As a prominent Canadian electricity provider, Hydro Ottawa has unveiled a comprehensive five-year strategy focused on climate change mitigation and the transition to a net-zero economy. The company aims to achieve net-zero operations by 2030, emphasizing environmental sustainability and aligning with global decarbonization efforts. Hydro Ottawa acknowledges the urgency of addressing climate change and emphasizes adaptation measures, such as infrastructure resilience and community preparedness. The company is committed to transparent ESG reporting, demonstrating its dedication to sustainability and responsible business practices.

Digitization

"The conversion of information and processes from analog to digital form".

The 21st century is experiencing the Fourth Industrial Revolution, marked by the exponential growth and connectivity of electronics and information technology. This revolution is transforming industries and production systems with technological breakthroughs like the Internet of Things and artificial intelligence. Utilities' operational and IT systems are evolving toward digital, mobile-friendly, and cloud-based solutions, leading to opportunities such as new service offerings and accelerated energy integration. However, the digitization of modern life also introduces cyber security risks, making utilities high-value targets. Public sector agencies are increasing their expectations regarding cyber security measures, and government and industry partnerships are increasingly important in addressing these risks.



Decentralization

“The transition from large, centralized production and networks to smaller, more distributed production and networks”.

The Smart Grid and distributed energy resources (DERs) have transformed the electricity sector from a one-way flow of power to a decentralized paradigm. DERs, such as solar panels and electric vehicles, are gaining popularity due to their cost-saving and environmental benefits. Smart Grid technology enables greater penetration of DERs on distribution networks, and advanced AI and IoT capabilities are expected to drive future adoption. The transition to a more decentralized power system also overlaps with aging infrastructure renewal, presenting opportunities to leverage DERs to defer or reduce certain capital investments, which in turn helps to control costs for consumers. Decentralization thus represents a valuable expansion of the utilities' toolbox to maintain and optimize grid infrastructure.

Diversification

“The process of enlarging a business or varying its range of assets, products, services, business lines and operational fields”.

The rising tides of decarbonization, digitization, and decentralization present intriguing challenges and opportunities for planners and operators of the electricity system. These change drivers have raised questions around fundamental aspects of the utility revenue model. The assumption of customer growth equating to electricity consumption growth no longer holds true. Innovative tools and technologies have enhanced customer control over energy use and introduced options around self-supply. Advances in efficiency and conservation have enabled increased use of devices and appliances to coincide with declines in overall consumption. These trends have injected risk into utilities' revenue profiles. Conversely, the push to decarbonize, digitize, and decentralize presents a host of opportunities. Customer demand for leading-edge solutions and analytics is growing rapidly. Utilities, with their direct, long-standing, and trusted relationships with customers are uniquely positioned to meet the evolving needs for value-added services.

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Demographics

“The ‘people’ side of the electricity business – customers, community, employees”.

The changing role of customers is fueling transformation in the electricity sector, with customers expecting customized service, control, and convenience. Customer needs and expectations vary across different segments, such as residential and commercial customers. Shifting customer behaviour mirrors broader shifts in demographics and attitudes, with a growing preference for digital services and support for green energy investments. The economic outlook for the community has both positive and negative factors. Steady growth is expected, with an anticipated 22% increase in population by 2026, but challenges such as unemployment and affordability concerns persist. The workforce and workplace have experienced historic shifts, including the rise of remote work, digitization, and increased focus on collaboration and diversity. These shifts, compounded by pre-existing workforce challenges, present challenges for attracting, retaining, and nurturing talent. Hydro Ottawa's ability to proactively prepare for and mitigate these impacts will be crucial for meeting business objectives and customer needs.

Strategic Plan

Given the Strategic Context, Hydro Ottawa has crafted
an eight point strategy

1. **Achieving net zero operations by 2030;**
2. **Becoming the partner of first choice for signature green energy and carbon reduction projects in our community**
3. **Accelerating digital transformation to enable sustainable business practices;**
4. **Leveraging and promoting distributed energy resources;**
5. **Continuing to grow and diversify our revenue sources;**
6. **Growing our social license to operate;**
7. **Ensuring organizational capacity, culture, and leadership to deliver in a post-pandemic environment; and**
8. **Continuing to provide best-in-class customer service.**

Digital Strategy

The 2026-2030 Digital strategy is built on the strategic context and the strategic plan that has been outlined by Hydro Ottawa. It will build on the foundation and technology investments that Hydro Ottawa made in 2021-2025.

It has also been informed by an environmental scan of technology and its evolution over the next few years.

The Digital Strategy is centered around five themes.

1. Customer Experience
2. Employee Experience
3. Productivity & Operational Effectiveness
4. Grid Automation and Modernization
5. Cybersecurity and Business Continuity

Customer Experience

There will be a continued journey to build on the award winning customer centric offerings that Hydro Ottawa has delivered to its customers. Enhancing the customer experience will ensure that Hydro Ottawa continues to deliver choice, convenience and control through the tools and technologies that it deploys. These are consistent with the expectations of its customers which are simplicity, ease of convenience and cost effectiveness. They also align with the strategic plan which is to provide “best in class Customer Service”.

Hydro Ottawa will continue to invest in the multiple channels it serves its residential customers in thereby meeting them on their terms. This includes enhancing its customer engagement platforms through self-serving opportunities on line and through the “Hydro Ottawa App”. Generative AI will drive a number of innovations around customer experience especially with the enhancements of chatbots and the ability to serve customers quicker, around the clock and more efficiently. Hydro Ottawa will invest in a next generation contact center platform to facilitate this experience.

Customer Experience (Cont'd)

As a part of the energy evolution and with increasing concerns about affordability, customers have indicated a larger appetite to better understand their consumption patterns as well as the ability to tailor plans to their needs. Hydro Ottawa will continue to build on its Customer Relationship Management Platform (CRM) journey with a view to get a 360 degree of its customer. It will also simplify and enhance its bills and provide energy management tools to the customer to better understand usage and costs.

Employee Experience

Hydro Ottawa's employee demographics continue to change. By 2026 more than 50% of its employees could have less than five years of tenure at Hydro Ottawa. In addition there continues to be a larger workforce who are younger and technically savvy. It will be imperative to continue to evolve the employee experience to provide easy and secure access to information and tools anytime, anywhere and on any device.

Hydro Ottawa will continue to invest in the digital employee experience so as to provide information and tools anytime and anywhere in a secure manner. Improved access to touch screen devices will enable employees to select multiple form factors that will facilitate their work areas in a secure manner. The introduction of more web and mobile applications to manage workflows will enable employees to better serve customers, resolve outages, assess damage during storms, complete job planning and tailboards, submit and approve requisitions and expenses, and access their HR related information.

Generative AI is expected to change the ways employees work and have the capabilities to increase productivity. Hydro Ottawa will complement its existing productivity tools with Generative AI capabilities to facilitate this journey. Hydro Ottawa has already invested significantly in its HR and Safety platforms. It will continue to build on its award winning platforms with the use of AI and data related investments to attract talent, close skills gaps, train employees and ensure a safer and more secure workplace.

Productivity & Operational Effectiveness

“Affordability”, “Price” and the “Increasing cost of electricity” remains a concern for our customers. It is therefore important that Hydro Ottawa continues to digitize and automate its business operations to realize efficiencies through transformative projects.

Hydro Ottawa executes on a number of capital programs to build and operate its assets meant for energy distribution. It is important that it ensures its assets are operated efficiently, have a long lifespan and provide maximum value to the organization while minimizing costs. The organization will implement an Enterprise Asset Management Platform that will improve Asset Lifecycle management, streamline Work Management, and Materials Management, optimize resource planning and utilization and provide better data and analytics that will support better decision making about assets. This will lead to reduced downtime, improved asset lifespan, lower costs and better decision making capabilities.

Productivity & Operational Effectiveness (cont'd)

Hydro Ottawa will continue to evolve and transform its business process automation through the enhancement of its Enterprise Resource Planning Platform (ERP). This will enable Hydro Ottawa to create operational efficiency by streamlining workflows through automation and providing real time data access for decision making. It will also reduce costs through better resource management and optimized inventory. Specific areas of focus will be Financial Management, Supply Chain Management, Asset Management and Fleet Management. Hydro Ottawa collects and processes large volumes of data from its billing, metering, customer, ERP and Asset management systems. It will continue to invest in processing, consolidating and warehousing this data into data lakes to facilitate analytics and predictive reporting models.

Generative AI has the ability to enable process automation, streamline workflows and optimize data analysis. Hydro Ottawa will build a framework to flush out use cases that will enable it to utilize its data to enhance productivity and automation.

There will be a continued evolution of the business systems within the company with the view to consolidating and integrating systems so as to reduce data silos and facilitate efficiency. The ServiceNow platform will be enhanced for workflow automation, service delivery, IT asset and configuration management and security operations.

Grid Automation and Modernization

As the Energy landscape evolves over the next few years, there will be an increasing demand for sustainable greener energy sources such as electrification. In addition, the evolution of “Behind the Meter” technologies will demand engagement with both customers and the market place in the form of proof of concept projects. Hydro Ottawa has also set out a net zero goal which will require evolution of its technology, data and systems to manage and measure sustainability.

Climate change and the increased unpredictability of weather patterns combined with frequent storms highlight the need for a reliable, resilient and responsive grid that is automated. In addition, the advent of modern technology such as DER’s (Distributed Energy Resources) have the potential to change the business model for the utility. Grid Technology will need to evolve to respond to these needs.

Hydro Ottawa’s Grid Modernization key objectives are aligned with the company's eight point strategy. Grid Modernization will provide Enhanced Reliability, Adaptive Flexibility, Improved Resilience and Robust Security, Strengthened Customer Engagement and Empowerment, and Sustainable Decarbonization and Renewable Integration.

Grid Automation and Modernization (cont'd)

Enhanced Reliability means improving the grid's reliability through advanced monitoring, proactive failure detection, fast fault detection, automated power quality control, automated system restoration, and reduced outage times.

Adaptive flexibility will enable the grid to adapt to the changing energy demand and incorporate different energy generation sources. **Improved Resilience and Robust Security** will improve the grid's ability to withstand service disruptions due to system faults or climate events and safeguarding the grid's assets against cyber threats. **Engaging and Empowering Customers** through real-time data, efficient billing, and tools to manage their energy use will be important for its customers through the energy evolution.

And finally **Sustainable Decarbonization and Renewable Integration** will mean enabling carbon emissions reduction by optimizing planning and operations to support the integration of renewable energy sources into the grid and promote sustainability.

Hydro Ottawa will continue to make investments in Grid Modernization with key projects to enhance its Physical Infrastructure (DER, EV & VDA), Sensing and Measurement capabilities (AMI), Communication Infrastructure (Field Area Network), Data Management and Analytics, Control & Optimization (ADMS, FLISR, DERMS) and finally its Operational Structure and processes.

Cybersecurity and Business Continuity

In an increasingly interconnected world, cyber intrusions and data breaches can have a major impact on Hydro Ottawa's brand, calling into question the trust of its customers, investors, suppliers, and employees. Today, threat prevention alone is no longer sufficient to protect Hydro Ottawa – equal focus must be placed on detection and response. Investment decisions in cybersecurity technology, processes, and people will be predicated on understanding organizational needs, risk profile, and the cyber threat landscape. Hydro Ottawa has continued to mature its landscape. As a critical infrastructure company, Cybersecurity plays a key role in protecting Hydro Ottawa's customers and its grid assets from cyber attacks.

Hydro Ottawa will continue to invest in the areas of Security Governance, Data Protection, Security Risk Management, Identity and Access Management, Incident Response, Third Party Vendor Management, Security Awareness and Training and Operational Technology Architecture. A comprehensive, prioritized roadmap has been developed to continually mature the Security Program.

Hydro Ottawa will also continue to focus on its Information Technology Business Continuity program that is tied to the overall business continuity program of the company. Focus will be continuing to create fully redundant data centers, backup and recovery processes and redundant connectivity.

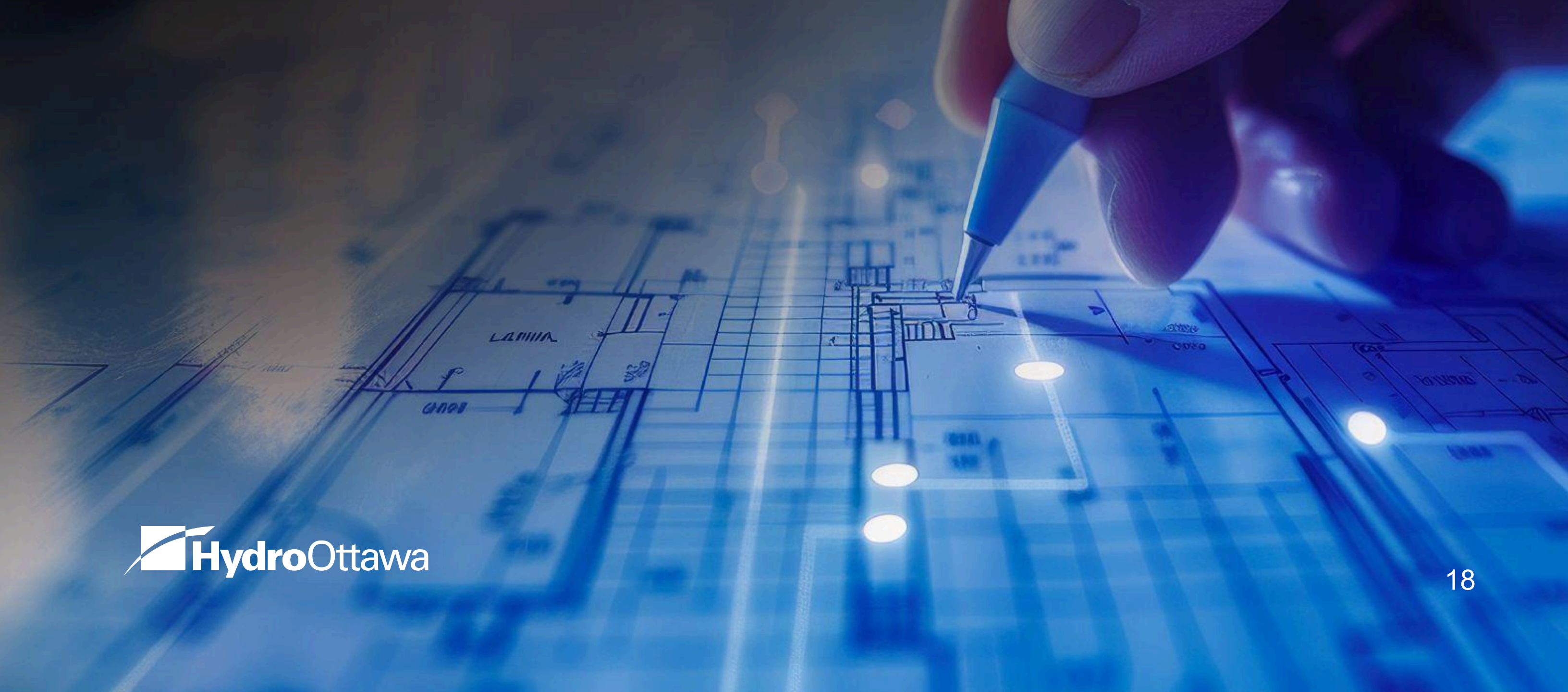
Planning the Strategy & Roadmap (Inputs)

The Digital Strategy has been informed by a number of planning and regulatory processes as well as IT planning sub-committees and programs within the organization to ensure stakeholder alignment and input.

The following are the inputs into the Digital Strategy:

1. **Hydro Ottawa Strategic Direction**
2. **Customer Experience Strategy & Roadmap**
3. **Grid Modernization Strategy & Roadmap**
4. **Meter to Cash Steering Committee**
5. **ERP Steering Committee**
6. **Information Management Program**
7. **Cybersecurity Program**
8. **Business Continuity Program**
9. **Workforce & Talent Management Program**
10. **Rate Application Program**
11. **IT Planning and Programs**
12. **Roadmaps from the Strategic Plan of the organization**

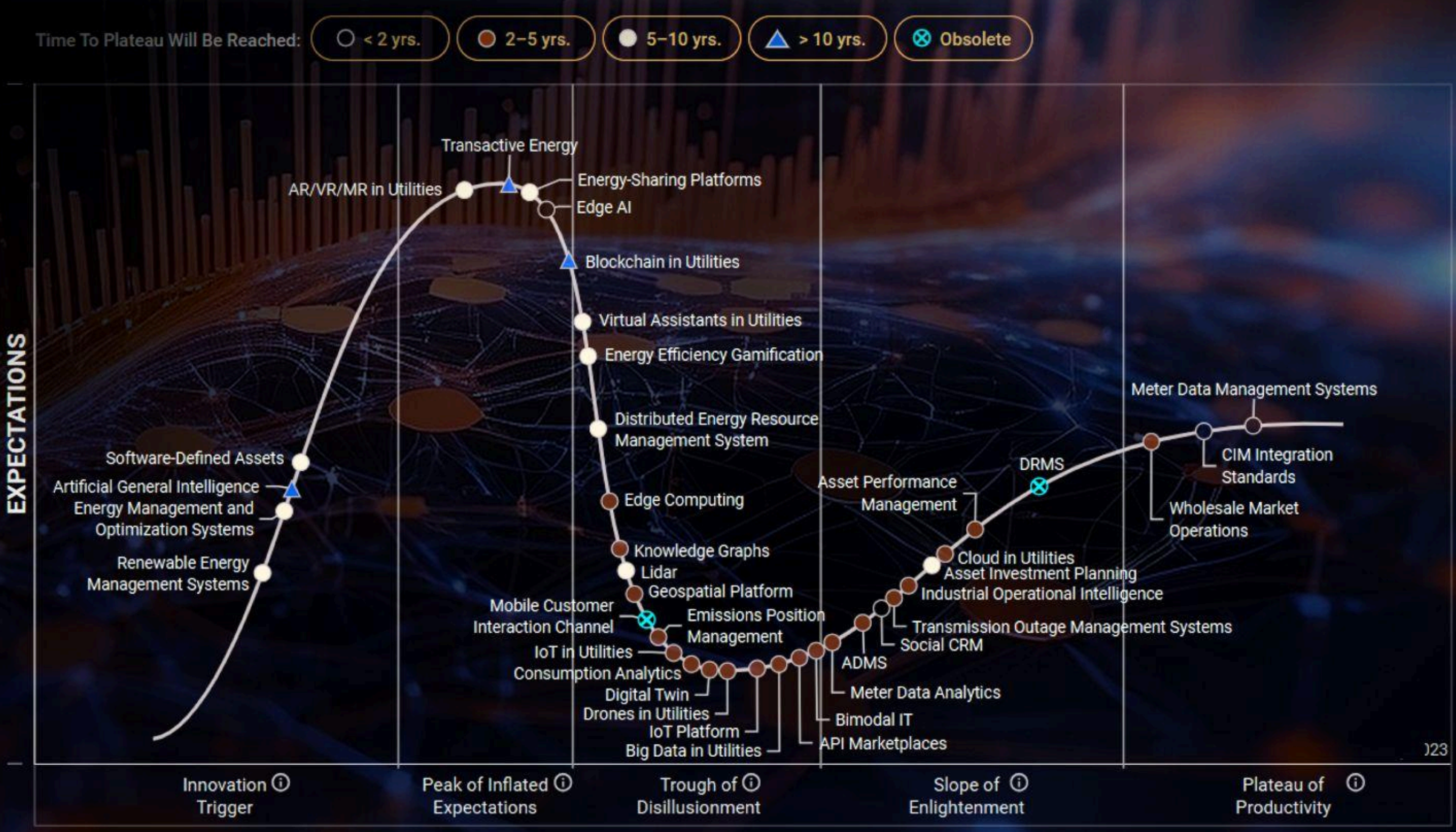
The Strategy is also influenced by the continued evolution of the technology and the environment that we operate in. A number emerging technologies will be mature technologies tomorrow. Likewise a number of relevant technologies today will plateau and be unsupported or need to be retired tomorrow. Hydro Ottawa will track and implement a number of technologies outlined in the "Hydro Ottawa Hype Cycle".



Hydro Ottawa Hype Cycle

Technologies moving from the Peak of Inflated Expectations to the Trough of Disillusionment are emerging technologies that digitize processes and increase organizations' capability to manage assets and support interactions with business partners and customer engagement during energy transition. These technologies (e.g., virtual assistants in utilities, energy efficiency gamification, DERMS) are used to deliver specialist and utility expert capabilities.

Technologies nearing or at the peak show promise in providing new and potential breakthrough capability, enabling intelligent utility, but they are not proven nor standardized to yield breakthrough efficiencies. They can, for example, assist field workers to improve productivity and effectiveness, such as AR/VR/MR for remote assistance.



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Key Guidelines

Hydro Ottawa’s Digital Strategy will follow certain principles to ensure best practice and ease of deployment to market.

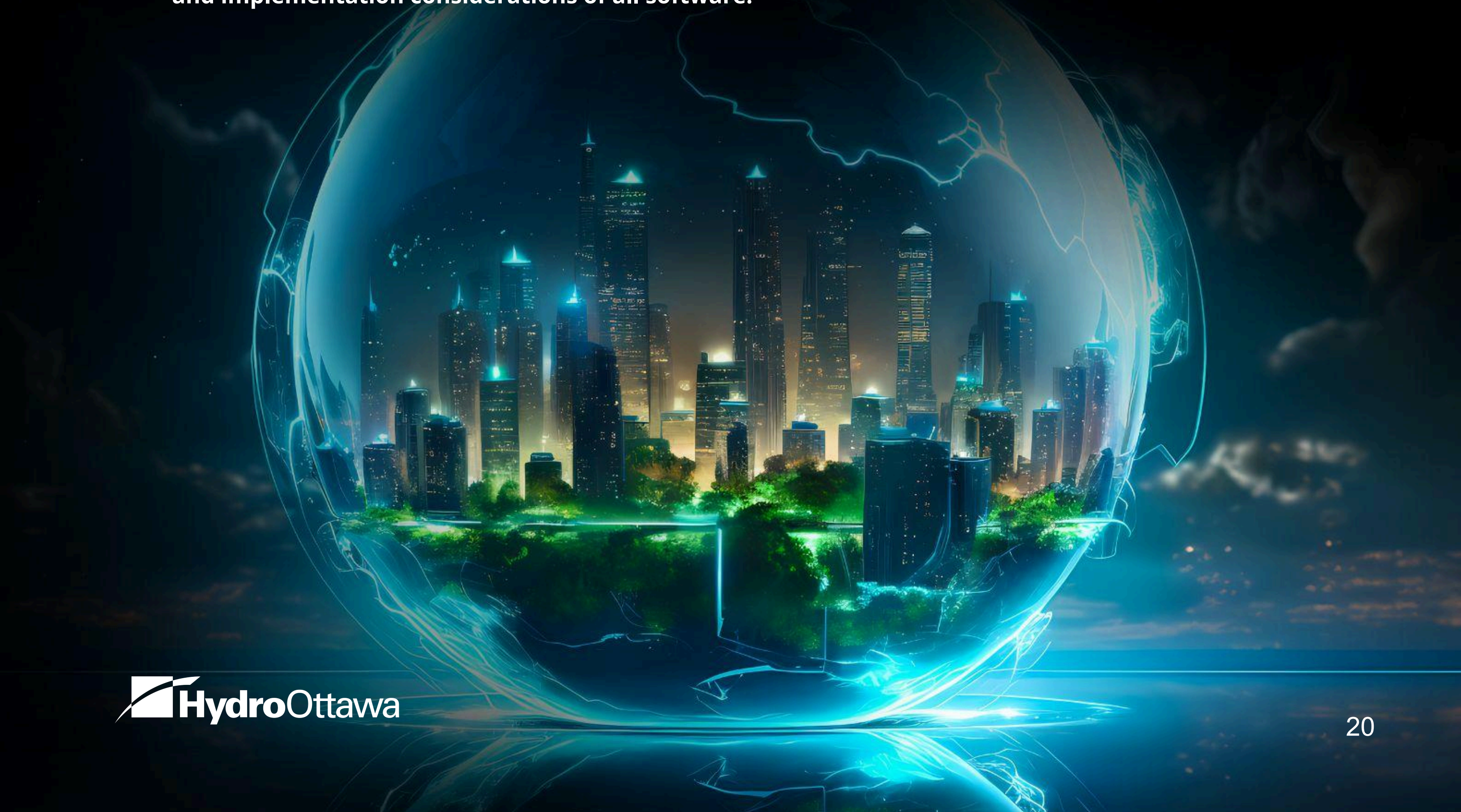
Buy vs Build
The business will seek out solutions that best fit our business needs preferably using commercially available cloud or on premise platforms that are available in the market.

Cloud vs On Premise
All purchase decisions will consider cloud options primarily so as to simplify internal infrastructure and avail of the more turnkey, secure options that cloud solutions offer

Configure vs Customize
The company will adopt best practices where possible transforming existing business processes to conform to best practices available in the system.

Business Case Development
Technology decisions will need to be supported by a business case and need to be aligned with the corporate strategic plan.

Security by Design
Cybersecurity to be incorporated very early into design and implementation considerations of all software.



Planning

As a regulated electricity distributor, Hydro Ottawa files for rates every 5 years. As a part of the rate filing all major capital and operational investments are submitted to the regulator. The digital strategy aligns with the rate planning cycle and contemplates investments to be made over a five year planning cycle. Below is a reference roadmap of the projects and major initiatives that are being planned from 2026-2030.

Securing and defending against more sophisticated cyber attacks will require heightened maturation of:

❖ Substation Hardening	❖ Identity Management
❖ Securing the Modernized Grid	❖ Network Segmentation & Segregation
❖ Disaster Recovery	❖ Insider Threat Program

Key elements impacting this rate period:

Explosion of Intelligent devices
Skill sets and resources to select, secure & manage devices.

Escalating value of data
Data drives effective and efficient business decisions but requires robust communication infrastructure, data integration capabilities and ability to mine additional intelligence.

Cloud
Market growth is focused on cloud computing. Configuration, maintenance and security of these systems will fuel a variety of initiatives, skills and process evolution.

Resilience
Systems that withstand the increasing frequency and criticality of severe weather events as well as the increasing risk of Cyber incidents.

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DISTRIBUTOR CONSOLIDATION AND COLLABORATION

1. INTRODUCTION

As detailed in the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications - 2025 Edition for 2026 Rate Applications*, dated December 9, 2024, this Schedule includes information on the extent to which Hydro Ottawa has investigated potential opportunities for consolidation, as well as the utility's collaboration and partnerships with other distributors.

2. MERGER, AMALGAMATION, ACQUISITIONS

Hydro Ottawa has pursued Merger, Amalgamation, Acquisition (MAA) with contiguous or nearby Local Distribution Companies (LDCs) at various times over the past several years. No MAA has been completed for various reasons, most prominently due to an inability to agree on commercial terms.

Hydro Ottawa acquired the Casselman service territory from the Municipality of Casselman in 2002. However, as part of a new customer connection Hydro Ottawa was required to amend its service territory in Casselman by approximately 10%.[1] The customer connection was more than revenue neutral, meaning Hydro Ottawa's customers would have benefited from this customer connection. In addition, it was estimated that the new customer would have benefited from lower Hydro Ottawa rates. Hydro Ottawa could not have foreseen this service territory amendment when it acquired the Casselman service territory in 2002. This unexpected situation arose due to two subsequent factors: the implementation of the elimination of Load Transfer Arrangements,[2] and Hydro Ottawa's use of existing Hydro One poles in the Casselman region. Serving this new customer was estimated to represent approximately 15% of Hydro Ottawa's total demand within the Casselman service area. As such, Hydro Ottawa notes that this example demonstrates how policy changes can create unintended or unforeseen consequences for both Hydro Ottawa's customers and shareholder.

[1] Ontario Energy Board, *Decision and Order - Hydro One Networks Inc. Application to amend licensed service area in Schedule 1 of electricity distribution license ED-2003-0043*, EB-2022-0234 (February 9, 2023), page 10.
[2] Ontario Energy Board - *Elimination of Load Transfer Arrangements,* EB-2015-0006 (March 30, 2016).

3. ALLIANCES AND COLLABORATION

3.1. SERVICE ALLIANCES

In the absence of any MAA, Hydro Ottawa Limited has entered agreements and alliances to provide services to certain LDCs on a cost recovery basis. In addition, the utility actively collaborates with other LDCs to share information, strategies and best practices. This collaborative approach includes participation in various working committees and industry forums, such as Electricity Canada (EC), Ontario Energy Association (OEA), Electricity Distributors Association (EDA), and Utilities Standards Forum (USF). These associations allow professionals across the organization to benefit from other utility employees related to a wide range of activities and share costs of experts.

3.2. MUTUAL AID

Hydro Ottawa is a volunteer member/signatory to three different Mutual Aid agreements, and participates in the following mutual aid groups:

- North Atlantic Mutual Assistance Group (NAMAG) - includes both American and Canadian utilities;
- Ontario Mutual Assistance Program (OnMAG) - Ontario based utilities; and
- Canadian Mutual Assistance Group (CanMAG) - Canadian utilities from across the country.

These groups deliver not-for-profit assistance to each other during times of crisis or emergencies when an act, such as a severe weather event, exceeds the capabilities of a utility to reasonably restore or maintain electrical service to customers. Hydro Ottawa is an active member of all three and participates in quarterly calls and in-person conferences to stay connected and network with colleagues and counterparts from other member utilities. This collaboration involves reviewing past activations, sharing best practices, and working towards driving consistency in process and templates for use in future events. Hydro Ottawa hosted the Fall 2024 OnMAG conference at its facilities in Ottawa.

Hydro Ottawa has provided mutual aid five times and received mutual aid three times since 2021. This reciprocal arrangement allows Hydro Ottawa to both contribute and benefit from a network of support, optimizing resource allocation and enhancing the collective ability to manage the electrical system during significant events when necessary.

3.3. LOCATE COLLABORATION

Hydro Ottawa is a member of the Locate Alliance Consortium (LAC), a collaborative group of Ontario-based facility owners committed to safe and efficient underground infrastructure practices. Representing sectors like electricity distribution, water, sewer, gas, telecommunications, and streetlighting, LAC members adhere to the Ontario Underground Notification System Act, providing standardized locate services with a focus on safety and infrastructure protection. The LAC aims to optimize underground infrastructure location practices through a multi-utility approach. By utilizing a single service provider to complete locates for all LAC members within a geographic area, the alliance achieves greater efficiency and cost savings. LAC members benefit from reduced locate unit rates based on the number of utilities within a specific locate area, lowering overall costs. Additionally, LAC members benefit from knowledge sharing on regulatory changes and quality management practices.

Hydro Ottawa also works with both Ontario One Call and excavators to deploy Alternate Locate Agreements and Dedicated Locate Agreements. Alternate Locate Agreements are an agreement between Hydro Ottawa and specific excavating contractors who are performing specific types of excavation work that are considered to be low risk to Hydro Ottawa assets. The agreement allows for the elimination of physical locates for these particular types of excavation, therefore reducing the number of physical locates that Hydro Ottawa must complete annually.

Dedicated Locate Agreements are an agreement administered by Ontario One Call to allow Project Owners to hire their own Dedicated Locators to complete the locates for specific infrastructure projects. Hydro Ottawa must agree to allow the Dedicated Locator to complete their own locates and grants access to Hydro Ottawa mapping and records to facilitate the completion of their own locates. The cost of these locates is paid for by the Project Owner, however Hydro Ottawa provides technical requirements for locating as well as performs quality audits for safety and accuracy.

3.4. UTILITY SERVICES

Hydro Ottawa works with other LDCs to find efficiencies through services agreements. Through 2021-2024 Hydro Ottawa has provided other distributors station, occupational health, safety and environmental assessment, and rate application services. The associated revenues and costs are recorded in Schedule - 6-3-5 Other Income & Deductions.

3.5. POLICY COLLABORATION

Hydro Ottawa regularly and actively collaborates with other industry members to enhance efficiency and minimize costs. Recognizing the value of a unified approach to shared challenges, the utility actively shares resources and expertise wherever possible. This extends to regular meetings with EC, OEA, EDA and Coalition of Large Distributors (CLD)[3] to exchange knowledge, collaborate on joint submissions and/or share legal costs for policy consultations.

A prime example of this collaborative approach is Hydro Ottawa's participation in the OEB's Generic Proceeding on Cost of Capital.[4] By partnering with fellow CLD Plus (CLD+)[5] members through the OEA and sharing the cost of a single expert witness and legal council, Hydro Ottawa realized several key benefits, including reduced expenses, access to leading expertise, and increased efficiency throughout the proceeding. This collaborative strategy underscores Hydro Ottawa's dedication to responsible resource management and to achieving optimal outcomes for customers and stakeholders.

[3] The CLD comprises Alectra Utilities Corporation, Elexicon Energy Inc., Hydro One Networks Inc., Hydro Ottawa Limited, and Toronto Hydro-Electric System Limited.
[4] Ontario Energy Board, *Generic Proceeding - Cost of Capital and Other Matters*, EB-2024-0063.
[5] The CLD+ comprises the CLD plus Enbridge Gas Inc., Ontario Power Generation and Upper Canada Transmission 2, Inc.

3.6. OTHER INFORMATION SHARING

Hydro Ottawa participates in numerous industry and association working groups in order to stay up to date on the industry. Including new efficiencies, lessons learned from pilot projects, industry and customers trends, supply chain strategies and approaches to address new OEB requirements.

4. JOINT USE ASSETS

Hydro Ottawa enhances cost efficiency and productivity through the strategic sharing of assets and costs with third parties, including other distributors, transmitters, municipalities, and telecommunications companies. This collaborative approach reduces the financial burden on customers by distributing costs among multiple users. For further detail, please see Schedule - 1-3-1 Rate Setting Framework and Schedule - 6-3-4 Other Operating Revenue.

While joint asset operation with other utilities generates cost savings, it also necessitates some additional expenses to support multi-utility use. These additional costs are recorded in Hydro Ottawa's operations, maintenance and administration expenses, as detailed in Schedule - 4-1-2 Operations, Maintenance and Administration Program Costs.