UPDATED OPERATIONS, MAINTENANCE AND ADMINISTRATION SUMMARY

1. INTRODUCTION

This Schedule provides an overview of Hydro Ottawa's total operating expenses, in the contexts of both the 2016-2020 and 2021-2025 rate periods. These expenses include Operations, Maintenance and Administration ("OM&A") expenditures, Property Taxes, Depreciation and Amortization expenses, and Payments in Lieu of Taxes ("PILS"). Detailed information with respect to each of these operating expenses is available in UPDATED Exhibit 4-1-3: Operations, Maintenance and Administration Program Costs, UPDATED Exhibit 4-1-4: Operations, Maintenance and Administration Cost Drivers and Program Variance Analysis, UPDATED Exhibit 4-3-1: Depreciation, Amortization Disposal, and UPDATED Exhibit: 4-4-1: Payments in Lieu of Taxes.

Please note that throughout this evidence, unless it is explicitly stated otherwise, OM&A is **inclusive** of property taxes.

Table 1 summarizes Hydro Ottawa's total operating expenses for the 2021-2025 period.

Table 1 – AS ORIGINALLY SUBMITTED – 2021-2025 Total Operating Expenses ($'000,000s)

	2021	2022	2023	2024	2025
OM&A excluding Property Tax	$90.8	$93.1	$95.4	$97.8	$100.2
Property Tax	$3.1	$3.2	$3.3	$3.4	$3.5
OM&A including Property Tax	$93.9	$96.3	$98.7	$101.2	$103.7
Depreciation	$52.5	$56.9	$59.1	$60.7	$64.0
PILS	$1.0	$5.2	$8.8	$11.8	$7.8
TOTAL[1]	**$147.5**	**$158.4**	**$166.6**	**$173.7**	**$175.5**

Table 1 – UPDATED FOR 2019 ACTUALS – 2021-2025 Total Operating Expenses ($'000,000s)

	2021	2022	2023	2024	2025
OM&A excluding Property Tax	$90.8	$93.1	$95.4	$97.8	$100.2
Property Tax	$3.1	$3.2	$3.3	$3.4	$3.5
OM&A including Property Tax	$93.9	$96.3	$98.7	$101.2	$103.7
Depreciation	$52.5	$56.9	$59.1	$60.7	$64.0
PILS	$2.2	$3.9	$8.6	$11.5	$7.6
TOTAL[2]	**$148.6**	**$157.1**	**$166.4**	**$173.4**	**$175.3**

2. OM&A SUMMARY

2.1 OVERVIEW

Hydro Ottawa's forecasted OM&A expenses include costs that are incurred to continue providing a safe and reliable electricity distribution system, meeting legislative and regulatory compliance requirements, and satisfying other operational and maintenance needs.

During the 2016-2020 period, Hydro Ottawa completed key OM&A-related projects and programs, such as operating and maintaining overhead and underground distribution lines, feeders, transformers, and distribution stations. The utility also incurred operations and

[1] Totals may not sum due to rounding.
[2] Totals may not sum due to rounding.

maintenance costs for programs designed to invest in proactive measures to avoid long-term OM&A and capital costs. Examples of such programs include vegetation management and asset maintenance.

Key projects and programs in the 2021-2025 period include distribution maintenance and operations programs, such as vegetation management, underground locates, information technology ("IT") maintenance, contact centre and billing activities, stations maintenance, and meter operations and testing activities.

Figure 1 below summarizes Hydro Ottawa's OM&A expenses over both rate periods (2016-2020 is displayed in blue; 2021-2025, in orange).

Figure 1 – AS ORIGINALLY SUBMITTED – 2016-2025 OM&A Expenses ($'000,000s)

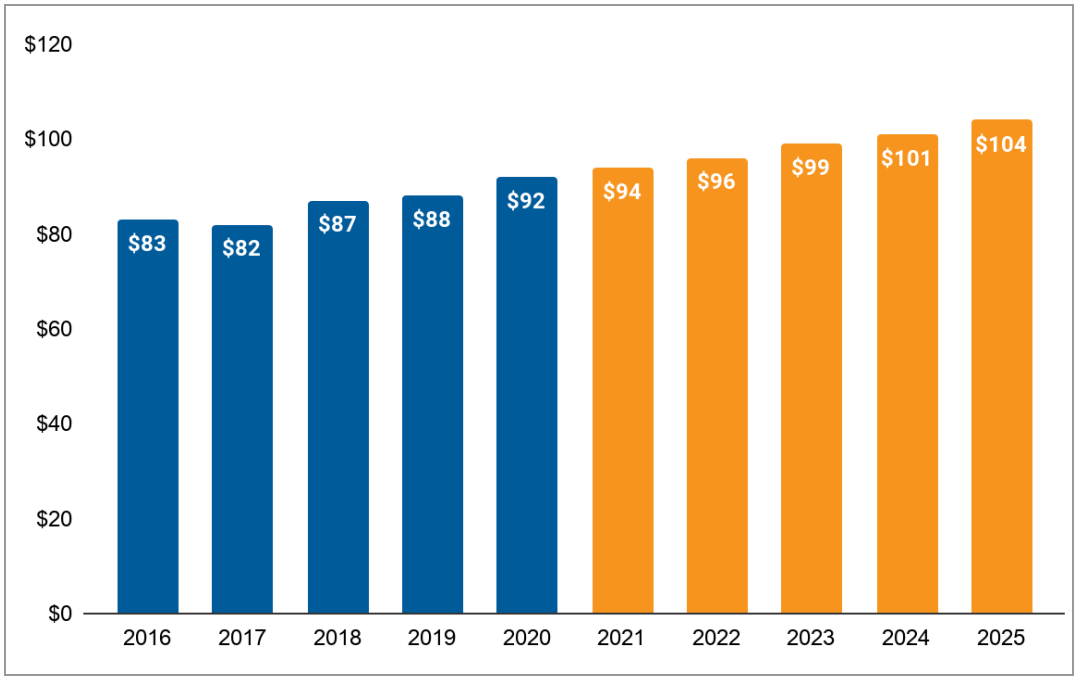
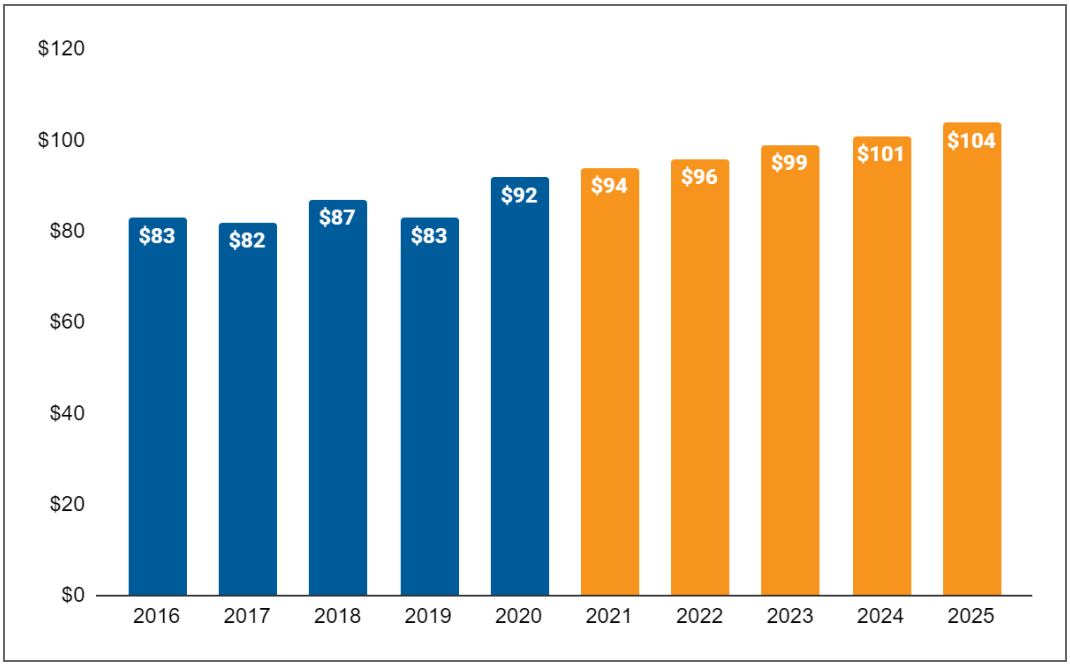


Figure 1 – UPDATED FOR 2019 ACTUALS – 2016-2025 OM&A Expenses ($'000,000s)



2.2 OM&A COST DRIVERS

Key cost drivers for OM&A are as follows:

Proactive and Reactive Distribution System Maintenance

This includes power outage restoration work due to storms, vegetation management (e.g. tree trimming for purposes of storm hardening), underground cable locates, distribution system inspections, and clean-up of sites contaminated by leaks/spills.

Employees, Equipment, and Facilities

Hydro Ottawa relies upon a skilled and experienced workforce that is equipped with the tools necessary to perform its work safely and efficiently. Ongoing employee training is required as the workforce is renewed due to retirements. This ensures that employees continue to work safely and keep pace with the new skill sets associated with a more sophisticated distribution system and evolving business landscape.

IT & Operational Technology Systems and Communications

Many of the utility's IT and operational technology systems require ongoing support, maintenance, and protection, including for purposes of cyber security. Examples of such systems include the Supervisory Control and Data Acquisition System, Geographic Information System, Customer Care and Billing System, Outage Management System, Enterprise Resource Planning ("ERP") system, and Human Capital Management ("HCM") system. The needs and costs associated with software licensing are also increasing.

For additional details on OM&A cost drivers, please see UPDATED Exhibit 4-1-4: Operations, Maintenance and Administration Cost Drivers and Program Variance Analysis.

2.3 PRODUCTIVITY INITIATIVES & SAVINGS

Some of the key productivity improvements undertaken by Hydro Ottawa during its 2016-2020 rate term include the launch of an upgraded ERP system and new HCM system, migration to a

new customer contact centre service provider, and implementation of a Mobile Workforce Management tool. Further details on these and other such initiatives are provided in Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives.

With respect to Hydro Ottawa staffing levels (as submitted in the utility's original Application), these are set to decrease in 2021 from 2019 levels (see Attachment 4-1-5(C): OEB Appendix 2-K - Employee Costs). After accounting for 2019 actuals, Hydro Ottawa staffing levels are set to increase in 2021 from 2019 levels (see UPDATED Attachment 4-1-5(C): OEB Appendix 2-K - Employee Costs). Ongoing and expected productivity improvements mean that the utility will be able to accomplish more while ensuring overall headcount remains stable and associated compensation costs are controlled. In addition, it should likewise be noted that Hydro Ottawa is currently serving more customers than it was in 2015, with the customer base having increased by almost 5%, as of the end of 2019.[3]

During the internal budgeting process at Hydro Ottawa for the 2021-2025 period, the initial levels of OM&A expenditures proposed by the various Divisions within the utility translated into an overall OM&A Compound Annual Growth Rate ("CAGR") of 3.5%.[4] This growth was attributable to increases in program activities, salaries and benefit costs, fuel costs, and market priced contracts.

The proposed 2021-2025 OM&A spending levels were reviewed by the Executive Management Team and several adjustments/reductions were made to the proposals. One significant modification was that inflationary adjustments were not applied to programs where inflationary growth was not already explicitly included (e.g. wages set through the collective bargaining process). As a result, Hydro Ottawa will manage these programs and their associated costs to 2020 cost levels.

[3] As of the end of 2015, Hydro Ottawa's total customer count was 323,919. This number increased to 339,771 as of the end of 2019. The addition of 15,852 customers during that timeframe is equivalent to approximately a 5% increase.

[4] Details on the parameters that governed the internal budgeting process at Hydro Ottawa can be found in Attachment 1-1-9(A): Corporate Memorandum - 2020-2025 Priorities and Budget Guidelines.

In addition, Hydro Ottawa applied a custom OM&A productivity escalator to its planned 2021 OM&A levels. The custom escalator applied was 2.51%.[5] The application of this custom escalation factor resulted in a reduction to OM&A spending over the 2021-2025 rate term of approximately $13.1M. These savings will be achieved in large part through productivity and continuous improvement initiatives, as described in Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives. Hydro Ottawa is committed to productivity and continuous improvement, and is confident that it has proposed a reasonable target for OM&A productivity.

3. PROPERTY TAXES

Property taxes are paid to the City of Ottawa annually based on the value of its buildings and substations and the associated municipal tax rates. For more information, please see UPDATED Exhibit 4-1-4: Operations, Maintenance and Administration Cost Drivers and Program Variance Analysis.

4. DEPRECIATION AND AMORTIZATION EXPENSES

For more information regarding Hydro Ottawa's Depreciation and Amortization expenses, please refer to UPDATED Exhibit 4-3-1: Depreciation, Amortization Disposal.

5. PAYMENTS IN LIEU OF TAXES

Pursuant to its obligations under Section 93 of the *Electricity Act, 1998*, Hydro Ottawa is liable for the payment of PILS to the Ministry of Finance based on its taxable income. For more information regarding PILS, please see UPDATED Exhibit 4-4-1: Payments in Lieu of Taxes.

[5] For more information on this productivity escalator and how it was calculated, please see Exhibit 1-1-10: Alignment with the Renewed Regulatory Framework.

SUMMARY OF CORPORATE DIVISIONAL FUNCTIONS

1. INTRODUCTION

The purpose of this Schedule is two-fold: (i) to identify the various Divisions within Hydro Ottawa's corporate structure; and (ii) to describe the functions and activities that are carried out by these Divisions.

Hydro Ottawa's employees are organized within the following Divisions:

- Chief Electricity Distribution Officer
- Chief Customer Officer
- Chief Information and Technology Officer
- Chief Financial Officer
- Chief Human Resources Officer
- Corporate Planning and Governance Group
- Legal Services Group
- Office of the President and Chief Executive Officer

The Divisions deliver value to the customer and the organization by providing core services in an effective and efficient manner.

At the outset of this Schedule, it merits observation that the costs associated with any services provided by any Division to other entities within the larger corporate enterprise of which Hydro Ottawa is a member (i.e. affiliates or Hydro Ottawa Holding Inc. [the "Holding Company"]) are appropriately calculated and allocated pursuant to Service Level Agreements ("SLAs"). For more details, please see Exhibit 4-2-1: Shared Services and Corporate Cost Allocation. Similarly, it should be noted that certain Divisions are based in the Holding Company with an allocation to Hydro Ottawa (i.e. Office of the President and Chief Executive Officer, Corporate Planning and Governance, and Legal Services).

For each Division within the utility, this Schedule provides the following information:

- A description of key activities and business areas, and an explanation of how these are aligned with the utility's corporate strategy as well as the OEB's Renewed Regulatory Framework ("RRF");
- An overview of key initiatives for the 2021-2025 period, with particular emphasis on value for the customer; and
- An outline of the key productivity and continuous improvement initiatives that have been undertaken during Hydro Ottawa's 2016-2020 rate term, as well as the productivity and continuous improvement initiatives that are planned for the 2021-2025 period.

2. CHIEF ELECTRICITY DISTRIBUTION OFFICER

2.1. INTRODUCTION

The Chief Electricity Distribution Officer ("CEDO") Division is comprised of seven main business areas that are responsible for planning, engineering, design, construction, and maintenance to provide a safe and reliable electricity distribution system. The Division also shoulders responsibility for 24/7 system monitoring and control, as well as emergency response planning, execution, and restoration.

Key statistics and figures with respect to the average work performed by CEDO employees on an annual basis are as follows:

- Over $100M in capital work performed;
- 500-600 System Access, System Service, and System Renewal projects;
- 4,000-5,000 customer connections;
- 2,500-3,000 isolation and re-energizations performed for service upgrades, service removals, and non-electrical maintenance;
- Over 2,800 work permits issued; and
- More than 3,800 switching orders performed.

In addition, through Hydro Ottawa's membership in the North Atlantic Mutual Assistance Group, field crew personnel in CEDO provide emergency restoration support to other utilities across Canada and the United States.

2.2. BUSINESS AREAS

- **System Operations:** is responsible for ensuring overall grid integrity, security, reliability, and optimization. This group serves as the controlling authority for distribution operations by conducting 24/7 monitoring and management of the power system. During system and emergency events, System Operations coordinates the planning and execution of the utility's response and restoration activities, ensuring the safety of personnel and minimization of the duration and impact of the disturbance.

- **Asset Planning and Distribution Engineering:** plans, develops, and oversees distribution inspection, testing, maintenance, and capital programs. This includes the development and maintenance of design and construction standards to enhance the durability and reliability of distribution plant, and to ensure the safety of staff and the public at large. This group also performs a project management function for large substation construction and refurbishment.

- **Distribution Design:** designs and manages all System Service, System Renewal, and System Access construction projects.

- **Distribution Construction and Maintenance:** encompasses all overhead and underground personnel responsible for construction, maintenance, reliability, and emergency response. Employees from this group also provide emergency restoration support to other utilities in Canada and the United States.

- **Program and Contractor Management:** oversees the inspection, maintenance, and construction contractors who provide support and services in the execution of the utility's annual programs. Scheduling and monitoring the status of programs and projects

through execution likewise falls under the purview of this group. In addition, this group owns and operates the Mobile Workforce Management system that schedules and dispatches high-volume, short-duration work to crews performing the following functions: metering, field collections, inspections, vegetation management, and new customer servicing.

- **Stations:** performs all field work associated with the following: (i) construction, maintenance, upgrades, and inspections of all distribution substations within the service territory; and (ii) grid automation and communication systems to facilitate improved system monitoring and remote power restoration.

- **Metering:** acquires, installs, maintains, and monitors the testing of meters. Meter Data Services is also embedded within this group and is responsible for reading and validating all data from every meter point to ensure accurate billing and settlement for electricity that is purchased and sold by Hydro Ottawa.

2.3. 2021-2025 BUSINESS PRIORITIES

The CEDO Division performs many of the basic functions that are essential to the utility's ownership and operation of its distribution system. In many ways, Hydro Ottawa's ability to achieve its strategic objectives relating to Customer Value, Organizational Effectiveness, and Financial Strength (and by extension, their RRF counterparts of Customer Focus, Operational Effectiveness, and Financial Performance) is contingent upon CEDO's success in fulfilling its broad set of accountabilities.

Accordingly, foremost among the chief priorities for CEDO over the course of 2021-2025 will be the successful execution of all capital and maintenance programs, on time and on budget. Areas of particular focus and emphasis will include the quality and cost-effectiveness of workforce scheduling and contractor management. For the sustainment capital program, priority attention will be given to aging infrastructure, pockets of the service territory with persistent reliability issues, and station capacity. In the demand capital program, attention will be fixed on

new customer connections, system expansions, and plant relocations and upgrades driven by the needs of third parties. And in the testing, maintenance, and inspection programs, a crucial priority will remain ongoing evaluations of distribution system assets such as poles, cables, switches, and underground chambers.

Alongside the aforementioned activities, another major priority will be maintaining and enhancing Hydro Ottawa's best-in-class reliability metrics, the attainment of which the utility has worked rigorously to achieve in recent years.

Finally, CEDO will help support revenue diversification efforts within the utility, through the development of multiple service and construction offerings (e.g. emergency repair and replacement of customer-owned distribution assets, meter services for other entities, distribution substation services to private businesses and other electricity distributors, and forestry services). Likewise, CEDO will look for opportunities to expand Hydro Ottawa's distribution system through the acquisition of customer-owned assets, where appropriate and cost-effective.

2.4. KEY 2021-2025 PRODUCTIVITY & CONTINUOUS IMPROVEMENT INITIATIVES

Productivity in the CEDO Division during the 2021-2025 period will focus on a number of different themes, including enhancing organizational effectiveness in execution processes, increasing "wrench time" for crews, redeploying resources to higher value work, effectively managing contractors, increasing automation, and modernizing the grid.

For example, Hydro Ottawa is set to explore the implementation of seasonal construction shifts. These would take advantage of the increased amount of daylight in the spring and summer months to increase crew productivity, reduce overtime costs, and improve customer service. Similarly, using Global Positioning System analytics, the utility plans to identify impediments to the optimization of crews' wrench time, and undertake process and resource improvements to alleviate them. Cost savings are likewise expected to accrue from the ongoing refinement of programs requiring support from external contractors. Annual savings are projected for vegetation management over the course of 2021-2025. Finally, continuous improvement with

respect to grid modernization will concentrate largely on optimizing the functionality and value of existing meters. Action in this regard will include deployment of a cloud-based analytics platform to enhance the harvesting and analysis of data that is collected from customers' meters, as well as the installation of new equipment to improve the communications and data transfer capability of existing metering infrastructure.

For more information on continuous improvement activities planned for the 2021-2025 period, please see Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives.

3. CHIEF CUSTOMER OFFICER

3.1. INTRODUCTION

Hydro Ottawa established the executive role of Chief Customer Officer ("CCO") in 2016. This action was undertaken as part of a larger package of leadership and organizational shifts that were intended to better align the utility with the goals set forth in its *2016-2020 Strategic Direction* – and, in particular, with the overriding imperative to put the customer at the centre of everything the organization does.

Creation of the CCO position consolidated the organization's primary customer experience functions under one administrative structure. By organizing these groups together within one corporate Division, Hydro Ottawa has been better able to leverage, align, and expand its customer service offerings, advance the delivery of the utility's Customer Experience Strategy, and position Hydro Ottawa as an innovative and truly customer-centric organization.

The CCO Division fosters direct and meaningful relations with customers, and acts as a liaison between the customer and the utility. CCO guides the direction of the business in terms of customer needs, influencing corporate activities and initiatives to ensure that the customer experience is understood, appreciated, and considered in all major decisions, at all times. It works with other teams to actively identify and capitalize on opportunities to streamline customer processes, to offer new services, and to leverage new technologies.

In addition, CCO is responsible for the administration of all new service connections, service upgrades, and service removal processes for residential and small commercial customers, including supporting customers as they navigate through the lifecycle of their individual jobs.

The CCO Division collaborates with other Divisions across the utility for several purposes (e.g. to support the testing and integration of new regulatory requirements into Hydro Ottawa's operations). CCO also assists Divisions in enhancing the larger Hydro Ottawa brand through effective communications, marketing, and customer relationship management. This includes building a robust level of employee ambassadorship and contribution by engaging employees in customer-related initiatives.

3.2. BUSINESS AREAS

- **Customer Care:** manages customer interaction activities, including the handling of the 260,000 calls received every year through the Customer Contact Centre, customer correspondence, new customer account requests, changes to existing customer accounts, move requests, Auto Pay and Equal Monthly Payment Plan requests, complex customer inquiries, and reporting. In addition, this group oversees the Service Desk, which assists customers and contractors with a number of services that include new service connections, service modifications, and maintenance.

- **Customer Experience:** plans and implements initiatives focused on continuously improving the customer journey, enhancing understanding of customer needs, preferences, and behaviour, and maximizing choice, convenience, and control for customers in their interactions with Hydro Ottawa. This group also collects, reviews, and reports on customer analytics to pinpoint trends, address recurring customer issues, and identify opportunities to further enhance existing processes and services. Another major responsibility is proactively managing relationships with Key Account customers and supporting their diverse needs with respect to costs, energy management, power quality, and energy efficiency. Finally, this group is accountable for the execution of remaining projects under the interim framework for energy efficiency in Ontario, and identifying

opportunities for future development and implementation of customized local energy efficiency projects and programs.

- **Billing and Collections:** oversees the production of 3.6 million customer bills on an annual basis, processing of bill payments, and collection of amounts owing on customer accounts (including through enlisting the services of collection agencies). The administration and delivery of programs aimed at assisting customers who are having difficulty with bill payment (e.g. Ontario Electricity Support Program and Low-income Energy Assistance Program) is also the responsibility of this group.

- **Communications and Public Affairs:** advances Hydro Ottawa's brand and reputation as a trusted partner and a vital community asset, by creating awareness of Hydro Ottawa's work, plans, and community contributions. Through numerous platforms such as social and traditional media, web channels, and mobile applications, this group guides the execution of a comprehensive communications strategy directed at customers, the general public, the media, and other key external stakeholders. In addition, it provides strategic and operational communications support to other Divisions across Hydro Ottawa, including the President & Chief Executive Officer ("CEO") and Executive Management Team. This includes crisis communications support during severe outages and weather events, as well as advertising and marketing programs. Other responsibilities consist of issues management, administration of the utility's community investment program, community relations and consultation, public education, and relations with the City of Ottawa (the sole shareholder of the larger corporate enterprise of which Hydro Ottawa is a member).

3.3. 2021-2025 BUSINESS PRIORITIES

Over the course of its 2016-2020 rate term, Hydro Ottawa has been implementing a formal Customer Experience Strategy and an accompanying roadmap for action. The overarching goals of this strategy are to become a partner for customers that is easy to do business with,

caring, and efficient, and to deliver seamless customer service excellence across all channels and customer touchpoints. Five strategic imperatives guide this strategy:

- Developing a customer-centric culture
- Understanding customers
- Improving customer touchpoints
- Providing leading services and products
- Enhancing technologies and processes

As discussed elsewhere in this Application, tremendous progress has been made thus far in meeting the commitments and targets under this strategy.[1] Notwithstanding this success, however, more work is required to comprehensively fulfill the ambitious scope of the strategy.

Accordingly, the top priority for the CCO Division during the 2021-2025 period will be continuing this journey towards taking the customer experience to the next level of excellence, and offering customers more personalization, choice, convenience, and self-serve capability in the services provided by Hydro Ottawa. Examples of projects and initiatives that will be rolled-out in support of these priorities include the following: implementing systems and processes to enable one-to-one conversations with customers; developing an interface to centralize customer data points to allow for targeted and personalized communications; and expanding product offerings for Key Accounts, developers, and contractors.

The linkage between the foregoing activities and Hydro Ottawa's core strategic objective of Customer Value is clear. The nature of CCO's work, and the outcomes thereof, also give rise to robust connections between the Division's actions and the three other areas of focus within the utility's broader business strategy – i.e. Organizational Effectiveness, Financial Strength, and

[1] For more details, please see the following: Attachments 1-1-10(A), 1-1-10(B), and 1-1-10(C): 2016, 2017, and 2018 Annual Summaries - Achieving Ontario Energy Board Renewed Regulatory Framework Performance Outcomes; Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives; Exhibit 1-2-1: Customer Engagement Overview; and Attachment 1-2-1(B): Customer Strategy.

Corporate Citizenship. In turn, the Division's responsibilities dovetail directly with all of the performance outcome categories under the RRF.

3.4. KEY 2021-2025 PRODUCTIVITY & CONTINUOUS IMPROVEMENT INITIATIVES

In step with the core tenets of Hydro Ottawa's business strategy, the productivity and continuous improvement activities planned by CCO for the upcoming rate term are all anchored in the fundamental imperatives of putting the customer at the centre of everything the utility does – providing more personalization, choice, convenience, control, and self-serve capability to customers – and of embracing greater automation in business processes.

Of all the productivity initiatives being proposed, the most consequential is arguably the deployment of a digital Customer Relationship Management ("CRM") platform that will enable a 360-degree view of customer activity across the organization. This initiative will provide a single, end-to-end picture of the customer's journey aggregated from across various channels, systems, and data silos. By providing a unified view of all customer touchpoints, Hydro Ottawa will gain greater customer insight to deliver more personalized and engaging customer experiences, improve customer intelligence, and achieve corporate performance objectives.

Among the most compelling aspects of this project is that its benefits will ripple across numerous functional areas within the utility – not just in the CCO Division, but in several other Divisions as well. With customer data currently residing in multiple systems, there are barriers to achieving direct, holistic, real-time line-of-sight into a customer's profile, preferences, and interaction and touchpoint history. Equipped with the CRM solution, however, business units company-wide will enjoy full visibility into account activity (whether for low-volume or Key Account customers), thus positioning the utility to more efficiently serve and segment customers based upon their unique needs and priorities.

For more information on continuous improvement activities planned for the 2021-2025 period, please see Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives.

4. CHIEF INFORMATION AND TECHNOLOGY OFFICER

4.1. INTRODUCTION

The Chief Information and Technology Officer ("CITO") Division provides vision and leadership for developing and implementing information technology ("IT") and operational technology ("OT") initiatives, in alignment with Hydro Ottawa's business strategy. CITO plans and oversees the utility's IT/OT initiatives and information management needs, while supporting corporate functions through functional leadership and appropriate IT capabilities. This includes partnering with other Divisions – as well as other entities across the larger corporate enterprise – to fulfil their mandates by developing, implementing, and supporting technology that facilitates the efficient delivery of services and functions. CITO also has a stewardship mandate in relation to the lifecycle management of Hydro Ottawa's physical IT assets, as well as its information assets. The utility balances IT needs not only to enable robust business operations but also to advance strategic and growth objectives, while ensuring compliance with privacy and access to information laws.

4.2. BUSINESS AREAS

- **Planning & Programs:** leads, shapes, and guides the planning, execution, and delivery of technology initiatives. This includes translating corporate strategy into actions, setting priorities, aligning goals and outcomes, assigning project managers, managing governance, and reporting on investment decisions. In addition, this team shoulders responsibility for information management, which is defined as the collective management of people, processes, and technology to provide control over the structure, processing, delivery, and usage of information required for business intelligence and operations.

- **Infrastructure Management:** manages all of the utility's data centers and computing infrastructure such as hardware, software, and network resources. The delivery of essential IT services also falls under the scope of this group and consists of services like server deployment, desktop refresh, storage management, email and collaboration tools,

voice and mobility services, business continuity planning, security patching, and the IT helpdesk.

- **Enterprise Applications:** acquires, develops, and integrates applications capability in support of business systems and solutions. These include the following: meter-to-cash operations; web, mobile, and digital technology channels (e.g. corporate website and intranet, MyAccount online customer self-service portal, and mobile application); back office enterprise resource planning system for accounting, supply chain, inventory, payroll, and human capital management; job scheduling; field crew dispatch; and asset planning. This group also serves as the custodian of raw enterprise data, database administration, data governance, and the mechanisms by which data is delivered across business systems.

- **Cybersecurity:** maintains a highly active program to safeguard the integrity, confidentiality, and availability of Hydro Ottawa's information and systems. 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. Cybersecurity services are managed in conjunction with an ecosystem of partners to ensure technical, legal, and communication support during an incident.

- **Grid Technology:** maintains, modifies, and supports Hydro Ottawa's OT systems, including the Supervisory Control and Data Acquisition ("SCADA") system for monitoring and controlling the grid, Geographic Information System ("GIS") for system mapping, Outage Management System ("OMS") for power outage restoration, along with a portfolio of design, engineering, and monitoring tools that are utilized to help maintain and improve reliability. In addition, this group performs innovative research, development, and deployment activities involving Smart Grid technologies, including for purposes of introducing new products and services.

4.3. 2021-2025 BUSINESS PRIORITIES

Much of the CITO Division's work over the impending five-year rate period will be executed in accordance with Hydro Ottawa's *2021-2025 Digital Strategy,* which is appended to this Application as Attachment 1-1-13(B). This means that IT/OT projects and initiatives pursued during this rate term will be animated by four underlying objectives: enhancing the customer experience; evolving the grid; increasing productivity and automation; and participating in energy innovation and technology.

Key priorities for the Division will include enabling the deployment of new software and solutions to support enhanced service offerings to customers. Expanding and integrating the use of robotics and analytics into these solutions will likewise be a prime area of focus. Similarly, a parallel approach will be undertaken in relation to the installation and optimization of grid automation technology on Hydro Ottawa's distribution grid (e.g. through the deployment of sensors and remotely-operated devices allowing for real-time, system-wide outage visibility; the enhancement of Distribution Management System ["DMS"] capabilities; and the integration of a cloud-based analytics platform to optimize functionality of existing advanced metering infrastructure). In addition, Hydro Ottawa intends to successfully execute its flagship grid modernization and smart energy projects. Finally, continuous strengthening of the utility's cybersecurity, information management, and privacy programs will be pursued with vigour.

In shepherding these and other priorities forward, the CITO Division will lend critical support to the achievement of the utility's strategic objectives pertaining to Customer Value and Organizational Effectiveness (with its activities thus comporting with the RRF's interest in Customer Focus and Operational Effectiveness).

4.4. KEY 2021-2025 PRODUCTIVITY & CONTINUOUS IMPROVEMENT INITIATIVES

Given the essential functions served by technology and data in the business and operations of the modern utility, the CITO Division is set to play a critical role in the implementation of numerous productivity initiatives during the 2021-2025 rate term. For example, through the introduction of new technology, CITO will enable growth in the number of channels through

which customers can communicate with Hydro Ottawa. This will not only augment the customer experience, but will yield rich analytical insights into customer needs and preferences that will help inform ongoing refinements to how resources are allocated to customer service projects, especially those for which the use of artificial intelligence and automation is contemplated.

In addition, the Division will be heavily involved in the enhancements or replacements that are planned for several mission-critical business systems and solutions. These include the enterprise resource planning system, Customer Care & Billing system, and OMS and DMS systems, all of which are slated for significant upgrades over the course of 2021-2025. It also includes the replacement of the utility's field service management tool, Mobile Workforce Management. Together, these and other improvements will help lower operational costs and boost employee productivity through such actions as automating business processes, eliminating manual transactions and tasks, generating higher quality information to guide decision-making, simplifying user interfaces, and integrating systems and enhancing their functionality.

For more information on continuous improvement activities planned for the 2021-2025 period, please see Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives.

5. CHIEF FINANCIAL OFFICER

5.1. INTRODUCTION

The Chief Financial Officer ("CFO") Division provides financial support across all aspects of Hydro Ottawa's business and operations, as well as for other entities within the larger corporate enterprise. This Division performs traditional finance functions such as preparing annual budgets, forecasting, financial planning and reporting, accounting, treasury, and internal audit. The Division also plays a key support role in the formulation of Hydro Ottawa's business and strategic plans, and bears primary accountability for fulfilling many of the utility's financial, statutory, and regulatory obligations to its employees, external suppliers, external auditors, and Board of Directors, as well as to bondholders, the shareholder, government agencies, OEB, and

the Independent Electricity System Operator ("IESO"). In addition, management of the utility's fleet, facilities, and supply chain fall under the purview of the Division.

What's more, through a combination of formal processes and informal practices, the CFO Division supports efforts to promote and embed an organizational culture of accountability, productivity, performance, innovation, profitability, and entrepreneurship.

5.2. BUSINESS AREAS

- **Finance:** oversees the budgeting, forecasting, and business planning cycles. This group is likewise responsible for all internal and external financial reporting, accounting, accounts payable and payment cycles, cash receipts processing, accounts receivable, and administration of capital assets and regulatory accounting activities.

- **Tax and Treasury:** manages matters relating to cash flow, arrangements with banks and lending institutions, credit ratings, corporate financing and liquidity, taxation, financial compliance, and insurance.

- **Internal Audit and Risk Management:** evaluates and improves the effectiveness of corporate risk management, internal controls, and governance processes, and enables the effective identification and timely management of factors likely to impede the achievement of corporate objectives. Direct reporting on these matters to the Board of Directors is a key responsibility.

- **Supply Chain:** delivers procurement and warehouse functions, through the administration of procurement policies, procurement of all products and services acquired by the utility, and management of the inventory and equipment used to construct and maintain Hydro Ottawa's distribution assets. In accordance with corporate policy, this group ensures that fair, open, efficient, transparent, and accountable competitive processes are followed, that favourable prices are obtained to maximize

value for the utility and its customers, and that goods and services are procured from reputable and ethical vendors.

- **Regulatory Affairs:** ensures that the utility is able to fulfill its obligations under the various rules, regulations, and codes of the OEB, IESO, and Ministry of Energy, Northern Development, and Mines. Core functions include overseeing the implementation of OEB-approved distribution rates and charges, preparation of distribution rate applications, load forecasting, cost allocation, rate design, regulatory and compliance reporting, policy research and analysis, and public policy engagement.

- **Fleet & Facilities:** supervises the acquisition, operations, and maintenance of Hydro Ottawa's fleet and facility assets. These assets include four operations centers, an administrative office, fleet garage, training facility, and approximately 70 distribution stations and 234 vehicles.

5.3. 2021-2025 BUSINESS PRIORITIES

The CFO Division occupies a prominent role in helping Hydro Ottawa achieve its corporate strategic objective of Financial Strength – a goal which aligns seamlessly with the RRF's emphasis on Financial Performance. In keeping with this role, the Division's overarching priorities for the impending five-year rate period will include ensuring strong financial operations, practices, information, systems, and reporting across the utility to support informed decision-making, as well as ensuring the achievement of value for money and sound stewardship in the management of assets and procurement. Supporting other Divisions within the utility in the execution of corporate priorities will also be a chief imperative, especially in relation to the pursuit and roll-out of strategic initiatives (e.g. potential expansion of Hydro Ottawa's business activities; possible consolidations, shared services, or strategic collaborations with other electricity distributors or partners; and monetization of corporate assets and expertise). Effectively executing, monitoring, and reporting against the progress of this Application will likewise serve as a critical area of focus.

5.4. KEY 2021-2025 PRODUCTIVITY & CONTINUOUS IMPROVEMENT INITIATIVES

The path for continuous improvement activities in the CFO Division during the 2021-2025 period is largely one which will continue the trajectory of the 2016-2020 rate plan. Over the past five years, much of the Division's productivity focus has been on transitioning away from administratively burdensome, manual processes to digital processes and platforms with self-service capability that simplify and streamline business practices. As one of the largest users of the utility's JD Edwards enterprise resource planning ("ERP") system, the CFO Division helped steer the ERP upgrade project that was successfully implemented in recent years.[2] The Division will therefore likewise be strongly engaged in the project planned during the 2021-2025 rate term to further enhance the ERP system by migrating it to a cloud-based platform.

The CFO Division has likewise been a key architect and beneficiary of other business process optimization efforts, such as the adoption of the DocuSign software solution enabling electronic review and approval of documents. The Division is therefore committed to the continued exploration of additional business process enhancements, including the piloting of Robotic Process Automation for highly transactional activities.

In addition, CFO management continues to focus on ensuring that work evolves and that processes are as effective and efficient as possible, with staff working on value-added and meaningful analysis work. This is resulting, and will continue to result in, a shift from less transactional processing to more knowledge-based work such as data analytics to develop business intelligence and to enhance strategy-focused financial planning. This is an ongoing process, a key part of which is Hydro Ottawa's organizational cultural change to enhance accountability, while strengthening the focus on innovation and productivity.

For more information on continuous improvement activities planned for the 2021-2025 period, please see Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives.

[2] For more information on the ERP upgrade, please see Attachment 1-1-10(C): 2018 Annual Summary - Achieving Ontario Energy Board Renewed Regulatory Framework Performance Outcomes, pages 13-17.

6. CHIEF HUMAN RESOURCES OFFICER

6.1. INTRODUCTION

The Chief Human Resources Officer ("CHRO") Division is responsible for providing leadership and guidance on all matters related to people and safety in the areas of recruitment, compensation (including payroll), training, employee and labour relations, organizational development, change management, and health, safety, and wellness, as well as in non-traditional areas such as environment (compliance and sustainability), emergency preparedness/business continuity management, trades apprenticeship programs, and the joint delivery of Algonquin College's Powerline Technician Diploma Program. This is achieved through the development and implementation of policies, frameworks, and programs that ensure operational capacity and continuity by supplying the right talent with the right knowledge and skill sets, by providing a safe and healthy work environment, and by engaging, aligning, and preparing the workforce.

The CHRO Division supports the strategic objectives and priorities of the utility by creating an effective and agile learning organization which promotes and embraces the cultural attributes that enable Hydro Ottawa to achieve its Strategic Direction. The CHRO Division partners with the business to provide solutions to enhance the productivity and performance of employees, ensure their readiness to respond to the change and disruption in the industry, and enrich the employee experience by driving efficiency and accountability at the appropriate levels.

The work of the CHRO Division has led to Hydro Ottawa receiving best employer and innovation recognition, both locally and nationally, including the following:

- National Capital Region's Top Employers from 2009-2019;
- Algonquin College's Alumni Employer of the Year in 2018;
- Canada's Top Employers for Young People for the past six years (2014-2019);
- Canadian HR Award for Next Generation Employment Innovation of the Year in 2017;
- Canada's Best Diversity Employers for 2018 and 2019; and

- Hire Immigrants Ottawa Employer of Excellence in 2016.

6.2. BUSINESS AREAS

- **Compensation:** develops and administers workforce compensation strategies, practices, and technologies (including those related to payroll, pension, and benefits), and implements programs and practices to support a performance-driven work culture.

- **Employee and Labour Relations:** provides advice to people leaders on compliance with corporate policies and relevant legislation, including the development of policies and procedures, and negotiates, administers, and interprets the collective bargaining agreement.

- **Organizational Development:** develops and administers strategies related to workforce planning, with a focus on fostering and maintaining a highly skilled, properly trained, and knowledgeable workforce. In addition, this group manages internal corporate communications to employees, and leads the development of employee engagement, recognition, and orientation programs, ensuring alignment between individual employee contribution/performance and Hydro Ottawa's strategic objectives and performance measurement.

- **Recruitment:** works with people leaders to implement workforce planning strategies and programs as they relate to employee recruitment, in a manner that ensures adherence to corporate values and commitments to establishing a qualified workforce that reflects the diverse population served by Hydro Ottawa.

- **Training:** develops and administers a wide variety of training and development programs and courses, aimed at equipping employees with the skills, preparation, and leadership qualities required to thrive in a rapidly changing business environment.

- **Health, Safety and Wellness:** administers the formal management system (which is registered to international standards) for ensuring a safe and healthy work environment for all employees. This system encompasses policies, processes, procedures, orientation, training, jobsite coaching, inspections, audits, standards, management of contractor safety performance, and compliance with all relevant health and safety statutory requirements. In addition, this group develops strategies and delivers programs to help prevent employee illnesses and injuries and reduce any associated lost time. This includes working with people leaders on employee absence claims and reintegration into the workplace following periods of leave, and promoting employee wellness and wellbeing.

- **Change Management:** designs and delivers systems, programs, and processes to engage employees in successfully preparing for changes in the work environment and to position the organization for increased productivity following the adoption of these changes. This group also exercises responsibility for engaging all divisions within the utility to support the implementation of major cross-cutting projects and initiatives (e.g. migration to new administrative and operational facilities, adoption of new workplace technology, enhancements to performance management framework, etc.)

- **Trades Apprenticeship Programs:** manages in-house programs focused on sustaining a strong base and supply of trades talent. Administration of these programs involves the formation and maintenance of partnerships within and outside the organization (e.g. Algonquin College).

- **Environment:** plans, implements, and maintains a management system aimed at improving the utility's environmental performance and reducing the environmental impacts of its operations. This encompasses compliance-related activities, such as reporting, inspections, and audits, as well as sustainability initiatives focused on reducing the utility's carbon footprint, greening its procurement and supply chain practices, and building a culture of sustainability within the workforce.

- **Business Continuity Management:** oversees the framework for building organizational resilience, maintaining emergency preparedness, and managing business disruptions; identifies potential threats to the organization and the impacts to business operations of such threats; and works with business areas to develop and implement recovery plans for ensuring continuity of products and services. This business area is responsible for administering the utility's Crisis Management Plan, as well as the supporting plans which fall under the crisis management umbrella.

6.2.1. Human Resources Operating and Service Delivery Model

As depicted in Figure 1, the CHRO Division, through its leadership and employees, delivers the mandate noted above through an operating and service delivery model that is designed around the human resources ("HR") customer (the employee), leverages technology, and is aligned to the changing needs of the business.

Figure 1 – HR Operating and Service Delivery Model

6.2.1.1. HR Technology

Innovative and employee-centered HR technologies, such as Hydro Ottawa's Human Capital Management ("HCM") system, provide employees and people leaders with direct access to their

information anytime, anywhere, and on any device, enabling them to view and edit their own personal information, initiate transactions online (e.g. time and equipment entry, leave requests, etc.), and proactively manage performance and development. People leaders, through process flows, approve transactions online, and have access to data on their employees, as well as actionable information, such as reports and dashboards, to assist in making more effective and timely decisions.

The introduction of Hydro Ottawa's HCM system has earned the utility accolades from the industry with the 2018 Electricity Human Resources Canada Award for Innovation in HR Practices, and from the HR community with the 2019 Canadian HR Award for Most Innovative Use of HR Technology.

6.2.1.2. HR Service Centre

The HR Service Centre is the first point of contact for employees and people leaders for all HR enquiries. The HR Service Centre responds to common HR requests, supports the recruitment process, and redirects more complex issues to the appropriate HR Centres of Expertise.

6.2.1.3. HR and Safety Partners

The business-facing strategic HR and Safety Partners, aligned to the utility's divisions/groups, work together to provide advisory and consultative services to people leaders, bringing solutions on employee and safety-related issues consistent with best practices for the type of work performed. The Partners leverage the HR Centres of Expertise to bring the right combination of service, support, and guidance to their customer groups.

6.2.1.4. HR Centres of Expertise

The HR Centres of Expertise consist of HR specialists with deep technical, legislative, and regulatory knowledge and insight in functional HR areas aligned with the employee lifecycle of planning, attraction and acquisition, deployment, performance and development, and exit and transition. These specialists design and develop strategies to drive leading-people policies,

programs, processes, and tools, and provide innovative solutions to HR customer and business needs.

6.3. 2021-2025 BUSINESS PRIORITIES

The CHRO Division plays a pivotal role in supporting Hydro Ottawa's achievement of its corporate strategic objectives and priorities in all of its areas of focus, with additional emphasis in the areas of Organizational Effectiveness and Corporate Citizenship. The Division's overarching priorities are to ensure the organization's operational capacity and continuity by supplying the right talent with the right knowledge and skill sets, by providing a safe and healthy work environment, and by engaging, aligning, and preparing the workforce.

More specifically, as outlined in Attachment 4-1-5(B): Workforce Planning Strategy, the CHRO Division will lead the organization's workforce planning, with a focus on sustaining its trades workforce, replacing mid-level experienced front-line supervisors/managers, and responding to the changing skill sets required in light of the technological innovations and digital transformation in the electricity sector.

Additionally, as outlined in Attachment 4-1-5(D): Health, Safety and Environment Compliance and Sustainability, the CHRO Division will continue to manage and advance Hydro Ottawa's health and wellness, employee and public safety, and environmental programs (both compliance and sustainability-related) so as to meet legislative and regulatory requirements, align with best practices, and maintain standards of performance relative to risks associated with its ongoing business activities.

The CHRO Division will also continue to ensure that Hydro Ottawa's compensation philosophy and associated compensation components, as summarized in Attachment 4-1-5(A): Employee Compensation Strategy, are premised on attracting and retaining a highly skilled workforce and on supporting a performance-driven work culture. This will be achieved by appropriately and fairly rewarding performance in the achievement of the utility's strategic objectives, and in

accordance with position competencies and the organization's values, while at the same time controlling total compensation costs.

6.4. KEY 2021-2025 PRODUCTIVITY & CONTINUOUS IMPROVEMENT INITIATIVES

An essential element of Hydro Ottawa's Strategic Direction is ensuring readiness to respond to the change and disruption in the industry and the changing needs of the business and its customers.

The CHRO Division has and will continue to embrace digital innovation as outlined in section 6.1 above. This involves moving away from time-consuming, manual, and paper-based processes to cloud-based, mobile-friendly solutions with self-service capability and automated workflows, which leverage how Hydro Ottawa's employees already consume and interact with information outside of work.

The CHRO Division will continue to seek opportunities to streamline and automate processes with technological solutions. This includes both leveraging its current HCM system to continue to automate what have in the past been time-consuming, manual, paper-based processes for employees and people leaders, and to expand its self-service capabilities, as well as integrating and introducing other HR technologies such as a cloud-based Occupational Health, Safety and Environment ("OHSE") software solution. The OHSE software solution, as referenced in Attachment 4-1-5(D): Health, Safety and Environment Compliance and Sustainability, will automate the manual processes and workflows associated with Hydro Ottawa's OHSE activities and eliminate the paper forms and paper-based recording of these activities by employees in the field.

This approach to embracing technological solutions is also positioning Hydro Ottawa to make more effective and timely people and safety-related decisions through access to powerful data and analytics, including predictive analytics.

These technological solutions have also become one of the principal means of communicating with employees. Whether it is letters of employment, notices for training or change of work location, or micro-learning through new programs, the main repository is the HCM system. Coupled with electronic newsletters, digital screens and intranet, employee communication is timely and paperless.

Another noteworthy opportunity which Hydro Ottawa began introducing to its workforce in the last few years, and which will increase substantially in the next five years, is the delivery of training through eLearning in lieu of classroom-based sessions. This enables the utility to better leverage trades' inclement weather days for training purposes, allows for training at the worksite/individual workstation, and provides access to just-in-time training for employees. For example, employees have recently completed Business Continuity Management, Cybersecurity, and Code of Business Conduct training through comprehensive eLearning modules. This supplemented some of the current training for health and safety also delivered online. With its recently obtained library of eLearning courses, integrated with its HCM system, Hydro Ottawa is well equipped to increase the delivery of legislated, business, and leadership skills training through eLearning, enabling it to more efficiently and effectively address the workforce planning challenges outlined in Attachment 4-1-5(B): Workforce Planning Strategy.

7. CORPORATE PLANNING, GOVERNANCE, LEGAL SERVICES, AND OFFICE OF THE PRESIDENT & CEO

7.1. INTRODUCTION

These groups are housed within the Holding Company and only a portion of their costs are allocated to Hydro Ottawa.

The President and CEO shoulders responsibility for the strategic leadership, profitability, sustainability, and growth of the utility, in alignment with the corporate strategy established by the Board of Directors. This individual provides leadership and direction to the Executive

Management Team, with respect to the execution of the corporate strategy and achievement of corporate performance goals.[3]

The Corporate Planning and Governance ("CP&G") Group is responsible for the development and implementation of an integrated strategic and business planning framework for Hydro Ottawa, and process management for tracking, monitoring, and reporting of progress against these plans. The group also fulfills a corporate secretariat function, dealing with all matters pertaining to corporate governance of the utility (e.g. providing coordination and support for the Executive Management Team, Board of Directors, and Board Committees, as well as ensuring compliance with applicable legal and policy requirements under corporate statutes).

The Legal Services Group is tasked with the coordination and delivery of legal services for all of the divisions within Hydro Ottawa, as well as for other entities across the larger corporate enterprise. A key priority for this group is ensuring the utility operates in a manner that is compliant with all relevant legal requirements.

7.2. BUSINESS AREAS

- **President and CEO:** under the direction of the Board of Directors, develops the mission, vision, values, Strategic Direction and goals, priorities, and growth agenda for the utility. The President and CEO ensures the development of corporate policies, programs, and practices in support of Hydro Ottawa's mission. Likewise, a key responsibility is reporting to the Board of Directors on performance against strategic objectives, operational and financial results, and any other matters of material consequence. In addition, this individual acts as the primary public face and spokesperson for the utility, and fosters a culture that promotes Hydro Ottawa's values and Code of Business Conduct.

- **Corporate Planning and Performance Management:** develops and manages an integrated strategic and business planning framework and related processes covering

[3] The President and CEO is an employee of the Holding Company. In this capacity, this individual simultaneously serves as the President and CEO of Hydro Ottawa.

the following: five-year strategic plan; annual business plan (including the budget and Corporate Performance Scorecard); Division plans and scorecards; monthly updates and quarterly financial reporting to the shareholder; quarterly and annual reports against the division and Corporate Performance Scorecards; annual report, including the Management Discussion and Analysis; and Executive Management Team meetings and strategy session management.

- **Corporate Governance:** performs a corporate secretariat function, handling traditional corporate governance-related matters, including the following: coordination of Board of Directors and Board Committee meetings and work plans; oversight and management of governance structures, practices, and policies; and corporate record maintenance and reporting.

- **Legal Services:** provides legal advice, opinions, and legal matter coordination, and monitors and advises on significant legal changes having an impact on the utility. The group also assists in the preparation and review of legal agreements and the provision of advice for corporate finance matters, business development initiatives, and the procurement process. Other key areas of focus include litigation (i.e. pursuit or defence of legal action brought by or against the utility), representations to the Board of Directors on legal compliance and related party transactions, preparation and submission of responses to Access to Information requests and privacy complaints, and support for reporting and investigation of complaints made to the Business Conduct Hotline.

The aforementioned services are provided through internal legal counsel as well as external counsel who may be retained on specific matters.

7.3. 2021-2025 BUSINESS PRIORITIES

As signalled in Exhibit 1-1-9: Business Plan, the utility intends to maintain continuity in its core strategic objectives heading into its next five-year rate term. These objectives are as follows: Customer Value, Organizational Effectiveness, Financial Strength, and Corporate Citizenship.

As discussed further in the Business Plan, there is substantial congruence between these objectives and the main performance outcomes promoted under the RRF.

The President and CEO's chief priority will therefore be providing leadership and direction to guide the successful execution of corporate objectives over the course of 2021-2025.

Similarly, the CP&G group's overarching mandate will be administering the integrated strategic and business planning framework for Hydro Ottawa during this period, and continuously driving alignment between strategic objectives, corporate performance goals, divisional plans, and performance management for individual employees. This will include ensuring that internal Division monitoring and reporting is comprehensive and adheres to established timelines.

For the Legal Services Group, chief priorities will remain the delivery of prompt and value-added legal analysis and advice on business transactions and initiatives, while focusing on the ongoing mitigation of legal and business risks. Beyond these core areas of focus, a major goal will be the evolution of the group's service delivery and operating model. A key driver for this effort is the broader evolution of the utility business model that is underway in the sector.[4] The steady transformation of the utility business model raises challenging legal questions, insofar as there may be ambiguity around how new product and service offerings, along with models for running the business or operating the electric grid, may or may not comport with existing statutory and regulatory frameworks. Accordingly, with an eye towards assisting the utility in addressing and resolving such questions, Legal Services will aspire to continue shifting its culture from one of an internal service provider to that of a business partner.

7.4. KEY 2021-2025 PRODUCTIVITY & CONTINUOUS IMPROVEMENT INITIATIVES

Looking ahead to the impending five-year rate term, the President and CEO will establish expectations for ongoing, company-wide productivity objectives. These include continuing to prioritize and control spending, eliminate non-value added steps in processes, leverage

[4] Please see the Strategic Context section of Exhibit 1-1-9: Business Plan for more insights.

innovation and technology to improve efficiency and enhance service, and realign resources to higher priority areas.

An important cost control initiative for CP&G will be renegotiating the contract for the software that is utilized for Board management purposes (Diligent). This software offers an e-portal solution for managing sensitive and confidential Board materials and information. Since its adoption several years ago, Diligent has centralized Board management information and enhanced the utility's effectiveness in accessing and storing corporate information.

With respect to the Legal Services Group, a handful of noteworthy productivity initiatives are planned for the 2021-2025 horizon. In step with the utility's broader push to streamline and digitize business systems and processes, the group will continue implementing an electronic record keeping and document management system, so as to achieve full digitization of its legal records. It will likewise sustain the transition to online legal resources as well as the refinement of its tracking system for tracking legal matters. In addition, ongoing refinement of precedent agreements is planned, with the goal of continuously improving the coordination and standardization of the utility's position on legal risks in procurement contracts (thereby reducing the amount of time needed to prepare and negotiate contracts). Process improvements for managing privacy and Freedom of Information requests are also set for enactment. Finally, Legal Services will continue optimizing productivity and competencies through the retention of external counsel, where appropriate.

UPDATED OPERATIONS, MAINTENANCE AND ADMINISTRATION PROGRAM COSTS

1. INTRODUCTION

This Schedule provides a brief qualitative and quantitative summary of Hydro Ottawa's operations, maintenance and administration ("OM&A") expenditures. It also includes a brief overview of the composition of Hydro Ottawa's OM&A costs, trends, and business environment changes. This Schedule further describes Hydro Ottawa's approach to OM&A planning, and the top-down and bottom-up budget process used to arrive at the utility's OM&A expenditures. The inclusion of information in this Schedule is informed by the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019 ("Filing Requirements").

2. OM&A SUMMARY

2.1. HYDRO OTTAWA'S APPROACH TO OM&A PLANNING AND BUDGETING

Hydro Ottawa's approach to OM&A planning and budgeting for the 2021-2025 period is guided by the utility's planning and performance management framework, which aligns corporate strategies with planning, operations, performance, and the drive for continuous improvement.

Figure 1 – Hydro Ottawa's Integrated Planning & Performance Management Framework

The framework maintains that spending correspond to business priorities, be directed to achieve performance targets, and support Hydro Ottawa's four key focus areas, as set out in its *2016-2020 Strategic Direction*:

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

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

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

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

Hydro Ottawa's 2021 OM&A budget was developed as a Test Year rebasing budget and is based on the utility's forecast of expenditures, as developed in its budget process. It was guided by the objectives and constraints articulated in a 2020-2025 budget planning memorandum issued by the utility's Chief Financial Officer to members of the Executive Management Team.[1] Among other things, this memorandum included constraints on headcount, compensation, and OM&A. Hydro Ottawa's 2021 OM&A budget was further informed by substantive operational investments needed to maintain service reliability and safety, as well as those necessary to remain in compliance with regulatory and legislative requirements. Finally, the OM&A budget was informed by the need to maximize productivity and minimize bill impacts, while ensuring the financial health and viability of the utility.

For the 2022-2025 Test Years, Hydro Ottawa will adjust OM&A using a Custom Price Escalation Factor ("CPEF") to align with the principles of incentive regulation, as enshrined in the Renewed Regulatory Framework ("RRF"). Detailed information on the specific configuration of the CPEF is outlined in UPDATED Exhibit 1-1-10: Alignment with the Renewed Regulatory Framework. Hydro Ottawa's approach to adjusting the OM&A component of rates by the CPEF formula will result in the utility bearing the risk associated with any shortfall between revenues collected through rates and regularly incurred costs. This difference will be recovered through productivity initiatives and operational efficiencies. Further details regarding planned initiatives for the 2021-2025 period are discussed in Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives.

2.2. OM&A BUDGET PROCESS

Hydro Ottawa undertook both a top-down and bottom-up forecasting exercise to develop the 2021-2025 budget. The budget forecasting exercise began with the preparation and issuance of a planning memorandum from the Chief Financial Officer (see section 2.1 above) that provided top-down guidance on the areas of constraints which were to inform the individual corporate Divisions in the bottom-up development of their budgets. Examples of top-down constraints and

[1] Please see Attachment 1-1-9(A): Corporate Memorandum - 2020-2025 Priorities and Budget Guidelines.

expectations included constraints on hiring, compensation, and benefits, as well as expectations for productivity and cost control activity. Bottom-up funding requests were then developed, evaluated, and scrutinized based on priority and alignment with core strategic objectives as well as ratepayer impacts. Adjustments were subsequently made to the OM&A budget to reflect these priorities and impacts. The final OM&A budget was developed to accommodate Hydro Ottawa's operational requirements to provide a safe and reliable distribution system, while respecting legislative and regulatory obligations, including the conditions set forth in the utility's OEB-approved license. The OM&A budget was included in the assessment of customer rate impacts that were reviewed by Hydro Ottawa's senior management team and Board of Directors.

As noted above, the OM&A budget for the 2022-2025 Test Years was subsequently adjusted by a CPEF formula, consistent with the OEB's model for incentive regulation. Recognizing that Hydro Ottawa cannot accurately predict all potential OM&A funding requirements that may emerge during the 2021-2025 Custom Incentive Rate- term, the utility may avail itself of the cost recovery mechanism available under a Z factor application. Hydro Ottawa will only resort to using the Z factor mechanism if costs incurred arise from unforeseen events, decisions, or activities, the results of which cannot be reasonably anticipated or quantified at this juncture and where the costs exceed Hydro Ottawa's materiality threshold and satisfy OEB criteria. Examples include unforeseen weather events or changes to laws or regulations requiring significant implementation investment.[2]

2.3. OM&A TEST YEAR LEVELS

As established by the RRF, under a Price Cap IR rates are adjusted using a formulaic approach in the years following the first year base rates. This formula consists of a two component Price Cap Index ("PCI"): inflation and productivity. For electricity distributors, the formula includes an industry-specific inflation factor and two factors for productivity. One productivity factor is a fixed amount for industry-wide productivity, and the other is a stretch factor which is set each year

[2] Additional information on Hydro Ottawa's intended approach to Z factor applications is available in Exhibit 9-2-1: New Deferral and Variance Accounts.

based on the level of productivity the distributor has achieved as evaluated by the Pacific Economics Group ("PEG") econometric model.

Under a Custom Incentive Rate-Setting ("Custom IR") approach, the annual rate adjustment must be based on a custom index supported by empirical evidence that can be tested. The annual adjustment must include explicit financial incentives for continuous improvement and cost control targets. As noted in the OEB's *Handbook for Utility Rate Applications*, "these incentive elements, including a productivity factor, must be incorporated through a custom index or an explicit revenue reduction over the term of the plan (not built into the cost forecast)."[3]

As a result, Hydro Ottawa is proposing to adopt a CPEF rate framework for years two through five, which is based on the approach approved by the OEB in Hydro Ottawa's 2016-2020 Custom IR application.[4] This framework is aligned with OEB policy and based on sound ratemaking principles. The CPEF incorporates the OEB's key principles and expectations of a Custom IR application, and is structured in a way that:

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

The proposed OM&A costs for the Test Years were developed by escalating the 2021 Test Year OM&A levels by a CPEF of 2.51% in the years 2022 through 2025. For more information on how this escalation factor was developed, please see UPDATED Exhibit 1-1-10: Alignment with the Renewed Regulatory Framework.

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

2.4. SUMMARY OF TOTAL OM&A EXPENDITURES

Hydro Ottawa's OM&A costs are significantly influenced by requirements to operate and maintain a safe and reliable distribution grid, provide service levels that are satisfactory to customers, and ensure continued compliance with all legislative and regulatory obligations. Among other things, this entails a need for the utility to strategically manage its workforce in a way that allows it to replace retiring workers with new tradespeople, and respond to the changing dynamics of the market and operating environment in which it is tasked with the distribution of electricity to customers.

Table 1 below provides a summary view of Hydro Ottawa's Historical, Bridge, and Test Year OM&A expenditures and has been updated to incorporate 2019 actual results.

Table 1 – AS ORIGINALLY SUBMITTED – OM&A Variances ($'000s)

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

Table 1 – UPDATED FOR 2019 ACTUALS – OM&A Variances ($'000s)

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

With respect to OM&A expenditures in 2019, total expenditures were lower than forecasted by $4.4M and were below 2018 levels by $3.8M. The 2019 actual to 2019 forecast variance is explained by the following:

1) Compensation was below forecast by $2.5M due to reduced overtime, higher than anticipated position vacancies, and a variance in the WSIB Surcharge account (for which a rebate was received in 2019 due to improvement in claim status year-over-year).
2) Shared services provided by Hydro Ottawa Holding Inc. ("Holding Company") fell $0.8M below the forecast. This decrease is largely explained by the utility's reduced share of the Holding Company's services, in the midst of continued expansion of the business activity of the utility's affiliates.
3) The remaining $1.1M reduction was achieved by cost control and cost deferral. For example, an effort was made by the utility to mitigate cost increases in spills cleanup and overlapping ownership of facilities. In addition, the timing and pacing of OM&A expenditures resulted in cost deferral in certain instances. This was the case with select OM&A programs, for which the initiation of activities occurred later than the forecasted schedule as a result of contract renewal negotiations. Instead of 2019, some of these costs are expected to be incurred in 2020.

2.5. SUMMARY OF OM&A COSTS BY MAJOR CATEGORY

UPDATED Attachment 4-1-3(A): OEB Appendix 2-JA - Summary of Recoverable OM&A Expenses provides a summary of recoverable OM&A expenses, as outlined below in Table 2. In addition, please see UPDATED Exhibit 4-1-4: Operations, Maintenance and Administration Cost Drivers and Program Variance Analysis for a description of high-level cost drivers and cost drivers by program.

Table 2 – AS ORIGINALLY SUBMITTED – OM&A Costs by Major OM&A Category ($'000s)

OM&A Category	Actual			Bridge		Test	CAGR[5]
	2016	2017	2018	2019	2020	2021	
Operations	$18,399	$18,860	$20,877	$22,398	$23,824	$22,924	4.5%
Maintenance	$9,739	$10,299	$9,125	$8,653	$9,767	$9,855	0.2%
Subtotal	$28,138	$29,158	$30,003	$31,050	$33,591	$32,779	3.1%
Billing and Collecting	$12,594	$12,745	$11,941	$10,220	$12,052	$12,711	0.2%
Community Relations	$5,290	$5,120	$4,759	$5,131	$5,895	$6,365	3.8%
Subtotal	$17,884	$17,865	$16,700	$15.352	$17,946	$19,076	1.3%
Administrative and General	$36,599	$35,222	$40,161	$41,143	$40,453	$42,068	2.8%
Total OM&A Expenses[6][7]	**$82,621**	**$82,245**	**$86,863**	**$87,545**	**$91,990**	**$93,923**	**2.6%**

Table 2 – UPDATED FOR 2019 ACTUALS – OM&A Costs by Major OM&A Category ($'000s)

OM&A Category	Actual				Bridge	Test	CAGR[8]
	2016	2017	2018	2019	2020	2021	
Operations	$18,399	$18,860	$20,877	$20,863	$23,824	$22,924	4.5%
Maintenance	$9,739	$10,299	$9,125	$7,693	$9,767	$9,855	0.2%
Subtotal	$28,138	$29,158	$30,003	$28,556	$33,591	$32,779	3.1%
Billing and Collecting	$12,594	$12,745	$11,941	$10,873	$12,052	$12,711	0.2%
Community Relations	$5,290	$5,120	$4,759	$4,796	$5,895	$6,365	3.8%
Subtotal	$17,884	$17,865	$16,700	$15,670	$17,946	$19,076	1.3%
Administrative and General	$36,599	$35,222	$40,161	$38,887	$40,453	$42,068	2.8%
Total OM&A Expenses[9][10]	**$82,621**	**$82,245**	**$86,863**	**$83,113**	**$91,990**	**$93,923**	**2.6%**

[5] CAGR represents the compound annual growth rate between 2016 and 2021.
[6] Totals may not sum due to rounding.
[7] In the 2019 forecast included in the original Application, $3.7M in OM&A costs were reclassified to USofA Account 4330, in relation to Shared Services (please see Appendix 2-N).
[8] CAGR represents the compound annual growth rate between 2016 and 2021.
[9] Totals may not sum due to rounding.
[10] In 2019, $3.2M in OM&A costs were reclassified to USofA Account 4330, in relation to Shared Services. Please see UPDATED Attachment 3-2-1(B): OEB Appendix 2-N - 2016-2020 Shared Services and Corporate Cost Allocation.

Over the period of 2016-2021, overall OM&A expenses are set to experience a 2.6% increase (using a compound annual growth rate). This is attributable to Hydro Ottawa's strong commitment to productivity, continuous improvement, and cost control. The overall increase is largely explained by increases in labour costs, as per Collective Agreements, as well as the increased demand in distribution maintenance and technology. These increases are partially offset by savings associated with productivity initiatives and cost control.

2.5.1. Operations and Maintenance Costs

Operations and maintenance are expected to increase by a compound annual growth rate of 3.1% over the course of 2016-2021. The increase to operations and maintenance-related costs is partly attributable to increased costs associated with labour, and maintenance expenses associated with operating and maintaining overhead and underground distribution lines, feeders, transformers, and distribution stations. The principal cost drivers of the increases are as follows:

- Higher volume of Preventative and Predictive Overhead, Underground Line, and Station Maintenance costs;
- Increase in Corrective Maintenance and Emergency Response costs;
- Increase in System Operations costs;
- Technology costs, such as Supervisory Control and Data Acquisition ("SCADA"), Geographic Information System ("GIS"), and Asset Management software; and
- Increased labour and fleet costs.

The foregoing cost increases are mitigated by savings achieved through several productivity initiatives, the largest one being a dark fibre lease. Once this lease is completely terminated in 2022, annual OM&A savings of $1.1M are expected to accrue. The construction of Hydro Ottawa's own dark fibre network is moving forward as part of the Telecom Master Plan included in the utility's approved 2016-2020 Custom IR application. Construction of dark fibre is set to strengthen overall grid reliability, while simultaneously reducing OM&A costs.

2.5.2. Billing and Collections & Community Relations

Billing, Collections, and Community Relations costs increased by a compound annual growth rate of 1.3% from 2016 through 2021. Billing and collections expenses relate to costs associated with enabling customer billing services, conducting collections activities, and maintaining the billing system (including for purposes of satisfying new regulatory requirements). The principal cost drivers of the increases are the following:

- Increase in postage rates;
- Increase in technology costs to ensure Hydro Ottawa's Customer Care & Billing system is complying with all new regulatory requirements (e.g. amendments to the OEB's Customer Service Rules and annual Disconnection Moratoriums); and
- Increase in technology costs to enhance customer experience. For example, customers are now communicating with Hydro Ottawa through numerous channels including voice, text, email, and web chat.[11]

The foregoing cost increases were successfully offset by many cost control initiatives, including e-billing and automation. Hydro Ottawa maintains the highest e-billing participation rate of any distributor in Ontario (48% of customers), with an estimated corresponding cost avoidance of $1.6M per year.

2.5.3. Administrative and General

From 2016 to 2021, Administrative and General costs increased by a compound annual growth rate of 2.8%. Administrative costs generally reflect salary expenses, as well as costs associated with Human Resources ("HR"), Information Technology ("IT"), Finance, Regulatory, Facilities, Supply Chain, Warehouse, Legal, Communications, and Occupational Health, Safety and Environment. The principal cost drivers of the increases are as follows:

- Compensation and benefits costs;

[11] For further information on Hydro Ottawa's enhanced customer communications and resulting increases in customer satisfaction, please see Attachment 1-2-1(B): Customer Strategy.

- Higher demand for technological support (e.g. IT security, IT subscription, and system support) to meet higher customer expectations and diverse business and operational needs; and
- Higher customer demand for communications from and with Hydro Ottawa, especially during outages and severe weather events.

2.6. INFLATION RATES AND FINANCIAL ASSUMPTIONS

Hydro Ottawa has assumed an inflation rate of 2.01% for 2021, for all non-compensation related costs.[12]

2.7. OVERVIEW OF OM&A PROGRAMS & EXPENDITURES

A full quantitative description and variance of Hydro Ottawa's program costs is available in UPDATED Attachment 4-1-3(B): OEB Appendix 2-JC - OM&A Programs Table. A qualitative description of the utility's OM&A programs and an analysis of cost drivers can be found in UPDATED Exhibit 4-1-4: Operations, Maintenance and Administration Cost Drivers and Program Variance Analysis.

3. OM&A COST PER CUSTOMER AND PER FTE

UPDATED Attachment 4-1-3(C): OEB Appendix 2-L - Recoverable OM&A Cost per Customer and per Full Time Equivalent summarizes Hydro Ottawa's OM&A expenditures over the Historical, Bridge, and 2021 Test Years, expressed on a per customer and per Full Time Equivalent ("FTE") employee basis. The compounded growth rate in OM&A costs per customer is 1.4% and per FTE is 2.3% over the 2016-2021 period.

[12] Conference Board of Canada, *Consumer Price Index - Canada* (October 2019).

TO BE UPDATED AT THE DRAFT RATE ORDER STAGE

UPDATED - Appendix 2-JA

Summary of Recoverable OM&A Expenses

		2016	2017	2018	2019	2020	2021
	2016 Last Rebasing Year OEB Approved	2016 Last Rebasing Year Actuals	2017 Actuals	2018 Actuals	2019 Actuals	2020 Bridge Year	2021 Test Year
Reporting Basis	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
Operations		$ 18,398,554	$ 18,859,756	$ 20,877,170	$ 20,863,261	$ 23,824,185	$ 22,923,625
Maintenance		$ 9,739,324	$ 10,298,658	$ 9,125,316	$ 7,692,891	$ 9,766,516	$ 9,855,230
SubTotal	**$ -**	**$ 28,137,878**	**$ 29,158,414**	**$ 30,002,486**	**$ 28,556,152**	**$ 33,590,701**	**$ 32,778,855**
%Change (year over year)			3.6%	2.9%	-4.8%	17.6%	-2.4%
%Change (Test Year vs Last Rebasing Year - Actual)							
Billing and Collecting		$ 12,593,747	$ 12,744,913	$ 11,940,913	$ 10,873,479	$ 12,051,515	$ 12,711,160
Community Relations		$ 5,290,093	$ 5,119,660	$ 4,758,993	$ 4,796,400	$ 5,894,923	$ 6,365,075
Administrative and General		$ 36,599,477	$ 35,221,846	$ 40,160,945	$ 38,886,829	$ 40,453,281	$ 42,067,566
SubTotal	**$ -**	**$ 54,483,317**	**$ 53,086,419**	**$ 56,860,851**	**$ 54,556,708**	**$ 58,399,719**	**$ 61,143,801**
%Change (year over year)			-2.6%	7.1%	-4.1%	7.0%	4.7%
%Change (Test Year vs Last Rebasing Year - Actual)							
Total	**$ 83,105,563**	**$ 82,621,195**	**$ 82,244,833**	**$ 86,863,337**	**$ 83,112,860**	**$ 91,990,420**	**$ 93,922,656**
%Change (year over year)			-0.5%	5.6%	-4.3%	10.7%	2.1%

Note:

1 Historical actuals going back to the last cost of service application are required to be entered by the applicant.

2 Recoverable OM&A that is included on these tables should be identical to the recoverable OM&A that is shown for the corresponding periods on Appendix 2-JB.

	2016			2017	2018	2019	2020		2021	
	Last Rebasing Year 2016 OEB Approved	Last Rebasing Year 2016 Actuals	Variance 2016 OEB Approved - 2016 Actuals	2017 Actuals	2018 Actuals	2019 Actuals	2020 Bridge Year	Variance 2020 Bridge vs. 2019 Actuals	2021 Test Year	Variance 2021 Test vs. 2020 Bridge
Operations		**$ 18,398,554**	**-$ 18,398,554**	**$ 18,859,756**	**$ 20,877,170**	**$ 20,863,261**	**$ 23,824,185**	**$ 2,960,924**	**$ 22,923,625**	**-$ 900,560**
Maintenance		**$ 9,739,324**	**-$ 9,739,324**	**$ 10,298,658**	**$ 9,125,316**	**$ 7,692,891**	**$ 9,766,516**	**$ 2,073,625**	**$ 9,855,230**	**$ 88,714**
Billing and Collecting		**$ 12,593,747**	**-$ 12,593,747**	**$ 12,744,913**	**$ 11,940,913**	**$ 10,873,479**	**$ 12,051,515**	**$ 1,178,036**	**$ 12,711,160**	**$ 659,645**
Community Relations		**$ 5,290,093**	**-$ 5,290,093**	**$ 5,119,660**	**$ 4,758,993**	**$ 4,796,400**	**$ 5,894,923**	**$ 1,098,523**	**$ 6,365,075**	**$ 470,152**
Administrative and General		**$ 36,599,477**	**-$ 36,599,477**	**$ 35,221,846**	**$ 40,160,945**	**$ 38,886,829**	**$ 40,453,281**	**$ 1,566,452**	**$ 42,067,566**	**$ 1,614,285**
Total OM&A Expenses	**$ 83,105,563**	**$ 82,621,195**	**$ 484,368**	**$ 82,244,833**	**$ 86,863,337**	**$ 83,112,860**	**$ 91,990,420**	**$ 8,877,560**	**$ 93,922,656**	**$ 1,932,236**
Adjustments for Total non-recoverable items (from Appendices 2-JA and 2-JB)										
Total Recoverable OM&A Expenses	**$ 83,105,563**	**$ 82,621,195**	**$ 484,368**	**$ 82,244,833**	**$ 86,863,337**	**$ 83,112,860**	**$ 91,990,420**	**$ 8,877,560**	**$ 93,922,656**	**$ 1,932,236**
Variance from previous year				-$ 376,362	$ 4,618,504	-$ 3,750,477	$ 8,877,560		$ 1,932,236	
Percent change (year over year)				0.0%	5.6%	-4.3%	10.7%		2.1%	
Percent Change: Test year vs. Most Current Actual									13.01%	
Simple average of % variance for all years									3.52%	
Compound Annual Growth Rate for all years										2.6%
Compound Growth Rate (2019 vs. 2016 Actuals)									0.2%	

	2016 Last Rebasing Year OEB Approved	**2016 Last Rebasing Year Actuals**		**2018 Actuals**	**2019 Actuals**	**2020 Bridge Year**	**2021 Test Year**
Operations		$ 18,398,554		$ 20,877,170	$ 20,863,261	$ 23,824,185	$ 22,923,625
Maintenance		$ 9,739,324		$ 9,125,316	$ 7,692,891	$ 9,766,516	$ 9,855,230
Billing and Collecting		$ 12,593,747		$ 11,940,913	$ 10,873,479	$ 12,051,515	$ 12,711,160
Community Relations		$ 5,290,093		$ 4,758,993	$ 4,796,400	$ 5,894,923	$ 6,365,075
Administrative and General		$ 36,599,477		$ 40,160,945	$ 38,886,829	$ 40,453,281	$ 42,067,566
Total	**$ 83,105,563**	**$ 82,621,195**		**$ 86,863,337**	**$ 83,112,860**	**$ 91,990,420**	**$ 93,922,656**
%Change (year over year)		-0.6%		5.1%	-4.3%	10.7%	2.1%

UPDATED - Appendix 2-JC
OM&A Programs Table

Programs	Last Rebasing Year (2016 OEB-Approved)	Last Rebasing Year (2016 Actuals)	2017 Actuals	2018 Actuals	2019 Actuals	2020 Bridge Year	2021 Test Year	Variance (Test Year vs. 2019 Bridge Year)	Variance (Test Year vs. Last Rebasing Year (2016
Reporting Basis		MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
Distribution Operations									
		17,754,301	18,885,205	19,311,623	18,154,464	20,382,354	21,457,611	3,303,147	21,457,611
Sub-Total	0	17,754,301	18,885,205	19,311,623	18,154,464	20,382,354	21,457,611	3,303,147	21,457,611
Engineering & Design									
		6,872,207	6,878,698	7,540,783	6,859,518	8,745,847	8,565,907	1,706,389	8,565,907
Sub-Total	0	6,872,207	6,878,698	7,540,783	6,859,518	8,745,847	8,565,907	1,706,389	8,565,907
Customer Billing									
		9,479,737	8,935,559	8,866,310	8,488,516	8,634,341	9,192,696	704,180	9,192,696
Sub-Total	0	9,479,737	8,935,559	8,866,310	8,488,516	8,634,341	9,192,696	704,180	9,192,696
Customer & Community Relations									
		7,191,429	7,290,667	7,010,829	6,477,554	7,892,865	8,459,107	1,981,553	8,459,107
Sub-Total	0	7,191,429	7,290,667	7,010,829	6,477,554	7,892,865	8,459,107	1,981,553	8,459,107
Collections, Accounts & Activities									
		3,120,713	3,775,127	2,882,389	2,231,581	3,278,626	3,377,588	1,146,007	3,377,588
Sub-Total	0	3,120,713	3,775,127	2,882,389	2,231,581	3,278,626	3,377,588	1,146,007	3,377,588
Facilities									
		6,652,188	6,441,641	7,123,923	9,912,474	7,338,521	7,475,608	-2,436,866	7,475,608
Sub-Total	0	6,652,188	6,441,641	7,123,923	9,912,474	7,338,521	7,475,608	-2,436,866	7,475,608
Finance									
		3,917,774	3,847,245	3,963,955	3,298,985	3,340,269	3,416,978	117,993	3,416,978
Sub-Total	0	3,917,774	3,847,245	3,963,955	3,298,985	3,340,269	3,416,978	117,993	3,416,978
Human Resources & Training									
		4,118,272	3,826,980	4,053,590	3,287,343	3,795,303	3,890,319	602,976	3,890,319
Sub-Total	0	4,118,272	3,826,980	4,053,590	3,287,343	3,795,303	3,890,319	602,976	3,890,319
Information Mgt & Technology									
		7,651,842	8,261,849	10,692,063	9,827,813	11,952,687	10,084,556	256,743	10,084,556
Sub-Total	0	7,651,842	8,261,849	10,692,063	9,827,813	11,952,687	10,084,556	256,743	10,084,556
Metering									
		2,265,665	2,477,790	2,200,471	2,018,543	2,585,701	2,611,952	593,409	2,611,952
Sub-Total	0	2,265,665	2,477,790	2,200,471	2,018,543	2,585,701	2,611,952	593,409	2,611,952
Regulatory Affairs									
		2,023,857	2,037,050	2,157,111	2,019,155	2,248,403	2,985,742	966,587	2,985,742
Sub-Total	0	2,023,857	2,037,050	2,157,111	2,019,155	2,248,403	2,985,742	966,587	2,985,742
Safety, Environment & Bus Continuity									
		2,045,255	2,261,796	3,422,633	4,207,164	3,662,418	3,719,278	-487,886	3,719,278
Sub-Total	0	2,045,255	2,261,796	3,422,633	4,207,164	3,662,418	3,719,278	-487,886	3,719,278
Supply Chain									
		1,244,105	1,470,594	1,252,299	1,288,547	1,062,107	1,059,855	-228,692	1,059,855
Sub-Total	0	1,244,105	1,470,594	1,252,299	1,288,547	1,062,107	1,059,855	-228,692	1,059,855
Corporate Costs									
		8,283,850	5,854,631	6,385,358	5,041,203	7,070,979	7,625,461	2,584,258	7,625,461
Sub-Total	0	8,283,850	5,854,631	6,385,358	5,041,203	7,070,979	7,625,461	2,584,258	7,625,461
Miscellaneous								0	0
Total	**83,105,563**	**82,621,195**	**82,244,832**	**86,863,337**	**83,112,860**	**91,990,421**	**93,922,658**	**10,809,798**	**10,817,095**

Notes:

1 Please provide a breakdown of the major components of each OM&A Program undertaken in each year. Please ensure that all Programs below the materiality threshold are included in the miscellaneous line. Add more Programs as required.

2 The applicant should group projects appropriately and avoid presentations that result in classification of significant components of the OM&A budget in the miscellaneous category

UPDATED - Appendix 2-L
Recoverable OM&A Cost per Customer and per FTE 1

	Last Rebasing Year 2016 - OEB Approved	Last Rebasing Year 2016 - Actual*	2017 Actuals*	2018 Actuals*	2019 Actuals	2020 Bridge Year	2021 Test Year
Reporting Basis	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**
OM&A Costs	**$ 83,105,563**	**$ 82,621,195**	**$ 82,244,832**	**$ 86,863,337**	**$ 83,112,860**	**$ 91,990,421**	**$ 93,922,658**
O&M		$ 28,137,878	$ 29,158,414	$ 30,002,486	$ 28,556,152	$ 33,590,701	$ 32,778,855
Admin Expenses		$ 54,483,317	$ 53,086,419	$ 56,860,851	$ 54,556,708	$ 58,399,719	$ 61,143,801
Total Recoverable OM&A from Appendix 2-JB 5	$ 83,105,563	$ 82,621,195	$ 82,244,833	$ 86,863,337	$ 83,112,860	$ 91,990,420	$ 93,922,656
Number of Customers 2,4	327,260	325,915	329,927	333,620	339,771	341,559	344,936
Number of FTEs 3,4	623	611	612	605	611	623	616
Customers/FTEs	526	533	539	552	556	549	560
OM&A cost per customer							
O&M per customer	$0	$86	$88	$90	$84	$98	$95
Admin per customer	$0	$167	$161	$170	$161	$171	$177
Total OM&A per customer	$254	$254	$249	$260	$245	$269	$272
OM&A cost per FTE							
O&M per FTE	$0	$46,045	$47,668	$49,615	$46,760	$53,961	$53,247
Admin per FTE	$0	$89,156	$86,785	$94,032	$89,335	$93,815	$99,324
Total OM&A per FTE	$133,460	$135,201	$134,453	$143,647	$136,094	$147,776	$152,571

Notes:

1 If it has been more than four years since the applicant last filed a cost of service application, additional years of historical actuals should be incorporated into the table, as necessary, to go back to the last cost of service application. If the applicant last filed a cost of service application less than four years ago, a minimum of three years of actual information is required.

2 The method of calculating the number of customers must be identified. Should correspond with data provided in Appendix 2-IB.

3 The method of calculating the number of FTEs must be identified. See also Appendix 2-K.

4 The number of customers and the number of FTEs should correspond to mid-year or average of January 1 and December 31 figures.

5 For the test year, the applicant should take into account the system O&M (line 22 of Appendix 2-AB) in developing its forecasted OM&A.

* As outlined in UPDATED Attachment 4-1-5(A) - Employee Compensation Strategy, revisions have been made to 2016, 2017 and 2018 Number of FTEs due to a systemic error in spreadsheet templates.

UPDATED - Appendix 2-D
Overhead Expense

Applicants are to provide a breakdown of OM&A before capitalization in the below table. OM&A before capitalization may be broken down by cost center, program, drivers or another format best suited to focus on capitalized vs. uncapitalized OM&A.

OM&A Before Capitalization	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year
Distribution Operations	$ 42,072,595	$ 42,985,534	$ 40,399,152	$ 44,455,558	$ 45,958,946
Engineering & Design	$ 12,437,569	$ 13,398,062	$ 12,507,395	$ 13,977,990	$ 14,167,879
Customer Billing	$ 8,936,703	$ 8,912,271	$ 9,120,268	$ 9,274,258	$ 9,619,556
Customer & Community Relations	$ 7,300,361	$ 7,010,829	$ 6,477,554	$ 8,003,925	$ 8,617,580
Collections, Acct & Activities	$ 3,781,614	$ 2,948,863	$ 2,371,317	$ 3,278,626	$ 3,377,588
Facilities	$ 6,443,441	$ 7,127,723	$ 9,919,789	$ 7,338,521	$ 7,475,608
Finance	$ 3,847,245	$ 3,963,955	$ 3,303,451	$ 3,340,269	$ 3,441,938
Human Resources & Training	$ 3,889,418	$ 4,056,098	$ 3,316,757	$ 3,853,861	$ 3,939,877
Information Mgt & Technology	$ 10,722,068	$ 10,884,225	$ 10,101,028	$ 11,952,687	$ 10,310,302
Metering	$ 2,856,917	$ 2,621,587	$ 2,454,821	$ 2,967,981	$ 3,074,131
Regulatory Affairs	$ 2,037,050	$ 2,157,111	$ 2,019,155	$ 2,248,403	$ 2,998,222
Safety, Environment & Bus Cont	$ 2,261,796	$ 3,434,261	$ 4,228,570	$ 3,662,418	$ 3,719,278
Supply Chain	$ 2,632,039	$ 2,465,807	$ 2,489,293	$ 2,267,583	$ 2,321,330
Corporate Costs	$ 5,854,631	$ 6,385,206	$ 5,041,203	$ 7,070,979	$ 7,625,461
Total OM&A Before Capitalization (B)	$ 115,073,447	$ 118,351,532	$ 113,749,753	$ 123,693,059	$ 126,647,696

Applicants are to provide a breakdown of capitalized OM&A in the below table. Capitalized OM&A may be broken down using the categories listed in the table below if possible. Otherwise, applicants are to provide its own break down of capitalized OM&A.

Capitalized OM&A	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year	Directly Attributable? (Yes/No)	Explanation for Change in Overhead Capitalized
Supply Chain	$ 1,160,695	$ 1,213,508	$ 1,200,746	$ 1,205,476	$ 1,231,474	Yes	
Supervision	$ 2,365,426	$ 2,539,391	$ 2,315,815	$ 2,287,211	$ 2,530,939	Yes	
Engineering	$ 3,020,405	$ 3,235,342	$ 3,153,225	$ 2,910,979	$ 3,184,311	Yes	
Fleet	$ 2,954,501	$ 3,101,160	$ 3,010,871	$ 3,333,470	$ 3,317,225	Yes	
Labour	$ 23,327,587	$ 21,398,793	$ 20,956,236	$ 21,965,502	$ 22,461,088	Yes	
Total Capitalized OM&A (A)	$ 32,828,614	$ 31,488,194	$ 30,636,893	$ 31,702,638	$ 32,725,037		

% of Capitalized OM&A (=A/B)	29%	27%	27%	26%	26%		

UPDATED OPERATIONS, MAINTENANCE AND ADMINISTRATION COST DRIVERS AND PROGRAM VARIANCE ANALYSIS

1. INTRODUCTION

This Schedule describes Hydro Ottawa's operations, maintenance and administration ("OM&A") costs by major program. It also provides a year-over-year variance analysis and a major cost driver variance summary. Variance explanations are provided for program costs with variances greater than $750K, consistent with the materiality threshold that the utility is employing for purposes of this Application.[1]

The information contained in this Schedule is guided by the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019 ("Filing Requirements").

2. OM&A COST DRIVERS

Table 1 below identifies the year-over-year cost drivers impacting Hydro Ottawa's OM&A. Explanations for each cost driver are provided thereafter.

[1] Please see Exhibit 1-1-4: Administration for information on the utility's materiality threshold.

Table 1 – AS ORIGINALLY SUBMITTED – Recoverable OM&A Cost Drivers[2] ($'000,000s)

Major Driver	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year
OPENING BALANCE	**$83.1[3]**	**$ 82.6**	**$ 82.2**	**$ 86.8**	**$ 87.5**	**$ 91.9**
Labour Compensation and Benefits (Table 2)		$(0.2)	$3.3	$0.6	$1.6	$2.0
Proactive and Reactive Distribution System Maintenance (Table 3)		$0.1	$0.5	$0.5	$(0.1)	$0.3
Facilities, Insurance, and Fuel (Table 5)		$0.1	$0.3	$2.9	$(1.5)	$0.2
OEB Fees and CDM Allocation (Table 6)		$(0.1)	$0.0	$0.2	$0.2	$0.7
Call Centre, Postage, and Bad Debt (Table 7)		$0.3	$(1.0)	$ (0.7)	$0.8	$0.0
Dark Fiber Fees (Table 8)		$(0.1)	$0.0	$0.3	$0.9	$(1.7)
Technology (Table 9)		$0.8	$0.4	$0.5	$1.3	$0.9
SLA Cost Reclassification		$0.0	$0.0	$(3.7)	$(0.2)	$(0.1)
Other	$(0.5)	$(1.3)	$1.1	$0.1	$1.4	$(0.3)
Total Change	**$(0.5)**	**$(0.4)**	**$4.6**	**$0.7**	**$4.4**	**$2.0**
CLOSING BALANCE[4]	**$ 82.6**	**$ 82.2**	**$ 86.8**	**$ 87.5**	**$ 91.9**	**$ 93.9**

[2] As displayed in Attachment 4-1-4(A): OEB Appendix 2-JB: Recoverable OM&A Cost Driver Table
[3] The 2016 Opening Balance represents that which was approved by the OEB in the adjudication of Hydro Ottawa's *2016-2020 Custom Incentive Rate-Setting Distribution Rate Application* (EB-2015-0004).
[4] Totals may not sum due to rounding.

Table 1 – UPDATED FOR 2019 ACTUALS – Recoverable OM&A Cost Drivers[5] ($'000,000s)

Major Driver	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year
OPENING BALANCE	**$83.1[6]**	**$ 82.6**	**$ 82.2**	**$ 86.8**	**$ 83.1**	**$ 91.9**
Labour Compensation and Benefits (Table 2)		$(0.2)	$3.3	($1.9)	$4.1	$2.0
Proactive and Reactive Distribution System Maintenance (Table 3)		$0.1	$0.5	$0.0	$0.4	$0.3
Facilities, Insurance, and Fuel (Table 5)		$0.1	$0.3	$3.4	$(2.0)	$0.2
OEB Fees and CDM Allocation (Table 6)		$(0.1)	$0.0	$0.2	$0.2	$0.7
Call Centre, Postage, and Bad Debt (Table 7)		$0.3	$(1.0)	$(0.7)	$0.8	$0.0
Dark Fiber Fees (Table 8)		$(0.1)	$0.0	$0.1	$1.0	$(1.7)
Technology (Table 9)		$0.8	$0.4	$0.5	$1.3	$0.9
SLA Cost Reclassification		$0.0	$0.0	$(3.2)	$(0.7)	$(0.1)
Other	$(0.5)	$(1.3)	$1.1	$(2.1)	$3.7	$(0.3)
Total Change	**$(0.5)**	**$(0.4)**	**$4.6**	**$(3.7)**	**$8.8**	**$2.0**
CLOSING BALANCE[7]	**$ 82.6**	**$ 82.2**	**$ 86.8**	**$ 83.1**	**$ 91.9**	**$ 93.9**

2.1. LABOUR COMPENSATION COSTS AND BENEFITS

This first cost driver includes workforce planning, salary increases, step progressions, and changes in insured and statutory benefits, pension, and vacancy allowance.

Negotiated salary increases and step progressions for unionized employees are determined as per Hydro Ottawa's collective agreement with the International Brotherhood of Electrical Workers ("IBEW"). The utility's current collective agreement with the IBEW expires on March 31, 2021. Comparable adjustments are forecasted as merit increases for management and non-union employees.

[5] As displayed in UPDATED Attachment 4-1-4(A): OEB Appendix 2-JB: Recoverable OM&A Cost Driver Table
[6] The 2016 Opening Balance represents that which was approved by the OEB in the adjudication of Hydro Ottawa's *2016-2020 Custom Incentive Rate-Setting Distribution Rate Application* (EB-2015-0004).
[7] Totals may not sum due to rounding.

Hydro Ottawa has taken several proactive measures to contain compensation costs, as outlined in UPDATED Exhibit 4-1-5: Workforce Staffing and Compensation. Table 2 shows total compensation for employees over the 2016-2021 period, including salaries and benefits. The increase in 2018 is largely attributable to overtime costs that were incurred during the restoration activities following three extreme weather events which all caused significant damage to the electricity grid – an ice storm in April, a wind storm in May, and six tornadoes in the Ottawa area in September. As submitted in the utility's original Application, Compensation in 2019 is relatively flat in comparison to 2018, as overtime costs are at a four-year low. After accounting for 2019 actuals, compensation has decreased from 2018, which can be largely explained by reduced overtime, higher than anticipated position vacancies, and a variance in the WSIB Surcharge account - 2018. This account included a surcharge; however, a rebate was received in 2019 due to improvement in claim status year-over-year. Overall, as indicated by the compound annual growth rate ("CAGR") in Table 2 below, the annual average increase in total compensation costs over 2016-2021, including benefits, is 2.0%.

Table 2 – AS ORIGINALLY SUBMITTED – Total Compensation Costs, Including Benefits ($'000,000s)

Total Compensation Costs	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year	CAGR[8]
	$72.1	$71.9	$75.2	$75.8	$77.5	$79.5	2.0%
Year-over-Year Variance[9]		*$(0.2)*	*$3.3*	*$(0.6)*	*$1.6*	*$2.0*	

Table 2 – UPDATED FOR 2019 ACTUALS – Total Compensation Costs, Including Benefits ($'000,000s)

Total Compensation Costs	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year	CAGR[10]
	$72.1	$71.9	$75.2	$73.3	$77.5	$79.5	2.0%
Year-over-Year Variance[11]		*$(0.2)*	*$3.3*	*$(1.9)*	*$4.1*	*$2.0*	

[8] CAGR represents the compound annual growth rate between 2016 and 2021.
[9] Variance may exist due to rounding.
[10] CAGR represents the compound annual growth rate between 2016 and 2021.
[11] Variance may exist due to rounding.

Figure 1 – Work Crews Restoring Power Following 2018 Tornado Event

2.2. PROACTIVE AND REACTIVE DISTRIBUTION SYSTEM MAINTENANCE

Within the Proactive and Reactive Distribution System Maintenance category, there are three programs which collectively represent 70% of total expenditures, on average:

- Vegetation Management
- Underground Cable Locates
- Spills Cleanup

Table 3 below summarizes Proactive and Reactive Distribution System Maintenance external costs, inclusive of these three categories, and has been updated to reflect 2019 actuals.[12]

Table 3 – AS ORIGINALLY SUBMITTED – Summary of Proactive and Reactive Distribution System Maintenance Costs ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year	CAGR[13]
Vegetation Management	$3.3	$3.2	$3.3	$2.8	$3.0	$3.0	(1.9)%
Underground Cable Locates	$2.1	$2.2	$2.7	$2.8	$2.9	$3.1	8.5%
Spills Cleanup	$0.7	$0.6	$0.8	$1.5	$0.7	$0.7	0.4%
Others	$2.6	$2.8	$2.5	$2.7	$3.1	$3.2	4.0%
TOTAL[14]	**$8.7**	**$8.8**	**$9.3**	**$9.8**	**$9.7**	**$10.0**	**2.9%**
Year-over-Year Variance[15]		*$0.1*	*$0.5*	*$0.5*	*$(0.1)*	*$0.3*	

Table 3 – UPDATED FOR 2019 ACTUALS – Summary of Proactive and Reactive Distribution System Maintenance Costs ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year	CAGR[16]
Vegetation Management	$3.3	$3.2	$3.3	$2.4	$3.0	$3.0	(1.9)%
Underground Cable Locates	$2.1	$2.2	$2.7	$2.9	$2.9	$3.1	8.5%
Spills Cleanup	$0.7	$0.6	$0.8	$1.5	$0.7	$0.7	0.4%
Others	$2.6	$2.8	$2.5	$2.5	$3.1	$3.2	4.0%
TOTAL[17]	**$8.7**	**$8.8**	**$9.3**	**$9.3**	**$9.7**	**$10.0**	**2.9%**
Year-over-Year Variance[18]		*$0.1*	*$0.5*	*$0.0*	*$(0.4)*	*$0.3*	

[12] The costs shown exclude internal labour costs.
[13] CAGR represents the compound annual growth rate between 2016 and 2021.
[14] Totals may not sum due to rounding.
[15] Variance may exist due to rounding.
[16] CAGR represents the compound annual growth rate between 2016 and 2021.
[17] Totals may not sum due to rounding.
[18] Variance may exist due to rounding.

2.2.1. Vegetation Management

Hydro Ottawa's Vegetation Management program is part of a preventative maintenance approach with the overall goals of maintaining safety clearances and minimizing outages caused by tree contact. The program involves the annual trimming of more than 40,000 trees which are located near overhead power lines, both in the downtown core and in suburban areas. The program is executed by contractors for an annual cost of approximately $3.0M.

The two key drivers of the contract costs are the number of trees trimmed each year and the negotiated contract rate. The cost increase each year represents a general inflationary increase built into the contract price.

In 2019, these contracts were re-tendered through a competitive procurement process and renewed at a lower price point. This resulted in a CAGR rate of -1.9% for the program over the 2016-2021 period.

Figure 2 – Hydro Ottawa Crew Trimming Trees

2.2.2. Underground Cable Locates

The Underground Cable Locates program is part of an overall Public Safety program. Within this program, utilities, home owners, and contractors must call to confirm that any excavation area in which they are working does not contain any buried utility infrastructure. The locate service is then executed by Hydro Ottawa's contractors.

Figure 3 – Underground Cable Locates Public Safety Reminders

Underground Cable Locates requests are customer demand-driven and hence the volume portion of the cost is not controllable by Hydro Ottawa. In the past three years, the volume of calls have increased significantly, largely due to growing demand for fiber-to-the-home ("FTTH") technology, which is expected to continue increasing.[19]

In order to mitigate the associated costs, Hydro Ottawa negotiated an Alternate Locate Agreement as part of a Local Distribution Company ("LDC") consortium which eliminates the need for a locate for low-risk electricity infrastructure work (e.g. hand-digging tree roots). In addition, in 2019 Hydro Ottawa changed its requirement for a relocate to be performed if the previous locate is older than 30 days, with 60 days now serving as the new date of expiration.

[19] FTTH, also called "fiber to the premises" ("FTTP"), is the installation and use of optical fiber from a central point directly to individual buildings – such as residences, apartment buildings, and businesses – in order to provide high-speed internet access.

This change will reduce the number of relocate requests and the associated costs without negatively impacting public safety.

The CAGR for this program over the 2016-2021 period is 8.5%. As noted above, this relatively high rate is driven primarily by customer volumes, with FTTH being the largest contributor. Table 4 below provides detail for two of the Historical Years, showing both the number of locate requests and the average cost per request. The 2019 Historical Year has been added to the updated version of Table 4 below. As a result, the number of locate requests and the average cost per request have been updated.

Table 4 – AS ORIGINALLY SUBMITTED – Indicative Underground Cable Locates Costs

Year	# of Locates	Total Costs ($'000,000s)	Average Cost per Locate
2017 Historical Year	87,622	$2.2	$25.10
2018 Historical Year	102,798	$2.8	$26.82
Percentage Variance	*17.3%*	*25.4%*	*6.9%*

Table 4 – UPDATED FOR 2019 ACTUALS – Indicative Underground Cable Locates Costs

Year	# of Locates	Total Costs ($'000,000s)	Average Cost per Locate
2017 Historical Year	87,622	$2.2	$25.10
2018 Historical Year	102,798	$2.8	$26.82
2019 Historical Year	104,063	$2.9	$28.05
Percentage Variance (2019 vs. 2017)	*18.8%*	*31.8%*	*11.8%*

2.2.3. Spills Cleanup

The Spills Cleanup program costs are driven by the number of spills and the amount of remediation work required.[20] The primary causes of spill cleanup are vehicle fluid spills (i.e. engine oil, hydraulic oil, transmission fluid, etc.) and insulating oil spills from equipment, such as

[20] This program excludes spills resulting from Damage to Plant.

distribution transformers. Distribution transformers were the source of 95% of the reported spill incidents from 2015-2018. Leaking transformers are identified through system operations as well as the Underground Transformer Visual and Thermographic Inspection program (see Figure 4 below for an example of a leaking transformer).

In 2018, there were 120 equipment oil spills identified, 59 of which required remediation. This represented a 40% increase over the 2015-2017 average. This change was driven, in part, by 2018 inspections largely occurring in the eastern region of the City of Ottawa, where the majority of transformers were installed during the 1980s. Not only are the transformers in this area advanced in age, they are situated much closer to the road as compared to other areas, making them more susceptible to corrosion from salt and thus to a higher number of leaks.[21] Although the spills were identified in 2018, the timing of the inspection program resulted in much of the remediation work being completed in 2019, which resulted in the spike in program costs during that year.

Hydro Ottawa is projecting program costs in 2020 and going forward to revert to normal ranges and historical averages.

[21] For more information on the asset demographics and lifecycle of transformers, including average age, please see Section 6 of Exhibit 2-4-3: Distribution System Plan.

Figure 4 – Leaking Transformer

2.3. FACILITIES, INSURANCE, AND FUEL

The third category of cost driver focuses on facilities, insurance, and fuel. Table 5 below displays each of these items and the associated CAGR over the 2016-2021 period. The updated version of Table 5 below reflects updates for 2019 actuals.

Table 5 – AS ORIGINALLY SUBMITTED – Summary of Facilities, Insurance, and Fuel ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year	CAGR[22]
Property Tax	$2.1	$2.1	$2.3	$3.3	$3.0	$3.1	7.8%
Utilities	$1.0	$0.9	$0.9	$1.0	$0.5	$0.5	(12.2)%
Facilities Overlap	$0.0	$0.0	$0.0	$1.7	$0.0	$0.0	N/A
Substation Rental	$0.0	$0.0	$0.0	$0.0	$0.6	$0.6	N/A
Insurance	$1.4	$1.5	$1.6	$1.7	$1.9	$2.0	7.3%
Fuel	$0.6	$0.7	$0.7	$0.7	$0.8	$0.9	8.9%
TOTAL[23]	**$5.1**	**$5.2**	**$5.5**	**$8.4**	**$6.9**	**$7.1**	**6.9%**
Year-over-Year Variance[24]		*$0.1*	*$0.3*	*$2.9*	*$(1.5)*	*$0.2*	

Table 5 – UPDATED FOR 2019 ACTUALS – Summary of Facilities, Insurance, and Fuel ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year	CAGR[25]
Property Tax	$2.1	$2.1	$2.3	$2.7	$3.0	$3.1	7.8%
Utilities	$1.0	$0.9	$0.9	$1.0	$0.5	$0.5	(12.2)%
Facilities Overlap	$0.0	$0.0	$0.0	$2.6	$0.0	$0.0	N/A
Substation Rental	$0.0	$0.0	$0.0	$0.0	$0.6	$0.6	N/A
Insurance	$1.4	$1.5	$1.6	$1.7	$1.9	$2.0	7.3%
Fuel	$0.6	$0.7	$0.7	$0.8	$0.8	$0.9	8.9%
TOTAL[26]	**$5.1**	**$5.2**	**$5.5**	**$8.9**	**$6.9**	**$7.1**	**6.9%**
Year-over-Year Variance[27]		*$0.1*	*$0.3*	*$3.4*	*$(2.0)*	*$0.2*	

[22] CAGR represents the compound annual growth rate between 2016 and 2021.
[23] Totals may not sum due to rounding.
[24] Variance may exist due to rounding.
[25] CAGR represents the compound annual growth rate between 2016 and 2021.
[26] Totals may not sum due to rounding.
[27] Variance may exist due to rounding.

Property taxes are paid to the City of Ottawa annually based on the value of the buildings and substations and the associated municipal tax rates. In 2019, the spike in taxes was due to the following: (i) overlap in property tax costs that arose during the transition from the Albion and Merivale properties to the Hunt Club and Dibblee properties; and (ii) the increase in the assessed values of the new properties. Property tax in 2020 is anticipated to be higher than 2018 due to higher assessed values from the new buildings only, as the Albion and Merivale buildings were sold in 2019. The percentage increase for the 2021 Test Year is based on the City of Ottawa's projection of a 3% increase.

Utilities include electricity, water, and natural gas. Utility costs are expected to decrease by half, largely due to the net metered solar arrays that were installed at the new buildings in 2019. Notwithstanding the fact that the move to the new facilities occurred during Q2 2019, the impact of this reduction is not seen until 2020 and 2021. This is on account of the overlap in costs experienced in 2019, as described above, with the transition between Albion and Merivale to Hunt Club and Dibblee. Amongst other things, the installation of the net metered solar arrays at the new facilities demonstrates Hydro Ottawa's leadership in the reduction of its environmental footprint. It also contributed to the utility being named one of Canada's Greenest Employers in 2019 (which marked the seventh occasion Hydro Ottawa has earned this distinction).

Figure 5 – Net Metered Solar Arrays at New Facilities

In addition to property taxes and utilities, the transition between Albion and Merivale to Hunt Club and Dibblee entailed a duplication of other facilities-related operating costs, seeing as the Merivale and Albion property sales closed in September and November 2019, respectively. Moving costs of $0.5M are also captured in the “Facilities Overlap” line in Table 5 above.

With respect to substation rentals, Hydro Ottawa and Hydro One Networks Inc. (“HONI”) have joint-use substations. In the case of Hydro Ottawa-owned substations at which HONI has equipment, Hydro Ottawa has been charging HONI rent for the portion of the substation occupied by HONI’s equipment. HONI has recently indicated that it intends to commence a reciprocal arrangement, in which it will charge Hydro Ottawa for the space occupied by Hydro Ottawa’s equipment at HONI-owned substations. Hydro Ottawa has not yet been charged an amount by HONI. Using a similar methodology to its own, however, Hydro Ottawa estimates the expected rental cost will be approximately $0.6M.

Insurance premiums have been increasing approximately 5%-6% per year due to global market factors and higher insured values as new assets come on-line and replacement costs increase

for existing assets. In 2020, this increase is set to be higher, as a full property valuation exercise was completed for insured assets which resulted in an increase to the overall valuation of approximately $100.0M. Along with the significant hardening of the insurance markets due to financial losses by the insurance industry, this has driven large increases for property insurance owned by Hydro Ottawa. Cyber security premiums have also risen significantly, as policy wording and coverage limits were strengthened to mitigate the increasing threat of cyber attacks.

Hydro Ottawa purchases approximately $0.7M per year in fuel. These costs are driven both by market price and consumption. Fuel consumption generally ranges from 50,000 to 70,000 litres per month to support 234 vehicles and other transportation equipment.[28] The consumption for the Bridge Years and Test Year is relatively flat. However, fuel costs are expected to rise over the term of the utility's 2021-2025 rate plan.

2.4. OEB FEES AND CONSERVATION AND DEMAND MANAGEMENT ALLOCATION

The fourth key cost driver is related to fees assessed to Hydro Ottawa by the OEB, in accordance with the OEB's Cost Assessment model, and to conservation and demand management ("CDM") allocation costs. The utility has grouped these together, in light of the fact that they are outside of its control and are driven by public policy and regulatory requirements.

[28] Please see Attachment 2-4-3(F): Fleet Replacement Program for details on Hydro Ottawa's vehicle fleet.

Table 6 – AS ORIGINALLY SUBMITTED – Summary of OEB Fees and CDM Allocation Costs ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year	CAGR[29]
OEB Fees	$1.1	$1.1	$1.1	$1.0	$1.1	$1.6	8.0%
CDM Allocation	$(0.5)	$(0.6)	$(0.6)	$(0.4)	$(0.2)	$0.0	(41.4)%
TOTAL[30]	**$0.6**	**$0.5**	**$0.5**	**$0.7**	**$0.9**	**$1.6**	**21.1%**
Year-over-Year Variance[31]		*$(0.1)*	*$0.0*	*$0.2*	*$0.2*	*$0.7*	

Table 6 – AS REVISED – Summary of OEB Fees and CDM Allocation Costs ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year	CAGR[32]
OEB Fees	$1.1	$1.1	$1.1	$1.0	$1.1	$1.6	8.0%
CDM Allocation	$(0.5)	$(0.6)	$(0.6)	$(0.4)	$(0.2)	$0.0	(41.4)%
TOTAL[33]	**$0.6**	**$0.5**	**$0.5**	**$0.6**	**$0.9**	**$1.6**	**21.1%**
Year-over-Year Variance[34]		*$(0.1)*	*$0.0*	*$0.2*	*$0.2*	*$0.7*	

Table 6 – UPDATED FOR 2019 ACTUALS – Summary of OEB Fees and CDM Allocation Costs ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year	CAGR[35]
OEB Fees	$1.1	$1.1	$1.1	$1.1	$1.1	$1.6	8.0%
CDM Allocation	$(0.5)	$(0.6)	$(0.6)	$(0.4)	$(0.2)	$0.0	(41.4)%
TOTAL[36]	**$0.6**	**$0.5**	**$0.5**	**$0.7**	**$0.9**	**$1.6**	**21.1%**
Year-over-Year Variance[37]		*$(0.1)*	*$0.0*	*$0.2*	*$0.2*	*$0.7*	

[29] CAGR represents the compound annual growth rate between 2016 and 2021.
[30] Totals may not sum due to rounding.
[31] Variance may exist due to rounding.
[32] CAGR represents the compound annual growth rate between 2016 and 2021.
[33] Totals may not sum due to rounding.
[34] Variance may exist due to rounding.
[35] CAGR represents the compound annual growth rate between 2016 and 2021.
[36] Totals may not sum due to rounding.
[37] Variance may exist due to rounding.

Pursuant to modifications to its Cost Assessment model that were adopted in 2016, the OEB has enabled Hydro Ottawa to record the difference between OEB cost assessments that were built into the utility's 2016-2020 rates and cost assessments that resulted from the new model in a balance sheet variance account.[38] This treatment will not be applicable to Hydro Ottawa's 2021-2025 rates. Accordingly, the utility has included the full amount of OEB cost assessment fees in OM&A starting in 2021.

On March 21, 2019, the 2015-2020 Conservation First Framework ("CFF") program administered by the Independent Electricity System Operator ("IESO") was terminated, pursuant to Ministerial directive. During this program, Hydro Ottawa was providing certain shared services to its internal IESO-funded CDM program. These services included Human Resources ("HR"), Facilities, Information Technology ("IT"), Finance, Communication, and Fleet, for a total cost of $0.6M, as shown in the 2017 and 2018 Historical Years columns in Table 6 above. As a result, Hydro Ottawa's OM&A was reduced by the amount of this allocation during those years. However, after the CFF wind-down period is complete in 2021, this shared service recovery will cease.

2.5. CONTACT CENTRE, POSTAGE, AND BAD DEBT

The next category of cost driver involves matters pertaining to customer care and billing. As shown in Table 7 below, contact centre, postage, and fluctuations in bad debt serve as the primary drivers. The updated version of Table 7 below reflects 2019 actuals. Together, these drivers are set to produce an overall reduction in costs during 2016-2021.

[38] Please see UPDATED Exhibit 4-2-4: Regulatory Costs for further details on the OEB's Cost Assessment model.

Table 7 – AS ORIGINALLY SUBMITTED – Summary of External Contact Centre, Postage, and Bad Debt Costs ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year	CAGR[39]
External Contact Centre	$2.0	$1.7	$1.6	$1.6	$1.7	$1.7	(3.3)%
Postage	$2.1	$1.9	$1.8	$1.8	$1.8	$1.8	(3.2)%
Bad Debt	$1.4	$2.2	$1.5	$0.8	$1.5	$1.5	1.7%
TOTAL[40]	**$5.5**	**$5.8**	**$4.9**	**$4.2**	**$5.0**	**$5.0**	**(1.8)%**
Year-over-Year Variance[41]		*$0.3*	*$(1.0)*	*$(0.7)*	*$0.8*	*$0.0*	

Table 7 – UPDATED FOR 2019 ACTUALS – Summary of External Contact Centre, Postage, and Bad Debt Costs ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year	CAGR[42]
External Contact Centre	$2.0	$1.7	$1.6	$1.5	$1.7	$1.7	(3.3)%
Postage	$2.1	$1.9	$1.8	$1.8	$1.8	$1.8	(3.2)%
Bad Debt	$1.4	$2.2	$1.5	$0.9	$1.5	$1.5	1.7%
TOTAL[43]	**$5.5**	**$5.8**	**$4.9**	**$4.2**	**$5.0**	**$5.0**	**(1.8)%**
Year-over-Year Variance[44]		*$0.3*	*$(1.0)*	*$(0.7)*	*$0.8*	*$0.0*	

In 2017, Hydro Ottawa signed a contract with a new provider of contact centre services. This resulted in lower costs and better service levels. The costs associated with contact centre services are largely driven by the duration of customer calls. Call lengths have been reduced as a result of increased automation, including planned outage notifications sent to customers in advance through Auto Dialer, Move-In/Move-Out requests processed through the utility's web

[39] CAGR represents the compound annual growth rate between 2016 and 2021.
[40] Totals may not sum due to rounding.
[41] Variance may exist due to rounding.
[42] CAGR represents the compound annual growth rate between 2016 and 2021.
[43] Totals may not sum due to rounding.
[44] Variance may exist due to rounding.

portal, increased usage of MyAccount, and expanded communications through various social media channels.[45] The total contract cost for the contact centre was $2.0M in 2016; by 2021, it is expected to be $1.7M.

Postage rates have historically increased by 3% per year, while Hydro Ottawa's customer growth has averaged 1% per year. Despite these trends, the utility is showing a CAGR of -3.2% on account of its continued success in enrolling customers in e-billing. Hydro Ottawa has achieved the highest e-billing participation rate among Ontario LDCs (almost 50% of customers), which has translated into an estimated annual savings of $1.9M in avoided postage and printing costs.

Bad debt increased significantly in 2017, when the OEB first introduced the Disconnection Moratorium for electricity distributors. To address this increase, Hydro Ottawa undertook several mitigation efforts, including the implementation of Auto Dialer functionality. The Auto Dialer replaced the hand-delivery of the 48-hour warning notices, meaning more customers can be reached and reminded of payments in a much more timely fashion. Since the launch of the Auto Dialer solution, bad debt expenses have been trending more positively. Bad Debt as a percentage of Total Electricity Revenue is a metric that continues to be monitored by the utility, and since 2017, performance has trended in a positive direction. Despite the Disconnection Moratorium, the utility anticipates that bad debt will eventually return to pre-2017 levels.

2.6. DARK FIBER FEES

The construction of an optical telecommunications network was approved by the OEB, as part of Hydro Ottawa's last rebasing application.[46] In 2019, the utility began transitioning from the current leased fiber to the new fiber optic network in stages. The exit fees from the lease contracts (based on the contract terms and conditions) are shown in Table 8 below, which has

[45] More information on these initiatives is available in Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives.
[46] Ontario Energy Board, *Decision and Order*, EB-2015-0004 (December 22, 2015).

been updated to account for 2019 actuals. Hydro Ottawa expects to exit all of its lease contracts by 2022, which will result in a permanent operating cost reduction of $1.0M.

Table 8 – AS ORIGINALLY SUBMITTED – Summary of Dark Fiber Lease and Exit Fees ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year	CAGR[47]
Annual Lease	1.1	1.0	1.0	0.9	0.7	0.1	N/A
Exit Fee	0.0	0.0	0.0	0.4	1.5	0.4	N/A
TOTAL[48]	**1.1**	**1.0**	**1.0**	**1.3**	**2.2**	**0.5**	**(16.2%)**
Year-over-Year Variance[49]		*(0.1)*	*0.0*	*0.3*	*0.9*	*(1.7)*	N/A

Table 8 – UPDATED FOR 2019 ACTUALS – Summary of Dark Fiber Lease and Exit Fees ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year	CAGR[50]
Annual Lease	1.1	1.0	1.0	1.0	0.7	0.1	N/A
Exit Fee	0.0	0.0	0.0	0.2	1.5	0.4	N/A
TOTAL[51]	**1.1**	**1.0**	**1.0**	**1.2**	**2.2**	**0.5**	**(16.2%)**
Year-over-Year Variance[52]		*(0.1)*	*0.0*	*0.2*	*1.0*	*(1.7)*	N/A

2.7. TECHNOLOGY

Attachment 1-1-13(B): Digital Strategy identifies Hydro Ottawa's priorities and goals for leveraging information and operational technology in support of its business objectives over the 2021-2025 period. The Digital Strategy revolves around four central themes: an enhanced

[47] CAGR represents the compound annual growth rate between 2016 and 2021.
[48] Totals may not sum due to rounding.
[49] Variance may exist due to rounding.
[50] CAGR represents the compound annual growth rate between 2016 and 2021.
[51] Totals may not sum due to rounding.
[52] Variance may exist due to rounding.

customer experience; evolution of the grid; increased productivity through automation; and participation in energy innovation and technology.

As dependence on technology and automation increases, costs can as well. As the Digital Strategy continues to evolve and align with best practices, Hydro Ottawa is seeking readily-available solutions that best fit our business needs. In many instances, this has taken the form of the utility moving away from traditional on-premise solutions to cloud-based options. Cloud-based options simplify internal infrastructure and leverage turnkey options offered by cloud solutions. With this cloud-based focus, Hydro Ottawa has realized a year-over-year increase in IT subscriptions, resulting in a CAGR of 7.9% over the 2016-2021 period, as shown in Table 9 below.

One of the cost evaluation and control measures applied by Hydro Ottawa to this critical and growing part of the business is benchmarking. For a copy of the IT Budget Assessment Benchmark study that was prepared to support the development of this Application, please refer to Attachment 1-1-12(F).

Table 9 – Summary of Technology Costs ($'000,000s)

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year	CAGR[53]
Technology Costs	8.2	9.0	9.4	9.9	11.2	12.1	7.9%
Year-over-Year Variance[54]		*0.8*	*0.4*	*0.5*	*1.3*	*0.9*	

2.8. SERVICE LEVEL AGREEMENT COSTS RECLASSIFICATION

Consistent with section 2.4.3.2 of the Filing Requirements and OEB guidance issued in 2018, Service Level Agreement ("SLA") costs were no longer included in OM&A as of 2019.[55] (Please

[53] CAGR represents the compound annual growth rate between 2016 and 2021.
[54] Variance may exist due to rounding.
[55] Ontario Energy Board, Presentation re: *Chapter 1 & 2 Filing Requirements Update for 2019 Applications: Summary of Key Changes* (July 19, 2018), slides 15-16.

see Exhibit 4-2-1: Shared Services and Corporate Cost Allocation and UPDATED Exhibit 3-2-1: Other Revenue Summary for details). Prior to 2019, Hydro Ottawa recorded the SLA revenue in USofA 4325 as Revenues from Merchandising and Jobbing, but left the associated costs in OM&A. With the growth of Hydro Ottawa's affiliate business activity, the amounts charged to these affiliates and the associated costs through SLAs increased significantly, as outlined in Attachment 4-2-1(A): OEB Appendix 2-N - Shared Services and Corporate Cost Allocation, which has been updated for 2019 actuals and can be found in UPDATED Attachment 3-2-1(B): OEB Appendix 2-N - Shared Services and Corporate Cost Allocation. The costs, along with the associated SLA revenue, are now reported in USofA 4330 Costs from Merchandising and Jobbing and are deducted from Hydro Ottawa's OM&A.

3. OM&A PROGRAM COST & VARIANCE ANALYSIS

Pursuant to section 2.4.3 of the Filing Requirements, the following section provides a variance analysis for the 2016-2021 period of Hydro Ottawa's OM&A costs by major program. Table 10 provides Historical, Bridge, and Test Year expenditures by the program categories and the five-year CAGR for each program category. The updated version of Table 10 below reflects 2019 actuals using 2016-2019 Historical Years, 2020 Bridge Year, and 2021 Test Year. Table 11, which has also been updated for 2019 actuals, provides a year-over-year analysis of variances per program, as expressed in both dollar and percentage terms. Any variances exceeding the $750K materiality threshold for this Application are explained. The OM&A program costs shown in Table 10 are net of any allocations to the capital programs and, as of 2019, net of the SLA costs discussed in section 2.8 above.

UPDATED Attachment 4-1-3(D): OEB Appendix 2-D - Overhead Expenses details both the OM&A costs by program before capitalization, as well as the OM&A that has been capitalized. Hydro Ottawa's capitalized overhead costs conform with the OEB's policy on capitalization. The capitalization policy has not changed since 2016, with the percentage of OM&A costs capitalized representing between 26% and 29%. For more details on the utility's capitalization policy, please see Exhibit 2-4-4: Capitalization Policy.

Table 10 – AS ORIGINALLY SUBMITTED – Summary of OM&A Program Costs ($'000s)

Programs	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year	CAGR[56]
Collections, Accounts & Activities	$3,121	$3,775	$2,882	$2,489	$3,279	$3,378	1.6%
Corporate Costs	$8,284	$5,855	$6,385	$6,827	$7,071	$7,625	(1.6)%
Customer & Community Relations	$7,191	$7,291	$7,011	$6,852	$7,893	$8,459	3.3%
Customer Billing	$9,480	$8,936	$8,866	$7,734	$8,634	$9,193	(0.6)%
Distribution Operations	$17,754	$18,885	$19,312	$19,870	$20,382	$21,458	3.9%
Engineering & Design	$6,872	$6,879	$7,541	$7,419	$8,746	$8,566	4.5%
Facilities	$6,652	$6,442	$7,124	$9,541	$7,339	$7,476	2.4%
Finance	$3,918	$3,847	$3,964	$3,042	$3,340	$3,417	(2.7)%
Human Resources & Training	$4,118	$3,827	$4,054	$3,559	$3,795	$3,890	(1.1)%
Information Management & Technology	$7,652	$8,262	$10,692	$10,516	$11,953	$10,085	5.7%
Metering	$2,266	$2,478	$2,200	$2,059	$2,586	$2,612	2.9%
Regulatory Affairs	$2,024	$2,037	$2,157	$2,012	$2,248	$2,986	8.1%
Safety, Environment & Business Continuity	$2,045	$2,262	$3,423	$4,429	$3,662	$3,719	12.7%
Supply Chain	$1,244	$1,471	$1,252	$1,198	$1,062	$1,060	(3.2)%
GRAND TOTAL[57]	**$82,621**	**$82,245**	**$86,863**	**$87,545**	**$91,990**	**$93,923**	**2.6%**

[56] CAGR represents the compound annual growth rate between 2016 and 2021.
[57] Totals may not sum due to rounding.

Table 10 – UPDATED FOR 2019 ACTUALS – Summary of OM&A Program Costs ($'000s)

Programs	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year	CAGR[58]
Collections, Accounts & Activities	$3,121	$3,775	$2,882	$2,232	$3,279	$3,378	1.6%
Corporate Costs	$8,284	$5,855	$6,385	$5,041	$7,071	$7,625	(1.6)%
Customer & Community Relations	$7,191	$7,291	$7,011	$6,478	$7,893	$8,459	3.3%
Customer Billing	$9,480	$8,936	$8,866	$8,489	$8,634	$9,193	(0.6)%
Distribution Operations	$17,754	$18,885	$19,312	$18,154	$20,382	$21,458	3.9%
Engineering & Design	$6,872	$6,879	$7,541	$6,860	$8,746	$8,566	4.5%
Facilities	$6,652	$6,442	$7,124	$9,912	$7,339	$7,476	2.4%
Finance	$3,918	$3,847	$3,964	$3,299	$3,340	$3,417	(2.7)%
Human Resources & Training	$4,118	$3,827	$4,054	$3,287	$3,795	$3,890	(1.1)%
Information Management & Technology	$7,652	$8,262	$10,692	$9,828	$11,953	$10,085	5.7%
Metering	$2,266	$2,478	$2,200	$2,019	$2,586	$2,612	2.9%
Regulatory Affairs	$2,024	$2,037	$2,157	$2,019	$2,248	$2,986	8.1%
Safety, Environment & Business Continuity	$2,045	$2,262	$3,423	$4,207	$3,662	$3,719	12.7%
Supply Chain	$1,244	$1,471	$1,252	$1,289	$1,062	$1,060	(3.2)%
GRAND TOTAL[59]	**$82,621**	**$82,245**	**$86,863**	**$83,113**	**$91,990**	**$93,923**	**2.6%**

[58] CAGR represents the compound annual growth rate between 2016 and 2021.
[59] Totals may not sum due to rounding.

Table 11 – AS ORIGINALLY SUBMITTED – Summary of OM&A Program Variances ($'000s)

Programs	2017-2016 Variance		2018-2017 Variance		2019-2018 Variance		2020-2019 Variance		2021-2020 Variance	
Collections, Account & Activities	$654	*21%*	$(893)	*(24)%*	$(394)	*(14)%*	$790	*32%*	$99	*3%*
Corporate Costs	$(2,429)	*(29)%*	$531	*9%*	$441	*7%*	$244	*4%*	$554	*8%*
Customer & Community Relations	$99	*1%*	$(280)	*(4)%*	$(159)	*(2)%*	$1,041	*15%*	$566	*7%*
Customer Billing	$(544)	*(6)%*	$(69)	*(1)%*	$(1,132)	*(13)%*	$900	*12%*	558	*6%*
Distribution Operations	$1,131	*6%*	$426	*2%*	$558	*3%*	$513	*3%*	$1,075	*5%*
Engineering & Design	$6	*0%*	$662	*10%*	$(122)	*(2)%*	$1,327	*18%*	$(180)	*(2)%*
Facilities	$(211)	*(3)%*	$682	*11%*	$2,417	*34%*	$(2,202)	*(23)%*	$137	*2%*
Finance	$(71)	*(2)%*	$117	*3%*	$(922)	*(23)%*	$299	*10%*	$77	*2%*
Human Resources & Training	$(291)	*(7)%*	$227	*6%*	$(495)	*(12)%*	$236	*7%*	$95	*3%*
Information Management & Technology	$610	*8%*	$2,430	*29%*	$(177)	*(2)%*	$1,437	*14%*	$(1,868)	*(16)%*
Metering	$212	*9%*	$(277)	*(11)%*	$(142)	*(6)%*	$527	*26%*	$26	*1%*
Regulatory Affairs	$13	*1%*	$120	*6%*	$(145)	*(7)%*	$236	*12%*	$737	*33%*
Safety, Environment & Business Continuity	$217	*11%*	$ 1,161	*51%*	$ 1,007	*29%*	$(767)	*(17)%*	$ 57	*2%*
Supply Chain	$226	*18%*	$(218)	*(15)%*	$ (55)	*(4)%*	$(136)	*(11)%*	$ (2)	*0%*
Grand Total[60]	**$(376)**	***0%***	**$4,618**	***6%***	**$ 699**	***1%***	**$4,428**	***5%***	**$1,932**	***2%***

[60] Totals may not sum due to rounding.

Table 11 – UPDATED FOR 2019 ACTUALS – Summary of OM&A Program Variances ($'000s)

Programs	2017-2016 Variance		2018-2017 Variance		2019-2018 Variance		2020-2019 Variance		2021-2020 Variance	
Collections, Account & Activities	$654	*21%*	$(893)	*(24)%*	$(651)	*(23)%*	$1,047	*47%*	$99	*3%*
Corporate Costs	$(2,429)	*(29)%*	$531	*9%*	$(1,344)	*(21)%*	$2,030	*40%*	$554	*8%*
Customer & Community Relations	$99	*1%*	$(280)	*(4)%*	$(533)	*(8)%*	$1,415	*22%*	$566	*7%*
Customer Billing	$(544)	*(6)%*	$(69)	*(1)%*	$(378)	*(4)%*	$146	*2%*	558	*6%*
Distribution Operations	$1,131	*6%*	$426	*2%*	$(1,157)	*(6)%*	$2,228	*12%*	$1,075	*5%*
Engineering & Design	$6	*0%*	$662	*10%*	$(681)	*(9)%*	$1,886	*27%*	$(180)	*(2)%*
Facilities	$(211)	*(3)%*	$682	*11%*	$2,789	*39%*	$(2,574)	*(26)%*	$137	*2%*
Finance	$(71)	*(2)%*	$117	*3%*	$(665)	*(17)%*	$41	*1%*	$77	*2%*
Human Resources & Training	$(291)	*(7)%*	$227	*6%*	$(766)	*(19)%*	$508	*15%*	$95	*3%*
Information Management & Technology	$610	*8%*	$2,430	*29%*	$(864)	*(8)%*	$2,125	*22%*	$(1,868)	*(16)%*
Metering	$212	*9%*	$(277)	*(11)%*	$(182)	*(8)%*	$567	*28%*	$26	*1%*
Regulatory Affairs	$13	*1%*	$120	*6%*	$(138)	*(6)%*	$229	*11%*	$737	*33%*
Safety, Environment & Business Continuity	$217	*11%*	$ 1,161	*51%*	$785	*23%*	$(545)	*(13)%*	$ 57	*2%*
Supply Chain	$226	*18%*	$(218)	*(15)%*	$36	*3%*	$(226)	*(18)%*	$ (2)	*0%*
Grand Total[61]	**$(376)**	***0%***	**$4,618**	***6%***	**$(3,750)**	***(4)%***	**$8,878**	***11%***	**$1,932**	***2%***

[61] Totals may not sum due to rounding.

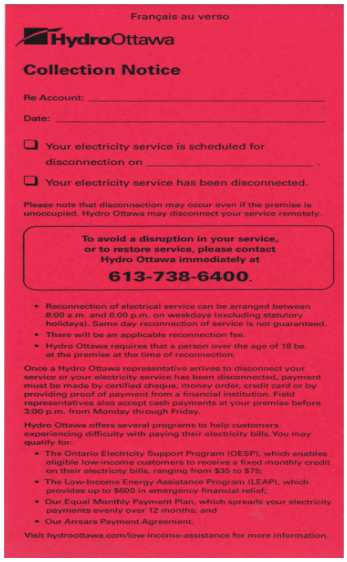
3.1. COLLECTIONS, ACCOUNTS AND ACTIVITIES

The Collections, Accounts and Activities program captures costs associated with Hydro Ottawa's collection activities and bad debt expense. The two main costs in this category are compensation and benefits, and bad debt expense.

The CAGR for this program is 1.6%. Despite higher demand and growth in collection activities, headcount in this program remained flat due to increased automation. The most notable and successful example of the use of automated technology is the implementation of the Auto Dialer solution in 2017. This initiative was implemented to help mitigate the high bad debt expense that was triggered by the imposition of the Disconnection Moratorium.

The Auto Dialer functionality was put in place to replace the 48-hour warning notices that were previously hand-delivered in advance of a disconnection for non-payment. The Auto Dialer costs only $0.26 per notice vs. hand-delivery at a combined labour and fleet hourly rate of $80. The number of hand-delivered 48-hour warning notices sent to customers dropped from 56,746 in 2016 to only 5,300 in 2018. This initiative reduced Hydro Ottawa's bad debt expense and other operational costs such as fuel, while increasing staff capacity to focus on higher-value work.

Figure 6 – 48-Hour Warning Disconnection Notice



Français au verso

HydroOttawa

Collection Notice

Re Account: _____

Date: _____

☐ Your electricity service is scheduled for disconnection on _____ .

☐ Your electricity service has been disconnected.

Please note that disconnection may occur even if the premise is unoccupied. Hydro Ottawa may disconnect your service remotely.

To avoid a disruption in your service, or to restore service, please contact Hydro Ottawa immediately at

613-738-6400.

- Reconnection of electrical service can be arranged between 8:00 a.m. and 6:00 p.m. on weekdays (excluding statutory holidays). Same day reconnection of service is not guaranteed.
- There will be an applicable reconnection fee.
- Hydro Ottawa requires that a person over the age of 18 be at the premise at the time of reconnection.

Once a Hydro Ottawa representative arrives to disconnect your service or your electricity service has been disconnected, payment must be made by certified cheque, money order, credit card or by providing proof of payment from a financial institution. Field representatives also accept cash payments at your premise before 3:00 p.m. from Monday through Friday.

Hydro Ottawa offers several programs to help customers experiencing difficulty with paying their electricity bills. You may qualify for:

- The Ontario Electricity Support Program (OESP), which enables eligible low-income customers to receive a fixed monthly credit on their electricity bills, ranging from $35 to $75;
- The Low-Income Energy Assistance Program (LEAP), which provides up to $600 in emergency financial relief;
- Our Equal Monthly Payment Plan, which spreads your electricity payments evenly over 12 months; and
- Our Arrears Payment Agreement.

Visit hydroottawa.com/low-income-assistance for more information.

The year-over-year variances in this program are mainly due to fluctuations in bad debt expense. The increase in 2017 was attributable to the inaugural implementation of a Disconnection Moratorium, which resulted in high accounts receivable aging and associated bad debt expense. In 2018, the bad debt expense dropped, due to the utility's mitigation efforts described above. The expectation is that these levels will be maintained over the 2020-2021 period.

"Bad Debt as a % of Total Electricity Revenue" is a metric that is being monitored and performance since 2017 is trending in a positive direction.

3.2. CORPORATE COSTS

The Corporate Costs category primarily captures insurance, Future Employee Benefit Costs, and management fees from Hydro Ottawa's parent company, Hydro Ottawa Holding Inc. (Please refer to Exhibit 4-2-1: Shared Services and Corporate Cost Allocation for additional details on management fees).

Corporate Costs show a decrease in 2017 compared to 2016 due to the recognition of non-vested sick leave credits of $1.5M in 2016. In 2016, a liability and associated expense was recognized for accumulated sick leave credits for unionized employees based on an actuarial valuation of $1.5M. Hydro Ottawa's unionized employees earn sick leave days each year and unused days are carried forward for use in future years. However, when an employee retires or is terminated, there is no pay-out of the accumulated sick leave credits since they do not vest. The expense in each of the remaining Historical, Bridge, and Test Years is minimal as it only represents a true-up of the balance.

After accounting for 2019 actuals, 2019 Corporate Costs dropped by $1.3M. This can be partially explained by the variance in the WSIB Surcharge account - 2018, which included a surcharge. However, a rebate was received in 2019 due to improvement in claim status year-over-year. The expectation for 2020 is back to a neutral level (i.e. neither rebate nor surcharge).

The CAGR for Corporate Costs, excluding this one-time amount of $1.5M in non-vested sick leave credits, is approximately 2.4%. All items remain relatively flat except for insurance premiums, which are on the rise because of the following reasons:

- Higher overall insured property values (including for Hydro Ottawa's new administrative and operations buildings), new substations, and the increase in replacement costs of the existing substations directly affect the cost of the policy.
- The property market has seen significant "hardening of the market" due to large financial losses incurred by insurance companies globally, which they are looking to recover. This includes catastrophic events in Canada such as wildfires (Fort McMurray), flooding (Calgary, eastern Canada), tornadoes (Ontario, including Ottawa) and an increasing number of wind and ice storms.

- For a utility like Hydro Ottawa, cyber threats are increasing, and ever-changing in complexity and volume. Higher premiums for cyber coverage reflect the increased coverage and limits required to mitigate cyber threats.

3.3. CUSTOMER AND COMMUNITY RELATIONS

The Customer and Community Relations program captures costs associated with customer experience, Key Accounts, customer contact, and communications staff. Half of the costs are salaries and benefits. The other half includes the Customer Contact Centre services, technology costs, media communications, and the administration of the provincially-mandated Low-Income Energy Assistance Program ("LEAP") and Ontario Electricity Support Program ("OESP").

As discussed in Exhibit 4-1-6: Conservation and Demand Management, despite the previous IESO-funded, LDC-delivered CDM program being terminated in 2019, Hydro Ottawa proposes to sustain a level of customer engagement, community outreach, and collaboration with other industry players in the CDM space, in order to remain a trusted advisor to its customers and to be able to partner in the pursuit of a smart energy future.

Through the effective delivery of CDM programming to its customers over the past 15 years, Hydro Ottawa has established a solid reputation as a trusted advisor providing energy-saving expertise in Ottawa's communities. By engaging customers in energy efficiency initiatives, the utility's goal is to reduce total electricity usage, avoid energy waste, and encourage customers to use less energy at times of high demand in Ottawa so as to support province-wide system needs.

Hydro Ottawa is proposing to continue this type of CDM programming starting in mid-2021, with funding recovered through rates – $0.2M in 2021, seeing as that year's needs are only partial, following on the heels of the expiration of the CFF framework, and $0.5M from 2022-2025. This funding would be allocated to compensation, marketing, and miscellaneous costs.

Contact centre service costs were reduced substantially from 2016, as a result of a transition to a new service provider and a decrease in average call duration. The reduction in call minutes is attributable to increased automation: planned outage notifications sent to customers in advance through Auto Dialer, Move-In/Move-Out requests processed through a web portal, increased usage of MyAccount, and increased communications through various social media channels. The reduction of contact centre costs was paired with an increase in service offerings from Hydro Ottawa. Contact centre hours were extended to include Saturday. In addition, several additional technology improvements have been implemented including the following:

- Social login – customers can now login to their Hydro Ottawa account using their passwords for email, Facebook, and Google.
- Customer service is available in 120 languages.
- Call-back assist – customers can request a call-back versus waiting on hold.
- Streamlined call-in system – one number for both outages and services.
- Customer self-serve telephony uses voice recognition technology known as “My Voice is My Password.”

The increase in 2020 from 2019 is largely explained by investments in increased automation, including administration and technical support for Hydro Ottawa’s mobile application program and Field Service Management. These solutions will enhance the customer experience and the efficiency of field operations.

3.4. CUSTOMER BILLING

Customer billing includes costs associated with Billing, Meter to Cash (“MTC”), and Meter Data operations and staff.[62] Technology costs represent about 40% of overall costs, while compensation represents approximately 33%.

[62] The MTC group includes the Enterprise Customer Care & Billing System application, Advanced Metering Infrastructure and related applications and data flows which enable business operations, and regulatory compliance for electricity revenue billing.

The overall program costs decreased by an average of 0.6%. These savings are largely associated with a reduction in postage costs on account of increased rates of e-billing enrollment. As noted above, Hydro Ottawa has achieved the highest e-billing participation rate among Ontario LDCs (almost 50% of customers), with estimated annual savings of $1.9M in avoided postage and printing costs. As an added benefit, Hydro Ottawa's e-billing success is also helping the environment by reducing the use of paper and transportation.

Figure 7 – E-Billing "Go Paperless" Campaign[63]

These postage savings are partially offset by increases in compensation and benefit costs, while the headcount in this area remained flat. The reduction in 2019, and the subsequent increase in 2020, are due to the timing of the Customer Care & Billing System upgrade project and the capitalization of internal resources dedicated to the development, configuration, and implementation of the program whereby not all of the resources were backfilled.

[63] Hydro Ottawa's donations to the Children's Hospital of Eastern Ontario ("CHEO") through its "Go Paperless" campaign are not rate-recoverable. Please see 4-2-6: Charitable and Political Donations for details.

3.5. DISTRIBUTION OPERATIONS

Distribution Operations includes costs associated with the operations and maintenance of Hydro Ottawa's distribution assets. Programs in this area include Vegetation Management, Underground Cable Locates, Pole Inspections, Cable Inspections, Infra-Red ("IR") Scanning, Load Dispatching, and other general maintenance.

Distribution Operations spending increased $1.1M in 2017 (6%) vs. 2016 and $0.4M (2%) in 2018 vs. 2017. Spending subsequently decreased $1.2M in 2019 (6%) vs. 2018. The major increases are driven by a larger volume of work and are associated with the following distribution maintenance programs:

- **Vegetation Management:** the Vegetation Management Program is a prevention investment that is designed to produce long-term reliability gains, while maintaining safety clearance requirements. Trees that contact power lines are one of the major causes of power failure. Hydro Ottawa's System Average Interruption Frequency Index ("SAIFI") caused by tree contacts remained low at 0.08 to 0.12 through 2016-2018, while the industry average was 0.18.[64] Planned cycle trim costs averaged $2.7M annually from 2016-2018. However, several significant adverse weather events in 2017 and 2018 contributed to higher than expected total spend over that timeframe ($0.4M in total storm response costs in 2017 and $0.5M in 2018). Storm response decreased in 2019, which contributed to a $0.3M reduction in outside services from 2018. Over 80% of the program costs are related to outside services. Program costs are expected to decrease through 2021, as a result of Hydro Ottawa having re-tendered and renegotiated its service provider contract in 2019. Renegotiation efforts in 2019 led to delays in planned cycle trim efforts that will catch up in 2020.

- **Underground Cable Locates:** the Underground Cable Locates program costs increased over the period of 2016-2020. Two-thirds of the increase is volume-related

[64] Source: 2016-2018 Canadian Electricity Association Service Continuity Reporting.

(i.e. customer demand), while the remaining one-third is due to inflationary pricing increases in Hydro Ottawa's external vendor contract. (Please see section 2.2 above). In 2018, Telecom companies' FTTH initiatives in Ottawa prompted an approximately 20% increase in locate volumes over 2016-2017 levels. This volume increase translated into a rise in costs from $2.2M in 2017 to 2.7M in 2018 and to $2.9M in 2019. Volumes are expected to continue growing through 2025. Hydro Ottawa has taken several steps to control program costs, including the establishment of Alternate Locate Agreements in situations where an approved excavator can dig without receiving a traditional locate and the extension of the validity period for locates from 30 to 60 days.

Despite the cost increases in the foregoing programs, the average annual growth rate for overall Distribution Operations remained 3.9%.

The $1.0M increase in 2021 from 2020, as submitted in the utility's original Application, represents a 5% increase. After taking 2019 actuals into account, Distribution Operations spending is set to increase $2.2M in 2020 (12%) vs. 2019 actuals, and by an additional $1.1M in 2021 from 2020 (5%). This is largely explained by vacant positions which are expected to be filled in 2020, as well as general compensation increases, as per collective agreements and insured and statutory benefits. Other increases are driven by volume and contract price increases for distribution maintenance.

Table 12 below, which has been updated for 2019 actuals, provides a summary of Distribution Operations by category.

Table 12 – AS ORIGINALLY SUBMITTED – Summary of Distribution Operations ($'000,000s)

	2016 Historical Year[65]	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year
Distribution Support Programs	$2.8	$4.0	$4.6	$4.6	$4.6	$4.9
Distribution Testing, Inspection & Maintenance	$1.7	$1.9	$2.0	$1.8	$2.2	$2.2
System Operating	$5.5	$4.6	$5.3	$4.9	$5.1	$5.2
Vegetation Management[66]	$4.2	$4.4	$4.0	$3.4	$3.9	$3.9
Distribution Maintenance	$1.9	$2.4	$1.7	$2.3	$2.4	$2.4
Stations Maintenance	$2.2	$1.8	$2.0	$2.1	$2.2	$2.2
Other[67]	$(0.6)	$(0.3)	$(0.3)	$0.7	$0.0	$0.6
TOTAL[68]	**$17.8**	**$18.9**	**$19.3**	**$19.9**	**$20.4**	**$21.4**

[65] Financials for 2016 were remapped from a different general ledger structure. Program spending may therefore be inconsistent from 2017 to 2021, thus impeding any calculation of CAGR. Accordingly, CAGR is not displayed in this table.
[66] Vegetation Management in this table includes internal labour costs. Table 3 includes external costs only.
[67] "Other" comprises compensation for these programs offset with allocation recoveries, and other general operating and administrative costs associated with Distribution Operations (e.g. small tools). Such costs are not allocated to the subprogram level.
[68] Totals may not sum due to rounding.

Table 12 – UPDATED FOR 2019 ACTUALS – Summary of Distribution Operations ($'000,000s)

	2016 Historical Year[69]	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year	2021 Test Year
Distribution Support Programs	$2.8	$4.0	$4.6	$4.9	$4.6	$4.9
Distribution Testing, Inspection & Maintenance	$1.7	$1.9	$2.0	$1.5	$2.2	$2.2
System Operating	$5.5	$4.6	$5.3	$5.0	$5.1	$5.2
Vegetation Management[70]	$4.2	$4.4	$4.0	$2.8	$3.9	$3.9
Distribution Maintenance	$1.9	$2.4	$1.7	$2.1	$2.4	$2.4
Stations Maintenance	$2.2	$1.8	$2.0	$1.8	$2.2	$2.2
Other[71]	$(0.6)	$(0.3)	$(0.3)	$0.1	$0.0	$0.6
TOTAL[72]	**$17.8**	**$18.9**	**$19.3**	**$18.2**	**$20.4**	**$21.4**

The sections below describe each category of Distribution Operations in more detail.

3.5.1. Distribution Support Programs

This category includes all operating and maintenance programs required to support the design, construction, and operation of the distribution system. Table 13 below contains Asset / Activity descriptions for Distribution Support Programs.

[69] Financials for 2016 were remapped from a different general ledger structure. Program spending may therefore be inconsistent from 2017 to 2021, thus impeding any calculation of CAGR. Accordingly, CAGR is not displayed in this table.
[70] Vegetation Management in this table includes internal labour costs. Table 3 includes external costs only.
[71] "Other" comprises compensation for these programs offset with allocation recoveries, and other general operating and administrative costs associated with Distribution Operations (e.g. small tools). Such costs are not allocated to the subprogram level.
[72] Totals may not sum due to rounding.

Table 13 – Asset/Activity Descriptions for Distribution Support Programs

Asset / Activity	Description
Transformer Shop	**Transformer Shop** *All costs associated with the repair and testing of distribution transformers in Hydro Ottawa's transformer shop.*
General Operating	**Records Field Checks & Standards Development** *All costs associated with Field Verification of distribution records and the development of standards, including labour associated with participating in the committee meetings of industry and standard-setting bodies.*
Power Quality Programs	**Power Quality Administration** *All costs associated with power quality investigations (as per section 2.3.2.1 of Hydro Ottawa's Conditions of Service).*
	Power Quality Monitoring Services *Costs associated with the monitoring and investigation of power quality on Hydro Ottawa's system.*
Underground Lines & Feeders	**Excavator Supervision** *Safety supervision of contractors excavating in proximity to Hydro Ottawa plant.*
	Underground Locate Service *Contracted services for protection of the Hydro Ottawa underground system (underground locates services and Ontario One–Call).*

3.5.2. Distribution Testing, Inspection & Maintenance

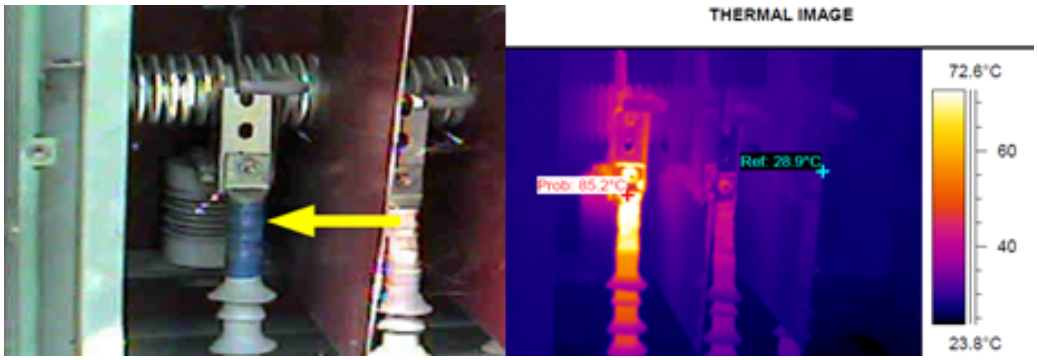
This category includes planned operating and maintenance programs associated with the testing, inspection, and maintenance of the distribution system. Table 14 below contains Asset / Activity descriptions for Distribution Testing, Inspection & Maintenance.

Table 14 – Asset/Activity Descriptions for Distribution Testing, Inspection & Maintenance

Asset / Activity	Description
Cable Chamber	**Cable Chamber Inspection** *Condition inspection of Hydro Ottawa and customer-owned cable chambers, which are integral to Hydro Ottawa's system.The inspection includes reviewing the condition of the collar, lid, roof, and walls. Cable chamber components that pose an immediate risk to the public, workers, or reliability of the distribution system are identified for immediate corrective actions. If they pose a reduced risk they are identified for planned corrective actions at a later date.*
Distribution Poles	**Pole Inspection** *Work to inspect and test all Hydro Ottawa distribution poles, on a 10-year cycle. Inspection information and estimated remaining strength, using the results of non-destructive resistograph drill tests, are used to assess the pole's condition. Condition information is used to identify and prioritize pole replacement programs.*
Insulator Washing	**Insulator Washing Overhead** *Costs associated with the planned washing of Hydro Ottawa's overhead insulators, in areas subjected to salt spray and heavy contamination to prevent insulation breakdown and pole fires.*
Overhead Inspection	**Overhead Thermographic Inspection** *Costs associated with the overhead thermographic scanning of all overhead assets on a 3-year cycle. Scanning is used to detect abnormal temperature conditions in equipment and connections.*
Overhead Maintenance	**Overhead Switch Maintenance** *Planned detailed inspection and corrective maintenance of Hydro Ottawa's critical overhead distribution switchgear (switch and controls).*
Underground Maintenance	**Hydro-Owned Vault Maintenance** *Planned maintenance of Hydro Ottawa-owned easement/shared vaults within customer facilities. This planned program subjects its vault transformers to a visual and thermographic inspection in addition to minor cleaning.*
Transformers - Underground	**Graffiti Abatement** *Work associated with Hydro Ottawa's Graffiti Abatement program supports compliance with the City of Ottawa's Graffiti By–Law.*
	Padmount Transformer Painting *Planned painting of Hydro Ottawa's padmount transformers, where the finish has deteriorated overtime.*
General Plant	**SCADA Maintenance** *Planned maintenance of Hydro Ottawa Supervisory Control and Data Acquisition ("SCADA") devices. Includes visual inspection, checking communication, cleaning, torquing, and function testing.*
Underground Lines & Feeders	**Cable Testing** *Planned testing of Hydro Ottawa's in–service distribution cable. Testing is completed using non-destructive testing technology to determine the cable's probability of failure resulting from water tree migration. The testing results are used to prioritize cable replacement programs.*
Customer Operating	**Field Ops Vault Inspections** *Inspection of customer-owned vaults to identify deficiencies found that would affect operations or safety. Issues are flagged to equipment owners for corrective action.*
Underground Switchgear	**Switchgear CO2 Wash – Padmounted Gear** *Dry–ice washing of Hydro Ottawa's air insulated underground distribution switchgear, including cleaning of its internal mechanism.*
Underground Thermographic Inspection	**Underground Switchgear Thermographic and Visual Inspection** *Visual and thermographic inspection of Hydro Ottawa's gas-insulated and air-insulated distribution padmount switchgear.*
	Underground Transformer Thermographic and Visual Inspection *Visual and thermographic inspection of Hydro Ottawa's underground transformers.*

Figure 8 – Pole Testing Using Resistograph Drill

Figure 9 – Thermographic Scan Identifying Hotspot in Distribution Switchgear



3.5.3. System Operating

This category includes work associated with daily operations of the distribution system and with event response. Table 15 below contains Asset / Activity descriptions for System Operating.

Table 15 – Asset/Activity Descriptions for System Operating

Asset / Activity	Description
Load Dispatching	**Control Room Labour** *System operator dispatch labour costs.*
	General System Switching *System switching, not directly tied to specific system work.*
	HONI Switching *Cost of HONI Switching requested by Hydro Ottawa.*
Overhead Transformers	**Operating Overhead Transformers** *Inspection testing, removing, or resetting of overhead transformers.*
Overhead Lines & Feeders	**Operating Overhead** *Inspecting and testing overhead lines including lightning arrestors, line circuit breakers, switches, and grounds.*
Underground Lines & Feeders	**Operating Underground** *Inspecting and testing underground lines; patrolling.*
Underground Transformers	**Operating Underground Transformers** *Inspection testing, removing, or resetting of underground transformers.*
General Operating	**24/7 Police & Fire Call Response** *Costs associated with 24/7 response to police and fire calls.*
General Operating	**Vault Maintenance Coordination Labour** *Coordination of customer vault maintenance.*

Figure 10 – Control Room System Operator Performing Dispatching

3.5.4. Vegetation Management

This category includes all work associated with the vegetation management of Hydro Ottawa's existing overhead lines. Table 16 contains Asset / Activity descriptions for Vegetation Management.

Table 16 – Asset/Activity Descriptions for Vegetation Management

Asset / Activity	Description
Tree Trimming	**Vegetation Management – Regular Cycle Trim** *Trimming of trees, as part of the normal tree trimming cycle, according to current Hydro Ottawa tree trimming standards.*
	Vegetation Management – Off Cycle Spot Trim *Trimming of trees, outside of normal trim cycle, that pose a hazard to reliability or safety, and the removal of which falls within current Hydro Ottawa tree trimming standards.*
	Vegetation Management – Off Cycle City of Ottawa *Trimming of trees, outside of normal trim cycle, whose removal falls within current Hydro Ottawa tree trimming standards and for which a request was initiated by the City of Ottawa.*
	Vegetation Management – Off Cycle Customer Calls *Trimming of trees, outside of normal trim cycle, whose removal falls within current Hydro Ottawa tree trimming standards and for which a request was initiated by a customer.*
	Vegetation Management – Storm (Emergency) *Vegetation management required in response to a system outage, imminent event, or safety hazard.*
	Vegetation Management – Emerald Ash Borer *Costs associated with the removal of trees affected by the Emerald Ash Borer.*

Figure 11 – Crews Performing Tree Trimming near Overhead Lines

3.5.5. Distribution Maintenance

This category includes unplanned work to repair or maintain the distribution system. Table 17 below contains Asset / Activity descriptions for Distribution Maintenance.

Table 17 – Asset/Activity Descriptions for Distribution Maintenance

Asset / Activity	Description
Asbestos Removal	**Asbestos Removal & Re–fireproofing** *Removal of asbestos fireproofing from distribution cables and installing new arc-proof tape.*
Poles & Towers	**Repair Poles & Fixtures** *Repair and maintenance of poles and fixtures, excluding guy and anchor repairs.*
	Repair Guying *Repair and maintenance of pole guying and anchors.*
Overhead Maintenance	**Overhead Repairs – Conductors & Devices** *Overhauling and repairing line switches and reclosers. Cleaning Insulators and Bushings. Refusing line cut–outs. Excludes repairs to grounding.*
	Repair Pole Grounds *Repairing pole grounds.*
Overhead Services	**Overhead Repairs – Secondary Services** *Repair of overhead secondary conductors.*
Underground Conduit	**Underground Repairs – Conduit** *Moving or changing position of conduit or pipe. Minor alteration repairs or moving racks, ladders, or hangers in hand holes or manholes.*
Underground Conductors and Devices	**Underground Repairs – Secondary Conductor & Devices** *Repairing secondary conductors, splices, and connections. Repairing or moving junction boxes*
	Switchgear Maintenance *Repair of underground switches, breakers, and control wiring.*
	Underground Repairs – Primary Conductors & Devices *Repairing conductors, splices, and connections. Repairing or moving junction boxes and potheads. Re–fireproofing cable and repairing supports. Excludes services.*
Underground Services	**Underground Repairs – Secondary Services** *Repair of underground secondary services.*
Transformers - Overhead	**Transformer Repairs – Overhead Transformers** *Renewing oil, painting and the like, that is necessary to keep equipment in service. Includes transformer lightning arresters.*
Transformers - Underground	**Transformer Repairs – Underground Transformers** *Renewing oil, painting, and the like that is necessary to keep the equipment in service. Includes transformer lightning arresters.*

3.5.6. Stations Maintenance

This category includes all planned and unplanned work associated with station maintenance. Table 18 contains Asset / Activity descriptions for Station Maintenance.

Table 18 – Asset/Activity Descriptions for Station Maintenance

Asset / Activity	Description
Station Transformers	**Transformer & Tap Changer Preventative Maintenance** *Work associated with planned preventative maintenance of station transformers and tap changers. Work is carried out every three to five years, and includes electrical testing and mechanical maintenance. Transformer tap changer maintenance intervals vary with the type.*
	Transformer & Tap Changer Reactive Maintenance *All work associated with unplanned corrective maintenance of station transformers and tap changers.*
	Transformer Inspection *Work associated with Hydro Ottawa's annual predictive station transformer maintenance, which includes a detailed visual inspection and infrared scans.*
	Transformer Oil Analysis *Work associated with oil-dissolved gas and oil quality analysis, undertaken as part of annual transformer predictive maintenance. This program includes a furan analysis to assess the degradation of the transformer's paper insulation, which is completed on a 5-year cycle.*
	Transformer Monitor Maintenance *Work associated with maintaining temperature controllers and online dissolved gas analysis monitors ("ODGA") on station transformers. These monitors support continuous monitoring of station transformers through SCADA to provide operational and asset condition related information.*
Station Switchgear	**Switchgear & Breaker Inspection** *All work associated with annual visual and thermographic inspection of station breaker, switchgear, and components.*
	Switchgear & Breaker Maintenance - Preventative *All work associated with planned maintenance of station breakers, switchgear and components. Work is carried out every four to six years. Preventative maintenance is performed on breakers, including electrical, mechanical, and type-specific maintenance tasks.* *Every 10 years, detailed preventative maintenance is performed on the entire switchgear assembly, including detailed internal visual inspections, insulation resistance tests, and ensuring that there are no structural deficiencies in the switchgear (e.g. cracks, leaks, or warped metal).*

Asset / Activity (Cont'd)	Description (Cont'd)
Station Switchgear	**Switchgear & Breaker Maintenance - Reactive** *All work associated with unplanned maintenance of station breakers, switchgear, and components.*
Relays	**Relay Maintenance - Preventative** *All work associated with planned maintenance of relays. Relay maintenance includes function testing, calibration of electromechanical relays, and protection setting updates, if required.*
	Relay Maintenance - Reactive *All work associated with unplanned maintenance of relays.*
DC System	**DC System Maintenance - Preventative** *Work associated with planned annual maintenance of station DC systems (Batteries and Chargers). Detailed predictive maintenance is performed on station battery banks and chargers. This includes a detailed visual inspection, infrared scan, as well as electrical and mechanical tests.*
	DC System Maintenance - Reactive *All work associated with unplanned maintenance of station DC systems, batteries, and chargers.*
Structures	**Station Structures** *All work associated with maintenance of station structures.*
IR Scan	**Station IR Scanning** *Planned thermographic scanning in stations.*
Station Inspections	**Station Inspections** *Hydro Ottawa performs monthly station inspections to check for any deficiencies and initiate corrective actions. Annual thermographic scan of all electrical components in the station is completed.*

1

Figure 12 – Station Transformer Maintenance

3.6. ENGINEERING AND DESIGN

The Engineering and Design program includes costs associated with Distribution Design, System Operations, Asset Planning, Policies, Procedures, and Standards. Over 80% of the costs are labour costs, with the remaining 20% being mostly technology costs related to the Geographic Information System ("GIS") system, SCADA, and the asset management software Copperleaf C55.[73]

[73] Please see section 1.8 of Exhibit 2-4-3: Distribution System Plan for more information on these items.

Costs were flat through 2019, as reflected in the utility's original Application, and decreased $0.7M after accounting for 2019 actuals, but are set to increase in 2020 due to technical support requirements for the new SCADA system and growing organizational demand for technical support in maintenance programs and standards. Higher costs in IT license and maintenance contracts, as well as general compensation and benefit increases, are also a factor. The decrease in 2019 is primarily due to compensation, which is attributed to both overtime costs (which were at a four-year low) and vacancies that were not filled. Vacant positions are expected to be filled in 2020.

3.7. FACILITIES

The Facilities program costs consist of maintenance and operating costs for Hydro Ottawa's administrative and operations buildings and substations. Such costs include summer and winter civil maintenance, cleaning, waste management, building electrical, mechanical, safety, security, general repair, utilities, and property taxes. Approximately 40% of total program costs are property taxes.

In 2019, as submitted in the utility's original Application, Facilities program costs increased by $2.4M, or 34%, and $2.8M, or 39%, after accounting for 2019 actuals, primarily on account of the timing overlap in the sale of the utility's old buildings and the occupation of its new ones, in addition to other one-time costs such as moving expenses. This overlap spike is temporary in nature, as reflected in the $2.2M reduction anticipated in 2020. After accounting for 2019 actuals, the revised reduction is anticipated to be $2.6M in 2020.

There is also a reduction in utility costs in 2020 due to the net metered solar arrays at the new facilities, which help offset utility costs. However, these savings will themselves be offset by substation rental charges payable to HONI, as discussed in section 2.3 above.

3.8. FINANCE

The Finance program costs consist primarily of salaries and benefits relating to functions such as accounts receivable and payable, capital asset accounting, banking, audit, budget and accounting support, and financial reporting. Compensation is the main cost driver of the program, however headcount has remained steady over the past four years.

The $0.9M, or 23%, cost reduction in 2019 vs. 2018 (which has been updated to $0.7M, or 17%, after accounting for 2019 actuals) is attributable to SLA Reclassification, as explained in section 2.8 above. Many Finance employees provide services to affiliates. Had this reduction not occurred, 2019 Finance costs would have been $3.8M. When taking 2019 actuals into account, Finance costs would have been $4.0M. This latter figure would have nevertheless still represented a cost reduction from 2018 due to the successful execution of various productivity initiatives and an enduring commitment to cost control.

Finance program costs in 2019, 2020, and 2021 include cost-saving impacts relating to the elimination of external support for cheque payment processing. The volume of cheques and reduction in equipment and technology costs have proven that internal payment processing will be less costly.

When excluding the aforementioned SLA reclassification, the CAGR for Finance program costs between 2016 and 2021 is 1%.

3.9. HUMAN RESOURCES & TRAINING

Included in the Human Resource & Training program are costs pertaining to the provision of HR support, talent development, trades-specific training, labour relations legal costs, and payroll administration costs.

Spending has been relatively steady in this program. The drop, as submitted in the utility's original Application, in 2019 of $0.5M, or 12% (which has been updated to a drop of $0.8M, or

19% after accounting for 2019 actuals) is connected with SLA Reclassifications, as explained in section 2.8 above. All variances are below the materiality threshold.

3.10. INFORMATION MANAGEMENT AND TECHNOLOGY

The Information Management and Technology ("IM&T") program is comprised of compensation and benefits and externally-sourced operating costs to deliver services relating to IT Infrastructure, including Helpdesk Support, Application Support, Data Management, Information Management, IT Security (cybersecurity), and IT Project Planning. As described in Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives, many technology and automation initiatives have been implemented since 2016, which has helped to cascade efficiency savings throughout other programs across Hydro Ottawa.

The $2.4M, or 29%, increase in 2018 vs. 2017 is largely explained by post-go-live activities associated with the Enterprise Resource Planning ("ERP") upgrades and Human Resource Capital (i.e. Workday) system implementation completed at the end of 2017. More specifically, in 2018, following a stabilization period, the incorporation of additional features and modules into the ERP and Workday systems led to further automation of business processes and thus leveraged the previous year's investments.

The decrease in 2019 of $0.9M, or 8%, is connected with SLA Reclassifications, as explained in section 2.8 above. The increase in 2020 vs. 2019, as submitted in the utility's original Application, is $1.4M, or 14% (which has been updated to an increase of $2.1M, or 22% after taking 2019 actuals into account). This increase is primarily due to a one-time termination fee to cancel the use of certain strands under the dark fibre lease. Beginning in 2022, Hydro Ottawa will no longer lease dark fibre. This will yield annual IM&T operating cost savings of $1.1M (please see section 2.6 for additional details). The one-time termination fee was removed from the 2021 budget. These two reductions explain the budget reduction in 2021.

3.11. METERING

Metering program costs are comprised of the costs of operating and maintaining Hydro Ottawa's meter fleet. Activities include, but are not limited to, testing and inspections, cross readings and investigations, and field retrieval. Compensation is the main cost driver in the program.

Overall program costs have remained fairly stable. However, there were some temporary cost reductions in 2018 and 2019 which were primarily driven by timing differences between employee departures and replacements. None of the variances exceed the materiality threshold. The overall CAGR of the Metering program over the 2016-2021 timeframe is 2.9%.

3.12. REGULATORY AFFAIRS

Included in Regulatory Affairs are compensation and benefits costs related to overseeing the implementation of OEB-approved distribution rates and charges, preparation of distribution rate applications, regulatory and compliance reporting, policy research and analysis, public policy engagement, load forecasting, cost allocation, and rate design. In addition, OEB fees represent approximately 50% of total program costs.

In 2021, there is an increase of $0.7M. This is attributable, in part, to an increase in Regulatory Memberships to reflect the actual costs of updated OEB cost assessments, as the previously-used variance account will no longer apply during the 2021-2025 rate term (see section 2.4 above). In addition, the preparation and adjudication costs associated with this Application will start being expensed in 2021.

Overall, the CAGR for the Regulatory Affairs program over the 2016-2021 timeframe is expected to be 8.1%.

3.13. SAFETY, ENVIRONMENT AND BUSINESS CONTINUITY

Included in the Safety, Environment and Business Continuity program are costs pertaining to Distribution Environmental Programs and Flame Resistant Clothing for employees. Outside services for environmental remediation make up approximately 30% of the annual budget.

The program experienced large increases over the past few years, with a CAGR of 12.7%. This was driven by the following:

- Increased environmental remediation costs due to proactive inspections of assets using infrared scanning. These inspections identify small spills/leaks before they cause greater impacts and potentially affect distribution system reliability. The number of events reported from 2015-2018 increased from 96 to 131. The associated cost increases of $0.4M in 2018 and $0.5M in 2019 are temporary increases and are expected to decrease in 2020 by $0.8M when Hydro Ottawa's infrared scanning cycle is completed. After accounting for 2019 actuals, the associated cost increase for 2019 has been updated to $0.6M. This is expected to decrease in 2020 by $0.9M, when Hydro Ottawa's infrared scanning cycle is completed.
- Costs of approximately $1.0M associated with the provision of Flame Resistant Clothing, as outlined in the collective agreement with the IBEW, were previously decentralized under other programs. In 2018, these costs were centralized and moved into this program in order to provide greater management oversight and control, and to assist with the administration of the online ordering system.

Figure 13 – AS ORIGINALLY SUBMITTED – Number of Spills

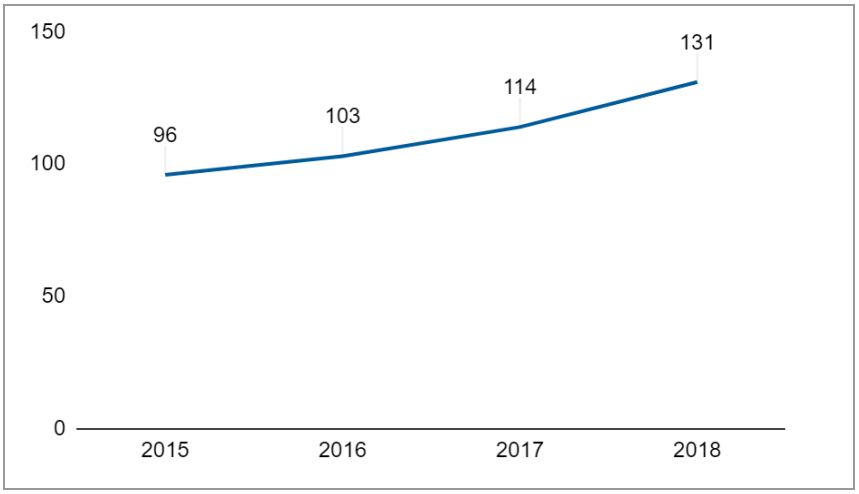
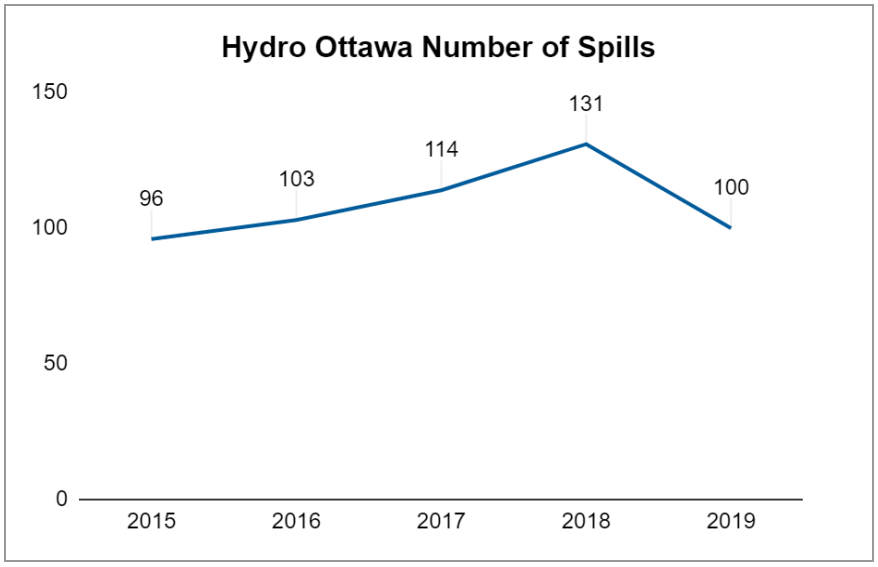


Figure 13 – UPDATED FOR 2019 ACTUALS – Number of Spills



3.14. SUPPLY CHAIN

Included in the Supply Chain program are costs pertaining to the delivery of procurement and warehouse functions. This is achieved through the administration of procurement policies,

procurement of all products and services acquired by the utility, and management of the inventory and equipment used to construct and maintain Hydro Ottawa's distribution assets.

Over the 2016-2021 period, CAGR for this program is expected to be 3.2%. There are no variances above the materiality threshold.

UPDATED - Appendix 2-JB
Recoverable OM&A Cost Driver Table[1,3]

OM&A ($Millions)	Last Rebasing Year (2016 Actuals)	2017 Actuals	2018 Actuals	2019 Actuals	2020 Bridge Year	2021 Test Year
Reporting Basis	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
Opening Balance[2]	$ 83.1	$ 82.6	$ 82.2	$ 86.8	$ 83.1	$ 91.9
Labour Compensation and Benefits		$ (0.2)	$ 3.3	$ (1.9)	$ 4.1	$ 2.0
Proactive and Reactive Distribution System Maintenance		$ 0.1	$ 0.5	$ -	$ 0.4	$ 0.3
Facilities, Insurance, and Fuel		$ 0.1	$ 0.3	$ 3.4	$ (2.0)	$ 0.2
OEB Fees and CDM Allocation		$ (0.1)	$ -	$ 0.2	$ 0.2	$ 0.7
Contact Center, Postage, Bad Debt		$ 0.3	$ (1.0)	$ (0.7)	$ 0.8	$ -
Dark Fiber fees		$ (0.1)	$ -	$ 0.1	$ 1.0	$ (1.7)
Technology		$ 0.8	$ 0.4	$ 0.5	$ 1.3	$ 0.9
SLA Cost Reclassification		$ -	$ -	$ (3.2)	$ (0.7)	$ (0.1)
Others	$ (0.5)	$ (1.3)	$ 1.1	$ (2.1)	$ 3.7	$ (0.3)
Closing Balance[2]	$ 82.6	$ 82.2	$ 86.8	$ 83.1	$ 91.9	$ 93.9

Notes:

1 For each year, a detailed explanation for each cost driver and associated amount is requied in Exhibit 4.

2 Opening Balance for "Last Rebasing Year" (cell B15) should be equal to the OEB-Approved amount. For purposes of assessing incremental cost drivers, the closing balance for each year becomes the opening balance for the next year.

3 If it has been more than four years since the applicant last filed a cost of service application, additional years of historical actuals should be incorporated into the table, as necessary, to go back to the last cost of service application. If the applicant last filed a cost of service application less than four years ago, a minimum of three years of actual information is required.

2020
2016

UPDATED WORKFORCE STAFFING AND COMPENSATION

1. INTRODUCTION

This Schedule, in tandem with Attachments A through E, provides detailed information on Hydro Ottawa's strategies and approach to ensuring operational capacity and capability to safely and efficiently:

- maintain and enhance the reliability of the electricity distribution system;
- execute its comprehensive asset management plan and planned infrastructure renewal;
- respond to increasing legislative and regulatory requirements;
- address customer growth and nurture an evolving customer relationship;
- continue to manage the effects of its aging workforce; and
- leverage technological advancements, and an ever-changing business landscape.

2. WORKFORCE PLANNING AND STAFFING

In its 2016-2020 Custom Incentive Rate-Setting application, Hydro Ottawa outlined how it would attract and retain a highly skilled, properly trained, and knowledgeable workforce.[1] More specifically, Hydro Ottawa reviewed the need to replenish its trades workforce and the proactive strategies it would employ to mitigate the ongoing risk of an insufficient talent pipeline. By leveraging workforce planning, integrated within its Talent Management Framework, Hydro Ottawa's workforce modeling forecasted that over the 2015-2020 period there would be a requirement for 65 trades hires.[2] The actual hiring from 2015-2019, alongside planned hiring for 2020, will result in exactly 65 trades hires over this period.

As outlined in Attachment 4-1-5(B): Workforce Planning Strategy, as Hydro Ottawa moves from 2021 to 2025, its workforce planning is focused on sustaining rather than replenishing its trades

[1] Hydro Ottawa Limited, *2016-2020 Custom Incentive Rate-Setting Distribution Rate Application*, EB-2015-0004 (April 29, 2015).
[2] Workforce modeling is primarily used at Hydro Ottawa to forecast the supply of labour in relation to operational demand for resourcing.

workforce, replacing mid-level experienced front-line supervisors/managers and responding to the changing skill sets required in light of the technological innovations and digital transformation in the electricity sector.

Through its workforce modeling, Hydro Ottawa continues to identify gaps in its trades workforce for the 2021-2025 period. However, these projections are substantially less than those of the 2015-2020 period. This is, generally, as a result of demographics, access to contracted services, and a focus on more efficient and innovative ways of working. Of significance during this period will be the focus on replenishing the Hydro Ottawa people leader pipeline due to retirements, through succession planning, strategic external hiring, and leadership and management initiatives. Furthermore, during this time, the emphasis on the demand for new skill sets – and in some cases the creation of entirely new roles as a result of technological innovations and digital transformation – will require diverse responses in the form of training, hiring, and contracting for those skill sets.

To ensure that planned apprenticeship investments and hiring remain prudent, and to limit overall headcount increases within the organization from 2021-2025, Hydro Ottawa continues to base forecasted hiring on the following principles:

- Increase overall productivity to ensure greater availability of productive time, while also establishing initiatives to gain efficiencies that increase the quality of the time worked;
- Hire apprentices and fill other positions by using vacancies as they become available, including the redistribution of vacancies from support functions to the trades;
- Where available in the labour market, attract and hire journeypersons to fill vacancies, with the aim of reducing the overall required training investment in apprenticeships and leverage qualified resources with a shorter lead time to achieve maximum productivity;
- Balance hiring with the appropriate use of overtime to supplement labour gaps, and continue to leverage contracted services where cost-effective and available to meet demand; and

- Increase the efficiency of work through innovative practices and the introduction of new technologies and automation.

3. MAINTAINING A SAFE WORK ENVIRONMENT

As outlined in Attachment 4-1-5(D): Health, Safety and Environment Compliance and Sustainability, Hydro Ottawa has adopted a best practice, continual improvement approach in relation to the following: (i) meeting legislative and regulatory requirements in the areas of health, safety, and environment; and (ii) maintaining standards of performance relative to risks associated with its ongoing business activities. Since 2008, Hydro Ottawa has successfully maintained registration of its integrated health, safety, and environmental management system to the International Organization for Standardization ("ISO") 14001 and the Occupational Health and Safety Assessment Series ("OHSAS") 18001. The Occupational Health, Safety and Environmental ("OHSE") management system has been updated to meet the requirements of the new ISO environmental standard in 2018, and preparations are underway to transition from the current OHSAS 18001 health and safety specifications to the new ISO 45001 health and safety standard in 2020.

With its younger workforce, as described in Attachment 4-1-5(B): Workforce Planning Strategy, Hydro Ottawa has increased the number of safety inspections, jobsite coaching, pre-construction meetings, and independent reviews of work in recent years, in order to mitigate safety risks.

Additionally, Hydro Ottawa ensures robust due diligence in relation to contractor safety and performance through a partnership with a contractor management firm, which carries out comprehensive and more cost-effective contractor pre-qualification and compliance monitoring.

4. COMPENSATION AND HEADCOUNT

Hydro Ottawa's compensation philosophy and associated compensation components are premised on attracting and retaining a highly skilled workforce and on supporting a

performance-driven work culture. This is achieved by appropriately and fairly rewarding performance in the achievement of the objectives identified in the utility's Strategic Direction, and in accordance with position competencies and the organization's values, while at the same time controlling total compensation costs. More details on Hydro Ottawa's approach to total compensation – including salaries, incentive-based pay for senior employees only, insured benefit plans, pension plan, premiums and allowances – are outlined in UPDATED Attachment 4-1-5(A): Employee Compensation Strategy, as well as in Attachment 4-1-5(E): Actuarial Report regarding the utility's limited future benefit costs.

As provided in Attachment 1-1-12(G): Compensation Benchmarking Study, Hydro Ottawa engaged Mercer Canada to conduct a benchmarking study of its total compensation, including salaries, target total cash compensation, and benefit and pension contributions against both general and industry (utility) market comparators, where available. Jobs that are core to the operational business and key professional jobs were all found to be very well aligned with the market comparators. Some positions, generally unionized support roles, were found to be comparable to the utility market comparators although higher than the general industry market comparators.

The study also found that Hydro Ottawa's employer paid benefits, which include insurance and wellness benefits and pension contributions, are generally aligned with what is typically seen in the market – and more specifically, in the Ontario Public Sector.

Since 2016, Hydro Ottawa's total number of permanent full-time equivalents ("FTEs") has remained relatively static, with the same forecasted to 2021. Management permanent FTEs are decreasing and non-management permanent FTEs are slightly increasing. This has been realized while simultaneously replenishing and continuing to sustain the trades workforce, by using vacancies as they become available and focusing on productivity and efficiency and effectiveness of operations.

Hydro Ottawa has been increasing its usage of a temporary workforce, which provides it with more flexibility to address seasonal and other workloads, and can be more easily adjusted upwards or downwards, as required. Hydro Ottaway's forecast to 2021 continues this approach, allowing the utility to contain compensation costs.

As a result of prudently managing FTEs and compensation costs, Hydro Ottawa's actual and forecasted annual average increase to total compensation is ~~2.8 %~~ 2.5% from 2016-2021.

UPDATED Attachment 4-1-5(C): OEB Appendix 2-K - Employee Costs summarizes Hydro Ottawa's historical and forecasted FTEs and compensation costs, and indicates the following:

- Between 2016 and 2018, there was a decrease in FTEs. The 2019-2021 forecast shows an initial increase in the total number of FTEs between 2018 and 2019, and then a decrease in the total number of FTEs out to 2021; ~~and~~
- The 2019 actuals confirm a smaller increase in the total number of FTEs between 2018 and 2019, with the updated forecast showing an increase for 2020, and then a decrease in the total number of FTEs in 2021; and
- Total compensation costs are expected to increase on average by ~~2.8%~~ 2.5% per annum, from approximately ~~$67.4M~~ $68.4M in 2016 to $77.6M in 2021.

UPDATED EMPLOYEE COMPENSATION STRATEGY

1. INTRODUCTION

Hydro Ottawa's compensation philosophy and associated compensation components are premised on attracting and retaining a highly skilled workforce and on supporting a performance-driven work culture. This is achieved by appropriately and fairly rewarding performance in the achievement of the objectives identified in the utility's Strategic Direction, and in accordance with position competencies and the utility's values, while at the same time controlling total compensation costs.

2. TOTAL COMPENSATION

Hydro Ottawa's approach to total compensation aligns with the utility's compensation philosophy and consists of the following major components which reinforce the total value proposition: salaries, incentive-based pay for senior employees only, insured benefit plans, pension plan, premiums, and allowances.

2.1. COMPENSATION BENCHMARKING STUDY

As provided in Attachment 1-1-12(G), Hydro Ottawa engaged Mercer Canada to conduct a benchmarking study of the utility's total compensation, including salaries, target total cash compensation, and benefit and pension contributions against both general and industry (utility) market comparators, where available. Competitiveness of salaries and target total cash compensation was defined as being within +/- 10% of P50 of each market comparator.[1]

The study reviewed 15 jobs, 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 categories of positions/employees (management and non-management), which are further defined in section 3 below. Five management jobs and 10 non-management jobs at different levels of each category were reviewed.

[1] "P50" refers to the market median job rate.

The jobs that are core to the operational business (e.g. Manager, Distribution Operations; Supervisor, Distribution Operations; Professional Engineer; and the trades jobs of Power Line Technician and System Operator) were all found to be very well aligned with the utility market comparators. In the case of the Professional Engineer job, there was also alignment with the general industry market comparators.

Some jobs, generally unionized support roles, were found to be higher than the general industry market comparators, but in most cases within +/-10% of P50 of the utility market comparators.

Key professional roles such as Senior Procurement Agents, Management Accountants, and Network Administrators were also found to be very well aligned with both the utility and general industry market comparators.

With respect to employer paid benefits, which include insurance and wellness benefits and pension contributions, the study found that these offerings at Hydro Ottawa 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 20-22% of base salary, Hydro Ottawa's benefits were found to be within 19-21% of base salary.

2.2. MERIT INCREASES

The salary structure for executive, management, and non-union employees consists of various salary scales representing positions of similar scope and responsibility. A formalized point factor system is in place to evaluate positions and determine the salary scale in which they are placed. This ensures internal equity. Salary scales are reviewed every four years to ensure competitiveness.

Employees are paid an annual salary within the salary scale based on education and experience. Annual increases to salaries, within the salary scales, are merit-based and determined by performance and contributions in the previous year. A robust performance

management system is in place for this purpose. An overall performance rating is established and a merit increase associated with the rating is provided. Performance and contributions are directly tied to Hydro Ottawa's corporate performance scorecard, ensuring that the focus of this workforce segment is aligned to the advancement of the utility's Strategic Direction.

In determining the appropriate merit increase associated with each performance rating, Hydro Ottawa reviews the national, provincial, and local salary projections of major compensation consulting firms, including those projections for the utility and broader public sectors, as well as consumer price indices.

2.3. INCENTIVE-BASED PAY

Since 2008, only senior management employees have been eligible for an annual incentive-based pay as a component of their total cash compensation, which is expressed as a percentage of annual salary. These employees have a direct line-of-sight to the success of the utility's Strategic Direction. On average, 39 employees are eligible for incentive-based pay in any given year. After accounting for 2019 actuals, the number of employees eligible for incentive-based pay in any given year has been updated to an average of 40.

Incentive-based pay is derived from the achievement of corporate, divisional, and individual priorities in the previous year, both financial and non-financial, and qualitative and quantitative. These priorities are established each year and approved by the Board of Directors. Non-financial priorities are designed to achieve continuous improvement in relation to Hydro Ottawa's Strategic Direction. They include a number of strategic objectives focused on customer service, operational and organizational efficiency and effectiveness, and service reliability.

Table 1 below demonstrates the variability in this component of total cash compensation as it relates to the achievement of priorities.

Table 1 – AS ORIGINALLY SUBMITTED – Average Annual Incentive-Based Pay

	2016 Historical	2017 Historical	2018 Historical	3-Year Average
Number of Employees	39	38	41	39
Average Amount	$15,220	$17,139	$15,897	$16,085

Table 1 – UPDATED FOR 2019 ACTUALS – Average Annual Incentive-Based Pay

	2017 Historical	2018 Historical	2019 Historical	3-Year Average
Number of Employees	38	41	41	40
Average Amount	$17,139	$15,897	$16,151	$16,396

2.4. COLLECTIVE AGREEMENT

The International Brotherhood of Electrical Workers ("IBEW"), Local 636 represents Hydro Ottawa's unionized employees. This includes the company's trades, technical, clerical, and administrative employees.

The current collective agreement is in effect from April 1, 2017 until March 31, 2021. The collective agreement provides for negotiated wage increases and employee step progressions. Negotiated wage increases are 2.0% for 2017, 2.10% for 2018, 2.10% for 2019, and 2.2% for 2020. The wage increases are on average 22% lower than the increases from the previous four-year collective agreement. Nominal increases to certain premiums and allowances were also negotiated, and spread-out over the collective agreement's four-year term.

A number of labour efficiencies were achieved during this most recent round of collective bargaining, with some directly and indirectly related to total compensation. These include the expansion of normal hours of operation, reduction in hours of rest time when employees work overnight, and a simplified process for the re-assignment of employees to a different work location for training purposes.

2.5. PENSION PLAN

Hydro Ottawa employees are part of the Ontario Municipal Employees Retirement System ("OMERS"), a multi-employer, contributory, defined-benefit pension plan established by the Province for employees of municipalities, local boards, and school boards in Ontario. Pension benefits are determined by a formula based on the highest consecutive five-year average of contributory earnings and years of service. Both participating employers and participating employees are required to make equal contributions to the plan based on the participating employees' contributory earnings.

Employers and employees that are members of the OMERS pension plan contribute a lesser percentage on earnings received up to the annual Yearly Maximum Pensionable Earnings ("YMPE"), and a higher percentage on earnings above the YMPE. The YMPE is equal to the Canada Pension Plan ("CPP") earnings limit, as the OMERS pension plan is designed to work together with the CPP to provide a stable retirement income.

Table 2 below summarizes Hydro Ottawa's historical and forecasted contribution rates to OMERS from 2016-2021.

Table 2 – AS ORIGINALLY SUBMITTED – OMERS Contribution Rates (2016-2021)

	YMPE	Below YMPE	Above YMPE
2016 Historical	$54,900	9.0%	14.6%
2017 Historical	$55,300	9.0%	14.6%
2018 Historical	$55,900	9.0%	14.6%
2019 Bridge	$57,400	9.0%	14.6%
2020 Bridge	$60,100	9.0%	14.6%
2021 Test	$60,900	9.0%	14.6%

Table 2 – UPDATED FOR 2019 ACTUALS – OMERS Contribution Rates (2016-2021)

	YMPE	Below YMPE	Above YMPE
2016 Historical	$54,900	9.0%	14.6%
2017 Historical	$55,300	9.0%	14.6%
2018 Historical	$55,900	9.0%	14.6%
2019 Historical	$57,400	9.0%	14.6%
2020 Bridge	$60,100	9.0%	14.6%
2021 Test	$60,900	9.0%	14.6%

In an effort to reduce the funding deficit after the 2008 global economic downturn, OMERS contribution rates increased for both the employer and employee portions in 2012 and 2013. Due to better returns in 2013, contribution rates remained unchanged from 2014-2019. OMERS has recently confirmed that there will be no changes to the contribution rates for 2020. Hydro Ottawa has also forecasted no change in contribution rates for 2021. By 2022, OMERS contribution rates will have remained static for eight years.

For 2022 onwards, Hydro Ottawa, with the assistance of actuaries from Mercer Canada, has forecasted a 0.65% contribution rate increase, both below and above the annual YMPE, for both the employer and employee portions. This forecast is based on the OMERS Sponsors Corporation's Funding Management Strategy and the plan's funded ratios, as of December 31, 2018.

2.6. INSURED BENEFITS

Hydro Ottawa's insured benefit plans provide employees with income security and protection from catastrophic and life events. Insured benefits coverage is provided to active full-time employees in the following areas:

- Health, including vision care, prescription drugs, and paramedical services;
- Dental, including major dental and orthodontics services;
- Long-term disability benefits;
- Short-term disability benefits; and
- Life insurance.

As part of the most recent round of collective bargaining in 2017, no changes were made to the provisions of the insured benefit plans for the four-year term of the collective agreement. As a result, all provisions of the insured benefit plans have remained static for all employee groups during this time period.

Hydro Ottawa continues to benefit from its current cost containment measures such as reasonable and customary limitations and generic substitution. Most recently, a drug risk management program was introduced whereby new or existing drugs with new treatment indications are reviewed by the benefit plan insurer to ensure appropriateness.

For 2020 onwards, Hydro Ottawa has forecasted increases in benefit costs by using the 2019 benefit costs as a base and applying assumptions regarding anticipated rate increases by benefit. These assumptions are based on Mercer's 2019 Anticipated Benefit Costs report (dated October 2018) and the expected salary increase as per the current collective agreement with the IBEW.

2.7. POST-RETIREMENT BENEFITS

Hydro Ottawa's post-retirement benefits consist of life insurance and a small retirement grant for eligible employees primarily linked to positive attendance at work.

Hydro Ottawa completes a full actuarial valuation of the future value of the post-retirement benefits every three years, which is consistent with industry standards. In the interim years, an extrapolation is completed to determine if there has been a material change from the previous year.

The most recent actuarial valuation was performed as at December 31, 2016, with an actuarial extrapolation performed as at December 31, 2018 by Eckler Consultants & Actuaries.[2] The valuation determined that the accrued post-retirement life insurance obligation decreased from 2017-2018, which is primarily attributable to an increase in the discount rate used in 2018. The accrued retirement grant amount decreased from 2017-2018, which is attributable to the retirement of employees in 2017 that were paid their retirement grant, thereby reducing the utility's future obligations.

Hydro Ottawa has taken steps to contain its future benefit costs by limiting the type, scope, and applicability of post-retirement benefits.

2.8. REGULATORY TREATMENT OF PENSION AND OTHER POST-EMPLOYMENT BENEFITS

On September 14, 2017, the OEB issued its final report on the regulatory treatment of pension and other post-employment benefit ("OPEB") costs establishing the use of accrual accounting as the default method on which to set rates for pension and other post-employment benefit amounts in cost-based applications.[3] Moreover, this report also provides for the establishment of a variance account to track the difference between the forecasted accrual amount in rates and

[2] Please see Attachment 4-1-5(E): Actuarial Report.
[3] Ontario Energy Board, *Report of the Board: Regulatory Treatment of Pension and Other Post-Employment Benefits (OPEBs) Costs*, EB-2015-0040 (September 14, 2007).

actual cash payment(s) made, with an asymmetric carrying charge in favour of ratepayers applied to the differential.

Hydro Ottawa provides pension benefits for its employees through the OMERS Fund (the "Fund"). Although the plan is a defined benefit plan, sufficient information is not available to Hydro Ottawa to account for it as such because it is not possible to attribute the fund assets and liabilities between the various employers who contribute to the Fund. As a result, Hydro Ottawa accounts for the plan as a defined contribution plan, and contributions payable as a result of employee service are expensed as incurred similar to short-term employee benefits.

Hydro Ottawa also provides other post-employment benefits such as life insurance and a retirement grant. These plans provide benefits to certain employees when they are no longer providing active service. Other post-employment benefits are recorded on an accrual basis. The accrued benefit obligation and current service costs are calculated using the projected benefit method prorated on service and based on assumptions that reflect Hydro Ottawa's best estimates. Hydro Ottawa tracks the difference between the forecast accrual amount in rates and actual cash payments in a variance account as set out in the OEB report.

Table 3 below outlines Hydro Ottawa's 2016-2021 Pension and OPEB amounts.

Table 3 – AS ORIGINALLY SUBMITTED – Pension and OPEB Amounts ($'000s)

Pension and OPEB	Historical			Bridge		Test
	2016	2017	2018	2019	2020	2021
Pension cost[4]	$5,389	$5,530	$5,741	$6,136	$6,168	$6,355
Future employee benefits cost[5]	$2,240	$832	$736	$786	$800	$816
Cash paid[6]	$593	$634	$649	n/a	n/a	n/a

Table 3 – UPDATED FOR 2019 ACTUALS – Pension and OPEB Amounts ($'000s)

Pension and OPEB[7]	Historical				Bridge	Test
	2016	2017	2018	2019	2020	2021
Pension cost	$5,389	$5,530	$5,741	$5,720	$6,168	$6,355
Future employee benefits cost	$2,240	$832	$736	$1,232	$800	$816
Cash paid	$593	$634	$649	$717	n/a	n/a

3. HEADCOUNT

Hydro Ottawa has categorized employees/positions into two groups in calculating the total full-time equivalents ("FTE"). These groups are comprised of full-time permanent equivalents and temporary equivalents (which can be full-time or part-time), defined as follows:[8]

[4] As noted above, pension contributions are expensed as incurred. With respect to the pension cost that is capitalized, this along with other employee benefits as described in this Schedule, are included on the capitalized labour line in UPDATED Attachment 2-4-5(A): OEB Appendix 2-D - Overhead Expense. Hydro Ottawa uses a blended labour rate and burden rates to do this allocation and therefore does not track each type of compensation-related expense charged to capital separately. The other capitalized OM&A amounts (Supply Chain, Supervisor, Engineering and Fleet) also include compensation, and as such, pension costs are also included on these lines.

[5] As described above, Hydro Ottawa's other post-employment benefits are limited to life insurance and a retirement grant. The amount shown in Table 3 is the expense amount included in OM&A. Note that these costs are not included in the capitalized OM&A amounts discussed above, and therefore none of these amounts are capitalized. Although, not considering post-retirement, the non-vested sick leave as described in UPDATED Exhibit 4-1-4: Operations, Maintenance and Administration Cost Drivers and Program Variance Analysis is also grouped in this analysis.

[6] This represents the cash payments for other post-employment benefits as included on Hydro Ottawa's tax returns.

[7] Footnotes 4-6 likewise apply as descriptions for this updated version of the table.

[8] Summer students and co-op students are not included, as these short-term hires are viewed as developmental in nature.

- Management – includes executives, directors, managers, supervisors, and senior professionals such as professional engineers.
- Non-Management – includes non-unionized professionals, such as engineers-in-training and executive assistants, and all employees who are represented by the IBEW.

The tables below summarize Hydro Ottawa's actual FTEs for 2016, 2017, 2018, along with the forecasted FTEs for 2019, 2020 and 2021. Hydro Ottawa's FTE count is determined using standard methodology. For the 2016-2018 actuals, FTE is a calculated value derived from the total regular hours paid each year divided by the regular hours of work scheduled each year by a single employee in that group. For the 2019-2021 forecasts, FTE is calculated as all budgeted positions, adjusted for part-year budgeting for new positions. These tables have been revised due to a systemic error in spreadsheet templates which affected 2016, 2017, and 2018 actual FTE, Temporary Equivalents, and Compensation amounts.

After accounting for 2019 actuals, the updated versions of the tables below summarize Hydro Ottawa's actual FTEs for 2016, 2017, 2018, and 2019, along with the forecasted FTEs for 2020 and 2021. For the 2016-2019 actuals, FTE is a calculated value derived from the total regular hours paid each year divided by the regular hours of work scheduled each year by a single employee in that group. For the 2020-2021 forecasts, FTE is calculated as all budgeted positions, adjusted for part-year budgeting for new positions.

3.1. FULL-TIME PERMANENT EQUIVALENTS

Table 4 below illustrates Hydro Ottawa's forecasted plan to stabilize its total number of permanent full-time employees/positions.

Table 4 – AS ORIGINALLY SUBMITTED – Number of Full-Time Permanent Equivalents

	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge	2021 Test
Management	122.6	124.4	118.7	116.2	118.1	118.9
Non-Management	464.2	461.7	460.6	470.4	467.5	468.3
TOTAL	**586.8**	**586.1**	**579.3**	**586.6**	**585.6**	**587.2**

Table 4 – AS REVISED – Number of Full-Time Permanent Equivalents

	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge	2021 Test
Management	122.6	124.4	118.7	116.2	118.1	118.9
Non-Management	464.7	462.3	461.1	470.4	467.5	468.3
TOTAL	**587.3**	**586.7**	**579.8**	**586.6**	**585.6**	**587.2**

Table 4 – UPDATED FOR 2019 ACTUALS – Number of Full-Time Permanent Equivalents

	2016 Historical	2017 Historical	2018 Historical	2019 Historical	2020 Bridge	2021 Test
Management	122.6	124.4	118.7	120.6	118.1	118.9
Non-Management	464.7	462.3	461.1	461.4	467.5	468.3
TOTAL	**587.3**	**586.7**	**579.8**	**582.0**	**585.6**	**587.2**

Since 2016, Hydro Ottawa's total number of permanent FTEs has remained relatively static with the same forecasted to 2021. Management permanent FTEs are decreasing and non-management permanent FTEs are slightly increasing. This has been realized while at the same time replenishing and continuing to sustain the trades workforce in accordance with Hydro Ottawa's Workforce Planning Strategy (which is appended to this Application as Attachment 4-1-5(B)). This has entailed using vacancies as they become available and focusing on productivity and efficiency and effectiveness of operations.

The slight increase in management FTEs reflected in the 2019 actuals is attributed to the filling of vacant positions, while Non-Management FTEs remained the same.

3.2. TEMPORARY EQUIVALENTS

Table 5 summarizes the number of actual and forecasted temporary equivalents from 2016-2021, which includes both temporary full-time and part-time employees. Hydro Ottawa has been increasing its usage of a temporary workforce, which provides the utility with more flexibility to address seasonal and other workloads, and can be more easily adjusted upwards or downwards as required. Hydro Ottawa's 2019, 2020 and 2021 forecast continues this approach, allowing the utility to contain compensation costs. This approach continues when accounting for 2019 actuals, as shown in the updated version of Table 5 below.

Table 5 – AS ORIGINALLY SUBMITTED – Number of Temporary Equivalents (Full-Time or Part-Time)

	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge	2021 Test
Management	1.2	1.9	1.4	3.6	5.5	3.0
Non-Management	17.7	15	18	35.0	31.4	25.4
TOTAL	**18.9**	**16.9**	**19.4**	**38.6**	**36.9**	**28.4**

Table 5 – AS REVISED – Number of Temporary Equivalents (Full-Time or Part-Time)

	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge	2021 Test
Management	3.6	3.3	2.1	3.6	5.5	3.0
Non-Management	20.1	21.6	22.8	35.0	31.4	25.4
TOTAL	**23.7**	**24.9**	**24.9**	**38.6**	**36.9**	**28.4**

Table 5 – UPDATED FOR 2019 ACTUALS – Number of Temporary Equivalents (Full-Time or Part-Time)

	2016 Historical	2017 Historical	2018 Historical	2019 Historical	2020 Bridge	2021 Test
Management	3.6	3.3	2.1	0.7	5.5	3.0
Non-Management	20.1	21.6	22.8	28.1	31.4	25.4
TOTAL	**23.7**	**24.9**	**24.9**	**28.8**	**36.9**	**28.4**

3.3. FULL-TIME PERMANENT AND TEMPORARY EQUIVALENTS

Table 6 provides the total number of actual and forecasted permanent and temporary FTEs, and demonstrates Hydro Ottawa's approach to continuing to manage its workforce and compensation costs prudently.

Table 6 – AS ORIGINALLY SUBMITTED – Number of Full-Time Equivalents (Permanent and Temporary)

	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge	2021 Test
Management	123.8	126.3	120.1	119.8	123.6	121.9
Non-Management	481.9	476.7	478.6	505.4	498.9	493.7
TOTAL	**605.7**	**603.0**	**598.7**	**625.2**	**622.5**	**615.6**

Table 6 – AS REVISED – Number of Full-Time Equivalents (Permanent and Temporary)

	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge	2021 Test
Management	126.3	127.8	120.8	119.8	123.6	121.9
Non-Management	484.8	483.9	483.9	505.4	498.9	493.7
TOTAL	**611.1**	**611.7**	**604.7**	**625.2**	**622.5**	**615.6**

Table 6 – UPDATED FOR 2019 ACTUALS – Number of Full-Time Equivalents (Permanent and Temporary)

	2016 Historical	2017 Historical	2018 Historical	2019 Historical	2020 Bridge	2021 Test
Management	126.3	127.8	120.8	121.3	123.6	121.9
Non-Management	484.8	483.9	483.9	489.4	498.9	493.7
TOTAL	**611.1**	**611.7**	**604.7**	**610.7**	**622.5**	**615.6**

Between 2016 and 2018, there was a decrease in the total number of FTEs predominantly as a result of a decrease in management FTEs. The 2019-2021 forecast shows an initial increase in

the total number of FTEs between 2018 and 2019, attributable mainly to an increase in the usage of temporary employees as well as a slight increase in permanent non-management FTEs. The total number of FTEs then decreases out to 2021.

The 2019 actuals confirm a smaller increase in the total number of FTEs over 2018. An increase in the total number of FTEs is forecasted for 2020 due mainly to increases in non-management and temporary FTEs, with a subsequent decrease forecasted for 2021.

4. TOTAL COMPENSATION

Table 7 below summarizes Hydro Ottawa's historical and forecasted total compensation including salary, wages, and benefits from 2016-2021. Hydro Ottawa's approach to prudently managing FTEs and compensation costs, as outlined throughout this Attachment, has resulted in an actual and forecasted annual average increase to total compensation of ~~2.8%~~ 2.5% from 2016-2021.

The original version of Table 7 has been revised due to a systemic error in spreadsheet templates. In addition, Table 7 has been updated to account for 2019 actuals.

Table 7 – AS ORIGINALLY SUBMITTED – Total Compensation (Salary, Wages, & Benefits)[9]

	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge	2021 Test
Management	$17,665,972	$18,043,105	$17,726,238	$17,017,160	$18,287,415	$18,623,000
Non-Management	$49,753,411	$51,285,615	$53,620,146	$56,282,382	$57,262,789	$58,950,460
TOTAL	**$67,419,383**	**$69,328,720**	**$71,346,384**	**$73,299,542**	**$75,550,204**	**$77,573,460**

Table 7 – AS REVISED – Total Compensation (Salary, Wages, & Benefits)

	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge	2021 Test
Management	$18,065,397	$18,337,465	$17,833,632	$17,017,160	$18,287,415	$18,623,000
Non-Management	$50,322,168	$52,258,971	$54,375,254	$56,282,382	$57,262,789	$58,950,460
TOTAL	**$68,387,565**	**$70,596,436**	**$72,208,886**	**$73,299,542**	**$75,550,204**	**$77,573,460**

Table 7 – UPDATED FOR 2019 ACTUALS – Total Compensation (Salary, Wages, & Benefits)

	2016 Historical	2017 Historical	2018 Historical	2019 Historical	2020 Bridge	2021 Test
Management	$18,065,397	$18,337,465	$17,833,632	$17,871,017	$18,287,415	$18,623,000
Non-Management	$50,322,168	$52,258,971	$53,375,254	$54,331,711	$57,262,789	$58,950,460
TOTAL	**$68,387,565**	**$70,596,436**	**$72,208,886**	**$72,202,728**	**$75,550,204**	**$77,573,460**

4.1. 2016-2018 ACTUALS

The total compensation increase from 2016-2018 is largely due to step increases and annual negotiated salary increases for unionized employees and annual merit increases for non-union employees. It is also attributable to an increase in overtime costs in 2018, in connection with

[9] Hydro Ottawa has completed UPDATED OEB Appendix 2-K - Employee Costs, which is included in this Application as Attachment 4-1-5(C). This footnote likewise applies to the revised and updated versions of Table 7.

restoration activities following an ice storm in April, a wind storm in May, and tornadoes, high winds, and thunderstorms in September – all of which caused significant damage to the electricity grid. As noted in Table 4 above, given the decrease in management FTEs during this period, compensation for that group also decreased.

4.2. 2019-2021 FORECAST

Hydro Ottawa's total compensation forecast for 2019-2021 shows an average annual increase of ~~2.8%~~ 2.5% over the three-year period. This trending is primarily based on the step increases and annual negotiated salary increases for unionized employees, together with the annual merit increase for management and non-union employees, as well as the forecasted increase in benefit costs. Total compensation costs have additionally been contained by the forecast of an overall flat number of permanent FTEs to 2021, supplemented by temporary FTEs, as required.

Actual total compensation for 2019 over 2018 remained relatively flat, showing a slight decrease. This is attributed to both a significant decrease in overtime and the ongoing use of a temporary workforce.

WORKFORCE PLANNING STRATEGY

1. INTRODUCTION

Utilities across Canada continue to face challenges in replacing and renewing their aging workforces to ensure operational capacity and continuity. Hydro Ottawa has been diligent in establishing strategic workforce planning as part of its annual corporate planning and budgeting processes, and as an ongoing business consideration to ensure it has a sustainable and prepared workforce in light of a rapidly transforming environment.

In its 2016-2020 Custom Incentive Rate-Setting application, Hydro Ottawa reviewed how it would be addressing the need to attract and retain a highly skilled, properly trained, and knowledgeable workforce to maintain and enhance the reliability of the electricity distribution system, to execute its comprehensive asset management plan, and to respond to increasing legislative and regulatory requirements, all while addressing customer growth and an evolving customer relationship.[1] Proactive strategies to close talent supply gaps, particularly the need to replenish its trades workforce, were outlined in relation to relevant environmental drivers such as the effects of its aging workforce, planned infrastructure renewal, anticipated technological advancements, and an ever-changing business landscape.

As Hydro Ottawa moves from 2021 to 2025, its workforce planning is focused on sustaining rather than replenishing its trades workforce, replacing mid-level experienced front-line supervisors/managers, and responding to the changing skill sets required in light of the technological innovations and digital transformation in the electricity sector.

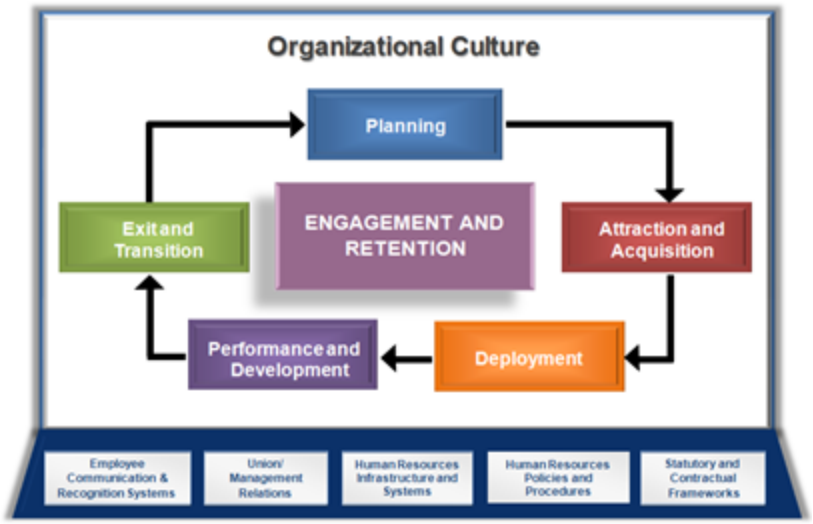
2. TALENT MANAGEMENT FRAMEWORK

Hydro Ottawa has leveraged workforce planning, integrated within its Talent Management Framework, to enable business execution and mitigate the ongoing risk of an insufficient talent

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

pipeline of skilled, prepared, and knowledgeable workers. The Talent Management Framework illustrated in Figure 1 provides a comprehensive and integrated human resources management model upon which priorities and initiatives are aligned. The Talent Management Framework centres around five key components of the employee experience in order to build performance and realize potential throughout the talent lifecycle: planning, attraction and acquisition, deployment, performance and development, and exit and transition. The Talent Management Framework is supported by systems that act as a strong foundation for enabling mechanisms.

Figure 1 – Talent Management Framework



Priorities and initiatives under the Talent Management Framework are informed through strategic workforce planning, which assesses changes in workforce demographics and environmental conditions, and responds with talent management approaches. The aim is to ensure operational capacity and continuity by supplying the right talent with the right skills, within the right structure, at the right time. The need to drive innovation, increase productivity, and enhance the customer experience has also been integrated into how Hydro Ottawa approaches workforce planning. To this end, workforce planning plays a role in containing costs,

creating efficiencies, and in generating added value for customers. Hydro Ottawa has focused its workforce planning into three areas, as follows:

- Workforce Demographics
- Workforce Modeling
- Talent Strategies to Sustain and Prepare the Workforce

3. WORKFORCE DEMOGRAPHICS

Workforce demographic assessments are a key element in Hydro Ottawa's workforce planning approach. Monitoring and planning for retirements, in particular, is critical to ensuring the utility's continued ability to deliver on its core business objectives with a highly skilled, properly trained, and knowledgeable workforce.

3.1. CHANGING WORKFORCE

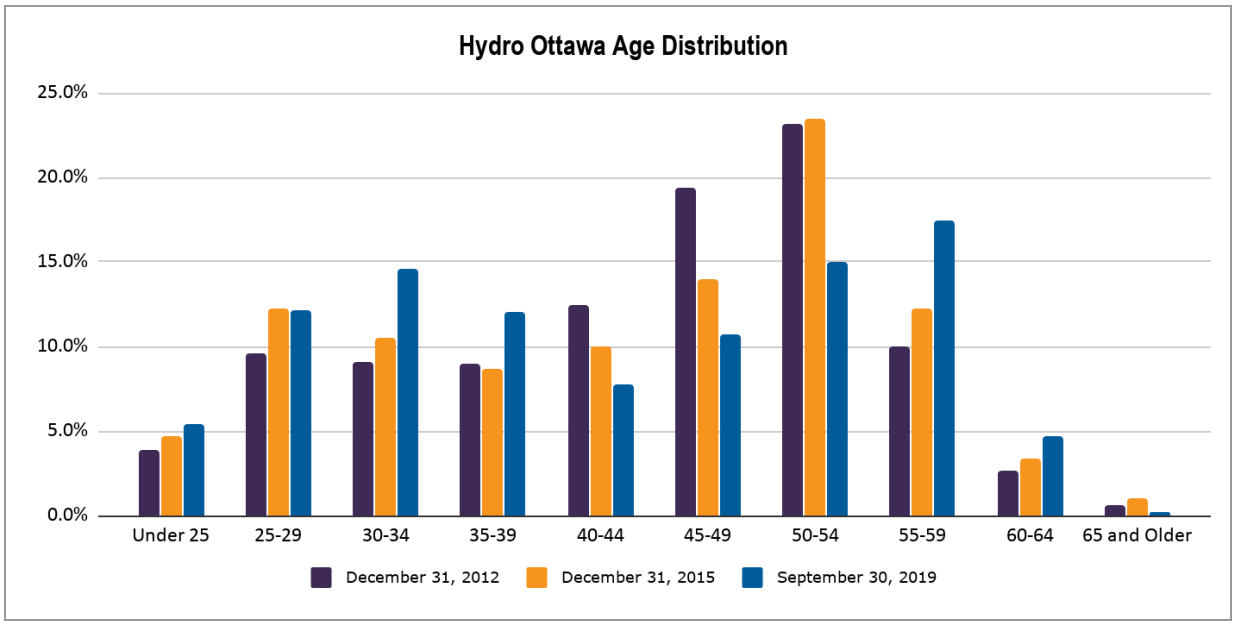
As outlined in Electricity Human Resources Canada's *Workforce in Motion: Labour Market Intelligence Study, 2017-2022* ("2017-2022 LMI Study"), the age distribution of the electricity sector workforce has changed since the previous 2011 study, with a smaller proportion of the workforce 55 and older.[2] However, the overall workforce in the sector tends to be slightly older than the general workforce and this is not anticipated to change as voluntary termination and retirement rates are at approximately 2%, with no expectation of change over the coming years. In turn, this has the effect of a lower representation of workers under 25 in the electricity sector compared to the general workforce.

The age distribution of Hydro Ottawa's workforce, as depicted in Figure 2, is somewhat aligned to the industry yet unique in other areas. The utility's workforce is slightly younger than it has been in recent years, attributable mostly to the increased hiring of trades apprentices and engineering graduates. For example, employees under the age of 30 represent 17.6% of the

[2] Electricity Human Resources Canada, *Workforce in Motion: Labour Market Intelligence Study, 2017-2022* (August 2017).

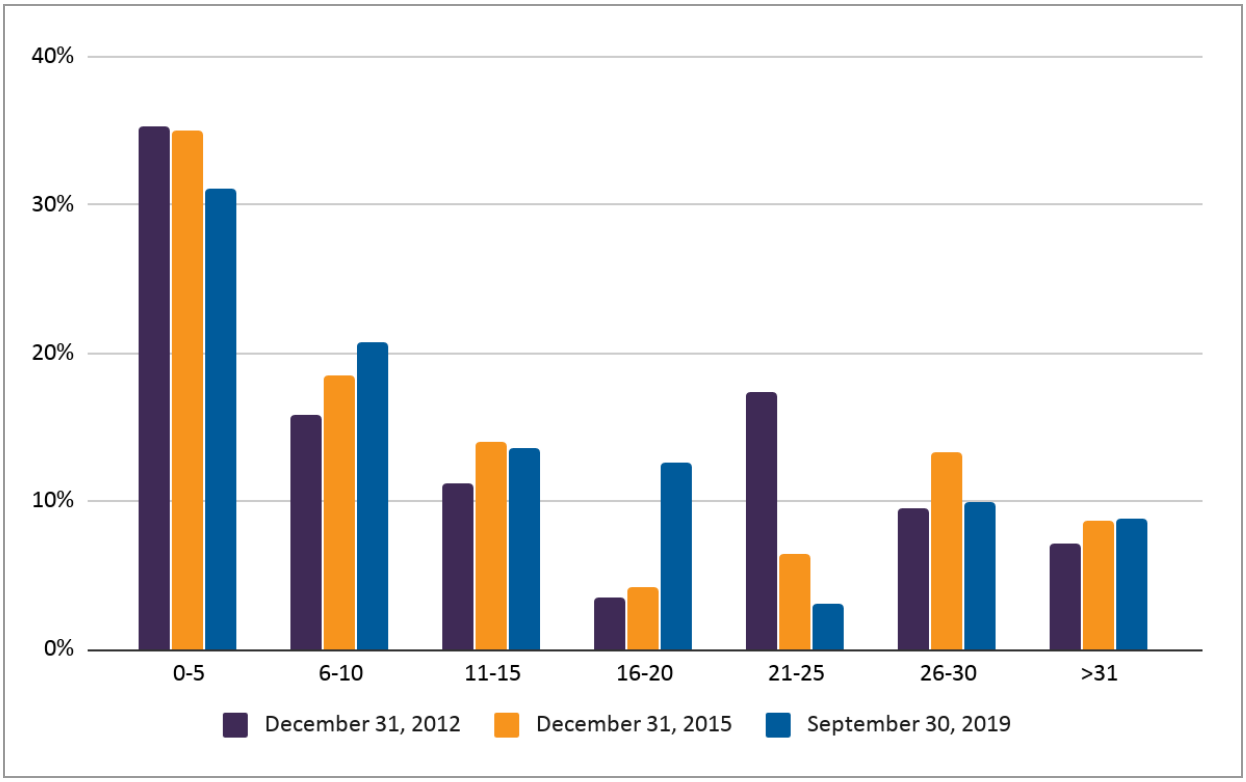
workforce – an increase from 17% in 2015 and 13.6% in 2012. Employees under the age of 40 represent 44.2% of the workforce – an increase from 36.1% in 2015 and 31.6% in 2012. At the same time, Hydro Ottawa employees over the age of 55 represent a larger proportion of its workforce at 22.3% – up from 16.6% in 2015 and 13.3% in 2012. The declining age group in the utility's workforce are those at mid-career in the 40-54 age group at 33.5% – down from 47.4% in 2015 and 55% in 2012, with the largest declines in the 45-49 and 50-54 age groups.

Figure 2 – Employee Age Distribution



Hydro Ottawa employees' average years of service has remained relatively consistent at 13 years. As depicted in Figure 3, over 50% of the workforce has 10 years or less of service, with those in the 16-20 years of service having increased to 12.6% from 4.2% in 2015 and 3.5% in 2012. Those with more than 20 years of service have decreased to 22% from 28.4% in 2015 and 34.1% in 2012.

Figure 3 – Distribution of Employees' Years of Service



3.2. ANTICIPATED RETIREMENT ATTRITION

In 2014, Hydro Ottawa began to experience a predicted increase in retirements that was expected to continue into the next 10 years, as employees elected to retire from the organization at their earliest unreduced eligibility date. For the last five years, Hydro Ottawa's average annual retirement attrition rate has been 3.0%, which is higher than the previous five years' (2009-2013) rate of 1.9%. Additionally, for the same periods, Hydro Ottawa's average annual resignation rate was 3.4% and 1.7%, respectively. Whether combined or on their own, Hydro Ottawa's attrition rates for the last five years are much higher than the industry average of 2%, as identified in Electricity Human Resources Canada's 2017-2022 LMI Study.

Although forecasted retirement eligibility over the next 10 years remains considerable at 34% of the workforce (of which 60% are skilled workers in trades or technical professions), it has

steadily declined from its peak of 42% in 2013. Similarly, over the next 10 years, 35% of Hydro Ottawa's trades and technical workforce is forecasted to retire. This also marks a steady decrease from a peak of 47% in 2012 and 2013. The number of eligible retirements for all employees is represented in Figure 4; the eligible retirements in the trades and technical workforce is represented in Figure 5.

Figure 4 – Eligible Retirements Forecast to 2028: All Employees

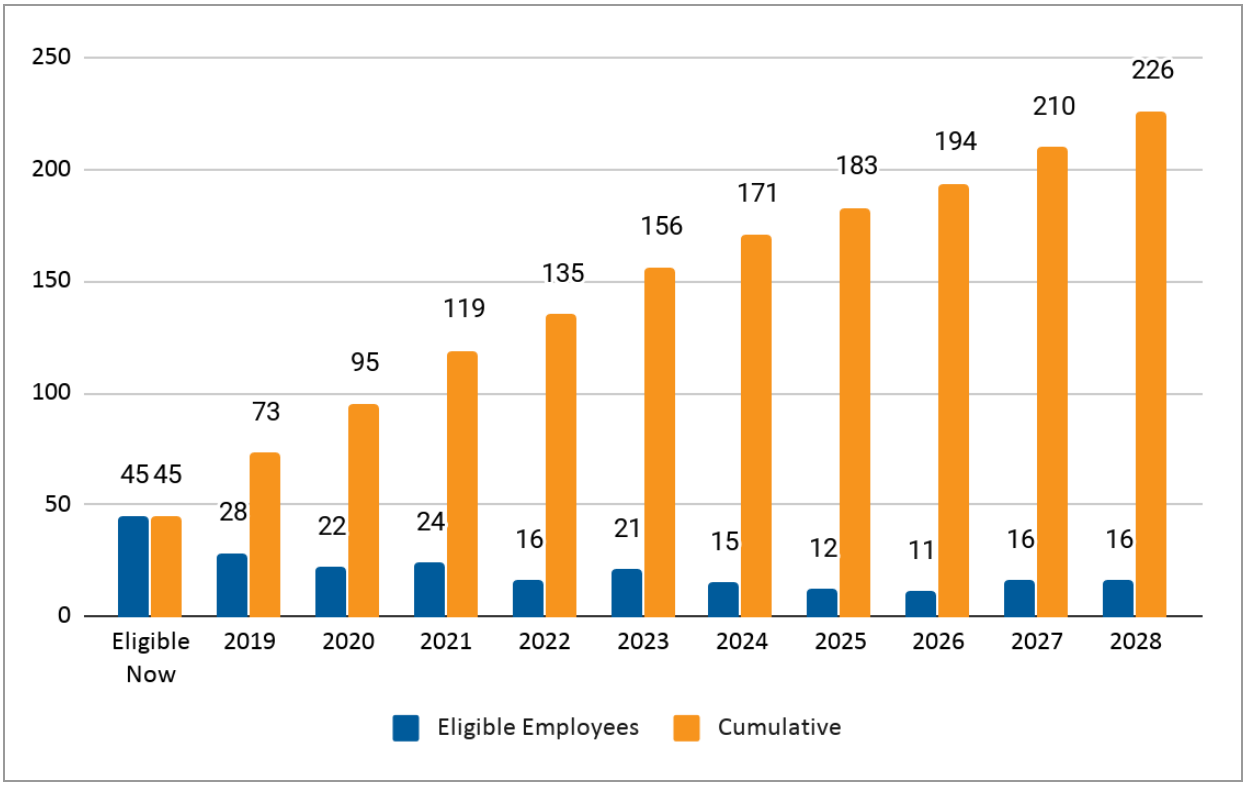
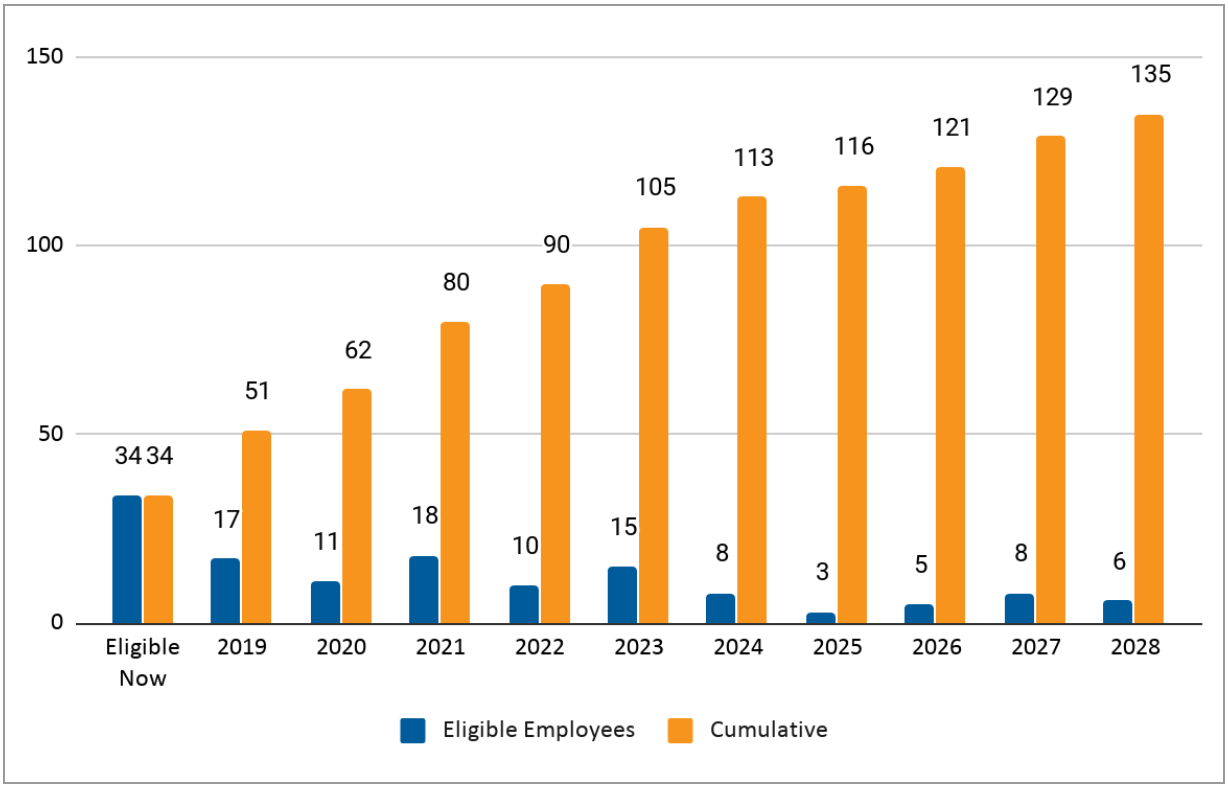


Figure 5 – Eligible Retirements Forecast to 2028: Trades and Technical Employees



While this extent of employee departures is in and of itself significant, the loss of experience that it represents continues to be sizable. Over the next 10 years, Hydro Ottawa projects the potential loss of approximately 6,077 years of experience from the organization as a result of retirements, including approximately 5,145 years of trades and technical experience. With almost one-third of the existing workforce population having five years or less of service and with the projected retirement of employees, the workforce at Hydro Ottawa is increasingly less experienced in what is a highly complex and safety focused business operating environment. As a result, given that over one-third of the existing trades and technical talent within the organization (35%) will have reached retirement eligibility within 10 years, it is critical that Hydro Ottawa proactively forecast talent demands and anticipate supply gaps early – particularly for positions that require a longer lead time to reach full competency, such as those filled through apprenticeship and internship programs.

4. WORKFORCE MODELING

As a key component of workforce planning, workforce modeling is primarily used at Hydro Ottawa to forecast the supply of labour in relation to operational demand for resourcing. The objective of workforce modeling is to anticipate gaps and inform proactive strategies to address the gaps. The modeling approach provides insight across work segments to identify potential supply gaps based on a number of variables. These variables are validated annually to adjust, as required, projected hiring and talent strategies in response to Hydro Ottawa's internal and external environments. The utility's workforce modeling serves to identify the optimal combination of internal resources, overtime utilization, and contracted services for the delivery of services and programs.

Hydro Ottawa's workforce modeling is leveraged in the deployment of its Distribution System Plan (Exhibit 2-4-3) and Strategic Asset Management Plan (Attachment 2-4-3(G)), where prudent cost management efforts require managing the renewal and expansion of the utility's distribution system and delivering on daily operating requirements within the resources allocated in capital and operating plans.

4.1. LABOUR DEMAND AND SUPPLY

Hydro Ottawa's workforce modeling is integrated with operational demand to ensure that forecasting optimally aligns with business requirements by considering projected operational labour requirements.

In order to determine labour supply, Hydro Ottawa's workforce modeling considers the following: available number of journeypersons or skilled technical employees in a given profession or trade; retirement eligibility; attrition rates; the apprentice pipeline feeding each trade; and supplementary labour resources that contribute to the work undertaken. The modeling is then adjusted based on productive time.

4.2. RETIREMENT RATE

Based on the actual average of the last three years, Hydro Ottawa's workforce modeling assumes that trades employees will retire at a rate of 75% within two years of reaching retirement eligibility.

4.3. NON-RETIREMENT ATTRITION RATES

As competition for skilled talent due to retirements continues within the electricity sector at large, an annual nominal non-retirement attrition rate due to resignation is factored into the modeling. This rate of 0.2% is based on the actual three-year average non-retirement attrition rate for trades employees.

4.4. INTERNAL MOVEMENTS

Hydro Ottawa continues to foster its internal talent pipeline as demographics shift throughout the business. This results in internal movements of the trades workforce as employees take on leadership roles or grow their professional capacity in another role. As skilled trades workers leverage their expertise, it is important to proactively anticipate the gaps they leave behind. With this in mind, Hydro Ottawa's workforce modeling assumes that 2.9% of the trades workforce will move laterally or as a result of promotion or development opportunity within any year. This is based on the actual three-year average of internal movements by trades employees.

4.5. MODELING OUTPUTS

Based on the above-noted variables, workforce modeling enables Hydro Ottawa to identify its projected gaps in internal labour, and to determine how best to fill these gaps using contracted services, overtime, and/or hiring. Several factors are considered, such as: costs of contracted services or overtime utilization, labour market availability, appropriate ratio of journeypersons to apprentices, legislated and contractual allowances for overtime, and the influence of environmental factors or business considerations that may impact assumptions used to inform modeling.

5. TALENT STRATEGIES TO SUSTAIN AND PREPARE THE WORKFORCE

Hydro Ottawa's workforce planning approach serves to inform the organization's talent management priorities and initiatives, including the design of key programs and strategies that emerge or are adjusted to ensure that talent demands are met and sustained.

5.1. SUSTAINING THE TRADES

Through structured in-house apprenticeship programs, Hydro Ottawa has been revitalizing the trades employee base to ensure a ready supply of trades talent. Hydro Ottawa has five Apprenticeship Programs in the following trades: Power Line Technician, Power Cable Technician, Meter Technician, Station Electrician, and System Operator. The total number of apprentices as of September 30, 2019 was 46, which represents 27% of Hydro Ottawa's trades workforce. The number of apprentices as a proportion of each trade varies from 21% to 31%. Since the introduction of formalized Apprenticeship Programs in 2005, Hydro Ottawa has enabled 91 apprentices to achieve journeyperson status, representing approximately 54% of its existing trades workforce.

With the anticipated number of retirements over the next 10 years (2019-2028), combined with forecasted changes in labour demand as a result of work requirements associated with the asset management plan, municipal infrastructure projects, and organic growth in the customer base, Hydro Ottawa expects to continue investing in apprenticeships as a viable source of talent for the skilled trades. To ensure that planned training investments remain prudent and to limit overall headcount increases within the organization as a whole from 2021-2025 as the trades are sustained, Hydro Ottawa continues to base forecasted hiring on the following principles:

- Increase overall productivity to ensure greater availability of productive time, while also establishing initiatives to gain efficiencies that increase the quality of the time worked.
- Hire apprentices by using vacancies as they become available, including the redistribution of vacancies from support functions to the trades.

- Where available in the labour market, attract and hire journeypersons to fill vacancies, with the aim of reducing the overall required training investment in apprenticeships and leverage qualified resources with a shorter lead time to achieve maximum productivity.
- Balance hiring with the appropriate use of overtime to supplement labour gaps, and continue to leverage contracted services where cost-effective and available to meet demand. These options offer flexibility to Hydro Ottawa in resourcing peak or temporary demands for labour, without unnecessarily inflating the overall workforce complement.
- Increase the efficiency of work through innovative practices and the introduction of new technologies and automation.

5.1.1. Power Line Technician Hiring – 2015-2020

In anticipation of future hiring requirements within the Power Line Technician trade, in 2011 Hydro Ottawa entered into a partnership with Algonquin College to design and deliver a two-year Power Line Technician Diploma Program. Through this Diploma Program, students develop the essential skills and knowledge required to design, plan, construct, and maintain electrical distribution systems through class work and hands-on learning. Algonquin College provides theory-based courses and leads program administration, while Hydro Ottawa delivers safety and core skills instruction in a practical field environment. This program leverages the skills of experienced Hydro Ottawa Power Line Technicians, including those who are being developed for leadership roles and those who are nearing retirement or have retired.

As a result of this strategic educational partnership with Algonquin College, Hydro Ottawa has hired 45 Power Line Technician Diploma Program graduates since 2013, when the first cohort completed the program, as mainly apprentice Power Line Technicians (“PLTs”) and apprentice Power Cable Technicians (“PCTs”). In doing so, Hydro Ottawa avoided the ongoing costs of apprentice recruitment, and was able to significantly reduce the costs of apprenticeship through a shortened vestibule training period. This has enabled safe and early field deployment of apprentices to on-the-job learning in the delivery of capital projects.

Table 1 below depicts the forecasted PLT apprentice and journeyperson hiring for the 2015-2019 period and the actual hiring over the same period. Table 2 further compares the previously forecasted hiring for 2020 and the planned hiring for that trade in 2020.

Table 1 – 2015-2019 Forecasted and Actual PLT Hiring

Power Line Technician	Forecasted	Actual	Difference
Apprentice	24	25	+1
Journeyperson	10	8	-2
TOTAL	**34**	**33**	**-1**

Table 2 – 2020 Forecasted and Planned PLT Hiring

Power Line Technician	Forecasted	Actual	Difference
Apprentice	4	2	-2
Journeyperson	2	0	-2
TOTAL	**6**	**2**	**-4**

The actual hiring in the PLT trade for the 2015-2019 period as well as the planned hiring for 2020 is slightly lower than originally projected in Hydro Ottawa's prior rebasing application by a total of five positions.[3] This is attributable to the shifting of work from the PLT trade to predominantly the PCT trade, driven by the need to re-focus resources from the overhead to the underground distribution system.

5.1.2. Other Trades Hiring – 2015-2020

Table 3 depicts the forecasted and actual hiring for all other trades for the 2015-2019 period. Table 4 further compares the previously forecasted hiring for 2020 and the planned hiring for each trade. Due to the specific nature of these trades, which are not regulated under the *Ontario College of Trades Apprenticeship Act, 2009*, Hydro Ottawa is limited in hiring qualified

[3] Hydro Ottawa Limited, *2016-2020 Custom Incentive Rate-Setting Distribution Rate Application*, EB-2015-0004 (April 29, 2015), Exhibit D-1-7.

journeypersons from the external labour market for these trades. As a result, the utility generally hires apprentices versus a combination of apprentices and journeypersons.

Table 3 – 2015-2019 Forecasted and Actual Hiring in Other Trades

Other Trades	Forecasted	Actual	Difference
Power Cable Technician	4	8	+4
Meter Technician	8	6	-2
Station Electrician	4	7	+3
System Operator	7	6	-1
TOTAL	**23**	**27**	**+4**

Table 4 – 2020 Forecasted and Planned Hiring in Other Trades

Other Trades	Forecasted	Actual	Difference
Power Cable Technician	2	2	-
Meter Technician	0	0	-
Station Electrician	0	0	-
System Operator	0	1	+1
TOTAL	**2**	**3**	**+1**

The actual hiring for the 2015-2019 period, as well as the planned hiring for 2020 for all other trades, is slightly higher than originally projected in Hydro Ottawa's prior rebasing application by a total of five positions.[4] This is mainly in the PCT trade as a result of the shifting of resources from the overhead to the underground distribution system.

5.1.3. Total Trades Hiring – 2015 to 2020

Overall, across all trades, as outlined in Table 5, the projected gaps in internal labour derived from workforce modeling were well aligned to actual hiring, with the annual review of projections allowing for adjustments between trades based on Hydro Ottawa's operational requirements. Workforce modeling projected a requirement for 65 trades hires for the 2015-2020 period.

[4] *Ibid.*

Actual hiring from 2015-2019 and the planned hiring for 2020 resulted in exactly 65 trades hires over this period.

Table 5 – 2015-2020 Forecasted vs. 2016-2019 Actual and 2020 Planned

All Trades	Forecasted	Actual	Planned	Total	Difference
Power Line Technician	40	33	2	35	-5
Power Cable Technician	6	8	2	10	+4
Meter Technician	8	6	0	6	-2
Station Electrician	4	7	0	7	+3
System Operator	7	6	1	7	-
TOTAL	**65**	**60**	**5**	**65**	**-**

5.1.4. Projected Trades Hiring – 2021-2025

Over the 2021-2025 period, Hydro Ottawa will continue to focus on sustaining its trades workforce so as to enable the utility to deliver on its Distribution System Plan (Exhibit 2-4-3) and Strategic Asset Management Plan (Attachment 2-4-3(G)). Gaps in internal labour derived from workforce modeling for the 2021-2025 period are projected to be substantially less than the 2015-2020 period, generally as a result of demographics, access to contracted services, and a focus on more efficient and innovative ways of working. As with the previous period (2015-2020), the annual review of projections will allow for adjustments as required by operational demands. The projected need is more prominent in some trades during the 2021-2025 period. The PCT trade is expected to require the most new hires, followed by the PLT trade, with the other trades seemingly adequately resourced. Table 6 shows forecasted hiring for all trades over the 2021-2025 period.

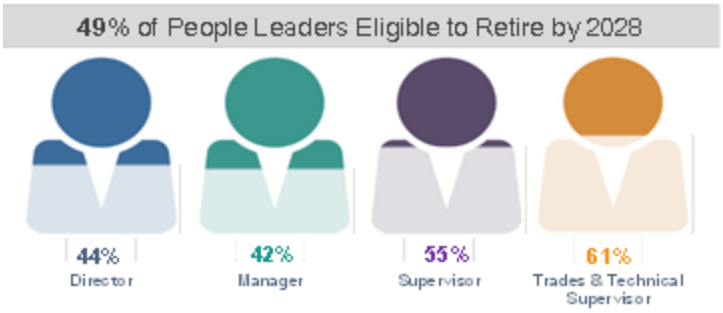
Table 6 – 2021-2025 Forecasted Hiring in the Trades

	2021	2022	2023	2024	2025	Total
Power Line Technician - Apprentice	0	2	0	2	0	4
Power Line Technician - Journeyperson	1	0	1	0	1	3
Power Cable Technician	2	2	2	2	2	10
Meter Technician	0	0	0	0	0	0
Station Electrician	0	0	0	0	0	0
System Operator	0	0	0	0	0	0
TOTAL	**3**	**4**	**3**	**4**	**3**	**17**

5.2. REPLACING FRONT-LINE SUPERVISORS/MANAGERS

As shown in Figure 6, by 2028 49% of Hydro Ottawa's existing people leaders will be eligible to retire. Even more striking is that 55% of its front-line supervisors and 61% of its trades and technical front-line supervisors will be eligible to retire by 2028. With this in mind, Hydro Ottawa continues to focus on replenishing its people leader pipeline through succession planning, strategic external hiring, and leadership and management initiatives.

Figure 6 – People Leaders Eligible to Retire by 2028



As noted in Electricity Human Resources Canada's 2017-2022 LMI Study, this challenge is also projected across the broader electricity sector. More specifically, the study finds that, with respect to electric utilities nation-wide, *"there was a dearth of mid-level staff within their*

organizations to step into senior positions."[5] Likely due to high numbers of baby boomers and lower numbers of younger workers with the required experience, organizations have to ensure employees obtain the support needed to step into supervisory/managerial positions.

The ongoing technological and digital transformation across the electricity sector is also impacting the skills required to be a leader in the sector. For example, according to the Western Energy Institute, given the profound change the industry is going through a new type of leader is required – transformational leaders who are visionary, nimble, agile, and able to navigate the changes in technology, regulatory and competitive uncertainties, and the evolution of a once-stable industry.[6] The leadership skills that will be most critical to lead in the evolving future include agile thinking, digital business skills, global operating skills, and relationship-building, as well as the ability to think strategically, innovate, and engage and inspire others.

To strengthen the leadership capability of current people leaders and prepare the leaders of tomorrow, Hydro Ottawa has a comprehensive approach to management and leadership development in which learning progresses from foundational to enrichment to leadership excellence. People leaders and emerging leaders receive targeted development opportunities which are supplemented by coaching to accelerate leadership development, in addition to mentorship opportunities with the aim of transferring knowledge cross-functionally and cross-generationally within the business.

5.3. CHANGING SKILL SETS – TECHNOLOGICAL INNOVATIONS AND DIGITAL TRANSFORMATION

As the electricity sector evolves, the wide-scale adoption of technological and digital transformation is transforming occupations and increasing the demand for new skill sets and, in some cases, creating entirely new roles. The need for employees able to work in the ever-changing, diverse, interconnected, and increasingly high-tech electricity sector will require

[5] Electricity Human Resources Canada, *Workforce in Motion: Labour Market Intelligence Study, 2017-2022* (August 2017).
[6] Western Energy Institute, "Transformational Leaders Power the Future of the Energy Industry" (September 4, 2014).

retraining, upskilling, and recruiting of workers with transferable skill sets from other industries. This is especially relevant for positions in information technology, engineering, data analytics, cybersecurity, and change management. It will also require a greater number of employees with specialized skills and higher educational qualifications.[7]

Hydro Ottawa has been engaged in ongoing technological and digital transformation for several years and will continue this evolution at an ever increasing pace in years to come, as outlined in its Digital Strategy (Attachment 1-1-13(B)). There is, however, a lack of digital skills across the electricity sector and in Hydro Ottawa's workforce to realize this transformation. As a result, Hydro Ottawa will continue to provide its employees with the training needed to work with new and evolving technologies and support these changes with robust change management. The utility will also hire or contract for those skill sets, by using vacancies as they become available, and where training is not the most efficient approach. Hydro Ottawa is also mindful of the need to ensure a balance of skill sets, combining digital skills with traditional technical knowledge as the utility moves forward with this transformation, recognizing the need to support legacy infrastructure as well as incorporate new technologies.

5.4. TALENT ATTRACTION AND ACQUISITION

The Government of Canada's Occupational Projection Summary for Electrical Trades and Telecommunications Occupations, forecasts that national job openings within this occupational group over the 2017-2026 period are expected to total 60,800 (arising from expansion and replacement demands resulting from retirements or mobility) and that 62,900 job seekers (arising from graduates, immigration and mobility) are expected to be available to fill those openings.[8] Electrical Power Line and Cable Workers (National Occupational Classification, or "NOC" 7244) and Power System Electricians (NOC 7243) are projected to experience a balance of labour supply and demand during the projection period. Further, it is expected that the

[7] Electricity Human Resources Canada, *Changing Nature of Work: Digital Transformation and Innovation in the Electricity Sector – Draft Final Research Report* (2019).
[8] Employment and Social Development Canada's Canadian Occupational Projection System ("COPS") develops national job projections and analysis for 292 occupations in Canada.

primary source of talent for these occupational groups will be from the post-secondary educational system.

Overall, for the majority of electricity occupations, the labour market will be relatively balanced between demand and supply in the coming years, according to Electricity Human Resources Canada's 2017-2020 LMI Study. However, there are some areas of exception. These include smart grid specialists, power system operators, power station operators, power system electricians, engineers, engineering technologists, and information technology specialists. Many of these skill sets are highly transferable, both within the industry and to other industries. This will mean competing not just with other utilities, but with employers across multiple industries. Thus, making an employer's brand and its ability to attract the best talent possible matter now more than ever before.

Hydro Ottawa makes a concerted effort to attract the next generation of workers to meet the organization's present and future talent needs by extending the utility's brand and employee value proposition through cost-effective social media channels, trades-focused career fairs that reach students at critical junctures in their decision-making about careers, and community outreach to support internationally trained workers in accessing employment. Both co-operative educational placements and a robust summer student program are also a valuable source of future employees.

Hydro Ottawa also emphasizes strategic partnerships with educational institutions that foster a vibrant and viable talent supply on a sustainable basis. These include the Power Line Technician Diploma Program through Algonquin College and associated applied research opportunities with students in Algonquin College's Electrical Engineering Technology program.

In addition to investing in apprenticeships, Hydro Ottawa offers training and development opportunities to attract engineering graduates. The training and development internship for engineering graduates is based on performance-measured deliverables that align with criteria

defined by the Professional Engineers of Ontario, and leads to acquisition of the Professional Engineer designation and transition into a Distribution Engineer role at the utility.

5.5. WORKFORCE DIVERSITY

Electricity Human Resources Canada's 2017-2022 LMI Study highlights that workforce diversity in the electricity sector remains well below the average for the Canadian workforce. Hydro Ottawa recognizes the value of a more diverse and inclusive workforce, and believes it is imperative to attract, retain, and develop diverse professionals to spur innovation, drive growth, and sustain competitive advantage in the marketplace. Doing so enables Hydro Ottawa to offer additional customer value, create an inclusive culture that leverages diversity in everyday business enhancing engagement and innovation, and broadening involvement to initiatives and organizations that promote diversity, thereby adding a new dimension to Hydro Ottawa's brand.

The utility's diversity and inclusion initiatives focus on attracting and engaging diverse populations represented within the current workforce and its customer communities, including the following: women, visible minorities, persons with disabilities, those who identify as LGBTQ+, indigenous, and youth. Recognizing the value of immigrant populations within the Canadian workforce and specifically as an under-leveraged talent pool within the electricity sector, new Canadians are also considered to be a critical talent segment. Hydro Ottawa's focus on diversity and inclusion consists of foundational initiatives intended to foster overall inclusion, complemented by specific initiatives targeted towards the identified diversity groups.

5.6. TALENT DEPLOYMENT

Hydro Ottawa's approach to talent deployment focuses on the preparation and positioning of new hires and new people leaders in order to achieve productivity and value realization, better integration of new hires into company culture, increased retention of new hires, and a smoother transition for new people leaders by providing the knowledge and information needed through the increased use of eLearning and technology. This approach ensures that new employees are proactively brought on board to replace employees leaving due to retirement or other forms of

attrition, and that measures and systems are in place to ensure the transfer of knowledge accumulated by older workers throughout their careers.

As Hydro Ottawa moves into 2020 and beyond, its approach to strategic talent deployment ensures that resources are provided with optimal leadership and that productivity is enabled by effective organizational design. To this end, and in anticipation of prolonged leadership turnover as a result of retirements and an increased labour demand for experienced people leaders, Hydro Ottawa is ever mindful of its responsibility to ensure supervisory spans of control are designed to maximize onsite safety and productivity. The utility is further mindful of the need to yield productivity benefits through consolidation of work, rationalization of vacancies for redeployment to trades and other hiring, and ongoing evaluation of possibilities to outsource work that is not considered to be a core or valued-added aspect of service delivery.

5.7. KNOWLEDGE MANAGEMENT AND TRANSFER

With the retirement of experienced workers and people leaders, Hydro Ottawa continues to stem the loss of knowledge unique to the organization through effective knowledge transfer mechanisms. This is consistent with the recommendations outlined in Electricity Human Resources Canada's 2017-2022 LMI Study which supports mitigating initiatives against the loss of knowledge and skills within the electricity sector.

With specialized skills powering the workforce and the continued risk of losing depth in the utility's corporate knowledge base, Hydro Ottawa recognizes that engaging older workers and retirees is a key consideration in ensuring operational capacity and continuity. As a result, Hydro Ottawa leverages its Prime Time Program to achieve the following:

- Delay retirements, where appropriate, to maintain a culture that values experience and supports knowledge transfer opportunities;
- Engage employees transitioning into retirement by leveraging hiring overlaps for unique positions to ensure that knowledge, skills, and corporate memory are passed onto the

next generation and by integrating pre-retirement older workers into mentoring programs to enhance knowledge transfer;

- Engage retirees after retirement, and ensure they remain ambassadors in the community; and
- Ensure policies, practices, and procedures serve older workers and retirees.

Without the implementation of such knowledge-transfer mechanisms, Hydro Ottawa is at risk of significant corporate memory loss, declines in productivity, compromised business continuity, and losses of intellectual capital.

6. CONCLUSION

Hydro Ottawa will continue to experience the effects of the changing landscape in which it operates. This includes experiencing the ongoing impact of employee demographics and the associated loss of highly skilled, experienced, and knowledgeable employees on both the front-lines and in leadership roles due to retirements and other attrition. These effects also encompass the impacts of technological and digital transformation, requiring reskilling, upskilling, and the introduction of new roles to support these changes.

If not proactive and meaningful, the responses to this rapidly changing environment will inevitably hamper the continued successes of the organization and challenge the organization's ability to fulfill its responsibilities to its customers. Hydro Ottawa must maintain and ensure that the current and future level of its business is sustained throughout these changing times by ensuring that it has a sufficient, sustainable, skilled, and prepared workforce.

Hydro Ottawa's multi-pronged workforce planning efforts are designed to synergistically manage the effects of the dynamically changing electricity sector, while ensuring appropriate resources and skills are in place to meet the existing and long-term needs of the business and its customers.

TO BE UPDATED AT THE DRAFT RATE ORDER STAGE

UPDATED - Appendix 2-K
Employee Costs

	Last Rebasing Year (2016 OEB Approved)	Last Rebasing Year (2016 Actuals)*	2017 Actuals*	2018 Actuals*	2019 Actuals	2020 Bridge Year	2021 Test Year
Number of Employees (FTEs including Part-Time)1							
Management (including executive)	137.5	126.3	127.8	120.8	121.3	123.6	121.9
Non-Management (union and non-union)	485.2	484.8	483.9	483.9	489.4	498.9	493.7
Total	622.7	611.1	611.7	604.7	610.7	622.5	615.6
Total Salary and Wages including Overtime and Incentive Pay							
Management (including executive)	$ 15,648,115	$ 14,750,453	$ 14,853,666	$ 14,403,208	$ 14,372,286	$ 14,528,292	$ 14,687,744
Non-Management (union and non-union)	$ 42,110,915	$ 40,801,567	$ 42,319,931	$ 43,996,434	$ 43,696,400	$ 45,426,991	$ 46,496,513
Total	$ 57,759,030	$ 55,552,020	$ 57,173,597	$ 58,399,642	$ 58,068,686	$ 59,955,283	$ 61,184,257
Total Benefits (Current + Accrued)							
Management (including executive)	$ 3,954,359	$ 3,314,944	$ 3,483,799	$ 3,430,424	$ 3,498,731	$ 3,759,123	$ 3,935,256
Non-Management (union and non-union)	$ 10,230,894	$ 9,520,601	$ 9,939,040	$ 10,378,820	$ 10,635,311	$ 11,835,798	$ 12,453,947
Total	$ 14,185,253	$ 12,835,545	$ 13,422,839	$ 13,809,244	$ 14,134,042	$ 15,594,921	$ 16,389,203
Total Compensation (Salary, Wages, & Benefits)							
Management (including executive)	$ 19,602,474	$ 18,065,397	$ 18,337,465	$ 17,833,632	$ 17,871,017	$ 18,287,415	$ 18,623,000
Non-Management (union and non-union)	$ 52,341,809	$ 50,322,168	$ 52,258,971	$ 54,375,254	$ 54,331,711	$ 57,262,789	$ 58,950,460
Total	$ 71,944,283	$ 68,387,565	$ 70,596,436	$ 72,208,886	$ 72,202,728	$ 75,550,204	$ 77,573,460

Note:

1 If an applicant wishes to use headcount, it must also file the same schedule on an FTE basis.

* As outlined in UPDATED Attachment 4-1-5(A) - Employee Compensation Strategy, revisions have been made to 2016, 2017 and 2018 actuals due to a systemic error in spreadsheet templates.

HEALTH, SAFETY AND ENVIRONMENT COMPLIANCE AND SUSTAINABILITY

1. INTRODUCTION

As a utility with deep roots in the community, established through more than 100 years of providing an essential service to homes and businesses, Hydro Ottawa is expected by its customers to safely, responsibly, and efficiently deliver electricity in a manner that protects the health and safety of employees, contractors, customers, and the broader community, while also being a good steward of the shared environment. Hydro Ottawa is fully committed to meeting that expectation.

Hydro Ottawa has adopted a best practice, continual improvement approach to meeting legislative and regulatory requirements in the areas of health, safety, and environment, and to maintaining standards of performance relative to risks associated with its ongoing business activities. Since 2008, Hydro Ottawa has successfully maintained registration of its integrated health, safety, and environmental management system to the International Organization for Standardization ("ISO") 14001 and the Occupational Health and Safety Assessment Series ("OHSAS") 18001.

2. EMPLOYEE SAFETY

At the core of Hydro Ottawa's business is the fundamental commitment to protecting the health and safety of employees. The foundation of occupational health and safety in Ontario, and thus at Hydro Ottawa, is the internal responsibility system. This model has roles and responsibilities for all parties in the workplace, including for those associated with the workplace that have decision-making or financial authority for the organization.

2.1. INTERNAL RESPONSIBILITY SYSTEM

Hydro Ottawa has entrenched the internal responsibility system in the organization as both a general philosophy of shared accountability and as a direct reflection of the specific roles and responsibilities required by legislation and regulations. Building upon this basic model, Hydro

Ottawa has a corporate Occupational Health, Safety, and Environmental ("OHSE") Accountability Program which details a number of 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 level. In addition to oversight at each level of management, Hydro Ottawa has 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. This mandate includes inspection, recommendation, and worker representation functions for the various occupations and workplaces at Hydro Ottawa.

As part of the OHSE Management Framework, Hydro Ottawa exercises appropriate due diligence, and complies with legislative and regulatory requirements, by doing the following:

- Establishing instruction, training, and orientation programs for operational areas;
- Auditing or reviewing the workplace for foreseeable health, safety, and environmental risks;
- Having policies, programs, procedures, processes, and work instructions in place to protect workers and the environment against risks;
- Actively demonstrating a strong, sustainable level of commitment to the health and safety of workers and to minimizing harm to the environment by reviewing regular reports on the operation of the OHSE programs, particularly incidents and cases of non-compliance with legislation and regulations; and
- Maintaining documents and records via a formal document/records management system.

2.2. INTEGRATED OCCUPATIONAL HEALTH, SAFETY, AND ENVIRONMENTAL MANAGEMENT SYSTEM

To ensure that the utility's OHSE programs are current, effective, and well-managed, Hydro Ottawa utilizes a structured focus on compliance, together with a formal, documented approach to continuous improvement.

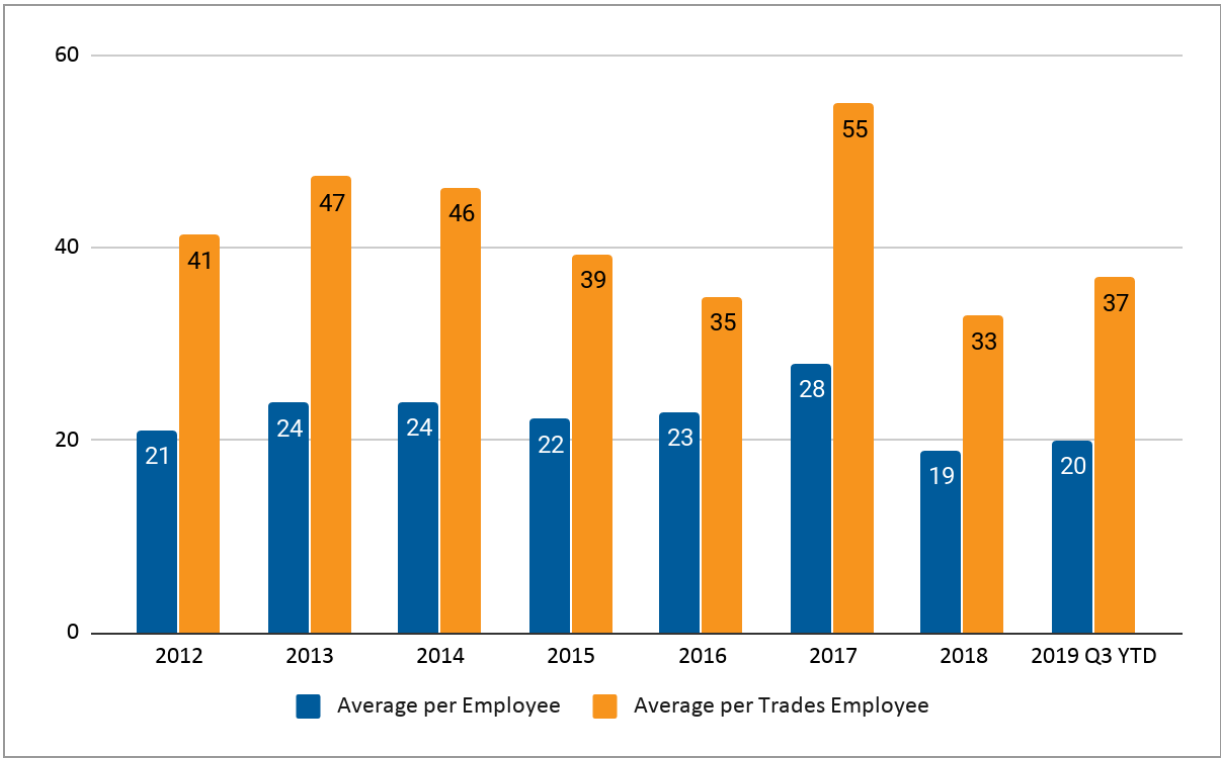
This approach has been applied through the adoption of an integrated OHSE management system registered to the ISO 14001 environmental standard and the OHSAS 18001 health and safety specification. These standards are based on the principles of planning, implementing, monitoring, measuring, and pursuing continuous improvement in Hydro Ottawa's OHSE programs and performance. The utility's integrated OHSE management system includes program elements on risk management, legal requirements, roles and responsibilities, competence and training, communication and consultation, document and record management, emergency preparedness and response, compliance evaluation, investigation and corrective action processes, and audit and management review processes.

In accordance with Hydro Ottawa's focus on continual improvement, the OHSE management system has been updated to meet the requirements of the new ISO environmental standard in 2018. Preparations are also underway to transition from the current OHSAS 18001 health and safety specification to the new ISO 45001 health and safety standard in 2020.

2.3. SAFETY TRAINING

Training is not only a legislative requirement under the *Occupational Health and Safety Act* and other key statutes and codes that govern Hydro Ottawa, but it also contributes to higher employee efficiency and safer operations. As depicted in Figure 1, Hydro Ottawa provides an average of over 40 hours of safe work practices training annually for all trades employees whose work is carried out in higher hazard environments, and an average of over 20 hours for all employees.

Figure 1 – Safe Work Practices Training for Hydro Ottawa Employees



Training varies year-over-year and is dependent on both internal and external drivers. Internal drivers include the increasing training needs that accompany apprenticeship programs and younger workers. External drivers include the substantial increase in legislated health and safety-related education and training in the province of Ontario (both the initial training required and the mandated training refreshers). In recent years, legislative changes related to worker and supervisor knowledge of the *Occupational Health and Safety Act*, the new Working at Heights training standard, the introduction of the Globally Harmonized System (replacement for Workplace Hazardous Materials Information System), and the legalization of recreational cannabis use have all placed additional cost pressures on Hydro Ottawa in both direct training development and delivery, and loss of productive time. This pressure is expected to continue as the Ministry of Labour develops and mandates additional training standards over the next five years.

2.4. CONTRACTOR MANAGEMENT

The importance of safety in Hydro Ottawa's operations extends beyond its own employees to include contractors who perform work on the utility's behalf. Continued use of contractors is required to meet Hydro Ottawa's construction and maintenance needs on an ongoing basis. Safe, efficient, and high-quality performance from contractors is essential to the delivery of electricity to the utility's customers. To effectively manage projects involving contractors, Hydro Ottawa utilizes a project management methodology and a contractor OHSE management program, which align project planning and implementation activities as they relate to contractors and sub-contractors.

Hydro Ottawa ensures robust due diligence in relation to contractor safety and performance through a partnership with a contractor management firm, which carries out comprehensive and more cost-effective contractor pre-qualification and compliance monitoring. This partnership operates through a subscription-based model, with fees borne by both Hydro Ottawa and its contractors. This partnership has resulted in the following outcomes: automation of previously manual processes; the provision of contractor performance scorecarding, benchmarking and trending capabilities; and the ability to perform more in-depth tracking and analysis of contractor safety programs, worker training, competencies, and work performance.

Hydro Ottawa continues to identify ways to leverage this partnership to further enhance the quality and efficient use of contactor resources. For example, recently introduced detailed on-site audits of contractors verify that documented safety programs are implemented at the working level and on-line contractor safety orientation training versus classroom-based training is allowing for the efficient completion of training by contractors prior to arrival at Hydro Ottawa job sites. This approach is expected to continue over the 2021-2025 period.

2.5. SAFETY PERFORMANCE – PLANNING, MONITORING, AND CONTINUOUS IMPROVEMENT

Safety performance planning, monitoring, and continuous improvement at Hydro Ottawa are undertaken through workplace/worksite inspections, tailboard conferences, jobsite coaching, pre-construction meetings, audits, and investigations of incidents, injuries, and hazards/near misses. As described in its Workforce Planning Strategy (Attachment 4-1-5(B)), given its younger workforce, Hydro Ottawa has increased the number of safety inspections, jobsite coaching, pre-construction meetings, and independent reviews of work practices in recent years, in order to mitigate safety risks.

Hydro Ottawa is currently automating the manual processes and workflows associated with these and other OHSE activities in a cloud-based OHSE software solution, and eliminating the paper forms and paper-based recording in the field related to these activities. With the resulting reporting functionality and enhanced analytics and intelligence available upon implementation in 2020, Hydro Ottawa anticipates being able to more efficiently and effectively identify and report on the findings and follow-up actions resulting from these activities. The utility also expects to be equipped to make more informative and timely decisions with respect to additional OHSE training, communications, and programming needs. For further details on Hydro Ottawa's business automation plans, please see Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives and Attachment 1-1-13(B): Digital Strategy.

2.6. SAFETY PERFORMANCE RESULTS

From a comparative perspective, as shown in Figures 2 and 3, Hydro Ottawa's approach to safety showed positive performance results with rates at or below the Canadian Electricity Association's ("CEA") Group II average from 2012-2015 for both the all injury frequency rate and the lost workday severity rate.[1] However, the all injury frequency rate trended upward from 2016

[1] Group II is comprised of CEA member organizations with 301 - 1,500 employees.

to 2018. The lost workday severity rate also trended upward in 2016, and then showed substantial improvement in 2017 and 2018.

Research conducted on the 2016-2018 incidents guided the introduction of additional safety training, communication, and programming for 2018 and 2019, resulting in continued positive trending through Q3 2019 for both the all injury frequency rate and the lost workday severity rate. The cloud-based technology noted above will allow Hydro Ottawa to make more predictive versus reactive decisions on such matters in the future.

Figure 2 – Hydro Ottawa vs. CEA Group II All Injury Frequency Rate

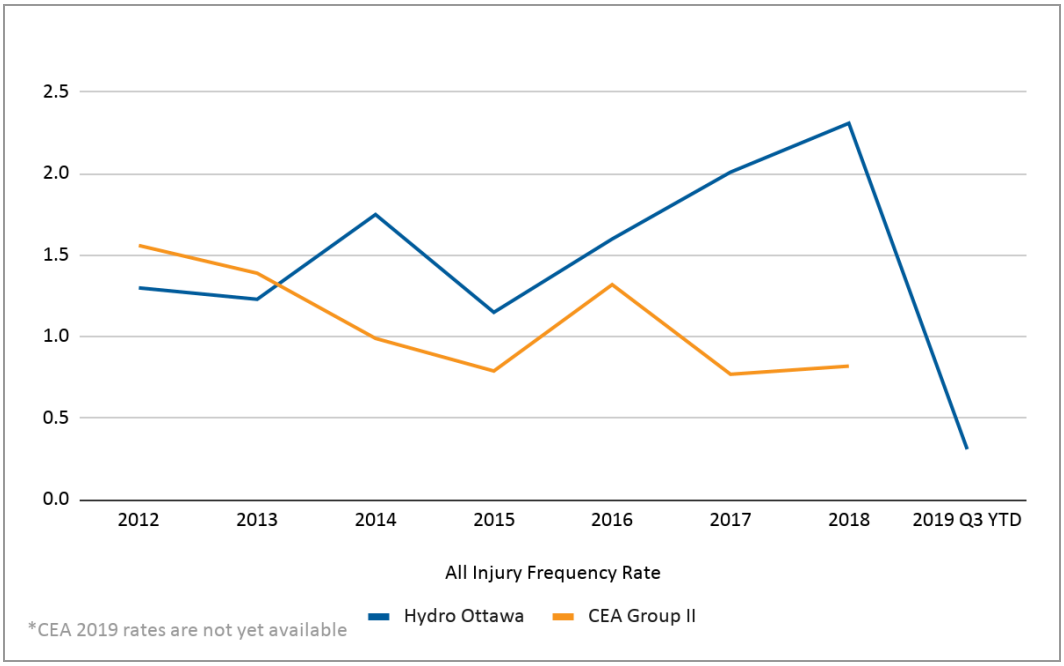
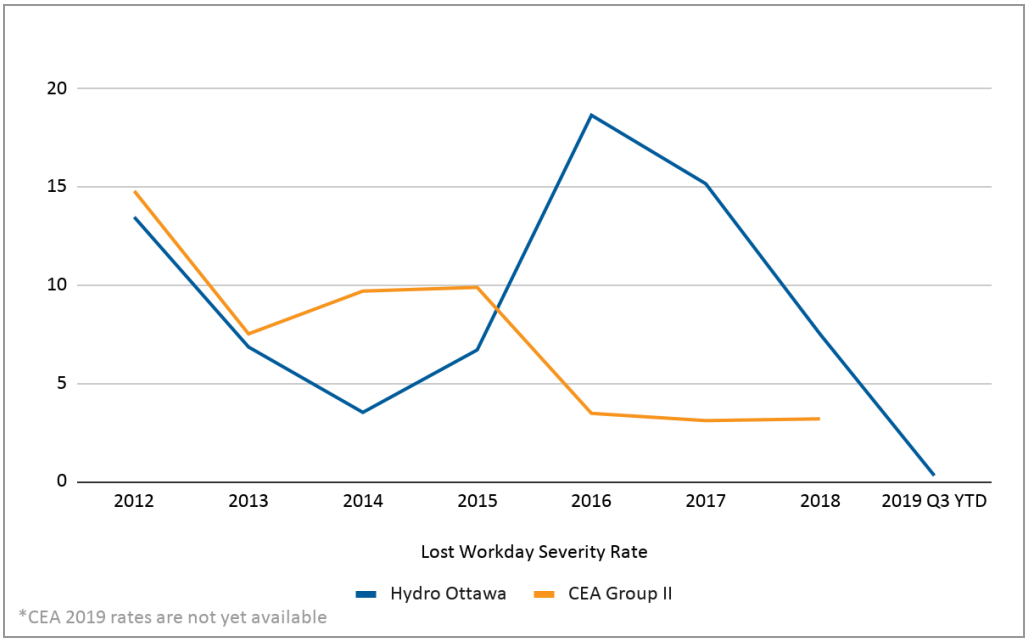


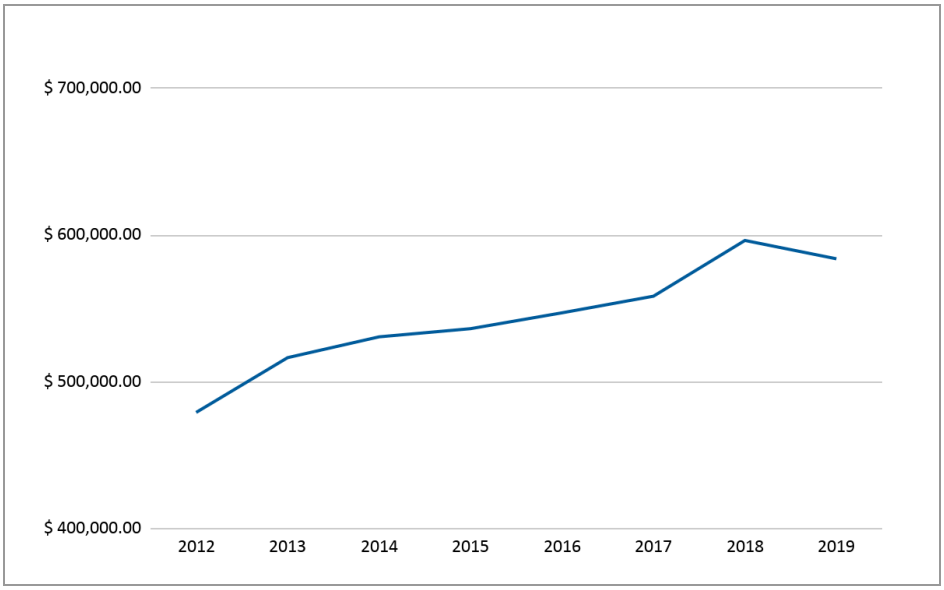
Figure 3 – Hydro Ottawa vs. CEA Group II Lost Workday Severity Rate



The Workplace Safety and Insurance Board ("WSIB") classifies firms into groups based on their activities, and establishes premium rates for each rate group. Hydro Ottawa is classified in the Oil, Power and Water Distribution rate group.

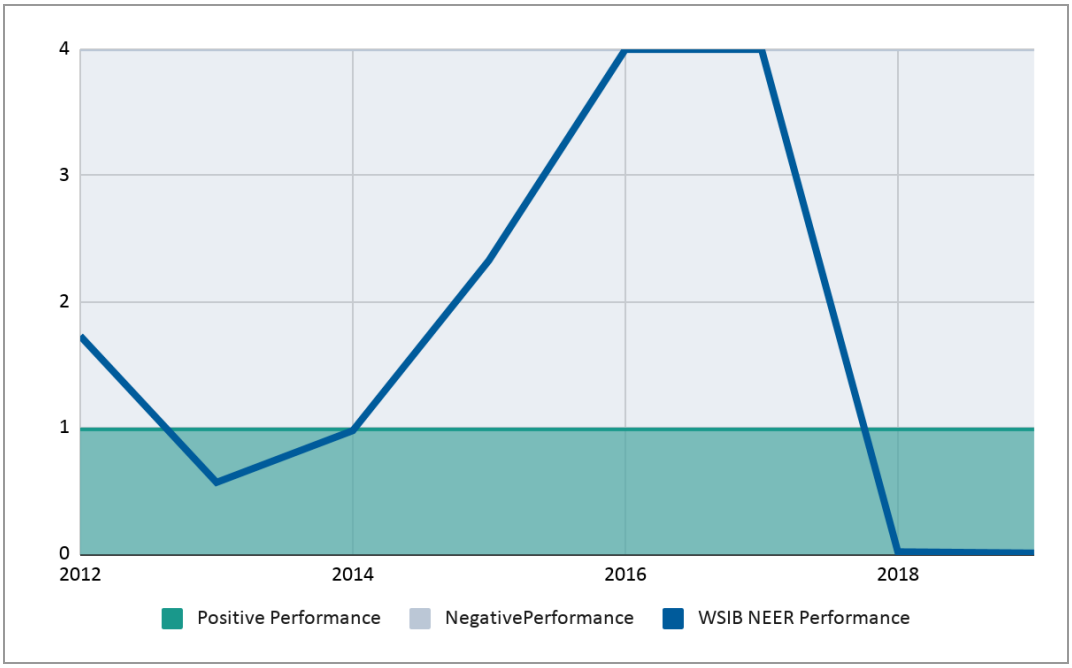
Hydro Ottawa's WSIB premium costs from 2012-2019 are shown in Figure 4 below. Premiums for the rate group in which Hydro Ottawa is classified increased in 2018 and decreased modestly in 2019.

Figure 4 – Hydro Ottawa WSIB Premiums



Hydro Ottawa's WSIB New Experimental Experience Rating ("NEER") performance index for 2012-2018 is shown in Figure 5 below. The utility experienced high NEER performance indices in 2015, 2016 and 2017 with the associated surcharges. This was due primarily to large WSIB future cost estimates in relation to two claims. These future cost estimates have been adjusted for 2018 and 2019 and, as such, have positively reduced the NEER performance index for each of those years.

Figure 5 – WSIB NEER Performance Index



As of January 1, 2020, the WSIB has moved to a new industry classification system and rate framework based on the North American Industry Classification System ("NAICS"), and has eliminated experience rating programs such as NEER. The new rate framework will assess premium rates based on the collective risk profile of all businesses within the class and the class's share of responsibility to maintain the insurance fund. In 2020, businesses will be assigned a starting point rate as well as a projected premium rate based on previous rates, claims experience, size of business, NAICS classification, and whether or not they were previously in an experience rating program. The impact of these changes on Hydro Ottawa's future WSIB premium rates for 2020 onwards is not known at this time.

3. EMPLOYEE HEALTH AND WELLNESS

Along with the emphasis on safety, Hydro Ottawa recognizes that in order to have a productive workforce, employees need to be healthy, well, and engaged in their work. The utility has

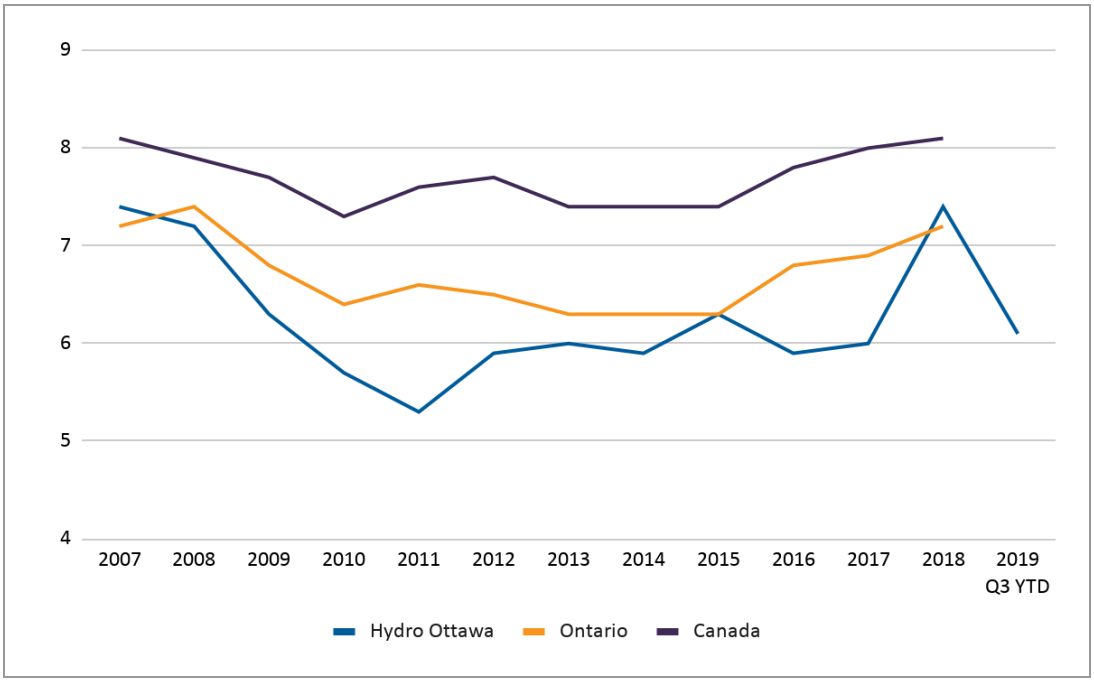
programs and strategies in place to help prevent illness and injury and reduce the associated lost time. These include the following: programs to alleviate musculoskeletal injuries, given that half of the employees perform physically demanding jobs; occupational and non-occupational illness/injury work reintegration programs to ensure employees return to work early and safely, and perform in a meaningful way; and other supports to promote employee health and wellness over the long-term, including an Employee Assistance Program and mental health programming. In addition, in 2019 over 80% of employees moved to new facilities, designed with the health and well-being of employees and the environment in mind.[2]

3.1. ATTENDANCE MANAGEMENT PROGRAM

Hydro Ottawa's Attendance Management Program, first introduced in 2009, monitors employee attendance, recognizes positive attendance, and provides the framework for addressing excessive absenteeism. As indicated in Figure 6 below, Hydro Ottawa's average number of sick days per employee in 2017 was 6.0. This was below the Ontario and Canada benchmarks of 6.9 days and 8.0 days per employee, respectively. In 2018, Hydro Ottawa's average number of sick days per employee increased to 7.4 – still lower than the Canada benchmark of 8.1 days, but slightly higher than the Ontario benchmark of 7.2 days. In light of the increase in overall sick leave usage in 2018, Hydro Ottawa conducted predictive analysis to better understand current and future trends, and to identify at-risk groups and positions in order to refine program strategies where required. As well, a toolkit of resources was developed to support people leaders with leave management. Additional training, tools, and accommodations will be required in the 2021-2025 period to maintain this positive trending.

[2] For further details on Hydro Ottawa's Facilities Renewal Program, please see Attachment 2-1-1(A): New Administrative Office and Operations Facilities.

Figure 6 – Average Usage of Sick Leave Days: Hydro Ottawa vs. Ontario and Canadian Benchmarks[3]



4. PUBLIC SAFETY

4.1. COMPLIANCE

Hydro Ottawa takes the health and safety of the public as seriously as it does the health and safety of its employees. Public safety is considered in all phases of Hydro Ottawa's operations, from facility and equipment design through construction to operations and maintenance. All job planning activities take into account public safety, so that the public is not adversely affected by construction and maintenance activities conducted on Hydro Ottawa property, on customer property, and along the many municipal roadways where infrastructure is located.

To ensure compliance with *Ontario Regulation 22/04: Electrical Distribution Safety*, which requires electrical utilities to design, build, and maintain their distribution infrastructure to

[3] *Source:* Statistics Canada – Days Lost per Worker – Illness or Disability (full time paid workers).

recognized standards, Hydro Ottawa participates in multiple Electrical Safety Authority ("ESA") due diligence inspections per year, as well as an annual ESA compliance audit. The results of the utility's ESA compliance audits have consistently demonstrated that Hydro Ottawa remains compliant in the five key compliance sections examined. In 2018, in light of the utility's consistently good performance in due diligence inspections ("DDIs"), ESA reduced the number of annual DDI inspections that Hydro Ottawa is required to participate in from seven to four.

4.2. PUBLIC EDUCATION

The other major component of public safety is that of education. Hydro Ottawa provides highly visible signage warning of hazards on all of its distribution substations and ground level transformers. The utility also works to foster a culture of safety and energy conservation in the community through a number of education campaigns, including the following:

- Educational programs for elementary school students – since 2001, approximately 2,300 presentations have been delivered to over 264,000 students in almost 400 elementary schools across Hydro Ottawa's service territory; and
- Electrical safety awareness campaigns – these campaigns help to ensure that customers are not putting themselves and their loved ones at risk around electricity, and include, among other initiatives, six animated "Smart as a Fox" videos of less than a minute in length each, tackling key areas of learning, which are available on-line in both official languages.

Additional information on electrical safety and energy conservation is provided on the utility's website, via social media channels, and through on-bill messages. Please see Attachment 1-1-12(C): Electricity Utility Scorecard for more details on Hydro Ottawa's plans to increase public safety awareness during the 2021-2025 rate period.

5. ENVIRONMENT

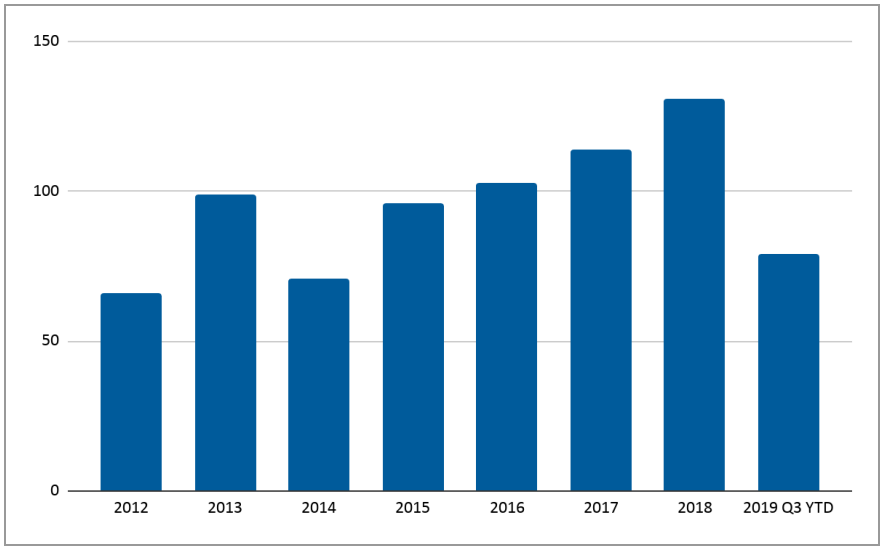
5.1. ENVIRONMENTAL COMPLIANCE

Hydro Ottawa is subject to federal, provincial, and municipal environmental legislation and regulations. In order to ensure compliance, the utility undertakes a range of strategies and activities. These include proactively monitoring multiple information sources, such as regulatory news feeds and industry newsletters, for legislative and regulatory changes that may impose additional duties, requirements, or costs on the organization. If any changes are identified, Hydro Ottawa revises its practices and procedures, if and as required. The utility is also an active participant in industry consultations and a member of a number of industry and trade associations. Furthermore, Hydro Ottawa proactively monitors its existing regulatory approvals and permits on a regular basis, in order to ensure timely compliance and renewal, as required. Hydro Ottawa's operations require that a variety of environmental reports be submitted at scheduled and ad-hoc intervals throughout the year to ensure compliance. Examples include the Ontario Ministry of Environment, Conservation and Parks' ("MECP") Director's Instructions related to the safe storage and destruction of polychlorinated biphenyls ("PCBs"), the National Pollutant Release Inventory, and the Ontario Hazardous Waste Inventory Network. In addition, Hydro Ottawa performs quarterly chemical and waste storage inspections and provides ad-hoc spill reports to the MECP.

Throughout any year, Hydro Ottawa may experience a number of unexpected releases of substances into the environment, with the majority of these releases coming from oil-filled transformers that fail due to age or damage. The utility has a 24-hour response system, with employees qualified to promptly report releases to the MECP and to organize immediate response through an on-call spill remediation contractor. Field employees receive training in spill reporting and containment, with large vehicles carrying spill response kits to provide basic containment. The spill kits contain protective equipment for employees and absorbent materials and mats to prevent spill entry into sensitive areas.

As shown in Figure 7, between 2014 and 2018, the number of spills and the cost to remediate them have increased. Due to proactive measures and practices that are in place, such as infrared scanning, Hydro Ottawa has been able to identify and address leaking equipment before the leaks become larger spills, which are more impactful and costly to remediate. This proactive approach is planned to continue over the next five years.

Figure 7 – Total Number of Spills (2012-Q3 2019)



Hydro Ottawa is working to actively eliminate PCBs from its electrical distribution system. Federal regulations introduced in 2008 established end-of-use dates for all PCBs from 2009-2025, depending upon the location and concentration of PCBs.

Hydro Ottawa has fulfilled all requirements to date to ensure compliance with the 2025 end-of-use deadlines. The utility is continuing the removal of the remaining PCBs from its system in accordance with its Asset Management Plan.

5.2. ENVIRONMENTAL SUSTAINABILITY

Since 2010, Hydro Ottawa's environmental sustainability efforts have been focused on three priority areas:

- Reducing the utility's carbon footprint through improvements in fleet, facilities, technology infrastructure, non-hazardous waste management, and recycling;
- Greening procurement and the supply chain; and
- Building a culture of environmental sustainability in Hydro Ottawa's business practices and workforce.

To build upon the progress made since 2010 relative to these three priority areas and following an environmental scan of Canada's Greenest Employers and Canadian Utilities, Hydro Ottawa added the following priorities in 2016 to ensure it continues to be a good steward of the environment:

- Achieve CEA designation as a Sustainable Electricity Company© in 2020;
- Make environmental sustainability metrics better linked to employee-related activities, more intuitive, and easier to understand;
- Continue to embed environmental stewardship into the way the utility does business; and
- Continue to work with Carbon 613, a network of organizations that are setting and achieving greenhouse gas ("GHG") reduction targets in Ottawa.

These priorities, which will remain in place over the 2021-2025 period, cover many aspects of the utility's operations and address matters of importance to customers, governments, and the electricity sector as a whole. They also provide the utility with the best options for reducing its environmental impacts and improving its environmental performance, while considering costs and return on investment.

Hydro Ottawa's continuing focus on reducing its environmental impacts and improving its environmental performance has resulted in the utility receiving numerous recognitions over the years:

- Canada's Greenest Employer (2011-2016, 2018-2019);
- CEA Environmental Commitment Award (2014);
- Best Ottawa Business Award, Sustainable Leader of the Year (2014); and
- Delta Management Clean 16 and Clean 50 (2013).

5.2.1. Reducing the Utility's Carbon Footprint

In 2019, Hydro Ottawa completed the construction of two new campuses consisting of a main office and two operational centres. The environment was top of mind during design and construction, with the new facilities built to Leadership in Energy and Environmental Design ("LEED") Gold Standards so as to decrease energy consumption, emit fewer GHGs, preserve natural resources, and reduce waste. The main office facility is projected to realize approximately 40% in energy-cost savings, compared to a building designed according to standard building codes, and to use approximately 55% less water due to the installation of efficient and innovative washroom fixtures and a rainwater recovery system. The addition of solar arrays at each campus will offset energy consumption by 18% at the east campus and 100% at the south campus. Please refer to Attachment 2-1-1(A): New Administrative and Operations Facilities for further details.

Hydro Ottawa also continues to invest in green fleet vehicles and technology, where it is available for commercial fleets, and to replace vehicles, as per the established fleet replacement schedule, with the following:

- Hybrid or more energy efficient vehicles, where available;
- Hybrid technology to operate hydraulics for aerial devices, where it is effective;

- Battery technology to eliminate idling for heating and lighting, while servicing underground cabling; and
- Electric vehicles, where appropriate.

Additionally, Hydro Ottawa is leveraging its vehicle Global Positioning System ("GPS") technology and Fleet Management Information System to better manage fleet scheduling, preventive maintenance, repair history, inspections, fuel usage, and vehicle utilization and rationalization to optimize fleet efficiency and environmental performance.

For more information on how improving environmental performance features in the utility's fleet strategy, please see Attachment 2-4-3(F): Fleet Replacement Program.

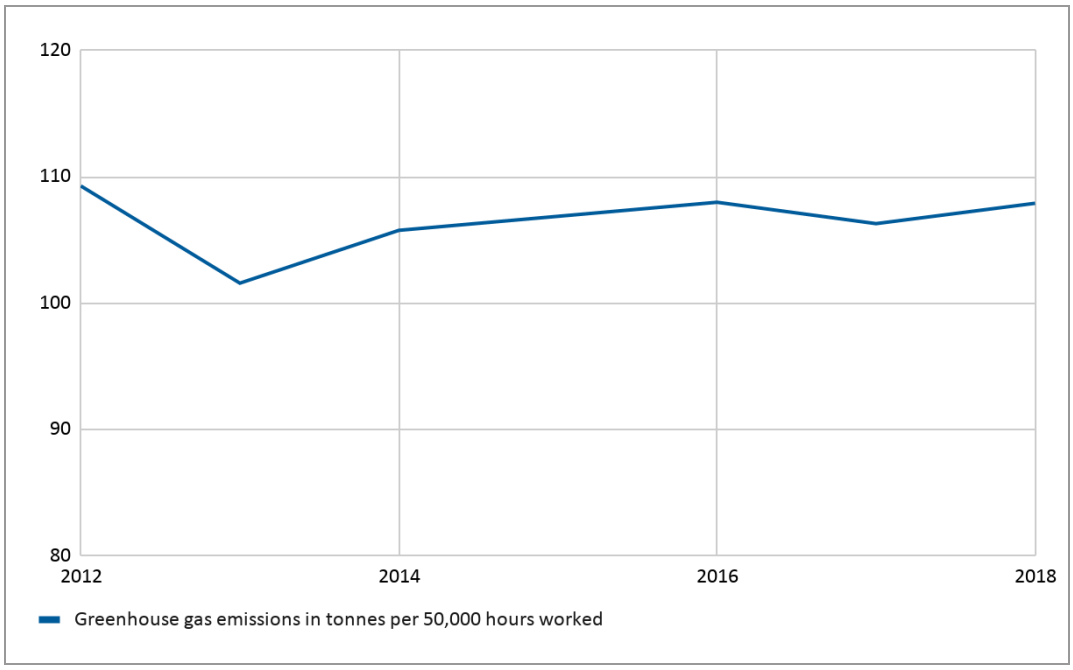
Reducing the environmental impact of information technology platforms also remains an important part of Hydro Ottawa's approach to reducing the utility's carbon footprint. Examples in this regard include the following:

- A new data center in 2019 which utilizes a hot aisle containment system that maintains the ideal temperature for equipment performance and efficiency without using the building's HVAC system;
- Web-conferencing technologies which allow for effective virtual meetings and reduce the need for employees to travel;
- Continuing to adopt cloud-based technologies to reduce the footprint of on-premise technologies and equipment; and
- Replacement of the utility's Supervisory Control and Data Acquisition ("SCADA") system in 2018, with the upgraded version providing remote visibility into the electric grid and ready access to data, without having to send crews and vehicles into the field.

For additional examples, please see Exhibit 1-1-13: Productivity and Continuous Improvement Initiatives and Attachment 1-1-13(B): Digital Strategy.

As outlined in Figure 8, Hydro Ottawa's GHG emissions in tonnes (vehicle fuel combustion emissions, buildings combustion emissions, and sulphur hexafluoride emissions) based on hours worked have remained low in recent years despite the utility not having moved to new, more energy efficient facilities until 2019.

Figure 8 – GHG Emissions

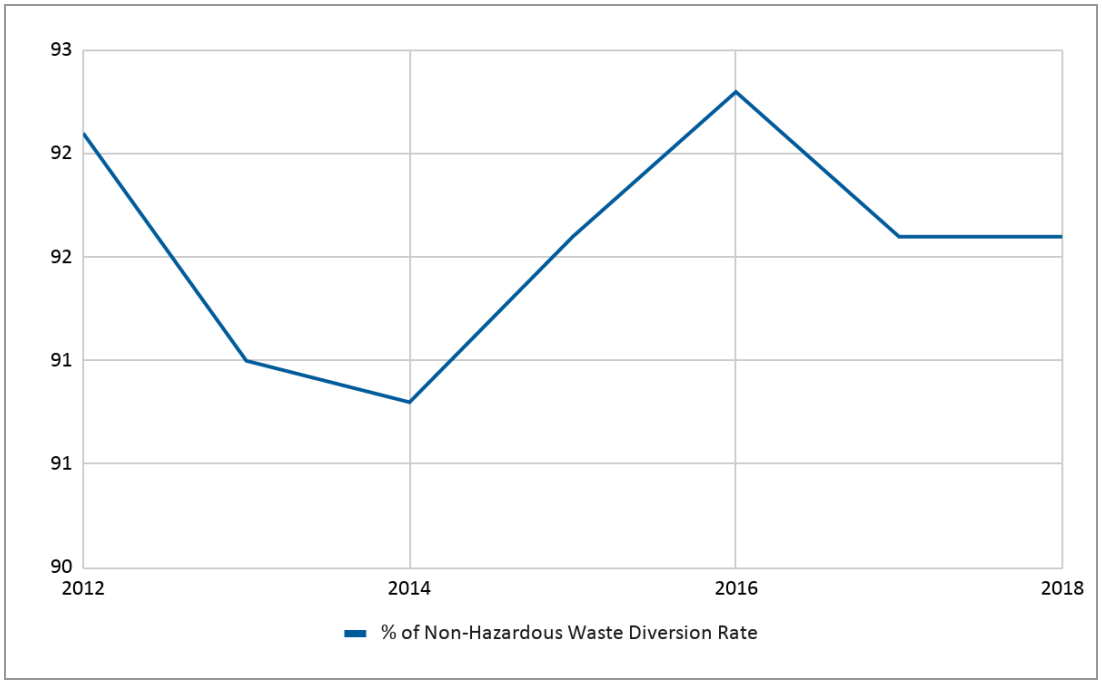


Reducing the amount of non-hazardous waste that is generated and diverting more away from landfill are also important elements of reducing the utility's carbon footprint. Hydro Ottawa tracks all solid and liquid wastes, including operational waste streams, and has systems in place to ensure high diversion rates are maintained. Hydro Ottawa recycles many items including cans, glass, cardboard, paper, plastic, wood, tree trimmings, transformers and electrical equipment, tires, meters, e-waste (laptops, servers, desktops, printers, and cell phones) and metals. In 2019, in conjunction with the move to its new facilities, the utility discontinued waste management at the desk/office level. Centralized four-stream waste collection systems (landfill, paper/cardboard, glass/can, and organics) were introduced, with the

organic waste dehydrated on-site using an energy efficient and automated process which produces a dry, earthy material that is used as an accelerant in composting.

As shown in Figure 9, Hydro Ottawa's non-hazardous waste diversion rate has consistently been above 90%. 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 9 – Non-Hazardous Waste Diversion Rate



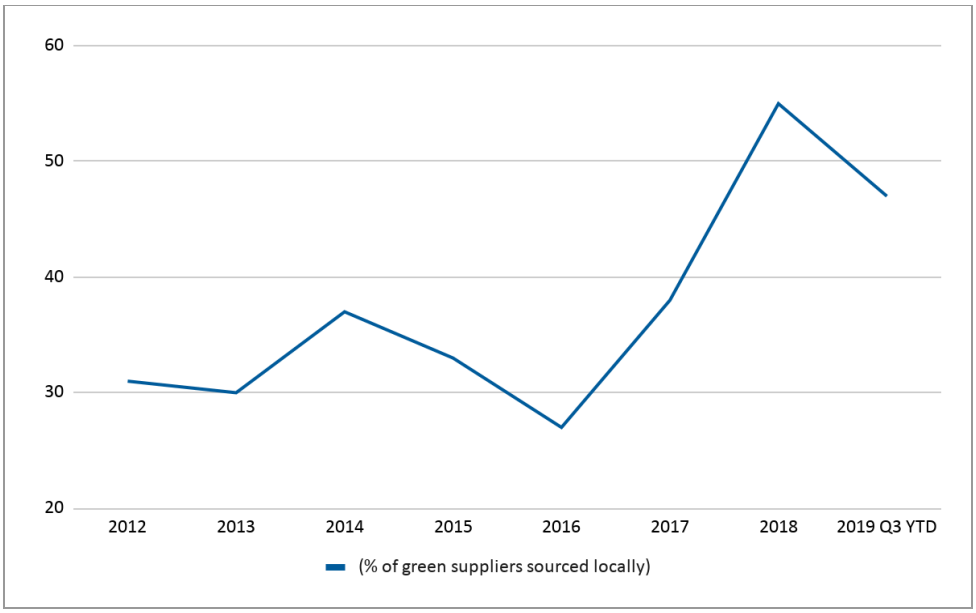
5.2.2. Greening Procurement and the Supply Chain

Hydro Ottawa's approach to green procurement ensures that environmentally friendly purchasing decisions are made, where opportunities exist, while still ensuring that the procurement process delivers value for money.

Hydro Ottawa maintains a point system for evaluating supplier proposals using environmental designations and practices as a "tie-breaker" for differentiating close competitive bidders. Hydro Ottawa also sources goods and services locally, where it is cost-effective to do so, in order to minimize transportation and associated impacts on the environment.

To that end, as represented in Figure 10, Hydro Ottawa tracks the relative proportion of purchase orders placed with firms in and surrounding the National Capital Region. Sourcing of goods and services from local suppliers within a 100 km radius of the National Capital Region, measured in terms of dollars spent, reached 38% in 2017 and a high of 55% in 2018.

Figure 10 – Green Procurement



5.2.3. Building a Culture of Environmental Sustainability

By fostering a culture of environmental stewardship within the utility, employees become champions for the greening of Hydro Ottawa's operations, and a key source of ideas for how to further reduce environmental impacts.

Hydro Ottawa works to ensure employees have the tools they need to reduce waste and conserve energy, whether through the default settings on their electronic devices, the availability of waste collection systems in the workplace, default black only and double-sided printing, campus-wide Wi-Fi, and mechanisms for electronic collaboration and communication.

The ongoing transition to online services and self-service for employees, customers, and vendors is providing an enhanced user experience and reducing Hydro Ottawa's impact on the environment. For example, through the introduction of innovative technologies and annual "go paperless" campaigns with customers, the utility is growing the number of customers opting for paperless billing and substantially reducing its annual usage of paper. Additionally, an ongoing focus to digitize records is continuing to move Hydro Ottawa closer to a paperless environment. For further details on the utility's corporate Digital Strategy, please refer to Attachment 1-1-13(B).

The use of technology also allows Hydro Ottawa to remote disconnect and reconnect customers reducing the need to dispatch workers and vehicles, and thus further reducing its impact on the environment. Hydro Ottawa encourages its employees to carpool, take public transit, bike to work, and drive electric vehicles. Electric vehicle charging stations, including solar powered stations, are available in both the visitor and employee parking lots of Hydro Ottawa's two new campuses at a cost to the users. Covered bicycle parking is conveniently located close to the employee entrances. Moreover, prime parking spaces close to employee entrances are designated for car poolers.

Through its Green Team of front-line employees, Hydro Ottawa continues to look for ways to promote the necessary behavioural changes needed to infuse environmental sustainability into its daily practices. By enlisting co-workers as sustainability partners and engaging external stakeholders and partners to share ideas, Hydro Ottawa is embedding environmental stewardship into the way the utility does business.

Hydro Ottawa Limited
Post-Employment Benefit Plans

ACTUARIAL REPORT FOR ACCOUNTING PURPOSES
IN ACCORDANCE WITH IAS 19
FOR THE PERIOD ENDING DECEMBER 31, 2018
AND PROJECTED RESULTS FOR 2019

April 2, 2019

Prepared by:

Kwame Smart, FCIA, FSA
Steve Cheon, FCIA, FSA

Eckler Ltd.
5140 Yonge Street, Suite 1700
Toronto, Ontario
M2N 6L7

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Section 1. EXECUTIVE SUMMARY

We are pleased to present this report which provides the results of an actuarial valuation of Hydro Ottawa Limited's (the "Company") Non-Pension Post-Employment Benefits Plans (the "Plans") in accordance with the International Accounting Standard 19 ("IAS 19"). This report has been prepared at the request of Hydro Ottawa Limited, and is intended for use by the Company and its external auditor in the support of amounts appearing on the Company's financial statements. Please note that all financial amounts shown are in Canadian dollars only.

The Plans are funded on a pay-as-you-go basis by contributions from the Company, and administered by Sun Life. The benefits included in the Plans and considered in this report are:

- Post-retirement life insurance benefits for the management and unionized retirees;
- Retirement grant benefit for the unionized employees; and
- Accumulating non-vesting sick leave benefits for the unionized employees.

The following categories of benefits covered by IAS 19 have not been explicitly considered in this report other than the plans outlined above:

- Short term employee benefits
- Termination benefits
- Post-retirement pension benefits

Actuarial Valuation

A full actuarial valuation of the Plan was performed as of December 31, 2016, based on membership data as of October 31, 2016. The results of the December 31, 2016 valuation are summarized in our actuarial report dated January 23, 2017. The Fiscal 2018 defined benefit cost, the defined benefit obligation as of December 31, 2018 and the estimated Fiscal 2019 information – all summarized in this report, were extrapolated from the results of the December 31, 2016 valuation.

Included in this Report

The following information is included in this report:

Section 2	**Reliance and Certification** Additional information on the data, methods and assumptions used to determine the disclosure amounts shown in this report, as well as our actuarial opinion
Section 3	**Fiscal 2018 Disclosure Information** Full disclosure schedules for each benefit
Section 4	**Estimated Fiscal 2019 Disclosure Information** Estimated disclosure schedules for each benefit. Please note that all the information provided for Fiscal 2019 are estimates only and can be materially different from what is shown dependent on significant events that may occur during and at the end of Fiscal 2019. We will confirm or update these estimates at the time of the preparation of the final Fiscal 2019 disclosure results

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Section 5	**Comparator Fiscal 2017 Disclosure Information** Prior year disclosure schedules for comparison purposes
Appendices	Summary of supporting information used in the actuarial valuations including: **A.** Membership Data **B.** Actuarial Assumptions and Methods **C.** Plan Provisions **D.** Employer Certification

Highlight of Result for Fiscal 2018 and Projected 2019

The table below highlights the key financial reporting results for Fiscal 2018 and the projected defined benefit cost for Fiscal 2019. For accounting under IAS 19, the life insurance and retirement grant as Post-Employment Benefits and gains or losses for these plans are recognized through Other Comprehensive Income (OCI) in the year they arise. The Non-vested Sick Leave Benefits ("NVSL") Plan, however, have been categorized as Other Long-Term Employee Benefits, and gains or losses are recognized immediately through the Defined Benefit Cost in the year they arise. Details of the results are provided in Sections 3 and 4.

Fiscal 2018 Disclosure Information	Life Insruance	Retirement Grant	Nonvested Sick Leave	Total
	$	$	$	$
Components Defined Benefit Cost/(Income)				
Service cost in the Income Statement:	174,000	43,700	120,000	337,700
Interest on the net defined benefit liability in Income Statement:	368,400	28,400	54,100	450,900
Remeasurements of the net defined benefit liability in Income Statement	n/a	n/a	(52,900)	(52,900)
2018 Defined benefit cost/(income) reflected in Income Statement	**$542,400**	**$72,100**	**$121,200**	**$735,700**
Funded Status at End of Period				
Plan assets at end of period	0	0	0	0
Defined benefit obligation at end of period	10,074,500	776,600	1,515,700	12,366,800
Funded status at end of period	**($10,074,500)**	**($776,600)**	**($1,515,700)**	**($12,366,800)**
Reconciliation of Defined Benefit (Liability)/Asset				
Defined benefit (liability)/asset at start of period	(10,933,000)	(855,400)	(1,545,400)	(13,333,800)
Defined benefit (cost)/income reflected in Income Statement	(542,400)	(72,100)	(121,200)	(735,700)
Remeasurements of the net defined benefit liability reflected in OCI	986,300	67,800	n/a	1,054,100
Employer contributions	414,600	83,100	150,900	648,600
Defined benefit (liability)/asset at end of period	**($10,074,500)**	**($776,600)**	**($1,515,700)**	**($12,366,800)**
IAS 24 disclosure information for Key Management Personnel	**1,200**	**0**	**0**	**1,200**
Weighted average assumptions for defined benefit cost/(income)				
Discount rate	3.40%	3.40%	3.40%	3.40%
Annual salary increase	2.00%	2.00%	2.00%	2.00%
Weighted average assumptions for disclosure				
Discount rate	3.90%	3.90%	3.90%	3.90%
Annual salary increase	2.00%	2.00%	2.00%	2.00%
	$	$		$
Estimated Fiscal 2019 Defined Benefit Cost				
Service cost in the Income Statement:	149,000	41,700	114,200	304,900
Interest on the net defined benefit liability in Income Statement:	388,300	30,000	60,500	478,800
Remeasurements of the net defined benefit liability in Income Statement	n/a	n/a	0	0
2019 Defined benefit cost/(income) reflected in Income Statement	**$537,300**	**$71,700**	**$174,700**	**$783,700**

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Section 2. RELIANCE AND CERTIFICATION

We have prepared accounting disclosure information in accordance with IAS 19 for the Plans sponsored by the Company as of December 31, 2018, based on an extrapolation of results from a full actuarial valuation of the Plans prepared as of December 31, 2016.

We have relied on the following information which was provided by the Company:

- Confirmation that there were no significant changes to the membership data since the last valuation as of December 31, 2016, which was based on data as of October 31, 2016;
- Premiums paid for the life insurance benefits and retirement grant payments in 2018; and
- Plan provisions in effect as of December 31, 2018.

This report has been prepared exclusively for the Company and its external auditor as support of amounts used for financial reporting purposes. This report may not be relied upon or be appropriate for other purposes.

The Plans' actual costs will depend on a number of factors including the amount of benefits paid, the number of members covered for benefits, the amount of plan expenses and other external influences on the plan costs. These amounts are not known at the measurement date and are uncertain, but expected to fall within a reasonable range of possibilities. To prepare this report, the selected actuarial assumptions produce one scenario from a range of possible scenarios. The results of the single scenario are summarized in this report. However, actual plan experience will differ from the assumptions used and the difference may be material or significant.

Another reasonable set of assumptions could have been selected and the results would have been different. As well, valuation assumptions are likely to change at each valuation due to plan changes, data or experience changes, legislated events or changed expectations about the future. Provided there are no significant changes to the membership data or plan provisions, the next full valuation is due on or before December 31, 2019.

Membership Data

The Fiscal 2018 year-end disclosure is based on membership data provided by the Company as at October 31, 2016 for all Plans, which was assumed to be as of December 31, 2016 for valuation purposes and is summarized in Appendix A of this report. At the time of preparation of the December 31, 2016 valuation, the data was subjected to a number of tests for reasonableness and consistency (e.g. on service, dates of birth, gender, etc.).

Premiums and Claims Information

We received information on the actual payments made for the life insurance and retirement grant benefits in 2018. With respect to the non-vesting sick leave benefits, actual payments are difficult to calculate, so we have reflected expected benefit payments in Fiscal 2018 from our valuation. These amounts are as follows, and were disclosed as the annual cash contributions made in Fiscal 2018 for financial reporting purposes:

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Employer contributions in Fiscal 2018	
	$
Life Insurance	414,600
Retirement Grant	83,100
Nonvested Sick Leave	150,900
Total	**$648,600**

Assumptions

The disclosure results have been prepared using the best estimate assumptions developed by Eckler Ltd. in discussions with management. With the exception of the discount rate, all assumptions used for the disclosure as of December 31, 2018, are the same as those used as of December 31, 2017.

Discount rate assumptions have been determined in accordance with IAS 19, and are based on the combined expected future cash flows for the Plans.

According to IAS 19, the discount rate used to determine the defined benefit obligation is the market interest rate on high quality debt instruments with duration similar to the duration of the Plan. The discount rate used as of December 31, 2017 and for the Fiscal 2018 defined benefit cost was 3.40% per annum based on the duration of all Plans combined.

Based on the duration of all the Plans as of December 31, 2018 and the associated current estimated yield on high quality corporate bonds, the discount rate at December 31, 2018 is 3.90% per annum.

Emerging experience under the plans differing from the assumptions will result in gains or losses which will be revealed in future valuations.

More detailed information on the actuarial assumptions and methodology used are included in Appendix B of this report.

Actuarial Method

The total value of the Plan's costs for financial reporting purposes at a particular date can be measured by the defined benefit obligation ("DBO"). The DBO at a particular date for an employee is the total present value of all expected future benefit payments that is attributed to service earned to that date, and the current service cost is the amount that is attributed to the current year. According to IAS 19, actuarial method used to determine the DBO and current service cost should be the projected unit credit method. This method assumes that the post-retirement benefits are attributed over the years of service to the date when future service no longer leads to a material amount of additional benefits from the plan. This is typically the date when an employee is first eligible to retire and receive benefits for the plan.
For the NVSL plan, the service cost is equal to the value of the benefits expected to be earned in each year.

More information on the actuarial method is provided in Appendix B.

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Plan Provisions

There have been no significant plan changes since the last disclosure as of December 31, 2017. The plan provisions have been provided and confirmed by the Company and are summarized in Appendix C of this report.

Subsequent Events

To the best of our knowledge and based on discussions with the Company, it is our understanding that there were no events which occurred between December 31, 2018 and the date this report was completed which would have a material impact on the results of the valuations or the year-end disclosures at December 31, 2018.

Statement of Actuarial Opinion

In our opinion,

- the membership data is sufficient and reliable for the purpose of the valuation;
- the preparers of the financial statements have selected the assumptions and they are in accordance with accepted actuarial practice in Canada; and
- the calculations have been made in accordance with our understanding of the requirements of International Accounting Standard 19 under the International Financial Reporting Standards.

This report has been prepared, and our opinion given, in accordance with accepted actuarial practice in Canada.

Respectfully submitted,

Kwame Smart, FCIA, FSA

February 6, 2019
Date

Steve Cheon, FCIA, FSA

February 6, 2019
Date

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Section 3. FISCAL 2018 IAS 19 DISCLOSURE INFORMATION

Fiscal 2018 Disclosure Information	Life Insurance	Retirement Grant	Nonvested Sick Leave	Total
	$	$	$	$
Reconciliation of Plan Assets				
Plan assets at start of period	0	0	0	0
Employer contributions	414,600	83,100	150,900	648,600
Employee contributions	0	0	0	0
Benefit payments	(414,600)	(83,100)	(150,900)	(648,600)
Settlement payments	0	0	0	0
Interest income	0	0	0	0
Return on plan assets excluding amounts included in interest income	0	0	0	0
Plan assets at end of period	**$0**	**$0**	**$0**	**$0**
Reconciliation of Defined Benefit Obligation				
Defined benefit obligation at start of period	10,933,000	855,400	1,545,400	13,333,800
Current service cost	174,000	43,700	120,000	337,700
Interest expense	368,400	28,400	54,100	450,900
Benefit payments	(414,600)	(83,100)	(150,900)	(648,600)
Past service cost/(credit)	0	0	0	0
Curtailment & Settlement (gains)/losses	0	0	0	0
Actuarial (gains)/losses from changes in experience	(130,000)	(43,300)	0	(173,300)
Actuarial (gains)/losses from changes in demographic assumptions	0	0	0	0
Actuarial (gains)/losses from changes in financial assumptions	(856,300)	(24,500)	(52,900)	(933,700)
Defined benefit obligation at end of period	**$10,074,500**	**$776,600**	**$1,515,700**	**$12,366,800**
Components Defined Benefit Cost/(Income)				
Service cost in the Income Statement:				
Current service cost	174,000	43,700	120,000	337,700
Past service cost	0	0	0	0
Curtailment & Settlement (gain)/loss	0	0	0	0
	174,000	**43,700**	**120,000**	**337,700**
Interest on the net defined benefit liability in Income Statement:				
Interest income	0	0	0	0
Interest expense	368,400	28,400	54,100	450,900
	368,400	**28,400**	**54,100**	**450,900**
Remeasurements of the net defined benefit liability in Income Statement	**n/a**	**n/a**	**(52,900)**	**(52,900)**
Defined benefit cost/(income) reflected in Income Statement	**$542,400**	**$72,100**	**$121,200**	**$735,700**
Remeasurements of the net defined benefit liability in OCI:				
Return on plan assets excluding amounts included in interest income	0	0	n/a	0
Actuarial (gains)/losses from changes in experience	(130,000)	(43,300)	n/a	(173,300)
Actuarial (gains)/losses from changes in demographic assumptions	0	0	n/a	0
Actuarial (gains)/losses from changes in financial assumptions	(856,300)	(24,500)	n/a	(880,800)
Remeasurements of the net defined benefit liability reflected in OCI	**($986,300)**	**($67,800)**	**$0**	**($1,054,100)**
Funded Status at End of Period				
Plan assets at end of period	0	0	0	0
Defined benefit obligation at end of period	10,074,500	776,600	1,515,700	12,366,800
Funded status at end of period	**($10,074,500)**	**($776,600)**	**($1,515,700)**	**($12,366,800)**
Reconciliation of Defined Benefit (Liability)/Asset				
Defined benefit (liability)/asset at start of period	(10,933,000)	(855,400)	(1,545,400)	(13,333,800)
Defined benefit (cost)/income reflected in Income Statement	(542,400)	(72,100)	(121,200)	(735,700)
Remeasurements of the net defined benefit liability reflected in OCI	986,300	67,800	n/a	1,054,100
Employer contributions	414,600	83,100	150,900	648,600
Defined benefit (liability)/asset at end of period	**($10,074,500)**	**($776,600)**	**($1,515,700)**	**($12,366,800)**
Reconciliation of amounts in OCI (Gain)/Loss				
Accumulated amounts in OCI at start of period	2,219,200	(115,300)	n/a	2,103,900
Remeasurements of the net defined benefit liability reflected in OCI	(986,300)	(67,800)	n/a	(1,054,100)
Accumulated amounts in OCI at end of period (Gain)/Loss	**$1,232,900**	**($183,100)**	**$0**	**$1,049,800**

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Fiscal 2018 Disclosure Information	Life Insurance	Retirement Grant	Nonvested Sick Leave	Total
	$	$	$	$
Determination of interest cost				
Defined benefit obligation at start of period	10,933,000	855,400	1,545,400	13,333,800
Current service cost weighted for timing (beg-year)	174,000	43,700	120,000	337,700
Past service cost weighted for timing (beg-year)	0	0	0	0
Expected benefit payments weighted for timing (mid-year)	(272,300)	(63,200)	(75,450)	(410,950)
Average weighted DBO	10,834,700	835,900	1,589,950	13,260,550
Discount rate	3.40%	3.40%	3.40%	3.40%
Interest cost for period	368,400	28,400	54,100	450,900
Additional disclosure information				
Expected employer contributions in next reporting period	532,200	97,400	156,900	786,500
Duration[(1)]	15.5	15.5	15.5	15.5
IAS 24 disclosure information for Key Management Personnel				
Defined benefit cost/(income) reflected in Income Statement				
EE ----	1,200			1,200
Total	1,200	0	0	1,200
Sensitivity on defined benefit obligation at end of period				
Discount rate				
Effect of 0.25% increase	(385,500)	(12,200)	(26,300)	(424,000)
Effect of 0.25% decrease	412,100	12,600	27,200	451,900
Salary scale				
Effect of 0.25% increase	53,900	17,400	33,600	104,900
Effect of 0.25% decrease	(52,300)	(16,900)	(32,600)	(101,800)
Weighted average assumptions for defined benefit cost/(income)				
Discount rate	3.40%	3.40%	3.40%	3.40%
Annual salary increase	2.00%	2.00%	2.00%	2.00%
Weighted average assumptions for disclosure				
Discount rate	3.90%	3.90%	3.90%	3.90%
Annual salary increase	2.00%	2.00%	2.00%	2.00%

[(1)] Duration is based on expected cash flows of the employee benefit plans combined

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Section 4. FISCAL 2019 IAS 19 DISCLOSURE INFORMATION (ESTIMATE)

Fiscal 2019 Disclosure Information (Estimate)	Life Insurance	Retirement Grant	Nonvested Sick Leave	Total
	$	$	$	$
Reconciliation of Plan Assets				
Plan assets at start of period	0	0	0	0
Employer contributions	532,200	97,400	156,900	786,500
Employee contributions	0	0	0	0
Benefit payments	(532,200)	(97,400)	(156,900)	(786,500)
Settlement payments	0	0	0	0
Interest income	0	0	0	0
Return on plan assets excluding amounts included in interest income	0	0	0	0
Plan assets at end of period	**$0**	**$0**	**$0**	**$0**
Reconciliation of Defined Benefit Obligation				
Defined benefit obligation at start of period	10,074,500	776,600	1,515,700	12,366,800
Current service cost	149,000	41,700	114,200	304,900
Interest expense	388,300	30,000	60,500	478,800
Benefit payments	(532,200)	(97,400)	(156,900)	(786,500)
Past service cost/(credit)	0	0	0	0
Curtailment & Settlement (gains)/losses	0	0	0	0
Actuarial (gains)/losses from changes in experience	0	0	0	0
Actuarial (gains)/losses from changes in demographic assumptions	0	0	0	0
Actuarial (gains)/losses from changes in financial assumptions	0	0	0	0
Defined benefit obligation at end of period	**$10,079,600**	**$750,900**	**$1,533,500**	**$12,364,000**
Components Defined Benefit Cost/(Income)				
Service cost in the Income Statement:				
Current service cost	149,000	41,700	114,200	304,900
Past service cost	0	0	0	0
Curtailment & Settlement (gain)/loss	0	0	0	0
	149,000	**41,700**	**114,200**	**304,900**
Interest on the net defined benefit liability in Income Statement:				
Interest income	0	0	0	0
Interest expense	388,300	30,000	60,500	478,800
	388,300	**30,000**	**60,500**	**478,800**
Remeasurements of the net defined benefit liability in Income Statement	**n/a**	**n/a**	**0**	**0**
Defined benefit cost/(income) reflected in Income Statement	**$537,300**	**$71,700**	**$174,700**	**$783,700**
Remeasurements of the net defined benefit liability in OCI:				
Return on plan assets excluding amounts included in interest income	0	0	n/a	0
Actuarial (gains)/losses from changes in experience	0	0	n/a	0
Actuarial (gains)/losses from changes in demographic assumptions	0	0	n/a	0
Actuarial (gains)/losses from changes in financial assumptions	0	0	n/a	0
Remeasurements of the net defined benefit liability reflected in OCI	**$0**	**$0**	**$0**	**$0**
Funded Status at End of Period				
Plan assets at end of period	0	0	0	0
Defined benefit obligation at end of period	10,079,600	750,900	1,533,500	12,364,000
Funded status at end of period	**($10,079,600)**	**($750,900)**	**($1,533,500)**	**($12,364,000)**
Reconciliation of Defined Benefit (Liability)/Asset				
Defined benefit (liability)/asset at start of period	(10,074,500)	(776,600)	(1,515,700)	(12,366,800)
Defined benefit (cost)/income reflected in Income Statement	(537,300)	(71,700)	(174,700)	(783,700)
Remeasurements of the net defined benefit liability reflected in OCI	0	0	n/a	0
Employer contributions	532,200	97,400	156,900	786,500
Defined benefit (liability)/asset at end of period	**($10,079,600)**	**($750,900)**	**($1,533,500)**	**($12,364,000)**
Reconciliation of amounts in OCI (Gain)/Loss				
Accumulated amounts in OCI at start of period	1,232,900	(183,100)	n/a	1,049,800
Remeasurements of the net defined benefit liability reflected in OCI	0	0	n/a	0
Accumulated amounts in OCI at end of period (Gain)/Loss	**$1,232,900**	**($183,100)**	**$0**	**$1,049,800**

Section 5. FISCAL 2017 IAS 19 DISCLOSURE INFORMATION (COMPARATOR)

Fiscal 2017 Disclosure Information	Life Insurance	Retirement Grant	Nonvested Sick Leave	Total
	$	$	$	$
Reconciliation of Plan Assets				
Plan assets at start of period	0	0	0	0
Employer contributions	361,600	127,700	145,000	634,300
Employee contributions	0	0	0	0
Benefit payments	(361,600)	(127,700)	(145,000)	(634,300)
Settlement payments	0	0	0	0
Interest income	0	0	0	0
Return on plan assets excluding amounts included in interest income	0	0	0	0
Plan assets at end of period	**$0**	**$0**	**$0**	**$0**
Reconciliation of Defined Benefit Obligation				
Defined benefit obligation at start of period	10,118,200	919,400	1,463,300	12,500,900
Current service cost	140,700	41,000	112,800	294,500
Interest expense	389,100	34,200	58,600	481,900
Benefit payments	(361,600)	(127,700)	(145,000)	(634,300)
Past service cost/(credit)	0	0	0	0
Curtailment & Settlement (gains)/losses	0	0	0	0
Actuarial (gains)/losses from changes in experience	(202,000)	(38,100)	0	(240,100)
Actuarial (gains)/losses from changes in demographic assumptions	0	0	0	0
Actuarial (gains)/losses from changes in financial assumptions	848,600	26,600	55,700	930,900
Defined benefit obligation at end of period	**$10,933,000**	**$855,400**	**$1,545,400**	**$13,333,800**
Components Defined Benefit Cost/(Income)				
Service cost in the Income Statement:				
Current service cost	140,700	41,000	112,800	294,500
Past service cost	0	0	0	0
Curtailment & Settlement (gain)/loss	0	0	0	0
	140,700	**41,000**	**112,800**	**294,500**
Interest on the net defined benefit liability in Income Statement:				
Interest income	0	0	0	0
Interest expense	389,100	34,200	58,600	481,900
	389,100	**34,200**	**58,600**	**481,900**
Remeasurements of the net defined benefit liability in Income Statement	**n/a**	**n/a**	**55,700**	**55,700**
Defined benefit cost/(income) reflected in Income Statement	**$529,800**	**$75,200**	**$227,100**	**$832,100**
Remeasurements of the net defined benefit liability in OCI:				
Return on plan assets excluding amounts included in interest income	0	0	n/a	0
Actuarial (gains)/losses from changes in experience	(202,000)	(38,100)	n/a	(240,100)
Actuarial (gains)/losses from changes in demographic assumptions	0	0	n/a	0
Actuarial (gains)/losses from changes in financial assumptions	848,600	26,600	n/a	875,200
Remeasurements of the net defined benefit liability reflected in OCI	**$646,600**	**($11,500)**	**$0**	**$635,100**
Funded Status at End of Period				
Plan assets at end of period	0	0	0	0
Defined benefit obligation at end of period	10,933,000	855,400	1,545,400	13,333,800
Funded status at end of period	**($10,933,000)**	**($855,400)**	**($1,545,400)**	**($13,333,800)**
Reconciliation of Defined Benefit (Liability)/Asset				
Defined benefit (liability)/asset at start of period	(10,118,200)	(919,400)	(1,463,300)	(12,500,900)
Defined benefit (cost)/income reflected in Income Statement	(529,800)	(75,200)	(227,100)	(832,100)
Remeasurements of the net defined benefit liability reflected in OCI	(646,600)	11,500	n/a	(635,100)
Employer contributions	361,600	127,700	145,000	634,300
Defined benefit (liability)/asset at end of period	**($10,933,000)**	**($855,400)**	**($1,545,400)**	**($13,333,800)**
Reconciliation of amounts in OCI (Gain)/Loss				
Accumulated amounts in OCI at start of period	1,572,600	(103,800)	n/a	1,468,800
Remeasurements of the net defined benefit liability reflected in OCI	646,600	(11,500)	n/a	635,100
Accumulated amounts in OCI at end of period (Gain)/Loss	**$2,219,200**	**($115,300)**	**$0**	**$2,103,900**

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Appendix A. MEMBERSHIP DATA

Below is a summary of the membership data as of December 31, 2016 (data was as of October 31, 2016, but assumed to be as of December 31, 2016 for valuation purposes), used to determine the 2018, 2017 and 2016 year-end disclosures.

We did not independently verify the accuracy and completeness of the data except to the extent required by generally accepted professional standards and practices. At the time of preparing the December 31, 2016 valuation, we did however review the data for internal consistency and reasonableness against the data used in the last valuations, and subjected it to a number of tests of reasonableness and consistency, including the following:

- the number of covered members is reasonable;
- a member's age is within a reasonable range;
- a member's years of membership is within a reasonable range given the age;
- a member's retirement age is within a reasonable range; and
- a member's gender has been provided and is reasonable for member.

Summary of Active Members

Active Members	Life Insurance	Retirement Grant / NVSL
	As of December 31, 2016	
Number of employees		
Male	425	306
Female	165	105
Total	590	411
Number with family coverage	n/a	n/a
Average age	44.2	43.1
Average service	14.5	14.9
Average salary	$85,400	$78,700

Summary of Retired Members

Retired Members	Life Insurance	Retirement Grant / NVSL
	As of December 31, 2016	
Number of retirees		
Male	281	n/a
Female	71	n/a
Total	352	n/a
Number with family coverage	n/a	n/a
Average age	71.1	n/a
Average life insurance amount	$35,600	n/a

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Appendix B. ACTUARIAL ASSUMPTIONS AND METHODS

The following table summarizes the assumptions used as at December 31, 2017 and 2018:

Assumptions	December 31, 2017	December 31, 2018
Financial Assumptions		
Discount Rate	3.40% per annum	3.90% per annum
Salary Increase	2.00% per annum	
Expenses & Taxes Loads	Life Insurance Plan 17.40% Retirement Grant Plan n/a Non-vesting Sick Leave n/a	
Demographic Assumptions		
Mortality	CPM 2014 Private Mortaliy Table with generational improvements using scale CPM-B	
Termination Rates (sample rates)	Age / Rate 20 0.070 25 0.050 30 0.050 35 0.050 40 0.030 45 0.020 50 0.020 55 0.000	
Retirement Rates	Upon attainment of Rule of 90; or Completion of 30 years of service subject to a minimum of 55, and a maximum of 71	
Disability Rates	n/a	
Assumed average sick leave usage per year	Retirement Grant only All eligible active employees use over 6 days for sick leave per year	
Net excess sick leave utilization rate / Probabilty of usage of excess sick leave days for unionized members:	Age / Average Excess Days Used / Probablity of Usage 25 - 29 5.7 5.3% 30 - 34 6.9 7.2% 35 - 39 8.5 9.4% 40 - 44 10.6 10.4% 45 - 49 13.1 10.7% 50 - 54 16.0 10.6% 55 - 59 19.4 10.3% 60 and over 23.2 9.9% Total 12.5 8.8%	

Discount Rate

Under IAS 19, the method of selecting the accounting discount rate should reference market interest rates on high-quality debt instruments at the measurement date with cash flows that match the timing and amount of expected benefit payments.

We used the Canadian Institute of Actuaries (CIA) model based on the Fiera Capital curve to develop the appropriate discount rate for accounting purposes.

This discount rate results in the duration of the bonds approximating the duration of the plan liabilities. The duration is the average of time to payment of benefits weighted by the size of expected benefit payments discounted by the applicable spot rates, at each point in time. The Company's post-employment plan has a duration of approximately 15.5 years. The duration also measures the impact of a change in the discount rate. For example, a 1% change in discount rate results in an approximate 15.5% change in the liabilities in the opposite direction of the discount rate change. With the relatively high duration, the plan liabilities are very sensitive to changes in the discount rate.

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Salary Escalation Rate

This assumption reflects the Company's long-term expectations of future annual increases in salary.

Demographic Assumptions

Mortality assumptions are based on the 2014 Canadian Pensioners Mortality table (CPM 2014), applicable to private sector retirees. The improvement table applied to the mortality table to reflect future improvements in mortality is the Canadian Pensioners Mortality improvement scale (CPM Scale). This CPM Scale B table is a two-dimensional table of improvement rates by age that decreases in a linear fashion for years 2012 - 2030.

For termination incidence and retirement rates we have continued to use the tables developed by the prior actuaries.

Claims Cost Development

For the life insurance benefit, the per capita claim assumption is based on the projected benefit amount payable upon death.

Net Excess Sick Leave Utilization Rate

For each unionized individual included in the membership data as of October 31, 2016, we were provided the number of sick leave days earned, the number of sick leave days used, and the accumulated sick day balances in each fiscal year over the period 2014 to 2016.

To estimate the utilization of the accumulated sick leave benefits in the future, we developed the average "Net Excess Sick Leave Days" and the probability that an employee would actually use excess sick leave days in the future.

The "Net Excess Sick Leave Days" are defined as the average number of sick leave days individuals are expected to use in a year, from the accumulated unused sick leave days earned in periods prior to the year of usage. For example, if the individual earns 18 sick days in a year, and uses 21 days, then 3 days are the "excess sick days". It is the expected draw of these additional 3 days that determines the non-vesting sick leave liability. There is no liability determined or required for the 18 days earned and used in the year.

Sick leave days used in a particular year were split between days used from the current period's allotment of sick days (sick leave days earned in the year), and days used that were accumulated from prior periods. This was done for each individual and for each year by applying the principle that any days used over the sick leave days earned in a year were taken from unused sick leave accumulations from prior periods. The average of the net excess sick leave days was based on the experience of individuals who actually used excess days above days earned in a year.

The "Probability of Usage of Excess Days" is equal to the probability that an individual will use sick leave days accumulated from prior periods in a given year. The probabilities were developed from actual usage experience over the period 2014 to 2016 for employees by age.

In addition to the salaries of employees that the Company pays with respect to the non-vested accumulating sick days, the Company would also pay payroll taxes (CPP/QPP premiums, Employment Insurance (EI) premiums, employer health taxes, workers' compensation premiums, etc.), with the respect to the employees taking a sick day and receiving compensation. As a result, there can also be an obligation related to these "payroll taxes". We have not made a provision for payroll taxes in this analysis.

Actuarial Cost Method

With respect to the post-retirement benefits, the actuarial valuation determines the defined benefit obligation (the "DBO") and the current service cost as described under IAS 19.

- The DBO at a particular date for an employee can be defined as the total present value of all expected future benefit payments that is attributed to service earned to that date.
- The current service cost for an employee can be defined as the present value of all expected future benefit payments that is attributed to the current year.
- For retired employees (or employees already eligible to retire and receive benefits), the current service cost is equal to zero, if no further service adds significantly to the value of the benefits.
- The DBO and current service cost for the Plan at a particular date would be the sum of the individual DBOs and current service costs for all employees and retirees.

The DBO and current service costs were determined using the Projected Unit Credit Method. Under this method, the projected post-retirement benefit is deemed to be earned on a pro-rata basis over years of service.

Under IAS 19, the projected post-employment benefit is deemed to be earned on a pro-rata basis from the date at which service first contributes towards earning a benefit, to the date where future service does not lead to a material amount of further benefit from the Plan. For the life insurance and retirement grant benefits, the attribution period is from date of hire to expected retirement age. For the NVSL plan, the attribution period is from date of hire to date of decrement. The actuarial liability for each member is equal to the present value of the projected benefits up to the valuation date.

Accounting Policies

Under IAS 19 gains or losses for the life insurance and retirement grant plans, that arise are recognized in other comprehensive income in the year. Prior service costs that arise due to plan changes or other significant events are recognized in the charge to income in the year they arise.

For the NVSL plan, gains or losses that arise are recognized in the defined benefit cost (income statement) in the year they arise. Prior service costs that arise due to plan changes or other significant events are recognized in the charge to income in the year they arise.

The benefit expense is made up of three main components as follows, and will be re-determined each year end for the following year:

- Current Service cost – value of benefits expected to be earned in the year
- Past service cost – estimated increase in the DBO for any plan changes or significant events
- Interest cost – interest on the liability at the start of the year
- For the NVSL plan – gains or losses that arise in the year.

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Appendix C. SUMMARY OF PLAN PROVISIONS

Life Insurance Benefits

- The cost of benefits is 100% employer paid
- Coverage for retired employee only (no dependent coverage)
- Benefits payable during retirement

Plan Option	Eligibility	Life Insurance Benefit
A	- With less than 10 years of service at retirement	Flat coverage of $2,000
	- With at least 10 years of service at retirement, and	
B	• Hired on or after May 1, 1967, and › Elected coverage under Options 2, 3, or 4 (Optional Life Insurance) at any time prior to retirement	50% of final annual earnings at retirement, reducing by 2.5% final earnings at the end of each year following retirement for 10 years, to a minimum of 25%
C	› Elected coverage under Option 1 (Basic Coverage only) only prior to retirement	50% of final annual earnings at retirement
D	• Hired before May 1, 1967	70% of the amount for which member was insured prior to retirement

Retirement Grant Benefits

Upon resignation or retirement, employees who have 25 or more years' continuous service may receive one of the following severance payments:

- Four week's pay; or
- A retirement grant.

The retirement grant is based on the employee's sick leave record and is calculated as follows:

- The amount of the retirement grant is the years of service (to a maximum of 35 days) multiplied by the sick leave factor. Allowance will be made to exclude one three-month illness (sixty-five working days)

Average Sick Leave Usage Per Year	Eligibility
4.0 days	100%
4.5 days	80%
5.0 days	60%
5.5 days	40%
6.0 days	20%
Over 6.0 days	0%

Sick Leave Days

Unionized employees are entitled to 18 sick leave days a year. Unused sick leave days earned in particular year can be banked for use in a future year. There is no payout of the value of unused sick days at termination, retirement or death.

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Appendix D. EMPLOYER CERTIFICATION

With regards to this report for accounting purposes on the Company's employee future benefits as of December 31, 2018, I certify that, to the best of my knowledge and belief:

- The membership data provided to the actuary and summarized in Appendix A, includes a complete and accurate description of every person who is entitled to benefits under the terms of the plan for membership up to October 31, 2016, and is appropriate at December 31, 2018;
- Management's best estimate assumptions for purposes of the valuations and disclosures are those described in Appendix B of this report;
- The summary of the plan provisions provided in Appendix C is a reasonable outline of the Plan provisions as of December 31, 2018 as provided to and confirmed with the actuary;
- Accounting policies adopted by the Company are those described in this report; and
- All events subsequent to December 31, 2018 that may have an impact on the valuation have been communicated to the actuary.

Feb 5, 2019
Date

Signature

AUDREY LIZOTTE
Name

Director Labour Relations and Compensation
Title

CONSERVATION AND DEMAND MANAGEMENT

1. INTRODUCTION

As a vital customer touch point, Hydro Ottawa's Conservation and Demand Management ("CDM") initiatives offer personalized advice to the utility's residential and business customers that helps them to reduce their energy consumption and better manage their electricity costs. Through these efforts over the past 15 years, Hydro Ottawa has established a solid reputation as a trusted energy advisor providing energy-saving expertise in the Ottawa community.

This positioning of Hydro Ottawa as the go-to resource for electricity optimization services and programs is a critical customer service that is fundamental to the future success of the utility. The electricity sector is rapidly changing with a growing array of electricity generation alternatives, electricity storage, demand management, and smarter grid technologies, that offer customers new choices in an increasingly competitive landscape. Through continued customer engagement, community outreach, and collaboration with other industry players, Hydro Ottawa intends to remain a trusted energy advisor to its customers in the smart energy future that is emerging. Its focus will continue to be on outcomes that deliver value to its customers, while adapting to the increased emphasis on the need to mitigate the impact of electricity consumption on climate change.

Hydro Ottawa's extensive community outreach initiatives in 2018 included the following:

- Participation of the utility's CDM group in more than 160 CDM-specific events, meeting with more than 12,000 residential customers about ways to save electricity in their homes and to better manage their consumption;
- Working with its service providers to encourage more than 3,500 small businesses in the community to participate in Hydro Ottawa's Small Business Lighting and Business Refrigeration Programs; and
- More than 1,200 commercial customer interactions through business meetings, delivering industry presentations, and attending trade shows and events to explain the

electricity management incentives and programs available to help their organizations reduce their energy consumption, costs, and carbon footprint.

The Key Accounts team also maintains membership in a number of associations to provide regular opportunities for consultation with the company's Key Account Coordinators. This approach allows Hydro Ottawa to foster continuous improvement in its engagement with this particular segment of customers. More information on Key Account customer engagement can be found in Exhibit 1-2-1: Customer Engagement Overview.

By engaging customers in energy-saving initiatives, Hydro Ottawa's goal is to reduce total electricity usage, avoid energy waste, and encourage customers to use less energy at times of high demand in Ottawa in order to support the needs of the larger provincial electricity system. Equally important, Hydro Ottawa's "feet-on-the-ground" strategy for fostering a conservation culture in the community delivers tremendous value to its customers, significantly increasing their participation in the utility's programs and their usage of the innovative tools on offer.

A snapshot of the noteworthy results yielded by Hydro Ottawa's CDM-related activities and offerings in 2018 reveals the following highlights:

- Approximately 625 residential customers participated in the utility's Poolsaver program, while the number of participants in the Heating and Cooling program totalled 2,610.
- During Hydro Ottawa's residential Deal Days, its customers took advantage of special discounts to purchase almost 870,000 energy efficient products such as lightbulbs, timers, furnaces, and air-conditioners.
- More than 17,000 customers downloaded the Hydro Ottawa mobile app.
- Approximately 1,000 customers accessed the utility's Smart Speaker Skill.
- Almost 950 Grade 5 students in 18 schools and more than 600 young people in six summer camps participated in Hydro Ottawa's presentations about electricity safety and conservation.

- Hydro Ottawa facilitated the completion of approximately 1,050 energy efficiency projects by customers through its Retrofit Program (representing an 11% increase over the previous year), including complex initiatives to upgrade the building assets of major municipal, federal, and industrial facilities. The aforementioned project count includes more than 170 customers who were first-time participants in the program.
- Over 330 small business customers participated in Hydro Ottawa's Business Refrigeration Incentive Program and approximately 225 customers participated in the utility's Small Business Lighting program.

2. BACKGROUND – CONSERVATION FIRST FRAMEWORK (2015-2020)

The Conservation First Framework ("CFF") established rigorous targets for local distribution companies ("LDCs") to collectively deliver 7 TWh through locally-delivered programs approved by the Independent Electricity System Operator ("IESO"). The CFF allowed LDCs like Hydro Ottawa to design and manage the delivery of cost-effective programs to meet the needs of their customers. The IESO's role was to ensure compliance, evaluate program efficiency, and report results on an annual basis.

Hydro Ottawa's target was 395 GWh for the original CFF term (i.e. 2015-2020). In 2018, the IESO reported that the utility had achieved 276 GWh (70%) of this target. While the IESO did not report verified savings for 2018, the most recent IESO participation report (through February 2019) shows that Hydro Ottawa had achieved 332 GWh (84.2%) of its target.

On March 21, 2019, the CFF was terminated and replaced by an Interim Framework, pursuant to a Ministerial directive. In turn, many LDC conservation programs were discontinued, including the Business Refrigeration Incentive, the Audit Funding Program, Residential New Construction, High Performance New Construction, Existing Building Commissioning, Monitoring and Targeting, Instant Discount (Deal Days), and the Heating and Cooling Incentive. The remaining programs were centralized with the IESO for delivery and program administration. The new Interim Framework targets are 1.4 TWh and 189 MW to be achieved at a Levelized Unit Energy Cost of $0.02/kWh, with the Interim framework scheduled to expire on December 31, 2020.

3. HYDRO OTTAWA'S 2021-2025 CDM OBJECTIVES

3.1. BUSINESS CUSTOMERS

Moving forward, the objective of Hydro Ottawa's CDM group is to strengthen the utility's reputation as a trusted energy advisor for customers in the commercial segment through an outreach strategy that contemplates the following actions:

- Increasing opportunities to meet one-on-one with customers to explore their challenges, identify opportunities and solutions, and share Hydro Ottawa's expertise to help them invest and deliver on projects to achieve their energy objectives;
- Leveraging Hydro Ottawa's and the province's industry-leading energy management tools, incentives, and programs to enhance the customer experience, reduce consumption, and meet carbon reduction objectives;
- Focusing on understanding individual business customer needs in a more individualized way so that services, programs, and products can be developed that make it easier for these customers to adopt innovative energy solutions that drive more value; and
- Building on Hydro Ottawa's partnerships with community-based organizations.

3.2. RESIDENTIAL CUSTOMERS

The CDM group will continue to engage, encourage, and educate Hydro Ottawa's residential consumers on conservation in the home through the utility's mobile app, web-based information, marketing outreach, community engagement, and personal interaction.

In collaboration with Divisions across Hydro Ottawa, other companies, and government partners, the CDM group will also seek to advance planning and preparation by the utility and the IESO for emerging Smart Grid technologies and services.

4. CUSTOMER ENGAGEMENT TO PROMOTE CONSERVATION

Moving forward, Hydro Ottawa will focus on existing program effectiveness and what customers want. Over the impending five-year rate term, the utility's CDM group will continue to do the following:

- Explore, design, and implement cost-effective and unique CDM programs that benefit both business and residential customers.
- Develop and deploy programs that address the unique issues facing current and future grid-constrained areas. Hydro Ottawa's goal is to continue to identify opportunities through customer engagement to defer the need for costly infrastructure upgrades and thereby reduce electricity rate increases while maintaining grid reliability.[1]
- Educate **residential** customers about the benefits and ways to reduce their electricity consumption by:
    - Promoting the Hydro Ottawa app and website, which include energy savings tips and recommendations to reduce power consumption;
    - Adopting smart thermostats, smart plugs, and timers to curb consumption during peak-rate periods and better manage bills;
    - Maintaining a presence at community events; and
    - Delivering age-appropriate presentations with a focus on electricity conservation that is tailored to two groups: students in Kindergarten to Grade 4 and students in Grades 5-8.
- Educate **business** customers (all applicable rate classes) about the benefits and ways to reduce their electricity consumption by:
    - Participating in industry events and associations as well as delivering on-site customer education related to energy conservation and electrical safety;
    - Delivering training seminars on energy-saving trends and technologies, such as smart buildings and Distributed Energy Resources ("DERs");
    - Engaging with business partners and associations such as the City of Ottawa, Canadian Green Building Council, Building Owners and Managers Association, and the Association of Energy Engineers;
    - Holding on-site meetings with Hydro Ottawa's large commercial customers to discuss their CDM needs and plans (this includes performing walk-through energy audits to identify low-cost opportunities and promote in-depth audits [i.e.

[1] A specific example in this regard is Hydro Ottawa's plan to deploy a portfolio of solutions, including CDM, to address immediate capacity and reliability needs in the Kanata North area of its service territory. For additional information on this project, please see Section 8 of Exhibit 2-4-3: Distribution System Plan.

American Society of Heating Refrigeration and Air-Conditioning Engineers Level 2 or Level 3] to be completed by third-party consultants);

- Applying for and/or leveraging future municipal, provincial, and/or federal incentives to drive cost-effective conservation and peak-load management;
- Exploring strategies to use conservation, peak-load shifting, and locally-triggered demand response to manage demand in grid-constrained areas; and
- Assisting and counseling Ottawa businesses enrolled in the Interim Framework programs such as Retrofit, High Performance New Construction, Residential New Construction, Process and Systems, and Audit Funding programs until these programs are either centralized or terminated.

5. CUSTOMER ENGAGEMENT TO INFORM ASSET PLANNING

Over the 2021-2025 rate term, Hydro Ottawa's CDM group will collaborate closely with numerous Divisions across the utility to contribute to the utility's efforts to meet the challenges and capture the opportunities of the future, as follows:

- The CDM group will work in concert with Key Account Coordinators to better understand:
  - The evolving energy needs and options for Key Account customers, as the utility helps the community to transition to a smart energy future;
  - The growing demand on the part of Key Account customers for renewables and the integration of more DERs such as solar panels, combined heat and power plants, electricity storage, and electric vehicles that are not only connected to Hydro Ottawa's local distribution network but have the potential to offset the need for supply from the provincial grid;
  - Partnership opportunities on new types of projects such as microgrids, Smart Cities, and district energy; and
  - Demand Response opportunities.
- The CDM group will continue to engage the utility's Distribution Engineering and Asset Management groups on strategies to address areas challenged by constrained supply. It will support the Asset Planning groups in developing non-wire solutions to manage load

in grid-constrained areas as identified through the IESO's regional planning framework and Achievable Potential Studies. In addition, the CDM group will assist in the regional planning process, providing CDM-related insights.

- The CDM group will collaborate with Hydro Ottawa's Customer Experience group on any access to, or analysis of, consumption data related to CDM projects. The goal in this context will be to leverage data analytics to offer personalized service and drive more value through more informed usage analysis for customers.
- The CDM group will support customers working with the System Design group to identify CDM opportunities, potentially avoiding the need for customer-owned infrastructure upgrades.
- The CDM group will engage and support customers who would potentially benefit from future provincial CDM programs – in particular, residential customers or business customers in areas of Hydro Ottawa's service territory which the IESO has identified as being grid-constrained.
- The CDM group will work to identify and investigate opportunities within Hydro Ottawa's service area to participate in any future energy efficiency auction mechanism developed by the IESO to reduce peak demand.[2]
- The CDM group will explore, and if feasible, assist customers in exploiting DER opportunities to manage consumption and provide local grid support.

6. 2021-2025 CDM STAFFING & RESOURCES

In order to successfully execute and deliver upon the aforementioned CDM initiatives during the 2021-2025 rate term, Hydro Ottawa is proposing an employee complement of four full-time equivalents, along with a resourcing envelope to enable marketing and associated activities. Consistent with the structure to date, the CDM group would continue to be housed within the Chief Customer Officer Division of the utility.[3]

[2] For additional details on the Energy Efficiency Auction Pilot that is under development at the IESO, please see the following page on the IESO's website: http://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/Energy-Efficiency-Auction-Pilot.
[3] For more information on the Chief Customer Officer Divisions, as well as the other Divisions within the utility, please see Exhibit 4-1-2: Summary of Corporate Divisional Functions.

For further details, please refer to Exhibit 4-1-4: Operations, Maintenance and Administration Cost Drivers and Program Variance Analysis.

7. INCREMENTAL ANNUAL ENERGY SAVINGS FROM RATE-BASED CDM ACTIVITIES FOR COMMERCIAL CUSTOMERS

The activities outlined above are expected to yield verifiable and persisting savings of 2 GWh per year. The savings outlined in Table 1 below are attributed to commercial customer engagement only, encompassing all applicable rate classes from small commercial up through large user.

Due to the inherent complexity of verifying residential customer influence and savings, Hydro Ottawa has not claimed any savings for planned activities targeted at the residential rate class.

Table 1 – 2021-2025 Forecasted Annual Energy and Demand Savings from Rate-Based CDM Activities for Commercial Customers

Commercial Accounts	2021	2022	2023	2024	2025
Annual Savings (MWh)	2,000	2,000	2,000	2,000	2,000
Persisting Savings (MWh)	2,000	4,000	6,000	8,000	10,000
Annual Savings* (kW)	298	298	298	298	298

*Note: A conversion rate of 6,702 kWh/kW was used to forecast annual demand savings. This conversion rate is based on an average taken from the 2017 Verified Savings Report issued by the IESO using totals from the entire suite of Provincial Business Programs.

Hydro Ottawa's CDM group has been very successful in helping its customers to make informed decisions regarding energy efficiency opportunities and initiatives. The utility's commitment to CDM programs and engagement for the 2021-2025 rate period will remain an important means of enhancing customer value and maintaining continuity, stability, and support for customers who wish to continue partnering with Hydro Ottawa on CDM opportunities and solutions.

SHARED SERVICES AND CORPORATE COST ALLOCATION

1. INTRODUCTION

In accordance with section 2.4.3.2 of the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019 ("Filing Requirements"), this Schedule provides information about shared services and corporate cost allocation between Hydro Ottawa and affiliated entities.

Hydro Ottawa is wholly owned by Hydro Ottawa Holding Inc. (the "Holding Company"). The Holding Company provides shared corporate services to Hydro Ottawa in the form of strategic direction and oversight in areas such as Human Resources, Safety, Environment, and Business Continuity Management (collectively referred to as "HR"), Information Management and Technology ("IT"), Finance, Treasury, Internal Audit, Risk Management, Legal, Corporate Administration, Customer Service, Corporate Communications, and Management Services. Some Board of Directors-related costs are also included in the corporate cost allocation to Hydro Ottawa.

The other two main affiliated companies are the following:

- Energy Ottawa Inc. ("Energy Ottawa") is the largest Ontario-based, municipally-owned producer of green power. Energy Ottawa owns and operates six run-of-the-river hydroelectric generation plants at Chaudière Falls and the Ottawa River Ring Dam near the city's downtown core, as well as 10 other run-of-the-river facilities located elsewhere in Ontario and in New York State. It also holds majority interests in two landfill gas-to-energy joint ventures, which produce renewable energy from landfill gas at the Trail Road and Lafèche landfill sites in Ottawa and in Moose Creek, Ontario. In addition, Energy Ottawa has 14 solar installations across the City of Ottawa.

- Envari Holding Inc. ("Envari") sells energy solutions to municipalities, industrial and commercial clients, and to various electricity distributors. Envari manages large energy

transformation projects, offers a portfolio of energy efficient and environmentally friendly products and services, and provides operations and maintenance capabilities to its clients. These activities were previously under Energy Ottawa until December 31, 2018.

Hydro Ottawa provides and receives services to/from its affiliated companies in order to realize economies of scale, manage costs, and maintain service levels. Hydro Ottawa is the largest entity within the Hydro Ottawa Group of Companies, currently contributing approximately 80% of total revenues and 70% of total assets. While Energy Ottawa, Envari, and the Holding Company have resources of their own, Hydro Ottawa supports these affiliates through the provision of shared corporate services such as HR, Facilities, IT, Finance, Regulatory, Legal, and Communications.

In addition, Hydro Ottawa previously provided shared corporate services to the non-rate regulated Conservation and Demand Management ("CDM") group.[1] On March 21, 2019, the Government of Ontario announced the elimination of provincially-funded CDM programs and the centralization of select programs with the Independent Electricity System Operator ("IESO"). These reforms were effective April 1, 2019. Notwithstanding these developments, Hydro Ottawa and the Holding Company will continue to allocate shared corporate services to CDM programs through the year 2021, as part of the phase-out period for the provincial CDM framework and according to the fully-allocated costing methodology for non-rate-regulated activities described in the *Conservation and Demand Management Code for Electricity Distributors*.

2. SHARED SERVICE MODEL

In accordance with the *Affiliate Relationships Code for Electricity Distributors and Transmitters* ("ARC"), prices for shared corporate services are determined by fully-allocated cost-based pricing. Services that could be competitively sourced in the market are based upon the pricing methodology Hydro Ottawa applies to third parties. The pricing models and methodology were developed internally and the services are provided under the terms of Service Level Agreements ("SLAs").

[1] Please refer to Exhibit 4-1-6: Conservation and Demand Management for further details.

Table 1 identifies the functional services provided by Hydro Ottawa to its affiliates and describes the pricing methodology used for each functional service.

Table 1 – Pricing Methodology for Services Provided by Hydro Ottawa to Affiliates

Functional Service	Pricing Methodology
HR	Cost per employee
IT Services	
Facilities	Market rate for rent, proportionate share of cost for operations and maintenance, property taxes, property insurance, and furnishings
Finance	Based on the number and value of transactions processed
Regulatory, Legal, Communications, Key Account Support, Electricity Distribution Management Services	Proportionate share of cost factored by time spent
Metering and Meter Data Services, Fleet	Market based, based on number of accounts and hours of use respectively
Mechanic Services	Internal labour rate factored by time spent

The Holding Company costs are allocated to its affiliates based on its budgeted costs and time to be spent supporting each affiliate for the fiscal year. This initial assessment is completed annually to ensure an accurate allocation of costs. At year-end, the allocations are reviewed, with any significant differences between actuals and budget being adjusted through a true-up process to ensure costs are properly allocated to each affiliate.

Table 2 below identifies the functional services provided by the Holding Company to Hydro Ottawa and describes the pricing methodology used for each functional service.

Table 2 – Pricing Methodology for Services Received from the Holding Company

Management Service	Pricing Methodology
Legal and Corporate Administration	Proportionate share of cost factored by time spent
Finance, Internal Audit, Enterprise Risk Management	
HR	
Customer Service, Corporate Communications	
IT Services	
Management Services	
Treasury Services	Proportionate share of cost based on value of total debt outstanding
Board of Directors	Proportionate share of cost

Hydro Ottawa has made the following changes to its shared service methodology since its last rebasing application in 2016:[2]

- The pricing methodology for Finance Services provided by Hydro Ottawa to its affiliates changed in 2018 from being based on the proportionate share of cost, factored by time spent, to being based on the number and/or value of transactions processed. This measure more accurately reflected the time and effort spent on the various finance services provided, such as procurement (now based on number of transactions), warehousing (now based on value of inventory) and accounts payable (now based on number of payments processed).
- The pricing methodology for Treasury Services provided by Hydro Ottawa to the Holding Company, and vice versa, changed in 2018 from being based on the proportionate share of cost, factored by time spent, to being based on the proportionate share of cost, based on the value of debt outstanding. This measure more accurately reflected the time and effort spent on the various treasury functions.

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

- Key Account Services provided by Hydro Ottawa to Envari were added to the allocations in 2019 to capture Hydro Ottawa's time spent towards developing opportunities with its large commercial customers on behalf of Envari (within the confines of the ARC).

3. SERVICES PROVIDED TO AND FROM AFFILIATES

Table 3 provides a summary of the services provided by Hydro Ottawa to its affiliates and to non-rate-regulated CDM activities in the Historical Years (2016-2018), the Bridge Years (2019 and 2020) and the 2021 Test Year.

Table 3 – Summary of Shared Corporate Services Provided by Hydro Ottawa[3]

Provided By	Provided To	Historical			Bridge		Test
		2016	2017	2018	2019	2020	2021
Hydro Ottawa	Holding Company	$861,944	$686,995	$1,081,985	$1,330,390	$1,450,389	$1,486,649
Hydro Ottawa	Energy Ottawa	$1,200,720	$2,618,407	$2,714,742	$1,652,401	$1,669,891	$1,711,638
Hydro Ottawa	Envari	$0	$0	$0	$1,456,526	$1,562,625	$1,601,691
Hydro Ottawa	CDM	$503,511	$618,278	$652,941	$441,253	$189,243	$34,738
TOTAL		**$2,566,176**	**$3,923,680**	**$4,449,668**	**$4,880,570**	**$4,872,148**	**$4,834,716**

Table 4 below provides a summary of the services received by Hydro Ottawa from the Holding Company in the Historical Years (2016-2018), the Bridge Years (2019 and 2020), and the 2021 Test Year.

[3] The costs in this table represent the costs that are allocated to the Holding Company, Energy Ottawa, and Envari and that are likewise reflected in Other Revenue (see Exhibit 3-2-1: Other Revenue Summary). The costs allocated to CDM are treated as an offset to operations, maintenance and administration ("OM&A") costs and are not included in Other Revenue. Finally, it should be noted that, beginning in 2019, costs associated with providing shared corporate services to affiliates are no longer included in Hydro Ottawa's OM&A.

Table 4 – Summary of Shared Corporate Services Received by Hydro Ottawa

Provided By	Provided To	Historical			Bridge		Test
		2016	2017	2018	2019	2020	2021
Holding Company	Hydro Ottawa	$3,755,760	$3,793,215	$3,222,336	$3,810,066	$3,722,716	$3,815,783
Holding Company	CDM	$175,060	$106,785	$92,207	$118,291	$45,898	$11,475
TOTAL		**$3,930,820**	**$3,900,000**	**$3,314,543**	**$3,928,356**	**$3,768,614**	**$3,827,259**

4. VARIANCE ANALYSIS

4.1. HYDRO OTTAWA SHARED CORPORATE SERVICES TO HOLDING COMPANY

The $0.6M increase in the value of services provided by Hydro Ottawa to the Holding Company between 2016 and 2021 is primarily due to the provision of additional services, including regulatory and distribution management services. A $0.3M rise in IT services was primarily the result of enterprise resource planning system upgrades and a new human capital management module, completed in late 2017, of which proportionate costs were shared by the Holding Company. There were also increased facilities costs associated with Hydro Ottawa's new administrative and operations buildings, which were completed in 2019. The downward trend in 2018 was due to Energy Ottawa assuming a larger share of the costs.

4.2. HYDRO OTTAWA SHARED CORPORATE SERVICES TO ENERGY OTTAWA AND ENVARI

The services provided by Hydro Ottawa to Energy Ottawa and Envari have been combined for variance analysis purposes. Up until December 31, 2018, Envari business lines were associated with Energy Ottawa. The sustained increase of 22% per year in the value of services provided by Hydro Ottawa to Energy Ottawa and Envari between 2016 and 2021 stems primarily from the growth in business activities in both Energy Ottawa and Envari. Through the years, the affiliates' headcount, financial transactions, and IT requirements have all increased as the companies have expanded their revenues, debt, and assets. Accordingly, the pricing reflects the increased services and associated volumes.

4.3. HYDRO OTTAWA SHARED CORPORATE SERVICES TO CDM

The $0.5M decrease in the value of services provided by Hydro Ottawa and the Holding Company to CDM, respectively, between the 2018 Actual and 2021 Test Year was due to the phasing-out of the provincial CDM framework, as described in section 1 above.

4.4. HOLDING COMPANY SHARED CORPORATE SERVICES TO HYDRO OTTAWA

The value of services provided by the Holding Company to Hydro Ottawa remained relatively stable with a slight drop in 2018, mainly due to staff vacancies at the Holding Company and reduced requirements for consulting and legal services during that year.

5. RECONCILIATION OF REVENUE IN APPENDIX 2-N

The Filing Requirements stipulate that distributors must provide a reconciliation of the revenue in Appendix 2-N to the amounts included in Table 8 in Exhibit 3-2-1: Other Revenue Summary.[4]

Table 5 below summarizes the revenues earned and forecasted by Hydro Ottawa from the Holding Company, Energy Ottawa, and Envari for the period 2016-2021. These figures are also provided in Table 8 in Exhibit 3-2-1: Other Revenue Summary. The amounts listed in “Others” are not shared services allocations; rather, they are services billed directly to the affiliates. Examples include flood restoration work provided by Hydro Ottawa to Energy Ottawa.

[4] Appendix 2-N is appended to this Schedule as Attachment 4-2-1(A): OEB Appendix -2N - Shared Services and Corporate Cost Allocation.

Table 5 – Total Affiliate Services Revenue Earned by Hydro Ottawa ($'000s)

Provided By	Provided To		Historical			Bridge		Test
			2016	2017	2018	2019	2020	2021
Hydro Ottawa	Holding Company	Shared Services	$862	$687	$1,082	$1,330	$1,450	$1,487
		Others		$4	$11	$0	$0	$0
		Total	$862	$691	$1,093	$1,330	$1,450	$1,487
Hydro Ottawa	Energy Ottawa	Shared Services	$1,201	$2,618	$2,715	$1,652	$1,670	$1,712
		Others	$156	$527	$282	$504	$0	$0
		Total	$1,357	$3,145	$2,997	$2,156	$1,670	$1,712
Hydro Ottawa	Envari	Shared Services	$0	$0	$0	$1,457	$1,563	$1,602
		Others	$0	$0	$0	$231	$0	$0
		Total	$0	$0	$0	$1,688	$1,563	$1,602
TOTAL			**$2,219**	**$3,835**	**$4,090**	**$5,175**	**$4,683**	**$4,800**

6. BOARD OF DIRECTORS COSTS

The Filing Requirements stipulate that distributors must identify any Board of Directors-related costs for affiliates that are included in the distributors' own costs. Hydro Ottawa confirms that there are no Board of Directors-related costs for affiliated entities included in its costs.

Appendix 2-N
Shared Services and Corporate Cost Allocation [1]

Year: 2016

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service
From	To			$	$
HOL	HOHI	Communications	Cost	$79,722	$79,722
HOL	HOHI	Facilities	Market/Cost	$238,441	$127,795
HOL	HOHI	Finance	Cost	$170,008	$170,008
HOL	HOHI	Human Resources	Cost	$128,904	$128,904
HOL	HOHI	Information Technology	Cost	$229,869	$229,869
HOL	HOHI	Legal	Cost	$15,000	$15,000
Total Charged HOL to HOHI				**$861,944**	**$751,298**
HOL	EO	Administration Support	Cost	$48,145	$48,145
HOL	EO	Communications	Cost	$38,993	$38,993
HOL	EO	Facilities	Market/Cost	$88,389	$62,078
HOL	EO	Finance	Cost	$115,017	$115,017
HOL	EO	Human Resources, Safey, Environment and Business Continuity Management	Cost	$244,119	$244,119
HOL	EO	Information Technology	Cost	$459,738	$459,738
HOL	EO	Meter Data Services	Market	$73,453	*
HOL	EO	Mechanic Services	Cost	$132,867	$132,867
Total Charged HOL to EO				**$1,200,721**	**$1,100,957**
HOL	CDM	Human Resources	Cost	$105,358	$105,358
HOL	CDM	Facilities	Market/Cost	$50,373	$30,810
HOL	CDM	Information Technology	Cost	$187,880	$187,880
HOL	CDM	Finance	Cost	$118,536	$118,536
HOL	CDM	Communications	Cost	$32,820	$32,820
HOL	CDM	Fleet	Cost	$8,544	$8,544
Total Charged HOL to CDM				**$503,511**	**$483,948**

* Meter Data Services costs related to Energy Ottawa are considered immaterial and not practicable to determine

Corporate Cost Allocation

Name of Company		Service Offered	Pricing Methodology	% of Corporate Costs Allocated	Amount Allocated
From	To			%	$
HOHI	HOL	Management Services	Cost	46%	$570,000
HOHI	HOL	Finance, Internal Audit & Enterprise Risk Mgt	Cost	63%	$1,220,000
HOHI	HOL	Human Resources	Cost	92%	$690,000
HOHI	HOL	Treasury	Cost	66%	$260,000
HOHI	HOL	Corporate Communications	Cost	36%	$455,760
HOHI	HOL	Legal, Corporate Admin	Cost	38%	$240,000
HOHI	HOL	Information Management & Technology	Cost	60%	$320,000
Total Charged from HOHI to HOL					**$3,755,760**
HOHI	CDM	Management Services	Cost	14%	$175,060
Total Charged from HOHI to CDM					**$175,060**

Note:

1 **This appendix must be completed in relation to each service provided or received for the Historical (actuals), Bridge and Test years. The required information includes:**

· ***Type of Service:***

Services such as billing, accounting, payroll, etc. The applicant must identify any costs related to the Board of Directors of the parent company that are allocated to the applicant.

· ***Pricing Methodology:***

Pricing Methodology includes approaches such as cost-base, market-base, tendering, etc. The applicant must provide evidence demonstrating the pricing methodology used. The applicant must also provide a description of why that pricing methodology was chosen, whether or not it is in conformity with ARC, and why it is appropriate.

· ***% Allocation:***

The applicant must provide the percentage of the costs allocated to the entity for the service being offered. The Applicant must also provide a description of the allocator and why it is an appropriate allocator.

Appendix 2-N
Shared Services and Corporate Cost Allocation [1]

Year: 2017

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service
From	To			$	$
HOL	HOHI	Communications	Cost	$21,130	$21,130
HOL	HOHI	Facilities	Market/Cost	$119,806	$63,543
HOL	HOHI	Finance	Cost	$41,113	$41,113
HOL	HOHI	Human Resources	Cost	$141,807	$141,807
HOL	HOHI	Information Technology	Cost	$357,451	$357,451
HOL	HOHI	Legal	Cost	$5,688	$5,688
Total Charged HOL to HOHI				**$686,995**	**$630,732**
HOL	EO	Administration Support	Cost	$76,780	$76,780
HOL	EO	Communications	Cost	$269,493	$269,493
HOL	EO	Facilities	Market/Cost	$123,068	$80,393
HOL	EO	Finance	Cost	$1,196,367	$1,196,367
HOL	EO	Human Resources, Safey, Environment and Business Continuity Management	Cost	$134,908	$134,908
HOL	EO	Information Technology	Cost	$516,867	$516,867
HOL	EO	Legal	Cost	$58,338	$58,338
HOL	EO	Meter Data Services	Market	$73,385	*
HOL	EO	Mechanic Services	Cost	$169,200	$169,200
Total Charged HOL to EO				**$2,618,406**	**$2,502,346**
HOL	CDM	Human Resources	Cost	$83,430	$83,430
HOL	CDM	Facilities	Market/Cost	$59,618	$32,290
HOL	CDM	Information Technology	Cost	$219,565	$219,565
HOL	CDM	Finance	Cost	$182,665	$182,665
HOL	CDM	Communications	Cost	$64,456	$64,456
HOL	CDM	Fleet	Cost	$8,544	$8,544
Total Charged HOL to CDM				**$618,278**	**$590,950**

* Meter Data Services costs related to Energy Ottawa are considered immaterial and not practicable to determine

Corporate Cost Allocation

Name of Company		Service Offered	Pricing Methodology	% of Corporate Costs Allocated	Amount Allocated
From	To			%	$
HOHI	HOL	Management Services	Cost	46%	$570,000
HOHI	HOL	Finance, Internal Audit & Enterprise Risk Mgt	Cost	65%	$1,270,000
HOHI	HOL	Human Resources	Cost	92%	$820,000
HOHI	HOL	Treasury	Cost	66%	$260,000
HOHI	HOL	Corporate Communications	Cost	33%	$363,215
HOHI	HOL	Legal, Corporate Admin	Cost	38%	$240,000
HOHI	HOL	Information Management & Technology	Cost	45%	$270,000
Total Charged from HOHI to HOL					**$3,793,215**
HOHI	CDM	Management Services	Cost	10%	$106,785
Total Charged from HOHI to CDM					**$106,785**

Note:

1 **This appendix must be completed in relation to each service provided or received for the Historical (actuals), Bridge and Test years. The required information includes:**

· ***Type of Service:***

Services such as billing, accounting, payroll, etc. The applicant must identify any costs related to the Board of Directors of the parent company that are allocated to the applicant.

· ***Pricing Methodology:***

Pricing Methodology includes approaches such as cost-base, market-base, tendering, etc. The applicant must provide evidence demonstrating the pricing methodology used. The applicant must also provide a description of why that pricing methodology was chosen, whether or not it is in conformity with ARC, and why it is appropriate.

· ***% Allocation:***

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Appendix 2-N
Shared Services and Corporate Cost Allocation [1]

Year: 2018

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service
From	To			$	$
HOL	HOHI	Communications	Cost	$234,981	$234,981
HOL	HOHI	Facilities	Market/Cost	$130,939	$71,421
HOL	HOHI	Finance	Cost	$41,642	$41,642
HOL	HOHI	Human Resources	Cost	$150,465	$150,465
HOL	HOHI	Information Technology	Cost	$325,518	$325,518
HOL	HOHI	Legal	Cost	$9,048	$9,048
HOL	HOHI	Regulatory	Cost	$139,811	$139,811
HOL	HOHI	Electricity Distribution Management	Cost	$49,580	$49,580
Total Charged HOL to HOHI				**$1,081,984**	**$1,022,466**
HOL	EO	Electricity Distribution Management	Cost	$49,580	$49,580
HOL	EO	Communications	Cost	$413,215	$413,215
HOL	EO	Facilities	Market/Cost	$118,036	$63,903
HOL	EO	Finance	Cost	$972,916	$972,916
HOL	EO	Fleet	Cost	$11,731	$11,731
HOL	EO	Human Resources, Safey, Environment and Business Continuity Management	Cost	$394,771	$394,771
HOL	EO	Information Technology	Cost	$488,280	$488,280
HOL	EO	Legal	Cost	$31,316	$31,316
HOL	EO	Meter Data Services	Market	$77,617	*
HOL	EO	Mechanic Services	Cost	$157,282	$157,282
Total Charged HOL to EO				**$2,714,744**	**$2,582,994**
HOL	CDM	Human Resources	Cost	$107,830	$107,830
HOL	CDM	Facilities	Market/Cost	$65,470	$35,711
HOL	CDM	Information Technology	Cost	$244,140	$244,140
HOL	CDM	Finance	Cost	$149,642	$149,642
HOL	CDM	Communications	Cost	$68,076	$68,076
HOL	CDM	Fleet	Cost	$17,784	$17,784
Total Charged HOL to CDM				**$652,942**	**$623,183**

* Meter Data Services costs related to Energy Ottawa are considered immaterial and not practicable to determine

Corporate Cost Allocation

Name of Company		Service Offered	Pricing Methodology	% of Corporate Costs Allocated	Amount Allocated
From	To			%	$
HOHI	HOL	Management Services	Cost	56%	$685,479
HOHI	HOL	Finance, Internal Audit & Enterprise Risk Mgt	Cost	53%	$970,752
HOHI	HOL	Human Resources	Cost	80%	$463,026
HOHI	HOL	Treasury	Cost	73%	$102,694
HOHI	HOL	Corporate Communications	Cost	58%	$546,685
HOHI	HOL	Legal, Corporate Admin	Cost	23%	$142,444
HOHI	HOL	Information Management & Technology	Cost	45%	$311,256
Total Charged from HOHI to HOL					**$3,222,336**
HOHI	CDM	Management Services	Cost	11%	$92,207
Total Charged from HOHI to CDM					**$92,207**

Note:

1 **This appendix must be completed in relation to each service provided or received for the Historical (actuals), Bridge and Test years. The required information includes:**

· ***Type of Service:***

Services such as billing, accounting, payroll, etc. The applicant must identify any costs related to the Board of Directors of the parent company that are allocated to the applicant.

· ***Pricing Methodology:***

Pricing Methodology includes approaches such as cost-base, market-base, tendering, etc. The applicant must provide evidence demonstrating the pricing methodology used. The applicant must also provide a description of why that pricing methodology was chosen, whether or not it is in conformity with ARC, and why it is appropriate.

· ***% Allocation:***

The applicant must provide the percentage of the costs allocated to the entity for the service being offered. The Applicant must also provide a description of the allocator and why it is an appropriate allocator.

Appendix 2-N
Shared Services and Corporate Cost Allocation [1]

Year: 2019

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service
From	To			$	$
HOL	HOHI	Electricity Distribution Management	Cost	$49,044	$49,044
HOL	HOHI	Communications	Cost	$268,851	$268,851
HOL	HOHI	Facilities	Market/Cost	$168,645	$87,629
HOL	HOHI	Finance	Cost	$116,153	$116,153
HOL	HOHI	Human Resources	Cost	$199,209	$199,209
HOL	HOHI	Information Technology	Cost	$426,866	$426,866
HOL	HOHI	Legal	Cost	$9,984	$9,984
HOL	HOHI	Regulatory	Cost	$91,638	$91,638
Total Charged HOL to HOHI				**$1,330,390**	**$1,249,374**
HOL	EO	Electricity Distribution Management	Cost	$24,519	$24,519
HOL	EO	Communications	Cost	$215,125	$215,125
HOL	EO	Facilities	Market/Cost	$20,736	$11,781
HOL	EO	Finance	Cost	$416,472	$416,472
HOL	EO	Human Resources, Safey, Environment and Business Continuity Management	Cost	$214,333	$214,333
HOL	EO	Information Technology	Cost	$505,500	$505,500
HOL	EO	Legal	Cost	$24,960	$24,960
HOL	EO	Regulatory Affairs	Cost	$45,816	$45,816
HOL	EO	Meter Data Services	Market	$18,600	*
HOL	EO	Mechanic Services	Cost	$166,339	$166,339
Total Charged HOL to EO				**$1,652,400**	**$1,624,845**
HOL	CDM	Human Resources	Cost	$85,186	$85,186
HOL	CDM	Facilities	Market/Cost	$38,517	$15,635
HOL	CDM	Information Technology	Cost	$182,538	$182,538
HOL	CDM	Finance	Cost	$60,000	$60,000
HOL	CDM	Communications	Cost	$68,076	$68,076
HOL	CDM	Fleet	Cost	$6,936	$6,936
Total Charged HOL to CDM				**$441,253**	**$418,371**
HOL	Envari	Electricity Distribution Management	Cost	$24,519	$24,519
HOL	Envari	Communications	Cost	$215,125	$215,125
HOL	Envari	Facilities	Market/Cost	$89,090	$53,507
HOL	Envari	Finance	Cost	$266,942	$266,942
HOL	Envari	Fleet	Cost	$11,734	$11,734
HOL	Envari	Human Resources	Cost	$209,690	$209,690
HOL	Envari	Information Technology	Cost	$449,331	$449,331
HOL	Envari	Key Accounts	Cost	$60,370	$60,370
HOL	Envari	Legal	Cost	$24,960	$24,960
HOL	Envari	Regulatory	Cost	$45,816	$45,816
HOL	Envari	Data Services	Cost	$58,950	$58,950
Total Charged HOL to Envari				**$1,456,527**	**$1,420,944**

* Meter Data Services costs related to Energy Ottawa are considered immaterial and not practicable to determine

Corporate Cost Allocation

Name of Company		Service Offered	Pricing Methodology	% of Corporate Costs Allocated	Amount Allocated
From	To			%	$
HOHI	HOL	Management Services	Cost	56%	$806,789
HOHI	HOL	Finance, Internal Audit & Enterprise Risk Mgt	Cost	56%	$1,223,927
HOHI	HOL	Human Resources	Cost	80%	$552,606
HOHI	HOL	Treasury	Cost	73%	$102,694
HOHI	HOL	Corporate Communications	Cost	48%	$635,455
HOHI	HOL	Legal, Corporate Admin	Cost	21%	$175,909
HOHI	HOL	Information Management & Technology	Cost	45%	$312,686
Total Charged from HOHI to HOL					**$3,810,066**
HOHI	CDM	Management Services	Cost	9%	$118,291
Total Charged from HOHI to CDM					**$118,291**

Note:

1 **This appendix must be completed in relation to each service provided or received for the Historical (actuals), Bridge and Test years. The required information includes:**

· ***Type of Service:***

Services such as billing, accounting, payroll, etc. The applicant must identify any costs related to the Board of Directors of the parent company that are allocated to the applicant.

· ***Pricing Methodology:***

Pricing Methodology includes approaches such as cost-base, market-base, tendering, etc. The applicant must provide evidence demonstrating the pricing methodology used. The applicant must also provide a description of why that pricing methodology was chosen, whether or not it is in conformity with ARC, and why it is appropriate.

· ***% Allocation:***

The applicant must provide the percentage of the costs allocated to the entity for the service being offered. The Applicant must also provide a description of the allocator and why it is an appropriate allocator.

Appendix 2-N
Shared Services and Corporate Cost Allocation [1]

Year: 2020

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service
From	To			$	$
HOL	HOHI	Electricity Distribution Management	Cost	$53,330	$53,330
HOL	HOHI	Communications	Cost	$236,781	$236,781
HOL	HOHI	Facilities	Market/Cost	$215,451	$118,800
HOL	HOHI	Finance	Cost	$17,770	$17,770
HOL	HOHI	Human Resources	Cost	$196,225	$196,225
HOL	HOHI	Information Technology	Cost	$515,803	$515,803
HOL	HOHI	Legal	Cost	$9,101	$9,101
HOL	HOHI	Regulatory	Cost	$205,928	$205,928
Total Charged HOL to HOHI				**$1,450,389**	**$1,353,738**
HOL	EO	Communications	Cost	$187,177	$187,177
HOL	EO	Facilities	Market/Cost	$27,318	$15,627
HOL	EO	Finance	Cost	$466,908	$466,908
HOL	EO	Human Resources, Safey, Environment and Business Continuity Management	Cost	$217,072	$217,072
HOL	EO	Information Technology	Cost	$473,981	$473,981
HOL	EO	Legal	Cost	$22,754	$22,754
HOL	EO	Regulatory Affairs	Cost	$102,964	$102,964
HOL	EO	Meter Data Services	Market	$18,600	*
HOL	EO	Mechanic Services	Cost	$153,117	$153,117
Total Charged HOL to EO				**$1,669,891**	**$1,639,600**
HOL	CDM	HR	Cost	$35,385	$35,385
HOL	CDM	Facilities	Market/Cost	$17,697	$9,025
HOL	CDM	Information Technology	Cost	$75,825	$75,825
HOL	CDM	Finance	Cost	$33,000	$33,000
HOL	CDM	Communications	Cost	$27,335	$27,335
Total Charged HOL to CDM				**$189,242**	**$180,570**
HOL	Envari	Electricity Distribution Management	Cost	$26,665	$26,665
HOL	Envari	Communications	Cost	$187,177	$187,177
HOL	Envari	Facilities	Market/Cost	$122,734	$74,648
HOL	Envari	Finance	Cost	$180,290	$180,290
HOL	Envari	Fleet	Cost	$11,731	$11,731
HOL	Envari	Human Resources	Cost	$217,439	$217,439
HOL	Envari	Information Technology	Cost	$571,566	$571,566
HOL	Envari	Key Accounts	Cost	$60,747	$60,747
HOL	Envari	Legal	Cost	$22,754	$22,754
HOL	Envari	Regulatory	Cost	$102,964	$102,964
HOL	Envari	Data Services	Cost	$58,560	$58,560
Total Charged HOL to Envari				**$1,562,627**	**$1,514,541**

* Meter Data Services costs related to Energy Ottawa are considered immaterial and not practicable to determine

Corporate Cost Allocation

Name of Company		Service Offered	Pricing Methodology	% of Corporate Costs Allocated	Amount Allocated
From	To			%	$
HOHI	HOL	Management Services	Cost	50%	$684,969
HOHI	HOL	Finance, Internal Audit & Enterprise Risk Mgt	Cost	57%	$1,148,327
HOHI	HOL	Human Resources	Cost	80%	$550,297
HOHI	HOL	Treasury	Cost	66%	$91,705
HOHI	HOL	Corporate Communications	Cost	57%	$746,473
HOHI	HOL	Legal, Corporate Admin	Cost	20%	$179,766
HOHI	HOL	Information Management & Technology	Cost	45%	$321,179
Total Charged from HOHI to HOL					**$3,722,716**
HOHI	CDM	Management Services	Cost	3%	$45,898
Total Charged from HOHI to CDM					**$45,898**

Note:

1 **This appendix must be completed in relation to each service provided or received for the Historical (actuals), Bridge and Test years. The required information includes:**

· ***Type of Service:***

Services such as billing, accounting, payroll, etc. The applicant must identify any costs related to the Board of Directors of the parent company that are allocated to the applicant.

· ***Pricing Methodology:***

Pricing Methodology includes approaches such as cost-base, market-base, tendering, etc. The applicant must provide evidence demonstrating the pricing methodology used. The applicant must also provide a description of why that pricing methodology was chosen, whether or not it is in conformity with ARC, and why it is appropriate.

· ***% Allocation:***

The applicant must provide the percentage of the costs allocated to the entity for the service being offered. The Applicant must also provide a description of the allocator and why it is an appropriate allocator.

Appendix 2-N
Shared Services and Corporate Cost Allocation [1]

Year: 2021

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service
From	To			$	$
HOL	HOHI	Electricity Distribution Management	Cost	$54,663	$54,663
HOL	HOHI	Communications	Cost	$242,701	$242,701
HOL	HOHI	Facilities	Market/Cost	$220,837	$121,770
HOL	HOHI	Finance	Cost	$18,214	$18,214
HOL	HOHI	Human Resources	Cost	$201,131	$201,131
HOL	HOHI	Information Technology	Cost	$528,698	$528,698
HOL	HOHI	Legal	Cost	$9,329	$9,329
HOL	HOHI	Regulatory	Cost	$211,076	$211,076
Total Charged HOL to HOHI				**$1,486,649**	**$1,387,582**
HOL	EO	Communications	Cost	$191,856	$191,856
HOL	EO	Facilities	Market/Cost	$28,001	$16,018
HOL	EO	Finance	Cost	$478,581	$478,581
HOL	EO	Human Resources, Safey, Environment and Business Continuity Management	Cost	$222,499	$222,499
HOL	EO	Information Technology	Cost	$485,831	$485,831
HOL	EO	Legal	Cost	$23,322	$23,322
HOL	EO	Regulatory Affairs	Cost	$105,538	$105,538
HOL	EO	Meter Data Services	Market	$19,065	*
HOL	EO	Mechanic Services	Cost	$156,945	$156,945
Total Charged HOL to EO				**$1,711,638**	**$1,680,590**
HOL	CDM	Human Resources	Cost	$6,553	$6,553
HOL	CDM	Facilities	Market/Cost	$2,740	$1,397
HOL	CDM	Information Technology	Cost	$14,042	$14,042
HOL	CDM	Finance	Cost	$8,250	$8,250
HOL	CDM	Communications	Cost	$3,154	$3,154
Total Charged HOL to CDM				**$34,739**	**$33,396**
HOL	Envari	Electricity Distribution Management	Cost	$27,332	$27,332
HOL	Envari	Communications	Cost	$191,856	$191,856
HOL	Envari	Facilities	Market/Cost	$125,803	$76,515
HOL	Envari	Finance	Cost	$184,797	$184,797
HOL	Envari	Fleet	Cost	$12,024	$12,024
HOL	Envari	Human Resources	Cost	$222,875	$222,875
HOL	Envari	Information Technology	Cost	$585,855	$585,855
HOL	Envari	Key Accounts	Cost	$62,265	$62,265
HOL	Envari	Legal	Cost	$23,322	$23,322
HOL	Envari	Regulatory	Cost	$105,538	$105,538
HOL	Envari	Data Services	Cost	$60,024	$60,024
Total Charged HOL to Envari				**$1,601,691**	**$1,552,403**

* Meter Data Services costs related to Energy Ottawa are considered immaterial and not practicable to determine

Corporate Cost Allocation

Name of Company		Service Offered	Pricing Methodology	% of Corporate Costs Allocated	Amount Allocated
From	To			%	$
HOHI	HOL	Management Services	Cost	50%	$702,093
HOHI	HOL	Finance, Internal Audit & Enterprise Risk Mgt	Cost	57%	$1,177,035
HOHI	HOL	Human Resources	Cost	80%	$564,054
HOHI	HOL	Treasury	Cost	66%	$93,997
HOHI	HOL	Corporate Communications	Cost	57%	$765,135
HOHI	HOL	Legal, Corporate Admin	Cost	20%	$184,261
HOHI	HOL	Information Management & Technology	Cost	45%	$329,208
Total Charged from HOHI to HOL					**$3,815,783**
HOHI	CDM	Management Services	Cost	1%	$11,475
Total Charged from HOHI to CDM					**$11,475**

Note:

1 **This appendix must be completed in relation to each service provided or received for the Historical (actuals), Bridge and Test years. The required information includes:**

- ***Type of Service:***

Services such as billing, accounting, payroll, etc. The applicant must identify any costs related to the Board of Directors of the parent company that are allocated to the applicant.

- ***Pricing Methodology:***

Pricing Methodology includes approaches such as cost-base, market-base, tendering, etc. The applicant must provide evidence demonstrating the pricing methodology used. The applicant must also provide a description of why that pricing methodology was chosen, whether or not it is in conformity with ARC, and why it is appropriate.

- ***% Allocation:***

The applicant must provide the percentage of the costs allocated to the entity for the service being offered. The Applicant must also provide a description of the allocator and why it is an appropriate allocator.

PURCHASES OF NON-AFFILIATE SERVICES

1. INTRODUCTION

In accordance with section 2.4.3.3 of the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019, this Schedule provides information on Hydro Ottawa's procurement policy and competitive tendering process. In addition, this Schedule provides confirmation that Hydro Ottawa's purchases of non-affiliate services comply with this policy and process.

2. PROCUREMENT PROCESS

Hydro Ottawa's procurement policy is appended to this Application as Attachment 4-2-2(A): Procurement Policy. The policy stipulates that all acquisitions shall be supported by purchase orders, with noted exceptions such as utilities and taxes, as defined by the policy.

The utility's procurement policy identifies the following objectives:

- Establish an efficient process for the purchase of quality goods and services;
- Ensure favourable prices are obtained to maximize the value of all purchases for Hydro Ottawa stakeholders;
- Ensure Hydro Ottawa procures all goods and services from reputable/ethical vendors;
- Support the protection of the environment;
- Ensure fair, open, transparent, and accountable competitive processes are followed in the acquisition of goods and services; and
- Ensure compliance with all applicable laws and regulations.

Spending authority is exercised pursuant to a defined corporate policy (see Attachment 4-2-2(B): Approval Authority for Procurements and Disbursements) and is controlled by electronic workflow embedded in the utility's enterprise resource planning ("ERP") system.

Hydro Ottawa ensures consistency and accountability in major procurement contracts through a formally defined procedure governing the procurement process for contracting goods and services. Please see Attachment 4-2-2(C): Procurement Process for further details.

2.1. PROCUREMENT METHODS

2.1.1. RFx – Competitive Vehicles for Awarding Business

Hydro Ottawa utilizes a variety of options for competitive procurement purposes, including the following:

- RFP – Request for Proposals
- RFSO – Request for Standing Offers
- RFQ – Request for Quotations
- RFSA – Request for Supply Arrangements
- RFPQ – Request for Pre-Qualification

2.1.2. Strategic Alliances

Strategic alliances for procurement purposes consist of competitively-based, long-term commercial partnerships. Alliance suppliers hold the inventory, positioning Hydro Ottawa to take delivery only when ready to proceed with the related projects. All residential transformers and underground cable are delivered in this manner. In addition, some commercial transformers and poles for new or replacement pole lines, as well as some pole-line hardware and connectors are procured through this method. Regular forecast sessions enable the supplier to work their supply channels to pipeline material to meet projected need dates, with minimal commitment on Hydro Ottawa's part.

2.1.3. Sole Source/Directed Source

This method involves instances in which the competitive procurement process is waived for compelling business reasons. Please refer to Attachment 4-2-2(A): Procurement Policy for a detailed description of the circumstances under which these purchases are permissible and how

they are authorized. In addition, a definition for each term (Sole Source and Directed Source) is provided in the section below.

3. MATERIAL SOLE SOURCE AND DIRECTED SOURCE PURCHASES UNDER PROCUREMENT POLICY

Hydro Ottawa defines a "Sole Source" procurement as one in which there is only one identifiable source for a given good or service. Examples include commercial monopolies, existing engagements, and support for owned software. These procurements require advance approval from the utility's Procurement group to ensure that applicable conditions are truly met.

"Directed Source" procurements are defined as procurements in which there is more than one identifiable source for a given good or service, but for which there are compelling business reasons why the selected vendor is not determined by a competitive process. The chief examples of Directed Source procurements are those in which the following conditions are met:

- The need is one of pressing urgency and must be addressed quickly to alleviate a threat to one or more of the following:
  - Health, safety, or welfare of Hydro Ottawa employees and/or the public;
  - Hydro Ottawa and/or public property; and
  - Essential services.
- The time, effort, and expense of a competitive procurement are not justified given the nature of the goods or services being acquired.
- The need is a follow-on to a previously acquired good or service, is price competitive, and is most appropriately provided by the original supplier.

As described in Hydro Ottawa's procurement and approval policies, these Directed Source procurements require an elevated level of approval by Procurement and the relevant Business Unit prior to the normal budget approval and the execution of any subsequent contract or Purchase Order.

Tables 1 through 3 below summarize the purchases of non-affiliate services for the 2016-2018 period for which Hydro Ottawa exercised either the Sole Source or Directed Source provisions in its procurement policy. The total costs are those costs paid to the suppliers in each year, excluding tax. Suppliers have been included in the list if the total purchases exceeded $750K per year. In the Tables, adjacent to the column in which each supplier is identified is a column that specifies the type(s) of procurement method employed (i.e. Sole Source or Directed Source). Other than the use of Sole Source and Directed Source procurements as permitted under the utility's procurement policy, there were no material exceptions to the policy during this timeframe.

Table 1 – Material Sole Source and Directed Source Purchases (2016)

Procurement Method	Supplier	Service / Product	Cost
Directed Source	Concentrix Services (Canada) Limited	Contact Centre Services	$2,123,986
Directed Source	Cresa Toronto Inc.,Brokerage	Real Estate Consulting	$1,072,974
Directed Source	Custom Control Panels Inc.	Station P&C Houses[1]	$1,921,653
Directed Source	Mid-Range Computer Group Inc	ERP Consulting Services	$993,138
Directed Source	Promark Telecon Inc.	UG Cable Location Services[2]	$1,823,067
Directed Source	Stoneworks Technologies Inc.	Data Migration Services	$888,663
Sole Source	Combat Networks	Telephony Installation & Support	$1,790,232
Sole Source	Elster Solutions Canada Inc	Metering	$5,941,196
Sole Source	HONI Accounts Receivable Unit[3]	CCRAs/LTLTs/Line Work[4]	$2,018,640
Sole Source	Oracle Canada ULC	Software Support and Enhancements	$4,807,018

[1] "P&C" stands for Protection & Control.
[2] "UG" stands for underground.
[3] "HONI" stands for Hydro One Networks Inc.
[4] "CCRA" stands for Connection Cost Recovery Agreement. "LTLT" stands for Long-Term Load Transfer.

Table 2 – Material Sole Source and Directed Source Purchases (2017)

Procurement Method	Supplier	Service / Product	Cost
Directed Source	Custom Control Panels Inc.	Station P&C Houses	$772,577
Directed Source	Mid-Range Software Services Inc.	ERP Consulting Services	$2,970,959
Directed Source	Sproule Powerline Construction	General OH & UG Line Work[5]	$2,010,825
Directed Source	verTerra Corp.	Project Management	$1,006,012
Sole Source	Combat Networks	Telephony Installation & Support	$1,490,886
Sole Source	Elster Solutions Canada Inc	Metering	$1,345,505
Sole Source	Intergraph Canada Ltd.	Software Sales & Support	$750,528

Table 3 – Material Sole Source and Directed Source Purchases (2018)

Procurement Method	Supplier	Service / Product	Cost
Directed Source	Custom Control Panels Inc.	Station P&C Houses	$1,988,874
Directed Source	Lourenco & Botelho Inc.	Civil Construction & Maintenance	$2,495,336
Directed Source	Marathon Drilling Co. Ltd.	Civil Construction Services	$3,146,631
Directed Source	Sproule Powerline Construction	General OH & UG Line Work	$947,122
Directed Source	verTerra Corp.	Project Management	$2,694,889
Sole Source	Elster Solutions Canada Inc	Metering	$1,369,588
Sole Source	Intergraph Canada Ltd.	Software Support and Enhancements	$904,462
Sole Source	Oracle Canada ULC	Software Support and Enhancements	$2,558,316

[5] "OH" stands for overhead.

HYDRO OTTAWA CORPORATE POLICY

Subject: Procurement		
Category: Finance	**Policy Number**: POL-Fi-003.01	
Administrator: Director of Finance	**Owner:** Chief Financial Officer	**Approver:** President and CEO

1. PURPOSE

The purpose of this policy is to document the principles that govern the acquisition of goods and services by Hydro Ottawa.

The objectives of the Procurement Policy are to:

- Establish an efficient process for the purchase of quality goods and services;
- Ensure favourable prices are obtained to maximize the value of all purchases for Hydro Ottawa stake-holders;
- Ensure Hydro Ottawa procures all goods and services from reputable/ethical vendors;
- Support the protection of the environment;
- Ensure fair, open, transparent and accountable competitive processes are followed in the acquisition of goods and services; and
- Ensure compliance with all applicable laws and regulations.

2. SCOPE

All employees of Hydro Ottawa.

3. DEFINITIONS

Call-Ups are requests to purchase goods and services available for sale under a Standing Offer.
Hydro Ottawa refers to Hydro Ottawa Holding Inc. and its affiliates
Emergency is defined as a sudden, urgent, unexpected occurrence or occasion requiring immediate action.
Low Dollar Value is defined as ≤ $2,000.
Inventory Items are materials that are routinely ordered/tracked by Procurement and issued to field operations for construction and maintenance activities.
Invoices without Reference are invoices for goods and services that have not been pre-authorized by a purchase order and/or vendor contract.
A ***Non-Competitive Procurement***, in the context of this policy, refers to an acquisition from a:

i. Sole Source, where there is only one identifiable source for a given good or service, or a
ii. Directed Source, where there is more than one identifiable source for a given good or service, but there are compelling reasons why the selected vendor is not determined by an open competition.

Non-Inventory Items are goods and services Hydro Ottawa business entities purchase either directly from a vendor or through the assistance of the Procurement function.
Personal Payments refer to “out of pocket” business expenditures paid for by employees through cash, personal debit/credit card or personal cheque transactions.
Procurement (Unit) is defined as the individual or team of individuals responsible for the Procurement function within Hydro Ottawa.
A ***Standing Offer*** agreement is an offer from a vendor to supply “on demand” goods and services at pre-arranged prices under negotiated terms and conditions.

4. POLICY DIRECTIVES

a. Purchases of goods and services are categorized as follows:

Inventory Items:

Items that are purchased solely by Procurement on a recurring basis to service corporate programs.

Non-Inventory Items:

i. Goods and services acquired by Procurement on behalf of Hydro Ottawa Business entities using the following purchasing vehicles:

- Standing Offers
  - Where Standing Offers are in place, they are the preferred procurement vehicle for the purchase of related goods and services
  - Business Units may elect to seek competitive quotations from existing Standing Offer suppliers for Call-Up values greater than $100,000
- Request for Proposal, Quotation and/or Tender
  - For values greater than $5,000 to a maximum of $50,000, Procurement will obtain a minimum of two oral or written competitive quotations
  - For values over $50,000 Procurement will obtain a minimum of three written competitive quotations

  Note: Following the selection of the winning supplier a Purchase Order and/or vendor contract will be issued by Procurement.

ii. Goods and services > $2,000 that can be acquired without the requirement of a Purchase Order and/or vendor contract (Reference Annex 1 – Schedule 6 and 7 of Hydro Ottawa's Approval Authority policy)

iii. Low Dollar Value goods and services that Hydro Ottawa business entities purchase directly from vendors using the following purchase vehicles:

- Hydro Ottawa Credit Card
- Personal Payment

Note: Low Dollar Value purchases do not require Purchase Orders/competitive quotations.

b. Procurement is responsible for ensuring that goods and services are acquired using the appropriate procurement method.

c. Approvals for the purchase of all goods and services will be in accordance with Hydro Ottawa's Approval Authority policy.

d. With the exception of Standing Offers and emergency purchases, POs initiated after the provision of goods or services and/or the receipt of supplier invoices are a serious violation of this policy and will:

i. Require the approval of the related Sponsoring Executive Team Member
ii. Be reported on a quarterly basis to senior Divisional management

e. Vendor proposals for the provision of goods will be assessed using a minimum 50% weighting factor for price.

f. Vendor proposals for the provision of services will be assessed using a minimum 30% weighting factor for price.

g. When appropriate, proposal evaluations will include environmental impact as part of the assessment criteria.

h. Non-financial proposal evaluation criteria will be jointly set by Procurement and the Requisitioner.

i. In the case of criteria disputes, and to ensure the competitive procurement is conducted in a fair, open and transparent manner, the Chief Financial Officer will make the final decision

j. The use of any non-standard terms and conditions relating to Hydro Ottawa procurement documentation requires prior approval by the Legal group.

k. Purchase requests must include the full scope of any given engagement to maintain appropriate approval levels. The splitting of purchase requests into multiple Purchase Orders to reduce the approval level required is a serious violation of this policy.

l. Requests to amend released contract agreements/Purchase Orders must be properly documented before Procurement proceeds with amendments. The following items must be considered

i. A revised requisition must be submitted/approved per Hydro Ottawa's Approval Authority policy detailing the reasons for the required changes,
ii. Revisions requested for greater than 50% of the original Purchase Order/contract value must be submitted to the Manager, Supply Chain for pre-approval.
iii. Requests for material changes in scope as defined in the original Purchase Order/contract may require a new competitive procurement process at Procurement's discretion.

m. The maximum term of a base vendor contract (excluding extensions) is limited to 3 years. Optional contract extensions are limited to an 2 additional years and extensions must be approved to the total cumulative value of the extended engagement according to POL-Fi-010 Annex To Approval Authority Policy Schedule 1. Optional extensions do not include auto-renewal provisions. Base contracts beyond 3 years and/or extensions beyond 2 option years require the joint approval of the sponsoring EMT member and Chief Financial Officer.
n. Employees involved in both competitive and non-competitive procurements must comply with Hydro Ottawa's conflict of interest guidelines as defined in Hydro Ottawa's Code of Business Conduct.

5. RELATED POLICIES, PROCEDURES and REFERENCE DOCUMENTS

Approval Authority Policy (POL-Fi-010)
Hydro Ottawa Corporate Credit Card Policy (POL-Fi-001)
Business Expense Reimbursement Policy (POL-Fi-005)
Request to Direct Source Goods and Services Form
Hydro Ottawa's Code of Business Conduct
Contractor OHSE Requirements (WI-MS-002)

6. EXCLUSIONS

Non-Competitive Procurements

Examples of when the competitive procurement process may be waived are as follows:

i. The need is one of pressing urgency and must be addressed quickly to alleviate a threat to:
   - the health, safety or welfare of Hydro Ottawa employees and/or the public
   - Hydro Ottawa and/or public property
   - essential services

   Note: During emergency situations it is understood urgently needed goods and services may be services may be procured without the issuance of a purchase order.
ii. The time, effort and expense of a competitive procurement are not justified given the nature of the goods or services being acquired.
   Example: The provision of price competitive professional services from an embedded vendor who, through a long standing relationship with Hydro Ottawa, has an in-depth understanding of the corporation's business needs/requirements
iii. There is only one qualified supplier capable of supplying the required good or service
iv. There are pre-requisites to quoting that can only be satisfied by one supplier
v. The need is a follow-on to a previously acquired good or service and, if price competitive, is most appropriately provided by the original contractor
vi. The value of the good or service being acquired does not exceed $5,000

Non-Competitive Procurement Approval Requirements

i. SOLE SOURCE procurements require prior authorization in accordance with Annex 1 – Schedule 1 of Hydro Ottawa's Approval Authority policy

ii. DIRECTED SOURCE procurements require authorization in accordance with Annex 1 – Schedule 4 of Hydro Ottawa's Approval Authority policy

Note:

1. The cost of known follow-on support activity (to the maximum duration of the agreement) associated with a Directed Source procurement should be included in the initial total purchase value to avoid duplication in approval requests (e.g. annual hardware/software maintenance, ongoing software support, quarterly/yearly audits etc.). After the maximum agreement duration, a decision to continue with the follow-on support requires re-approval in accordance with Hydro Ottawa's Approval Authority policy.

2. A Request To Direct Source Goods and Services Form must be completed to justify all Directed Source acquisitions of goods or services in excess of $5,000.
   Note: Hydro Ottawa management approvals are not required when the non-competitive procurement has been authorized by Hydro Ottawa's Board of Directors and/or its committees.

7. ADDITIONAL POLICY ELEMENTS

Requisitioner's Responsibilities:

i. Provide sufficient lead time for the processing of procurement documentation
ii. Initiate a Purchase Requisition in JDE and, through the imbedded workflow, secure approval to purchase. For requisitions >$5,000,000 the Requisition Summary Form must be completed and attached to the requisition in the ERP system. In some cases divisional chiefs may request this form to be completed for requisitions <$5,000,000 as well.
iii. Develop the Statement of Requirements or detailed Specification as applicable to the requirement and the acquisition method
iv. Work collaboratively with Procurement to define the non-financial proposal evaluation criteria/weighting and the selection process as appropriate to the acquisition method
v. In conjunction with Procurement, evaluate suppliers' proposals in accordance with the pre-determined evaluation criteria/weighting

Procurement's Responsibilities:

i. Act as custodian of the Procurement Policy and all associated procurement procedures and in so doing:
   - Monitor conformance with the policy and procedures
   - Reject any Purchase Requisitions which, in the opinion of Procurement, do not comply with this policy and supporting procedures
   - Raise any incidents of non-compliance through the Procurement management hierarchy for resolution
ii. Provide advice and guidance to internal customers and work collaboratively with them during the procurement process to:
   - Determine the most appropriate acquisition method
   - Establish the non-financial proposal evaluation criteria/weighting and the selection process as appropriate to the procurement method
   - Prepare the solicitation documents including the Statement of Requirements or detailed Specifications
   - Evaluate supplier submissions including the completion of a vendor risk assessment and validation of compliance with Hydro Ottawa's Contractor OHSE Management Program (Reference Contractor OHSE Requirements – WI-MS-002)
   - Ensure proposal prerequisites are fair and objective
iii. Identify/validate Sole Source (vs. Directed Source) procurements
iv. Work collaboratively with internal customers to determine opportunities to aggregate purchases and establish vehicles for the acquisition of common buys
v. Routinely inform internal customers about the availability of Standing Offers, supply arrangements and supplier source lists for the acquisition of goods or services
vi. Assess the complexity and risk of purchases to determine when vendor contracts are required and interface with Legal accordingly

vii. Debrief unsuccessful suppliers, in consultation with internal customers if requested by a supplier
viii. Work collaboratively with internal customers to evaluate supplier performance ensuring compliance with contract deliverables/service level commitments
Note: In the case of long term agreements performance assessments should be completed annually and/or in advance of any contract renewals and/or extensions
ix. Provide management with requested reports on procurement activity
x. Ensure all likely follow-on activity is identified and included in the initial approval request for competitive and non-competitive acquisitions

Management's Responsibilities:

i. Communicate details of the Procurement Policy to employees
ii. Ensure all procurements comply with this policy
iii. Ensure the availability of current year (and, when required, future years') budget funding to support the acquisition
iv. Collaborate with Procurement in the
- aggregation of Hydro Ottawa common purchases
- evaluation of supplier submissions
- assessment of supplier performance

v. Address minor policy non-compliance issues with the responsible employee and escalate serious policy violations to the Policy Owner

8. COMPLIANCE

Serious policy infractions will be addressed in accordance with Hydro Ottawa's Code of Business Conduct and policy on Discipline and Discharge (POL-Hr-005.00).

9. APPROVAL HISTORY

Revision .00	**Release Date** January 1, 2013	**Initial Release**	**Policy Owner Sign-off:**	**Approved by:**
Revision .01	**Revision Date** April 1, 2017	**Description of Changes** Re-affirmation of policy, revisions to weighting criteria, quotation limits and contract length as well as minor updates and references.	**Policy Owner Sign-off:** Chief Financial Officer	**Approved by:** President and CEO

Scheduled Re-affirmation Date: **April 2020**	Responsibility: **Chief Financial Officer**

10. POLICY EXCEPTIONS

Exceptions to the above directives and/or changes to this policy must receive written pre-authorization from the CFO. For clarification on any aspect of this policy contact the Director of Finance.

HYDRO OTTAWA CORPORATE POLICY

Subject: Approval Authority		
Category: Enterprise	**Policy Number**: POL-Fi-010.01	
Administrator: Director Finance	**Owner:** Chief Financial Officer	**Approver:** President and CEO

1. PURPOSE

The purpose of this policy is to define the financial approval authority limits delegated to specified positions within Hydro Ottawa.

2. SCOPE

All employees of Hydro Ottawa.

3. DEFINITIONS

Temporary, in the context of this policy, is defined as ≤ 30 consecutive calendar days.
Approval Authority refers to the assignment of financial decision-making authority by the President and CEO to various positions within Hydro Ottawa.
Temporary delegation of Approval Authority refers to the short-term reassignment of financial decision-making authority during management/supervisor absences.
Sole Source Procurement is one where there is only one identifiable source for a given good or service.
Directed Source Procurement is one where there is more than one identifiable source of supply for a given good or service, but there are compelling reasons why the selected vendor is not determined by an open competition.
EA refers to Executive Assistant.
AA refers to Administrative Assistant.
Chief normally refers to a Division Head with Directors as direct reports. May also include management staff that report directly to the President and Chief Executive Officer.
Director normally refers to a Group Head with Managers as direct reports. May also include management staff that report directly to a Chief.
Manager refers to a Section Head with Supervisors as direct reports. May also include management staff that report directly to a Director.
Supervisor normally refers to a Unit Head with Regular Staff as direct reports. May also include management staff that report directly to a Manager.
Hydro Ottawa refers to Hydro Ottawa Holding Inc. and its affiliates.

4. POLICY DIRECTIVES

a. The President and CEO has been granted, by the Board of Directors of Hydro Ottawa, full decision-making authority on all Hydro Ottawa day-to-day financial matters.
b. This authority has been assigned by the President and CEO to various employees within Hydro Ottawa based on their position and business mandate.
c. Details on the approval authority and delegation of approval authority are provided in **Annex 1** of this policy, which is structured as follows:

Schedule 1	Approval of Purchase Requisitions
Schedule 2	Temporary Delegation of Approval Authority for Purchase Requisitions
Schedule 3	Approval of Purchase Orders
Schedule 4	Approval of Directed Source Procurements
Schedule 5	Approval of Expense Reports and Credit Card Expense Reports
Schedule 6	Approval of Payments That Do Not Require Purchase Orders (Approval Limits same as Schedule 1)
Schedule 7	Approval of Payments That Do Not Require Purchase Orders (Specified Approvers)
Schedule 8	Approval of Invoices
Schedule 9	Approval of All financial amounts not specifically identified in another schedule or policy
Schedule 10	Requisition Summary Form

d. All values in **Annex 1** are expressed in Canadian currency.
e. Responsibility rests with the approver to ensure there are current year (and if necessary future years') budget to pay for goods and services procured through purchase orders and/or procurement contracts.
f. The procurement of /discretionary spending on the following specialized categories of goods and services must have co-approval from the appropriate Hydro Ottawa "functional" division before action is taken:

Category	Functional Division Co-Approval	Normal Approver
IM & IT Products and Services	IM & IT	Manager, Infrastructure Management
Advertising	Communications	Manager, Media and Public Affairs
Legal Services	Legal	Senior Legal Counsel
Commercial Insurance	CFO (Treasury)	Treasurer
Sponsorships/Donations	Communications	Manager, Media and Public Affairs
Leases	CFO (Treasury)	Treasurer
Recruitment Services	HR	Manager, Payroll, Recruitment & HRIS

Note:
- Legal approval is not required when:
  - there is an established relationship between the legal service provider and Hydro Ottawa, and
  - Legal initially approved the vendor.
- Commercial Insurance excludes HR employee benefit insurance programs such as life insurance, health and dental plans, the Worker Safety Insurance Board etc.

g. Individuals are responsible for delegating their approval authority *before departing on planned absences* by documenting the delegate's name and the duration the of the authority reassignment in an email which, at a minimum, should be sent to:
   To: Supervisor, Procurement
   Supervisor, Accounts Payable
   Copy: Name of delegated signing authority
   The manager of the individual delegating their signing authority
   Supporting Executive/Administrative Assistant
   Note: The above email can be sent by the appropriate EA/AA copying the individual who is delegating their approval authority.
h. Approval authority can be delegated to a peer within the employee's division or to a subordinate as detailed in **Annex 1 - Schedule 2** of this policy.
i. Chiefs must delegate their approval authority to a direct report within their division (i.e. lateral assignments are not permitted).
j. In the case of absences where a delegate has not been named, approval authority will revert to the individual's direct manager who can either retain the signing authority responsibilities until the individual returns or initiate the assignment of temporary signing authority as described in 4 g. above.
k. The delegation of signing authority for periods > 30 consecutive days requires the approval of the individual's direct manager (e.g. delegation of a Director's signing authority for a 31 day period would require approval of the Division Chief.)
l. Individuals who are appointed to a management position as a result of Hydro Ottawa's Emergency Succession Plan will assume full approval authority of the appointed position.
m. No approver may authorize a payment to or for the benefit of oneself.

5. RELATED POLICIES, PROCEDURES and REFERENCE DOCUMENTS

Approval Authority Policy – Annex 1
Hydro Ottawa Credit Card Policy (POL-Fi-001)
Business Expense Reimbursement Policy (POL-Fi-005)
Travel Expense Reimbursement Policy (POL-Fi-002)
Procurement Policy (POL-Fi-003)
Insurance Policy (POL-Fi-006)

6. EXCLUSIONS
There are no exclusions

7. ADDITIONAL POLICY ELEMENTS
There are no additional policy elements

8. COMPLIANCE
Serious policy violations will be addressed in accordance with Hydro Ottawa's Code of Business Conduct and may result in disciplinary action up to and including termination of employment.

9. APPROVAL HISTORY

Revision	**Release Date**	**Initial Release**	**Policy Owner Sign-off:**	**Approved by:**
.00	January 1, 2013	Initial release		
Revision	**Revision Date**	**Description of Changes**	**Policy Owner Sign-off:**	**Approved by:**
.01	April 1, 2017	Changed numbering from POL-En-006 to POL-Fi-010 and increased approval limits for business efficiency	Chief Financial Officer	President and CEO

Scheduled Re-affirmation Date: **April 2020**	Responsibility: **Chief Financial Officer**

10. POLICY EXCEPTIONS
Exceptions to the above directives and/or changes to this policy must receive written pre-authorization from the CFO. For clarification on any aspect of this policy contact the Director, Finance.

Schedule 1

Approval of Purchase Requisitions

Approver	Mandate	Limit
President & CEO	Enterprise	> $5,000,000
Chief	Division	To $5,000,000
Director	Group	To $1,000,000
Manager	Section	To $200,000
Supervisor	Unit	To $25,000

NOTES:

1. The above authorization limits relate to purchase requisitions for both competitive and sole source procurements.
2. Directed source procurement approval requirements are provided in Schedule 4.
3. Approval to purchase goods and services must be obtained from the division that will be paying the associated invoices/incurring the expenses.
4. Responsibility rests with the approver to ensure there are current year (and if necessary future years') budget to pay for goods and services procured through purchase orders and/or third party contracts.
5. All purchases must comply with Hydro Ottawa's Procurement Policy (POL-Fi-003).
6. Higher approval limits for specific operational positions (based on job function) require authorization from the President & CEO.
7. Requisitions greater than $5,000,000 must have the Requisition Summary Form (Schedule 10) completed and attached to the requisition in the ERP system (JD Edwards).

Schedule 2

Delegation of Approval Authority Purchase Requisitions		
Original Signing Authority	**Limit**	**Temporary delegated Signing Authority**
President & CEO	> $5,000,000	Chief
Chief	To $5,000,000	Director
Director	To $1,000,000	Manager
Manager	To $200,000	Supervisor
Supervisor	To $25,000	N/A

1. Temporary is defined as < 30 consecutive calendar days.
2. In the absence of Director positions within a Division, Chiefs would delegate signing authority to a Manager.
   Note: The Manager's delegated approval limit would be $1,000,000.
3. Delegation of a signing authority for any period in excess of 30 consecutive days requires approval of the individual's manager.
4. Supervisors cannot delegate their approval authority.
5. All NOTES in Schedule 1 apply to Schedule 2.

Schedule 3

Approval of Purchase Orders		
Approver	**Mandate**	**Limit**
Manager Supply Chain	Enterprise	> $1,000,000
Supervisor Procurement	Enterprise	To $1,000,000
Procurement Agent	Enterprise	To $5,000

NOTES:

1. The above relates to approval to make a commitment to a 3rd party supplier through the execution of Purchase Orders.
2. For contract procurements, refer to PRO-Fi-013 Contract Procurement Process.
3. The Purchase Order approver cannot be the same individual as the Requisition approver.
4. Invoices will be paid to a maximum of 105% of the Purchase Order value.

Schedule 4

Approval of Directed Source Procurements		
Approver	**Mandate**	**Limit**
Sponsoring EMT Member + CFO + President & CEO	Enterprise	> $500,000
Sponsoring EMT Member + Director, Finance	Division	> $100,000 to $500,000
Sponsoring Director + Manager, Supply Chain	Group	$25,000 to $100,000
Sponsoring Manager + Supervisor, Procurement	Section	< $25,000

NOTES:

1. A Directed Source Procurement is when there is more than one identifiable source for a given good or service, but there are compelling reasons why the selected vendor is not determined by an open competition. (Refer to Hydro Ottawa's Procurement Policy – POL-Fi-003 for additional details on Directed Source Procurements)
2. Hydro Ottawa management approvals are not required for Directed Source Procurements authorized by Hydro Ottawa's Board of Directors and/or its committees.

Schedule 5

Approval of Expense Reports and Credit Card Expense Reports
1. Direct supervisor approves expense report regardless of dollar value. 2. Individuals cannot approve their own expense reports. 3. Peers cannot approve expense reports.

Schedule 6

General Approval of Payments that do not Require Purchase Orders (Invoices Without Reference)	
Approval limits same as Schedule 1	
Expense Item	**Responsible Division**
Freight & forwarding	CFO
Courier	
Fuel	
Fleet purchases (excluding capital purchases)	
Commercial Insurance premiums	
Corporate income tax	
RFP Related Expenses (i.e. Honoraria)	
Licenses and registrations	
Payments under Affiliation Agreements	
Legal Costs (Non HR related)	Legal
HR employee benefit insurance programs (life insurance, health and dental plans, Worker Safety Insurance Board, etc.)	HR
Legal Costs (HR related)	
Planning permits, access fees, development fees, easements, traffic control	Distribution Engineering & Asset Management & Distribution Operations
Sponsorships, market promotions, donations	Communications & Marketing
Conferences and Training (note 5)	All
Subscriptions, publications, corporate memberships	All
Emergency related purchases of goods and services	All

Notes:

1. Schedule 6 identifies invoices for goods and services that are payable without a requirement for/reference to a purchase order.
2. Emergency is defined as a sudden, urgent, unexpected occurrence or occasion requiring immediate action.
3. Changes to related authorizations in Schedule 6 require the approval of the Chief Financial Officer.
4. For proposed related expense items not specifically covered in list, Manager, Supply Chain will have final discretion.
5. Training whereby Hydro Ottawa hires an external contractor to provide on-site training will require a PO. In cases where employees go offsite for training, no PO is required.

Schedule 7

Specified Approval of Payments that do not Require Purchase Orders (Invoices Without Reference)	
Specified Approvers	
Expense Item	**One of:**
Property taxes	Manager, Fleet and Facilities/Director, Finance
Utilities	
Interest and financing charges	Manager, Accounting/ Manager, Taxation & Treasury Services / Treasurer / Director, Finance
Bank charges	
Sales and Income tax (HST, QST etc)	
Other taxes and duties (eg DRC)	
IESO[1] and HONI charges	Manager, Accounting/ Manager, Taxation & Treasury Services / Treasurer / Director, Finance
Embedded Generators (FIT, MicroFIT, HCI, RESOP)	
Payments to Retailers	
Payroll-related remittances	Manager, Compensation / Director, Labour Relations and Compensation
Telecommunication Services	Manager, Infrastructure Management/Chief Information Officer

Notes:

1. Schedule 7 identifies invoices for goods and services that are payable without a requirement for/reference to a purchase order AND where payment is time sensitive and authorization requires specialized knowledge/insights to validate the invoice amount.
2. There are no dollar limits associated with the expense items listed in Schedule 7.
3. Individuals identified in as approvers in Schedule 7 must determine supporting documentation requirements for invoice approval with concurrence from Director Finance.
4. Changes to related authorizations in Schedule 7 require the approval of the Chief Financial Officer.
5. For proposed related expense items not specifically covered in list, Manager, Supply Chain will have final discretion.
6. Telephone related costs as well as the data lines are exempt from requiring approvals.

[1] Including related data submission to IESO and Ontario Ministry of Finance

Schedule 8

Approval of Invoices

1. For goods whereby a true receipt exists (goods received into the warehouse), no signature is required on the invoice
2. For invoices without a PO, Invoice signature most follow the signing authority of Schedule 1 unless they fall into the Schedule 7 categories.
3. For all other invoices, only one signature is required on the invoice:
    - The person signing the invoice is decided by the Business Unit procuring the goods or services.
    - The person chosen must have knowledge of the goods or services being procured.
    - The name and title of the person signing the invoice must be clearly identified beneath the signature through use of a stamp or legible printing.
    - Person signing the invoice must ensure that the payment agrees with the pre-approved purchase order commitments and that the work or service has been completed to Hydro Ottawa's satisfaction.

Schedule 9

Approval of All financial amounts not specifically identified in another schedule or policy		
Approvers	**Mandate**	**Limit**
Director + Manager, Accounting	Group	> $500,000
Manager + Manager, Accounting	Section	$100,000 - $500,000
Supervisor + Supervisor, Billing Projects	Unit	< $100,000

NOTES:

1. This schedule does not apply to electricity customer accounts.
2. Financial adjustments mean any changes to a customer's account that affect the amount collected/collectible from/to the customer.
3. Approval(s) must be obtained from the division that provided the good/service to the customer.
4. Approvers must determine supporting documentation requirements with concurrence from the Manager, Accounting.

Schedule 10

Requisition Summary[2]

Instructions: Complete all applicable fields and attach to the requisition in JDE.

Date:	YYYY-MM-DD
Lead:	
Division/Group:	
Vendor:	
Selection Process (RFP, Directed Source, etc)	
Requisition/Contract #:	
Project Name:	
Project Timing: (Start and End Dates)	
Description of Work:	
Amendment Reason(s)	
Type of work (demand, sustainment, general capital, generation, etc):	
Cost (Original + Amendments):	
Additional comments:	

[2] Requisitions greater than $5,000,000 must have the Requisition Summary Form (Schedule 10) completed and attached to the requisition in the ERP system (JD Edwards)

CORPORATE PROCEDURE

Subject: Contract Procurement Process		
Category: Finance	**Procedure Number**: PRO-Fi-013.00	
Policy Ref: POL-Fi-003.00 Procurement	**Administrator** Director of Finance	**Owner** Chief Financial Officer

1. **PURPOSE**
   To ensure consistency and accountability in the contract procurement process.

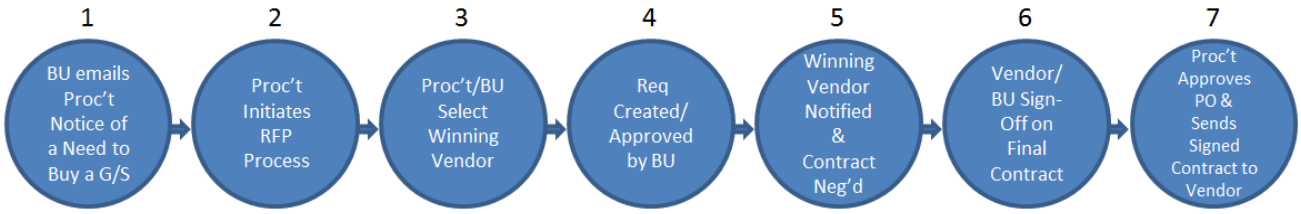
2. **SCOPE**
   All Hydro Ottawa employees involved in contract procurements.

3. **DEFINITIONS**
   BU refers to a Hydro Ottawa business unit
   G/S refers to a good or service
   Hydro Ottawa refers to Hydro Ottawa Holding Inc. and its affiliates
   Legal refers to Hydro Ottawa's Legal Group
   PO refers the Hydro Ottawa Purchase Order module within JDE
   Procurement or Proc't refers to the Procurement Unit within Hydro Ottawa's Supply Chain Section
   Pro Forma Contract refers to any Hydro Ottawa contract that has been prepared by Legal and contains standard terms and conditions
   Req refers to the Requisition module within JDE
   RFP refers to Request for Proposal
   RFQ refers to Request for Quote

   All references to dollar amounts shall be in Canadian currency and exclusive of taxes

4. **PROCEDURE DESCRIPTION**

Contract Procurement Process Overview



Responsibility	Ref	Instructions
BU – Requisitioner	4.1	When it is anticipated a pending purchase will require a procurement contract, the BU shall email the details to the Supervisor, Procurement providing a description of the G/S involved, an estimate of the total cost (excluding taxes/duties), specifics on the timing of the purchase and confirmation of budget funding. Note: a. The email should be copied to the appropriate BU signing level (per Annex 1 Schedule 1 of Hydro Ottawa's policy on Approval Authority for Procurements and Disbursements (POL-En-006.00) b. The final decision to proceed with an RFP/Contract procurement (vs. an alternate procurement vehicle such as an RFQ or PO) rests solely with Procurement c. The need to send a Request For Information (RFI) to prospective vendors shall be jointly determined by the BU and Procurement d. A non-competitive procurement process begins with step 4.4 above once the required Sole/Directed Source approvals are obtained per Hydro Ottawa's Procurement Policy (POL-Fi-003.00)

Responsibility	Ref	Instructions
Procurement	4.2	Per the Procurement Policy, an RFP is issued containing a detailed Statement of Work (written by the BU) and the requirement that vendors accept Hydro Ottawa's pro-forma contract terms and conditions.
Procurement/BU	4.3	The winning vendor is selected based on pre-set evaluation criteria. Note: The winning vendor selection shall remain Hydro Ottawa confidential until the Req is created/approved.
BU	4.4	The Req is created in JDE and approved per Annex 1 Schedule 1 of Hydro Ottawa's policy on Approval Authority for Procurements and Disbursements (POL-En-006.00). Note: Electronic attachments to the Requisition shall include: a. The Statement of Work b. The winning vendor's proposed solution c. Solution pricing d. The pro-forma contract and, if known, any potential non-standard contract terms and conditions e. Summary comments on open issues i.e. potential risk areas including recommendations on contingency funding to address risk issues
Procurement/BU	4.5	The winning vendor is notified and the contract is negotiated. Note: a. The winning vendor is advised that any commitments made by Hydro Ottawa during negotiations are subject to the BU sign-off on the final contract and the execution of the PO within JDE by Procurement b. Procurement (not the BU) shall engage Legal as/when required in the event changes are required to Hydro Ottawa's pro-forma contract wording c. Material changes (in the judgement of Procurement) between the winning vendor's RFP response and the negotiated contract (such as changes in contract terms and conditions, price, risks, key elements of the deliverables etc.) require an update to/re-approval of the Req within JDE d. In the event of material changes per 4.5 (c.) above, Procurement shall consult with Legal to determine if the RFP needs to be re-issued e. Procurement creates a PO within JDE and registers the PO number as the contract number on the duplicate originals of the final agreement f. The PO shall identify any contingency funding required to address risk issues that are contained in the final contract g. Contingency funding shall remain Hydro Ottawa confidential and excluded from the financial information detailed in the contract h. Procurement shall provide a scanned copy of the final agreement to both the contract and procurement signing authorities for their review.
Procurement/BU	4.6	The Vendor/BU sign-off on the final contract. Note: a. Duplicate originals of the final contract are presented to the vendor for their sign-off b. Following vendor approval, the contracts are returned to Hydro Ottawa and signed off by the BU per the following:

Hydro Ottawa Contract Procurement Signing Limits		
Approver	**Mandate**	**Limit**
President & CEO	Enterprise	> $5,000,000
Chief	Division	To $5,000,000
Director	Group	To $500,000
Manager	Section	To $100,000
Supervisor	Unit	To $5,000

c. Chiefs shall provide the President & CEO with email notifications of contract sign-offs valued from $1,000,000 to $5,000,000.

Responsibility	Ref	Instructions
Procurement	4.7	Once both parties have signed off on the contract, the PO is approved within JDE. Note: a. Approvals shall be in accordance with Annex 1 Schedule 3 of Hydro Ottawa's policy on Approval Authority for Procurements and Disbursements (POL-En-006.00) b. A duplicate contract original is returned to the vendor c. Procurement attaches a scanned copy of the second duplicate original to the PO within JDE and files the hard copy for their records

5. RELATED POLICIES, PROCEDURES & REFERENCE DOCUMENTS

Procurement Policy (POL-Fi-003.00)
Approval Authority for Procurements and Disbursements Policy (POL-En-006.00)
Discipline and Discharge Policy (POL-Hr-005.00)

6. COMPLIANCE

Periodic audits will be carried out by the Internal Audit & Risk Management group to assess compliancy with the procedures detailed above. Non-compliant behaviour will be escalated to the Chief Financial Officer who will determine the appropriate disciplinary action.

7. APPROVAL HISTORY

Revision	Release Date		Procedure Admin Sign-off:	Procedure Owner Approval:
.00	July 1, 2014		Director of Finance	Chief Financial Officer
Revision	Revision Date:	Description of Changes	Procedure Admin Sign-off:	Procedure Owner Approval:
.NN	Month/Day/Year		Director of Finance	Chief Financial Officer

Scheduled Re-affirmation Date	Responsibility
July 1, 2016	Director of Finance

Exceptions and/or **changes** to this procedure must receive written authorization from the Chief Financial Officer. For **clarification** on any aspect of this policy contact the Director of Finance.

ONE-TIME COSTS

Hydro Ottawa confirms that there are one-time costs being requested for recovery over the 2021-2025 Test Years related to this Application. Per the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019, one-time costs included in the Historical, Bridge, and Test Years are included in the first year, 2021, to be amortized over the 2021-2025 period. Please refer to Exhibit 4-2-4: Regulatory Costs and Attachment 4-2-4(A): OEB Appendix 2-M - Regulatory Cost Schedule for further details on these one-time costs.

UPDATED REGULATORY COSTS

Regulatory costs for Hydro Ottawa are included in the Uniform System of Accounts ("USofA") 5655, Regulatory Expenses and 5630, Outside Services Employed.[1] A summary of Regulatory Expenses are shown in Table 1, as updated below. Please refer to UPDATED Attachment 4-2-4(A): Appendix 2-M - Regulatory Cost Schedule for further details.[2] Regulatory costs include OEB cost assessments and licence fees, intervenor and other cost awards, professional services (legal and consulting), and costs to publish public notices.

Regulatory costs are split between one-time and on-going costs. In light of the increases in total Regulatory Costs which Hydro Ottawa has seen, the budget for the 2021 Test Year is $2.3M. The main driver of the increase in on-going costs relates to the annual assessment fees paid to the OEB. Additionally, consulting costs in 2020 and 2021 are forecasted to be higher than 2019, due to external expertise that will be sought on government, OEB, and industry policy consultations that are set to impact Hydro Ottawa.

In 2016, the OEB revised its cost assessment model.[3] As part of this change, the OEB established a variance account, Account 1508 Other Regulatory Assets, Sub-account OEB Cost Assessment Variance, to capture the difference between the costs incurred as a result of the new methodology and the costs which had already been built into a utility's rates. The variance account was to be utilized until a ~~utiilty's~~ utility's rates were next rebased/reset.[4]

These revisions to the OEB's cost assessment model substantially increased Hydro Ottawa's allocation of the OEB's costs. For the OEB's April 2016 - March 2017 fiscal year, the OEB's cost allocation to the utility was $1.4M, which represented an increase of 56% over the $916K projection included in Hydro Ottawa's 2016 rebasing application.

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[1] Prior to 2019, OEB Section 30 Costs were included in Account 5620, Office Supplies and Expense.
[2] Hydro Ottawa has made an adjustment to the Appendix to include a column for 2017 actuals.
[3] Ontario Energy Board, Letter re: *Revisions to the Ontario Energy Board Cost Assessment Model* (February 9, 2016).
[4] *Ibid*, page 2.

As a result, for purposes of this Application, the OEB Cost Assessment appears as an increase in the 2021 Test Year. For additional information on the OEB Cost Assessment Variance Account, please refer to UPDATED Exhibit 9-1-3: Group 2 Accounts.

Hydro Ottawa did not request one-time costs as part of its 2016-2020 Custom Incentive Rate-Setting application.[5] Accordingly, the one-fifth amortized portion of the $0.5M one-time costs included in the 2021 Test Year are incremental. The one-time costs include external studies on core areas or topics that were commissioned to support, and in some cases guide, Hydro Ottawa's Business Plan and requested revenue requirement.[6] Additionally, the one-time costs include OEB hearing costs, intervenor costs, and legal costs set to be incurred in the adjudication of this Application. Please refer to Exhibit 4-2-3: One-Time Costs for details related to the amortized period.

The costs associated with the time spent by Hydro Ottawa's regulatory employees in preparing this Application have not been included in USofA Accounts 5655, 5630, or 5620. These costs are contained within the general operations, maintenance and administration budgets. The costs associated with the time spent in preparing this Application by personnel from other business units within the utility (such as finance, distribution asset management, treasury, human resources, customer service, information technology, etc.) are likewise not included in Accounts 5655 or 5630. Instead, these costs are contained within the respective budgets of those business units.

[5] Hydro Ottawa Limited, *2016-2020 Custom Incentive Rate-Setting Distribution Rate Application*, EB-2015-0004 (April 29, 2015).
[6] The external studies commissioned in support of this Application are listed in UPDATED Exhibit 1-1-1: Table of Contents.

Table 1 – AS ORIGINALLY SUBMITTED – Regulatory Cost Schedule (Summary)

	OEB Approved	Historical			Bridge		Test
	2016	2016	2017	2018	2019	2020	2021
Ongoing	$1,365,775	$1,251,499	$1,125,122	$1,112,169	$1,036,124	$1,255,162	$1,843,850
1/5 of Total One-Time Costs	$0	$0	$0	$0	$0	$0	$462,398
TOTAL	**$1,365,775**	**$1,251,499**	**$1,125,122**	**$1,112,169**	**$1,036,124**	**$1,255,162**	**$2,306,248**

Table 1 – UPDATED FOR 2019 ACTUALS – Regulatory Cost Schedule (Summary)

	OEB Approved	Historical				Bridge	Test
	2016	2016	2017	2018	2019	2020	2021
Ongoing	$1,365,775	$1,251,499	$1,125,122	$1,112,169	$1,143,383	$1,255,162	$1,843,850
1/5 of Total One-Time Costs	$0	$0	$0	$0	$0	$0	$462,398
TOTAL	**$1,365,775**	**$1,251,499**	**$1,125,122**	**$1,112,169**	**$1,143,383**	**$1,255,162**	**$2,306,248**

TO BE UPDATED AT THE DRAFT RATE ORDER STAGE

UPDATED - Appendix 2-M
Regulatory Cost Schedule

	Regulatory Cost Category	USoA Account	USoA Account Balance	Last Rebasing Year (2016 OEB Approved)	Last Rebasing Year (2016 Actual)	2017 Actual	2018 Actual	2019 Actual	2020 Bridge Year	Annual % Change	2021 Test Year	Annual % Change
	(A)	(B)	(C)	(D)	(E)			(F)	(G)	(H)=[(G)-(F)]/(F)	(I)	(J) = [(I)-(G)]/(G)
	Regulatory Costs (Ongoing)											
1	OEB Annual Assessment	5655		916,311	984,177	917,112	916,311	917,111	917,162	0.01%	1,500,850	63.64%
2	OEB Section 30 Costs (OEB-initiated)	5655/5620			1,573	36,783	25,949	46,713	25,000	-46.48%	30,000	20.00%
3	Expert Witness costs for regulatory matters											
4	Legal costs for regulatory matters	5655		160,711	5,150		14,554	15,608	90,000	476.62%	90,000	0.00%
5	Consultants' costs for regulatory matters	5630		16,188	119,635	28,006		8,311	75,000	802.42%	75,000	0.00%
6	Operating expenses associated with staff resources allocated to regulatory matters											
7	Operating expenses associated with other resources allocated to regulatory matters 1											
8	Other regulatory agency fees or assessments	5655		140,843	140,964	143,222	155,355	155,639	148,000	-4.91%	148,000	0.00%
9	Any other costs for regulatory matters (please define)											
10	Intervenor costs	5655		131,722								
11	Include other items in green cells, as applicable											
12												
	Regulatory Costs (One-Time)											
1	Expert Witness costs											
2	Legal costs	5655									150,000	
3	Consultants' costs	5630									1,736,990	
4	Incremental operating expenses associated with staff resources allocated to this application.											
5	Incremental operating expenses associated with other resources allocated to this application. 1											
6	Intervenor costs	5655									150,000	
7	OEB Section 30 Costs (application-related)	5655									275,000	
8	Include other items in green cells, as applicable											
9												
10												
11												
29												
30												
1	Sub-total - Ongoing Costs 2		$ -	$ 1,365,775	$ 1,251,499	$ 1,125,122	$ 1,112,169	$ 1,143,383	$ 1,255,162	9.78%	$ 1,843,850	46.90%
2	Sub-total - One-time Costs 3		$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ 2,311,990	
3	Total		$ -	$ 1,365,775	$ 1,251,499	$ 1,125,122	$ 1,112,169	$ 1,143,383	$ 1,255,162	9.78%	$ 2,306,248	83.74%

Application-Related One-Time Costs	Total
Total One-Time Costs Related to Application to be Amortized over IRM Period	$ 2,311,990
1/5 of Total One-Time Costs	$ 462,398

LOW-INCOME ENERGY ASSISTANCE PROGRAM

As set out in the OEB report on the Low-Income Energy Assistance Program ("LEAP") issued in 2010,[1] and in accordance with section 2.4.3.6 of the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019, Hydro Ottawa has annually allocated 0.12% of its distribution service revenue requirement towards the LEAP Emergency Financial Assistance ("EFA") grant.

Table 1 shows Hydro Ottawa's annual LEAP contributions from 2016-2019 and the total number of customers assisted between 2016-2018.

Table 1 – LEAP Contributions and Number of Customers Assisted[2]

	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year	2021 Test Year
Annual Contribution	$210,054	$218,484	$228,713	$238,069	$240,000	$240,000
Carryover from Prior Years	$88,163	$80,565	$117,170	$208,706	n/a	n/a
Sub-Total Funds Available	**$298,217**	**$299,049**	**$345,883**	**$448,706**	**n/a**	**n/a**
Less: Admin Fees	$31,508	$32,772	34,307	n/a	n/a	n/a
Less: Grants Disbursed	$186,144	$149,106	$102,870	n/a	n/a	n/a
TOTAL FUNDS UNUSED	**$80,565**	**$117,170**	**$208,706**	**n/a**	**n/a**	**n/a**
Total Number of Applicants	593	465	364	n/a	n/a	n/a
Number of Applicants Assisted	482	380	246	n/a	n/a	n/a

The annual contribution amount of $240K in the 2021 Test Year is based on an estimate of Hydro Ottawa's distribution service revenue requirement. Hydro Ottawa continues to work with the United Way as its Lead Agency, with the Salvation Army administering the various Intake Agencies throughout the utility's service territory.

[1] Ontario Energy Board, *Report of the Board - Low-Income Energy Assistance Program*, EB-2008-0150 (March 10, 2009), page 10.
[2] Totals may not sum due to rounding.

Demand for the LEAP program, which was introduced in January 2011, has declined year-over-year since 2016 in terms of both the number of applicants and the dollar amount of grants disbursed to customers. This has resulted in an increased accumulation of unused funds annually.

One contributing factor of declining LEAP participation may be the Ontario Electricity Support Program ("OESP"), introduced in January 2016, which reduces the cost of electricity by applying a monthly credit directly to the bills of qualifying low-income households. Another contributing factor may be the introduction of the Ontario Fair Hydro Plan in March 2017, which lowered electricity bills for Ontario residential consumers by 25%. These programs have collectively reduced the bills of eligible low-income customers, thereby reducing demand for the LEAP program.

Further, the introduction of the Winter Disconnection Moratorium ("Moratorium") in 2017 prohibits distributors from disconnecting residential customers for reasons of non-payment annually between November 15 and April 30, and requires the reconnection of residential customers previously disconnected for non-payment over the same period. The Moratorium removes the risk of disconnection due to non-payment during the winter season. Customer reliance on LEAP funding is therefore mitigated during the Moratorium timeframe.

The rollover of LEAP funds remaining between 2016 and 2019 has provided the LEAP program with increased funding levels each successive year, in addition to the OEB-prescribed distributor contribution.

In accordance with LEAP funding requirements, Hydro Ottawa has annually contributed 0.12% of its OEB-approved distribution service revenue requirement to LEAP since 2012. The proposed contribution for the 2021 Test Year is an estimate. Hydro Ottawa will continue to support the LEAP and any new assistance programs that may be prescribed during the rate period of 2021-2025.

CHARITABLE AND POLITICAL DONATIONS

Hydro Ottawa follows the OEB's Accounting Procedures Handbook ("APH") with respect to charitable and political donations. In accordance with the APH, donations are tracked in the Uniform System of Accounts ("USofA") 6205 and are not included in the revenue requirement for the Test Years.

Only donations specifically for the Low-Income Energy Assistance Program ("LEAP"), as per section 2.4.3.6 of the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications*, as updated on July 12, 2018 and addended on July 15, 2019, are tracked in the USofA Sub-Account 6205 Donations, sub-account LEAP Funding, and are included in the revenue requirement for the Test Years. The OEB has prescribed the LEAP program to provide one-time assistance to eligible low-income consumers towards paying their electricity bills. Please refer to Exhibit 4-2-5: Low-Income Energy Assistance Program for further details on the program.

Table 1 summarizes charitable donations from the 2016-2021 period that are either recoverable or non-recoverable for revenue requirement purposes.

Table 1 – Charitable Donations Summary

Category	Historical			Bridge		Test
	2016	2017	2018	2019	2020	2021
Rate Recovery	$210,054	$218,484	$228,713	$238,069	$240,000	$240,000
Non-Rate Recovery	$321,473	$423,146	$448,788	$454,640	$442,252	$442,375
TOTAL	**$531,527**	**$641,630**	**$677,501**	**$692,709**	**$682,252**	**$682,375**

Hydro Ottawa will adhere to any requirements, as prescribed by the OEB, for the recording of charitable and political donations for any new OEB-approved programs to assist low-income customers.

NON-RECOVERABLE CONTRIBUTIONS

Hydro Ottawa confirms that no political contributions have been included in the revenue requirement for the Test Years. Please see Exhibit 4-2-6: Charitable and Political Donations for further information.

UPDATED DEPRECIATION, AMORTIZATION, DISPOSAL

1. INTRODUCTION

In accordance with section 2.4.4 of the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications,* as updated on July 12, 2018 and addended on July 15, 2019 ("Filing Requirements"), this Schedule seeks to demonstrate that Hydro Ottawa's proposed levels of depreciation and amortization expenses appropriately reflect the useful lives of the utility's assets and the OEB's accounting policies.

2. ANNUAL DEPRECIATION AND AMORTIZATION

In Tables 1 and 2 below, Hydro Ottawa provides details for depreciation by asset group for the Historical Years 2016-2018, Bridge Years 2019-2020, and 2021-2025 Test Years. Both tables have been updated to account for 2019 actuals for the Historical Years 2016-2019, Bridge Year 2020, and Test Years 2021-2025.

Table 1 – AS ORIGINALLY SUBMITTED – Depreciation Expense - Historical & Bridge Years ($'000s)

Asset Group	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year
Land and Buildings	$867	$858	$834	$845	$862
TS Primary Above 50	$3,100	$3,094	$3,058	$3,290	$3,669
Distribution Stations	$3,447	$3,455	$3,890	$4,176	$4,451
Poles, Wires	$12,585	$14,150	$15,847	$17,683	$19,189
Line Transformers	$2,269	$2,513	$2,766	$3,008	$3,188
Services and Meters	$4,573	$5,803	$6,328	$6,587	$6,961
General Plant	$2,286	$2,240	$2,233	$3,652	$3,821
Equipment	$2,611	$3,052	$3,375	$4,069	$4,194
IT Assets	$9,207	$8,036	$10,369	$7,921	$8,230
Other Distribution Assets	$758	$724	$826	$1,230	$1,247
Sub-Total	**$41,703**	**$43,925**	**$49,526**	**$52,460**	**$55,812**
Contributions and Grants	$(1,622)	$(2,262)	$(2,950)	$(3,984)	$(5,089)
TOTAL[1]	**$40,081**	**$41,663**	**$46,576**	**$48,476**	**$50,723**

[1] Totals may not sum due to rounding.

Table 1 – UPDATED FOR 2019 ACTUALS – Depreciation Expense - Historical & Bridge Years ($'000s)

Asset Group	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year
Land and Buildings	$867	$858	$834	$839	$862
TS Primary Above 50	$3,100	$3,094	$3,058	$3,328	$3,669
Distribution Stations	$3,447	$3,455	$3,890	$4,130	$4,451
Poles, Wires	$12,585	$14,150	$15,847	$17,603	$19,189
Line Transformers	$2,269	$2,513	$2,766	$3,024	$3,188
Services and Meters	$4,573	$5,803	$6,328	$6,861	$6,961
General Plant	$2,286	$2,240	$2,233	$3,778	$3,821
Equipment	$2,611	$3,052	$3,375	$4,129	$4,187
IT Assets	$9,207	$8,036	$10,369	$7,757	$8,230
Other Distribution Assets	$758	$724	$826	$1,220	$1,236
Sub-Total	**$41,703**	**$43,925**	**$49,526**	**$52,667**	**$55,793**
Contributions and Grants	$(1,622)	$(2,262)	$(2,950)	$(3,767)	$(5,089)
TOTAL[2]	**$40,081**	**$41,663**	**$46,576**	**$48,900**	**$50,704**

[2] Totals may not sum due to rounding.

Table 2 – AS ORIGINALLY SUBMITTED – Depreciation Expense - Test Years ($'000s)

Asset Group	2021 Test Year	2022 Test Year	2023 Test Year	2024 Test Year	2025 Test Year
Land and Buildings	$878	$994	$1,055	$1,080	$1,107
TS Primary Above 50	$3,758	$4,360	$4,673	$4,811	$5,003
Distribution Stations	$4,463	$4,700	$4,863	$5,001	$5,417
Poles, Wires	$20,986	$22,723	$24,323	$25,834	$27,170
Line Transformers	$3,406	$3,638	$3,855	$4,056	$4,226
Services and Meters	$6,818	$6,367	$6,138	$6,111	$6,332
General Plant	$4,209	$5,136	$5,152	$5,179	$5,222
Equipment	$4,101	$4,742	$5,233	$5,239	$5,121
IT Assets	$9,191	$10,779	$11,237	$11,591	$13,007
Other Distribution Assets	$1,341	$1,432	$1,419	$1,228	$1,227
Sub-Total	**$59,150**	**$64,873**	**$67,948**	**$70,128**	**$73,832**
Contributions and Grants	$(6,700)	$(8,012)	$(8,806)	$(9,417)	$(9,806)
TOTAL[3]	**$52,450**	**$56,860**	**$59,142**	**$60,711**	**$64,027**

[3] Totals may not sum due to rounding.

Table 2 – UPDATED FOR 2019 ACTUALS – Depreciation Expense - Test Years ($'000s)

Asset Group	2021 Test Year	2022 Test Year	2023 Test Year	2024 Test Year	2025 Test Year
Land and Buildings	$878	$994	$1,055	$1,080	$1,107
TS Primary Above 50	$3,758	$4,360	$4,673	$4,811	$5,003
Distribution Stations	$4,463	$4,700	$4,863	$5,001	$5,417
Poles, Wires	$20,986	$22,723	$24,323	$25,834	$27,170
Line Transformers	$3,406	$3,638	$3,855	$4,056	$4,226
Services and Meters	$6,818	$6,367	$6,138	$6,111	$6,332
General Plant	$4,209	$5,136	$5,152	$5,179	$5,222
Equipment	$4,063	$4,693	$5,196	$5,202	$5,085
IT Assets	$9,191	$10,779	$11,237	$11,591	$13,007
Other Distribution Assets	$1,262	$1,321	$1,330	$1,138	$1,137
Sub-Total	**$59,033**	**$64,711**	**$67,822**	**$70,002**	**$73,706**
Contributions and Grants	$(6,700)	$(8,012)	$(8,806)	$(9,417)	$(9,806)
TOTAL[4]	**$52,333**	**$56,699**	**$59,015**	**$60,585**	**$63,900**

For detailed depreciation and amortization expenses, please see the following Attachments:

- Attachment 4-3-1(B): Appendix 2-C: 2016 Depreciation and Amortization Expense
- Attachment 4-3-1(C): Appendix 2-C: 2017 Depreciation and Amortization Expense
- Attachment 4-3-1(D): Appendix 2-C: 2018 Depreciation and Amortization Expense
- UPDATED Attachment 4-3-1(E): Appendix 2-C: 2019 Depreciation and Amortization Expense
- UPDATED Attachment 4-3-1(F): Appendix 2-C: 2020 Depreciation and Amortization Expense
- UPDATED Attachment 4-3-1(G): Appendix 2-C: 2021 Depreciation and Amortization Expense

[4] Totals may not sum due to rounding.

- UPDATED Attachment 4-3-1(H): Appendix 2-C: 2022 Depreciation and Amortization Expense
- UPDATED Attachment 4-3-1(I): Appendix 2-C: 2023 Depreciation and Amortization Expense
- UPDATED Attachment 4-3-1(J): Appendix 2-C: 2024 Depreciation and Amortization Expense
- UPDATED Attachment 4-3-1(K): Appendix 2-C: 2025 Depreciation and Amortization Expense

3. DISPOSITIONS BY ASSET GROUP

In Tables 3 and 4 below, Hydro Ottawa provides details of amortization related to disposals by asset group for the Historical Years (2016-2018), Bridge Years (2019 and 2020), and Test Years (2021-2025).

Table 3 has been updated to account for 2019 actuals, such that it provides details of amortization related to disposals by asset group for the Historical Years (2016-2019) and Bridge Year (2020).

Table 3 – AS ORIGINALLY SUBMITTED – Disposals - Historical Years ($'000s)

Asset Group	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Bridge Year	2020 Bridge Year
Land and Buildings	$(1)	$0	$0	$0	$0
TS Primary Above 50	$0	$0	$0	$0	$0
Distribution Stations	$(2)	$(74)	$(80)	$(106)	$(55)
Poles, Wires	$(75)	$(129)	$(104)	$(271)	$(122)
Line Transformers	$(33)	$(30)	$(5)	$(60)	$(41)
Services and Meters	$(68)	$76	$(499)	$(209)	$(157)
General Plant	$0	$0	$0	$(6,996)	$0
Equipment	$(46)	$(1,235)	$(49)	$(138)	$(93)
IT Assets	$0	$(3,250)	$(133)	$0	$0
Other Distribution Assets	$0	$(184)	$(18)	$(134)	$0
Sub-Total	**$(225)**	**$(4,827)**	**$(888)**	**$(7,915)**	**$(468)**
Contributions and Grants	$0	$0	$0	$0	$0
TOTAL[5]	**$(225)**	**$(4,827)**	**$(888)**	**$(7,915)**	**$(468)**

[5] Totals may not sum due to rounding.

Table 3 – UPDATED FOR 2019 ACTUALS – Disposals - Historical Years ($'000s)

Asset Group	2016 Historical Year	2017 Historical Year	2018 Historical Year	2019 Historical Year	2020 Bridge Year
Land and Buildings	$(1)	$0	$0	$0	$0
TS Primary Above 50	$0	$0	$0	$(623)	$0
Distribution Stations	$(2)	$(74)	$(80)	$(553)	$(55)
Poles, Wires	$(75)	$(129)	$(104)	$(40)	$(122)
Line Transformers	$(33)	$(30)	$(5)	$(397)	$(41)
Services and Meters	$(68)	$76	$(499)	$(275)	$(157)
General Plant	$0	$0	$0	$(7,096)	$0
Equipment	$(46)	$(1,235)	$(49)	$(1,458)	$(93)
IT Assets	$0	$(3,250)	$(133)	$(4,851)	$0
Other Distribution Assets	$0	$(184)	$(18)	$(134)	$0
Sub-Total	**$(225)**	**$(4,827)**	**$(888)**	**$(15,428)**	**$(468)**
Contributions and Grants	$0	$0	$0	$0	$0
TOTAL[6]	**$(225)**	**$(4,827)**	**$(888)**	**$(15,428)**	**$(468)**

[6] Totals may not sum due to rounding.

Table 4 – Disposals - Test Years ($'000s)

Asset Group	2021 Test Year	2022 Test Year	2023 Test Year	2024 Test Year	2025 Test Year
Land and Buildings	$0	$0	$0	$0	$0
TS Primary Above 50	$0	$0	$0	$0	$0
Distribution Stations	$(55)	$(55)	$(55)	$(55)	$(55)
Poles, Wires	$(122)	$(122)	$(122)	$(122)	$(122)
Line Transformers	$(41)	$(41)	$(41)	$(41)	$(41)
Services and Meters	$(762)	$(776)	$(689)	$(738)	$(775)
General Plant	$0	$0	$0	$0	$0
Equipment	$(1,624)	$(1,835)	$(1,413)	$(902)	$(350)
IT Assets	$0	$0	$0	$0	$0
Other Distribution Assets	$0	$0	$0	$0	$0
Sub-Total	**$(2,604)**	**$(2,829)**	**$(2,320)**	**$(1,858)**	**$(1,343)**
Contributions and Grants	$0	$600	$360	$370	$410
TOTAL[7]	**$(2,604)**	**$(2,229)**	**$(1,960)**	**$(1,488)**	**$(933)**

4. DEPRECIATION AND AMORTIZATION RATES

Tables 5 and 6 below provide detailed rates of depreciation and amortization by Uniform System of Accounts ("USofA"). Depreciation and amortization rates will remain unchanged between the Historical/Bridge Years and the Test Years for all Accounts, with the exception of Accounts 1920 and 1930.

[7] Totals may not sum due to rounding.

Table 5 – Property, Plant, and Equipment Depreciation Rates 2016-2020

OEB Acct	Description	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge
1609	Capital Contributions Paid	2.2%	2.2%	2.2%	2.2%	2.2%
1611	Computer Software	10% - 20%	10% - 20%	10% - 20%	10% - 20%	10% - 20%
1612	Land Rights	2%	2%	2%	2%	2%
1805	Land	N/A	N/A	N/A	N/A	N/A
1808	Buildings	1.3% - 3.3%	1.3% - 3.3%	1.3% - 3.3%	1.3% - 3.3%	1.3% - 3.3%
1815	Transformer Station Equip. >50 kV	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%
1820	Distribution Station Equip. <50 kV	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%
1830	Poles, Towers & Fixtures	2.2%	2.2%	2.2%	2.2%	2.2%
1835	Overhead Conductors & Devices	2.2% - 4%	2.2% - 4%	2.2% - 4%	2.2% - 4%	2.2% - 4%
1840	Underground Conduit	2.5%	2.5%	2.5%	2.5%	2.5%
1845	Underground Conductors & Devices	1.7% - 4%	1.7% - 4%	1.7% - 4%	1.7% - 4%	1.7% - 4%
1850	Line Transformers	2.9%	2.9%	2.9%	2.9%	2.9%
1855	Services (Overhead & Underground)	2.2%	2.2%	2.2%	2.2%	2.2%
1860	Meters	6.7%	6.7%	6.7%	6.7%	6.7%
1905	Land	N/A	N/A	N/A	N/A	N/A
1908	Buildings & Fixtures	1.3% - 10%	1.3% - 10%	1.3% - 10%	1.3% - 10%	1.3% - 10%
1915	Office Furniture & Equipment	10%	10%	10%	10%	10%
1920	Computer Equipment - Hardware	10% - 20%	10% - 20%	10% - 20%	10% - 20%	10% - 20%
1930	Transportation Equipment	6.7% - 14.3%	6.7% - 14.3%	6.7% - 14.3%	6.7% - 14.3%	6.7% - 14.3%
1935	Stores Equipment	10%	10%	10%	10%	10%
1940	Tools, Shop & Garage Equipment	10%	10%	10%	10%	10%
1945	Measurement & Testing Equipment	10%	10%	10%	10%	10%
1950	Power Operated Equipment	6.7% - 8.3%	6.7% - 8.3%	6.7% - 8.3%	6.7% - 8.3%	6.7% - 8.3%
1955	Communications Equipment	4% - 12.5%	4% - 12.5%	4% - 12.5%	4% - 12.5%	4% - 12.5%
1960	Miscellaneous Equipment	10%	10%	10%	10%	10%
1970	Load Mgmt Controls Customer Premises	10%	10%	10%	10%	10%
1975	Load Mgmt Controls Utility Premises	10%	10%	10%	10%	10%
1980	System Supervisor Equipment[8]	6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%

[8] Starting in 2017, this account also includes dark fiber, communication underground conduit and chambers, communication support strand and fixture, and communication tower and support.

Table 6 – Property, Plant, and Equipment Depreciation Rate 2021-2025

OEB Acct	Description	2021 Test Year	2022 Test Year	2023 Test Year	2024 Test Year	2025 Test Year
1609	Capital Contributions Paid	2.2%	2.2%	2.2%	2.2%	2.2%
1611	Computer Software	10% - 20%	10% - 20%	10% - 20%	10% - 20%	10% - 20%
1612	Land Rights	2%	2%	2%	2%	2%
1805	Land	N/A	N/A	N/A	N/A	N/A
1808	Buildings	1.3% - 3.3%	1.3% - 3.3%	1.3% - 3.3%	1.3% - 3.3%	1.3% - 3.3%
1815	Transformer Station Equip. >50 kV	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%
1820	Distribution Station Equip. <50 kV	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%
1830	Poles, Towers & Fixtures	2.2%	2.2%	2.2%	2.2%	2.2%
1835	Overhead Conductors & Devices	2.2% - 4%	2.2% - 4%	2.2% - 4%	2.2% - 4%	2.2% - 4%
1840	Underground Conduit	2.5%	2.5%	2.5%	2.5%	2.5%
1845	Underground Conductors & Devices	1.7 %- 4%	1.7 %- 4%	1.7 %- 4%	1.7 %- 4%	1.7 %- 4%
1850	Line Transformers	2.9%	2.9%	2.9%	2.9%	2.9%
1855	Services (Overhead & Underground)	2.2%	2.2%	2.2%	2.2%	2.2%
1860	Meters	6.7%	6.7%	6.7%	6.7%	6.7%
1905	Land	N/A	N/A	N/A	N/A	N/A
1908	Buildings & Fixtures	1.3% - 10%	1.3% - 10%	1.3% - 10%	1.3% - 10%	1.3% - 10%
1915	Office Furniture & Equipment	10%	10%	10%	10%	10%
1920	Computer Equipment - Hardware	10% - 25%	10% - 25%	10% - 25%	10% - 25%	10% - 25%
1930	Transportation Equipment	6.7% - 12.5%	6.7% - 12.5%	6.7% - 12.5%	6.7% - 12.5%	6.7% - 12.5%
1935	Stores Equipment	10%	10%	10%	10%	10%
1940	Tools, Shop & Garage Equipment	10%	10%	10%	10%	10%
1945	Measurement & Testing Equipment	10%	10%	10%	10%	10%
1950	Power Operated Equipment	6.7% - 8.3%	6.7% - 8.3%	6.7% - 8.3%	6.7% - 8.3%	6.7% - 8.3%
1955	Communications Equipment	4.0% -12.5%	4.0% - 12.5%	4.0% - 12.5%	4.0% - 12.5%	4.0% - 12.5%
1960	Miscellaneous Equipment	10%	10%	10%	10%	10%
1970	Load Mgmt Controls Customer Premises	10%	10%	10%	10%	10%
1975	Load Mgmt Controls Utility Premises	10%	10%	10%	10%	10%
1980	System Supervisor Equipment	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%	2.2% - 6.7%

The useful lives of Hydro Ottawa's assets and components have been determined based on experience, professional judgement, failure data, and local conditions. Some useful lives differ when compared to the useful life range noted in the Kinectrics Report.[9] However, the useful lives of Hydro Ottawa's assets have been approved in previous rate applications. The utility has therefore continued to depreciate its fixed assets using the same methodology and useful lives as in prior years.

For further details on the useful lives of Hydro Ottawa's assets, please reference Attachment 4-3-1(A): OEB Appendix 2-BB - Service Life Comparison.

As indicated in Exhibit 2-4-4: Capitalization Policy, Hydro Ottawa is requesting to change the useful life of laptops from five years to four years. The useful life for Computer Equipment (Hardware) contained in the Kinectrics Report is three to five years.

Hydro Ottawa is also requesting to extend the useful life of some transportation equipment. Please refer to Attachment 2-4-3(F): Fleet Replacement Program for further details.

There are variances between the depreciation and amortization calculated using the formulas in the annual UPDATED Appendix 2-C[10] and those presented in the annual UPDATED Appendix 2-BA.[11] Hydro Ottawa uses the half-year rule for calculating depreciation/amortization in the year that capital additions are added to the rate base, for both actual and budgeted pooled assets. However, in the case of discrete material assets (e.g. a station, major investment in IT assets, and so forth), the actual or forecasted in-service month would be used to calculate the depreciation/amortization. This is consistent with Hydro Ottawa's historical practices for these types of assets, for both rate application and financial reporting purposes.

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[9] Kinetrics Inc., *Asset Depreciation Study for Use by Electricity Distributors*, EB-2010-0178 (July 8, 2010).
[10] The OEB's Appendix 2-C for the years 2016-2025 can be found in Attachments 4-3-1(B)-(K), respectively. Appendix 2-C for the years 2019-2025 has been updated to account for 2019 actuals, and can be found in UPDATED Attachments 4-3-1(E)-(K), respectively.
[11] The OEB's Appendix 2-BA for the years 2016-2025 can be found in Attachments 2-2-1(A)-(J), respectively. Appendix 2-BA for the years 2019-2025 has been updated to account for 2019 actuals, and can be found in UPDATED Attachments 2-2-1(D)-(J), respectively.

Hydro Ottawa uses its financial system to calculate depreciation and amortization expense on assets that are already in service, and uses a depreciation forecast model to calculate depreciation and amortization on budgeted capital additions. Both the financial system and forecast model incorporate actual in-service dates of discrete material assets in the calculation. Hydro Ottawa proposes to continue this method of calculating depreciation for the 2021-2025 period.

5. NET GAIN/LOSS ON DISPOSITION

In Hydro Ottawa's last rebasing application,[12] the OEB approved the establishment of USofA 4362 Loss from Retirement of Utility and Other Property to record the difference between the forecast and actual loss on the disposal of fixed assets related to retirement of assets or damages to plant. Table 7 below provides the balance in USofA 4362 for the Historical Years (2016-2018) and Bridge Years (2019 and 2020). The table has been updated to provide the balance in USofA 4362 for the Historical Years (2016-2019) and Bridge Year (2020).

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

Table 7 – AS ORIGINALLY SUBMITTED – Loss from Retirement of Utility and Other Property ($'000s)

Net (Gain)/Loss	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge	TOTAL
USofA 4362 OEB-Approved	$(198)	$(198)	$(198)	$(198)	$(198)	**$(990)**
USofA 4362 Actual	$350	$152	$264	$1,164	$301	**$2,231**
USofA 1508[13] *Variance*[14]	*$(548)*	*$(351)*	*$(462)*	*$(1,362)*	*$(499)*	***$(3,221)***

Table 7 – UPDATED FOR 2019 ACTUALS – Loss from Retirement of Utility and Other Property ($'000s)

Net (Gain)/Loss	2016 Historical	2017 Historical	2018 Historical	2019 Historical	2020 Bridge	TOTAL
USofA 4362 OEB-Approved	$(198)	$(198)	$(198)	$(198)	$(198)	**$(990)**
USofA 4362 Actual	$350	$152	$264	$1,984	$301	**$3,051**
USofA 1508[15] *Variance*[16]	*$(548)*	*$(351)*	*$(462)*	*$(2,183)*	*$(499)*	***$(4,043)***

The 2019 forecast net gain in Table 7 does not include the net gain on the sale of the Albion land and building, nor the net gain on the sale of the Merivale land and building. Similarly, the net gain in the updated version of Table 7 that accounts for 2019 actuals does not include the net gain on the sale of the Albion or the Merivale lands and buildings. As per the Approved Settlement Agreement governing Hydro Ottawa's 2016-2020 rate term, the utility is recording the net gain from the sale of these facilities in a separate regulatory account (Gains/Losses from Sale of Existing Facilities Deferral account), which captures 100% of the after tax net gain/loss on the sale of the facilities.

In UPDATED Exhibit 9-1-3: Group 2 Accounts, Hydro Ottawa is seeking the continuance of the net gain/loss on fixed assets variance account. Table 8 below provides the annual forecast amounts for the 2021-2025 Test Years.

[13] This refers to USofA 1508 Sub-Account Gains and Loss on Disposal of Fixed Assets Variance Account.
[14] Totals may not sum due to rounding.
[15] This refers to USofA 1508 Sub-Account Gains and Loss on Disposal of Fixed Assets Variance Account.
[16] Totals may not sum due to rounding.

Table 8 – Loss from Retirement of Utility and Other Property ($'000s)

Net (Gain)/Loss	2021 Test	2022 Test	2023 Test	2024 Test	2025 Test	TOTAL
Forecast	$389	$751	$323	$336	$445	**$2,243**

6. ASSET RETIREMENT OBLIGATION

According to the International Financial Reporting Standards and Article 410 of the OEB's *Accounting Procedures Handbook*, an entity is required to recognize a liability related to the retirement of certain fixed assets typically as a result of environmental laws or regulations. This obligation – referred to as an asset retirement obligation ("ARO") – is measured at the present value of future decommissioning, restoration, or similar cost.

Hydro Ottawa maintains an ARO related to the disposal and removal cost of Polychlorinated Biphenyls in its distribution equipment. The amount of the obligation and related depreciation expense in Historical and Bridge Years are shown in Table 9.

Table 9 – AS ORIGINALLY SUBMITTED – Asset Retirement Obligation ($'000s)

Net (Gain)/Loss	2016 Historical	2017 Historical	2018 Historical	2019 Bridge	2020 Bridge
ARO	$(206)	$(107)	$(62)	$0	$0
Related depreciation expense	$36	$36	$36	$36	$36

Table 9 – UPDATED FOR 2019 ACTUALS – Asset Retirement Obligation ($'000s)

Net (Gain)/Loss	2016 Historical	2017 Historical	2018 Historical	2019 Historical	2020 Bridge
ARO	$(206)	$(107)	$(62)	$0	$0
Related depreciation expense	$36	$36	$36	$36	$36

Appendix 2-BB
Service Life Comparison
Table F-1 from Kinetrics Report1

Parent*	#	Asset Details: Category| Component | Type			Useful Life: MIN UL	TUL	MAX UL	USoA Account Number	USoA Account Description	Current: Years	Current: Rate	Proposed: Years	Proposed: Rate	Outside Range of Min, Max TUL? Below Min TUL	Above Max TUL
OH	1	Fully Dressed Wood Poles	Overall		35	45	75	1830	Poles, Towers & Fixtures	45	2%				
			Cross Arm	Wood	20	40	55								
				Steel	30	70	95								
	2	Fully Dressed Concrete Poles	Overall		50	60	80								
			Cross Arm	Wood	20	40	55								
				Steel	30	70	95								
	3	Fully Dressed Steel Poles	Overall		60	60	80								
			Cross Arm	Wood	20	40	55								
				Steel	30	70	95								
	4	OH Line Switch			30	45	55								
	5	OH Line Switch Motor			15	25	25								
	6	OH Line Switch RTU			15	20	20	1970	Load Management Controls Customer P	10	10%				
	7	OH Integral Switches			35	45	60								
	8	OH Conductors			50	60	75	1835	Overhead Conductors & Devices	45	2%				
	9	OH Transformers & Voltage Regulators			30	40	60								
	10	OH Shunt Capacitor Banks			25	30	40								
	11	Reclosers			25	40	55	1835	Overhead Conductors & Devices	25	4%				
TS & MS	12	Power Transformers	Overall		30	45	60	1850	Line Transformers	35	3%				
			Bushing		10	20	30								
			Tap Changer		20	30	60								
	13	Station Service Transformer			30	45	55	1820	Distribution Station Equipment <50 kV	45	2%				
	14	Station Grounding Transformer			30	40	40								
	15	Station DC System	Overall		10	20	30								
			Battery Bank		10	15	15								
			Charger		20	20	30								
	16	Station Metal Clad Switchgear	Overall		30	40	60	1820	Distribution Station Equipment <50 kV	40	3%				
			Removable Breaker		25	40	60								
	17	Station Independent Breakers			35	45	65	1820	Distribution Station Equipment <50 kV	25	4%				
	18	Station Switch			30	50	60								
	19	Electromechanical Relays			25	35	50								
	20	Solid State Relays			10	30	45								
	21	Digital & Numeric Relays			15	20	20								
	22	Rigid Busbars			30	55	60								
	23	Steel Structure			35	50	90								
UG	24	Primary Paper Insulated Lead Covered (PILC) Cables			60	65	75	1845	Underground Conductors & Devices	60	2%				
	25	Primary Ethylene-Propylene Rubber (EPR) Cables			20	25	25								
	26	Primary Non-Tree Retardant (TR) Cross Linked Polyethylene (XLPE) Cables Direct Buried			20	25	30								
	27	Primary Non-TR XLPE Cables in Duct			20	25	30								
	30	Secondary PILC Cables			70	75	80								
	31	Secondary Cables Direct Buried			25	35	40								
	32	Secondary Cables in Duct			35	40	60								
	33	Network Tranformers	Overall		20	35	50								
			Protector		20	35	40								
	34	Pad-Mounted Transformers			25	40	45								
	35	Submersible/Vault Transformers			25	35	45	1850	Line Transformers	35	3%				
	36	UG Foundation			35	55	70	1840	Underground Conduit	40	3%				
	37	UG Vaults	Overall		40	60	80								
			Roof		20	30	45								
	38	UG Vault Switches			20	35	50	1845	Underground Conductors & Devices	25	4%				
	39	Pad-Mounted Switchgear			20	30	45								
	40	Ducts			30	50	85								
	41	Concrete Encased Duct Banks			35	55	80								
	42	Cable Chambers			50	60	80								
S	43	Remote SCADA			15	20	30	1980	System Supervisor Equipment	15	7%				

Table F-2 from Kinetrics Report1

#	Asset Details: Category| Component | Type		Useful Life Range		USoA Account Number	USoA Account Description	Current: Years	Current: Rate	Proposed: Years	Proposed: Rate	Outside Range of Min, Max TUL? Below Min Range	Above Max Range
1	Office Equipment		5	15	1915	Office Furniture & Equipment	10	10%				
2	Vehicles	Trucks & Buckets	5	15	1930	Transportation Equipment	12	8%				
		Trailers	5	20	1930	Transportation Equipment	15	7%				
		Vans	5	10	1930	Transportation Equipment	7	14%	8	13%	No	No
3	Administrative Buildings		50	75	1908	Buildings & Fixtures	75	1%				
4	Leasehold Improvements		Lease dependent									
5	Station Buildings	Station Buildings	50	75	1808	Buildings	75	1%				
		Parking	25	30	1808	Buildings	30	3%				
		Fence	25	60	1808	Buildings	30	3%				
		Roof	20	30	1808	Buildings	30	3%				
6	Computer Equipment	Hardware	3	5	1920	Computer Equipment - Hardware	5	20%	4	25%	No	No
		Software	2	5	1611	Computer Software	7.5	13%				
7	Equipment	Power Operated	5	10	1950	Power Operated Equipment	13.5	7%				
		Stores	5	10	1935	Stores Equipment	10	10%				
		Tools, Shop, Garage Equipment	5	10	1940	Tools, Shop & Garage Equipment	10	10%				
		Measurement & Testing Equipment	5	10	1945	Measurement & Testing Equipment	10	10%				
8	Communication	Towers	60	70								
		Wireless	2	10	1955	Communications Equipment	8	13%				
9	Residential Energy Meters		25	35								
10	Industrial/Commercial Energy Meters		25	35								
11	Wholesale Energy Meters		15	30	1820	Distribution Station Equipment <50 kV	15	7%				
12	Current & Potential Transformer (CT & PT)		35	50								
13	Smart Meters		5	15	1860	Meters (Smart Meters)	15	7%				
14	Repeaters - Smart Metering		10	15								
15	Data Collectors - Smart Metering		15	20								

TS & MS = Transformer and Municipal Stations UG = Underground Systems S = Monitoring and Control Systen

Note 1: Tables F-1 and F-2 above are to be used as a reference in order to complete columns J, K, L and N.
See pages 17-19 of Kinetrics Report

Appendix 2-C
Depreciation and Amortization Expense

This appendix is to be completed in conjunction with the accounting instructions in Appendix 2-B

Scenario that applies	Applicable Years and Accounting Standard	Year Reflected in Schedule Below	Accounting Standard Reflected in Schedule Below
Rebasing for the first time with depreciation policy changes made in 2012.	This appendix must be duplicated and completed for the years 2012 to 2021. The appendix for 2012 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2012 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Rebasing for the first time with depreciation policy changes made in 2013.	This appendix must be duplicated and completed for the years 2013 to 2021. The appendix for 2013 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2013 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased with depreciation policy changes in a prior rate application and rebasing MIFRS for the first time.	This appendix must be completed for 2014 to 2021. The appendix for 2014 is to be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased under MIFRS in a prior rate application	This appendix must be completed under MIFRS for each year for the earlier of: 1) all historical years back to its last rebasing; or 2) at least three years of historical actuals, in addition to Bridge Year and Test Year forecasts.	2016	MIFRS

		Book Values							Service Lives				Depreciation Expense					
Account	Description	Opening Net Book Value of Existing Assets as at Date of Policy Change (Jan. 1) 1	Less Fully Depreciated 7	Net Amount of Existing Assets Before Policy Change to be Depreciated	Opening Gross Book Value of Assets Acquired After Policy Change 2	Less Fully Depreciated 8	Net Amount of Assets Acquired After Policy Change to be Depreciated	Current Year Additions	Average Remaining Life of Assets Existing Before Policy Change 3	Depreciation Rate Assets Acquired After Policy Change	Life of Assets Acquired After Policy Change 4	Depreciation Rate on New Additions	Depreciation Expense on Assets Existing Before Policy Change	Depreciation Expense on Assets Acquired After Policy Change	Depreciation Expense on Current Year Additions 5	Total Current Year Depreciation Expense	Depreciation Expense per Appendix 2-BA Fixed Assets, Column J	Variance 6
		a	b	c = a-b	d	e	f = d- e	g	h	i = 1/h	j	k = 1/j	l = c/h	m = f/j	n = g*0.5/j	o = l+m+n	p	q = p-o
1611	Computer Software (Formally known as Account 1925)			$ -	$ 49,841,304	$ 809,318	$ 49,031,986	$ 2,116,356		0.00%	6.00	16.67%	$ -	$ 8,171,998	$ 176,363	$ 8,348,361	$ 7,775,205	-$ 573,156
1612	Land Rights (Formally known as Account 1906)			$ -	$ 1,809,831		$ 1,809,831	$ 472,925		0.00%	38.74	2.58%	$ -	$ 46,717	$ 6,104	$ 52,821	$ 58,928	$ 6,107
1805	Land			$ -	$ 4,626,006		$ 4,626,006	$ 18,883		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1808	Buildings			$ -	$ 27,181,307	$ 23,697	$ 27,157,610	$ 548,125		0.00%	43.44	2.30%	$ -	$ 625,175	$ 6,309	$ 631,484	$ 807,905	$ 176,421
1810	Leasehold Improvements			$ -			$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV			$ -	$ 86,332,769	$ 136,035	$ 86,196,734	$ 410,684		0.00%	24.21	4.13%	$ -	$ 3,560,377	$ 8,482	$ 3,568,859	$ 3,100,415	-$ 468,444
1820	Distribution Station Equipment <50 kV			$ -	$ 82,697,721	$ 1,891,731	$ 80,805,990	$ 7,359,391		0.00%	22.66	4.41%	$ -	$ 3,566,019	$ 162,387	$ 3,728,406	$ 3,447,469	-$ 280,937
1825	Storage Battery Equipment			$ -			$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures			$ -	$ 94,688,479		$ 94,688,479	$ 13,113,345		0.00%	41.31	2.42%	$ -	$ 2,292,144	$ 158,719	$ 2,450,863	$ 2,600,754	$ 149,891
1835	Overhead Conductors & Devices			$ -	$ 86,852,500		$ 86,852,500	$ 13,529,221		0.00%	31.34	3.19%	$ -	$ 2,771,299	$ 215,846	$ 2,987,145	$ 2,508,355	-$ 478,790
1840	Underground Conduit			$ -	$ 104,216,636		$ 104,216,636	$ 19,247,873		0.00%	35.05	2.85%	$ -	$ 2,973,370	$ 274,577	$ 3,247,948	$ 3,522,363	$ 274,415
1845	Underground Conductors & Devices			$ -	$ 101,480,101	$ 143,925	$ 101,336,176	$ 20,556,281		0.00%	31.75	3.15%	$ -	$ 3,191,691	$ 323,721	$ 3,515,412	$ 3,953,829	$ 438,417
1850	Line Transformers			$ -	$ 63,029,800		$ 63,029,800	$ 8,007,899		0.00%	29.90	3.34%	$ -	$ 2,108,020	$ 133,911	$ 2,241,931	$ 2,268,951	$ 27,020
1855	Services (Overhead & Underground)			$ -	$ 48,210,872		$ 48,210,872	$ 5,653,381		0.00%	37.22	2.69%	$ -	$ 1,295,295	$ 75,945	$ 1,371,240	$ 1,446,998	$ 75,758
1860	Meters			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1860	Meters (Smart Meters)			$ -	$ 36,737,909		$ 36,737,909	$ 1,977,455		0.00%	12.53	7.98%	$ -	$ 2,931,996	$ 78,909	$ 3,010,905	$ 3,126,447	$ 115,542
1905	Land			$ -	$ 20,355,841		$ 20,355,841			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1908	Buildings & Fixtures			$ -	$ 32,045,065	$ 3,152	$ 32,041,913	$ 281,924		0.00%	19.01	5.26%	$ -	$ 1,685,529	$ 7,415	$ 1,692,945	$ 1,834,915	$ 141,970
1910	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)			$ -	$ 1,257,807	$ 19,595	$ 1,238,212	$ 72,286		0.00%	5.69	17.57%	$ -	$ 217,612	$ 6,352	$ 223,964	$ 224,732	$ 768
1915	Office Furniture & Equipment (5 years)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 22/04)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)			$ -	$ 6,691,379	$ 495,167	$ 6,196,212	$ 654,364		0.00%	4.35	22.99%	$ -	$ 1,424,417	$ 75,214	$ 1,499,631	$ 1,431,505	-$ 68,126
1930	Transportation Equipment			$ -	$ 12,022,868	$ 2,847	$ 12,020,021	$ 1,696,026		0.00%	10.92	9.16%	$ -	$ 1,100,735	$ 77,657	$ 1,178,391	$ 1,215,782	$ 37,391
1935	Stores Equipment			$ -	$ 5,728	$ 5,728	$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1940	Tools, Shop & Garage Equipment			$ -	$ 3,690,030	$ 111,935	$ 3,578,095	$ 373,472		0.00%	6.10	16.39%	$ -	$ 586,573	$ 30,612	$ 617,185	$ 574,962	-$ 42,223
1945	Measurement & Testing Equipment			$ -	$ 228,830	$ 1,778	$ 227,052			0.00%	7.87	12.71%	$ -	$ 28,850	$ -	$ 28,850	$ 27,262	-$ 1,588
1950	Power Operated Equipment			$ -	$ 1,044,717		$ 1,044,717	$ 2,207,170		0.00%	15.00	6.67%	$ -	$ 69,648	$ 73,572	$ 143,220	$ 166,365	$ 23,145
1955	Communications Equipment			$ -	$ 1,933,886		$ 1,933,886	$ 1,367,875		0.00%	8.00	12.50%	$ -	$ 241,736	$ 85,492	$ 327,228	$ 364,703	$ 37,475
1955	Communication Equipment (Smart Meters)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment			$ -	$ 240,794	$ 483	$ 240,311	$ 7,903		0.00%	6.77	14.77%	$ -	$ 35,496	$ 584	$ 36,080	$ 36,676	$ 596
1970	Load Management Controls Customer Premises			$ -	$ 134,245		$ 134,245			0.00%	5.00	20.00%	$ -	$ 26,849	$ -	$ 26,849	$ 27,781	$ 932
1975	Load Management Controls Utility Premises			$ -	$ 17,974		$ 17,974			0.00%	5.00	20.00%	$ -	$ 3,595	$ -	$ 3,595	$ 3,587	-$ 8
1980	System Supervisor Equipment			$ -	$ 6,357,821		$ 6,357,821	$ 459,021		0.00%	9.14	10.94%	$ -	$ 695,604	$ 25,111	$ 720,715	$ 725,758	$ 5,043
1985	Miscellaneous Fixed Assets			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
2440	Contributions & Grants			$ -	-$ 48,553,292		-$ 48,553,292	-$ 21,578,316		0.00%	41.32	2.42%	$ -	-$ 1,175,055	-$ 261,112	-$ 1,436,168	-$ 1,621,618	-$ 185,450
1609	Capital Contributions Paid				$ 17,044,761		$ 17,044,761	$ 3,044,490		0.00%	44.52	2.25%	$ -	$ 382,856	$ 34,192	$ 417,049	$ 451,192	$ 34,143
	Total	$ -	$ -	$ -	$ 842,223,689	$ 3,645,391	$ 838,578,298	$ 81,598,034					$ -	$ 38,858,546	$ 1,776,363	$ 40,634,909	$ 40,081,221	-$ 553,688

General: Applicants are to complete this appendix to show the reasonability of the depreciation expense that is included in rate base via. Accumulated depreciation and the revenue requirement.
Applicants must provide a breakdown of depreciation and amortization expense in the above format for all relevant accounts. Balances presented in the table should exclude asset retirement obligations (AROs) and the related depreciation and accretion expense. These should be disclosed separately consistent with the Notes of historical Audited Financial

Notes:

1 This is the net book value of assets that existed as at the date of the utility's change in depreciation policies (i.e. as at Jan. 1, 2012 or Jan. 1, 2013). These assets are to be depreciated at the average remaining service life. This amount will not change in years subsequent to the date of the utility's change in depreciation policies. This column is expected to be used until the assets that existed as at the date of the utility's change in depreciation policies are fully depreciated.

2 This is the opening gross book value of assets that have been acquired after the date of the utility's change in depreciation policies (i.e. additions starting in 2012/2013 for those who changed policies Jan. 1, 2012/2013). These assets are to be depreciated at the revised service life. The amount is expected to be equal to the opening gross book value of the prior year plus the prior year's additions.

3 A recalculation should be performed to determine the average remaining life of opening balance of assets (i.e. excluding current year's additions) under the change in policies under CGAAP. For example, Asset A had a useful life of 20 years under CGAAP without the change in policies. On January 1 of the year of policy changes, Asset A was 3 years depreciated. As a result, Asset A would have a remaining service life of 17 years (20 years less 3 years) as at January 1 of the year of policy changes. Due to making the change in policies under CGAAP, management re-assessed the asset useful lives and concluded that the revised useful life of Asset A is now 30 years. Therefore, the average remaining useful life of the opening balance of Asset A is determined to be 27 years (30 years less 3 years) under the revised CGAAP as at January 1 of the year of policy changes.

4 The useful life used should be consistent with the OEB's regulatory accounting policies as set out in the Accounting Procedures Handbook for Electricity Distributors, effective Jan. 1, 2012 and also with the Report of the Board, Transition to International Financial Reporting Standards, EB-2008-0408, and the Kinectrics Report.
5 OEB policy of the "half-year" rule - the applicant must ensure that additions in the year attract a half-year depreciation expense in the first year. Deviations from this standard practice must be supported in the application.
6 The applicant must provide an explanation of material variances in evidence.
7 This should include assets in column A (excel column C) that become fully depreciated since the date of the policy change. The amount input in b (excel column D) should equal the net book value of the asset as at the date of depreciation policy change
8 This should include assets in column D (excel column F) that have become fully depreciated. The amount input in e (excel column G) should equal the gross book value of the asset

Appendix 2-C
Depreciation and Amortization Expense

This appendix is to be completed in conjunction with the accounting instructions in Appendix 2-B

Scenario that applies	Applicable Years and Accounting Standard	Year Reflected in Schedule Below	Accounting Standard Reflected in Schedule Below
Rebasing for the first time with depreciation policy changes made in 2012.	This appendix must be duplicated and completed for the years 2012 to 2021. The appendix for 2012 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2012 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Rebasing for the first time with depreciation policy changes made in 2013.	This appendix must be duplicated and completed for the years 2013 to 2021. The appendix for 2013 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2013 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased with depreciation policy changes in a prior rate application and rebasing MIFRS for the first time.	This appendix must be completed for 2014 to 2021. The appendix for 2014 is to be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased under MIFRS in a prior rate application	This appendix must be completed under MIFRS for each year for the earlier of: 1) all historical years back to its last rebasing; or 2) at least three years of historical actuals, in addition to Bridge Year and Test Year forecasts.	2017	MIFRS

		Book Values							Service Lives				Depreciation Expense					
Account	Description	Opening Net Book Value of Existing Assets as at Date of Policy Change (Jan. 1) 1	Less Fully Depreciated 7	Net Amount of Existing Assets Before Policy Change to be Depreciated	Opening Gross Book Value of Assets Acquired After Policy Change 2	Less Fully Depreciated 8	Net Amount of Assets Acquired After Policy Change to be Depreciated	Current Year Additions	Average Remaining Life of Assets Existing Before Policy Change 3	Depreciation Rate Assets Acquired After Policy Change	Life of Assets Acquired After Policy Change 4	Depreciation Rate on New Additions	Depreciation Expense on Assets Existing Before Policy Change	Depreciation Expense on Assets Acquired After Policy Change	Depreciation Expense on Current Year Additions 5	Total Current Year Depreciation Expense	Depreciation Expense per Appendix 2-BA Fixed Assets, Column J	Variance 6
		a	b	c = a-b	d	e	f = d- e	g	h	i = 1/h	j	k = 1/j	l = c/h	m = f/j	n = g*0.5/j	o = l+m+n	p	q = p-o
1611	Computer Software (Formally known as Account 1925)			$ -	$ 51,957,660	$ 3,970,777	$ 47,986,883	$14,077,258		0.00%	9.53	10.49%	$ -	$ 5,035,350	$ 738,576	$ 5,773,926	$ 6,656,426	$ 882,500
1612	Land Rights (Formally known as Account 1906)			$ -	$ 2,282,756		$ 2,282,756	$ 10,866		0.00%	38.73	2.58%	$ -	$ 58,940	$ 140	$ 59,081	$ 59,224	$ 143
1805	Land			$ -	$ 4,644,889		$ 4,644,889	$ 4,136		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1808	Buildings			$ -	$ 27,727,474	$ 42,644	$ 27,684,830	$ 1,074,355		0.00%	44.58	2.24%	$ -	$ 621,015	$ 12,050	$ 633,064	$ 798,585	$ 165,521
1810	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV			$ -	$ 86,743,453	$ 162,986	$ 86,580,467	$ 42,575		0.00%	24.24	4.13%	$ -	$ 3,571,801	$ 878	$ 3,572,680	$ 3,093,977	-$ 478,703
1820	Distribution Station Equipment <50 kV			$ -	$ 90,030,683	$ 2,461,951	$ 87,568,732	$15,638,328		0.00%	26.38	3.79%	$ -	$ 3,319,512	$ 296,405	$ 3,615,917	$ 3,455,058	-$ 160,859
1825	Storage Battery Equipment			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures			$ -	$ 107,430,430		$ 107,430,430	$10,488,904		0.00%	41.06	2.44%	$ -	$ 2,616,425	$ 127,727	$ 2,744,152	$ 2,857,270	$ 113,118
1835	Overhead Conductors & Devices			$ -	$ 99,985,646	$ 16,838	$ 99,968,808	$ 8,952,322		0.00%	42.00	2.38%	$ -	$ 2,380,210	$ 106,575	$ 2,486,785	$ 2,754,959	$ 268,174
1840	Underground Conduit			$ -	$ 123,464,509		$ 123,464,509	$21,209,894		0.00%	36.00	2.78%	$ -	$ 3,429,570	$ 294,582	$ 3,724,152	$ 4,018,835	$ 294,683
1845	Underground Conductors & Devices			$ -	$ 121,890,948	$ 275,855	$ 121,615,093	$21,522,450		0.00%	28.27	3.54%	$ -	$ 4,301,913	$ 380,659	$ 4,682,572	$ 4,518,705	-$ 163,867
1850	Line Transformers			$ -	$ 70,722,370		$ 70,722,370	$ 8,756,851		0.00%	30.31	3.30%	$ -	$ 2,333,302	$ 144,455	$ 2,477,756	$ 2,512,829	$ 35,073
1855	Services (Overhead & Underground)			$ -	$ 53,864,253		$ 53,864,253	$ 7,169,843		0.00%	38.48	2.60%	$ -	$ 1,399,799	$ 93,163	$ 1,492,962	$ 1,585,895	$ 92,933
1860	Meters			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$-	$ -
1860	Meters (Smart Meters)			$ -	$ 38,425,965		$ 38,425,965	$ 2,319,101		0.00%	9.00	11.11%	$ -	$ 4,269,552	$ 128,839	$ 4,398,391	$ 4,217,004	-$ 181,387
1905	Land			$ -	$ 20,355,841		$ 20,355,841	$ 203,701		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1908	Buildings & Fixtures			$ -	$ 32,326,989	$ 6,421	$ 32,320,568	$ 106,364		0.00%	19.15	5.22%	$ -	$ 1,687,758	$ 2,777	$ 1,690,535	$ 1,788,731	$ 98,196
1910	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)			$ -	$ 1,330,093	$ 51,162	$ 1,278,931	$ 77,259		0.00%	5.87	17.04%	$ -	$ 217,876	$ 6,581	$ 224,457	$ 194,462	-$ 29,995
1915	Office Furniture & Equipment (5 years)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 22/04)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)			$ -	$ 7,345,743		$ 7,345,743	$ 1,645,665		0.00%	5.00	20.00%	$ -	$ 1,469,149	$ 164,567	$ 1,633,715	$ 1,380,126	-$ 253,589
1930	Transportation Equipment			$ -	$ 13,565,710	$ 119,417	$ 13,446,293	$ 3,799,293		0.00%	10.00	10.00%	$ -	$ 1,344,629	$ 189,965	$ 1,534,594	$ 1,654,303	$ 119,709
1935	Stores Equipment			$ -	$ 5,728		$ 5,728			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1940	Tools, Shop & Garage Equipment			$ -	$ 4,063,502		$ 4,063,502	$ 319,444		0.00%	7.40	13.51%	$ -	$ 549,122	$ 21,584	$ 570,706	$ 478,984	-$ 91,722
1945	Measurement & Testing Equipment			$ -	$ 228,830		$ 228,830	$ 1,024		0.00%	8.71	11.48%	$ -	$ 26,272	$ 59	$ 26,331	$ 24,724	-$ 1,607
1950	Power Operated Equipment			$ -	$ 3,251,887		$ 3,251,887	-$ 2,187,918		0.00%	15.00	6.67%	$ -	$ 216,792	-$ 72,931	$ 143,862	-$ 70,641	-$ 214,503
1955	Communications Equipment			$ -	$ 3,301,761		$ 3,301,761	$ 5,668,530		0.00%	8.00	12.50%	$ -	$ 412,720	$ 354,283	$ 767,003	$ 734,781	-$ 32,222
1955	Communication Equipment (Smart Meters)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment			$ -	$ 248,697		$ 248,697	$ 12,813		0.00%	6.94	14.41%	$ -	$ 35,835	$ 923	$ 36,758	$ 36,041	-$ 717
1970	Load Management Controls Customer Premises			$ -	$ 134,245	$ 122,866	$ 11,379			0.00%	5.00	20.00%	$ -	$ 2,276	$ -	$ 2,276	$ 1,613	-$ 663
1975	Load Management Controls Utility Premises			$ -	$ 17,974		$ 17,974			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1980	System Supervisor Equipment			$ -	$ 6,816,842		$ 6,816,842	$ 1,084,733		0.00%	10.40	9.62%	$ -	$ 655,466	$ 52,151	$ 707,616	$ 722,352	$ 14,736
1985	Miscellaneous Fixed Assets			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
2440	Contributions & Grants			$ -	-$ 70,131,608		-$ 70,131,608	-$24,998,607		0.00%	40.00	2.50%	$ -	-$ 1,753,290	-$ 312,483	-$ 2,065,773	-$ 2,262,065	-$ 196,292
1609	Capital Contributions Paid				$ 20,089,251		$ 20,089,251	$ 686,500		0.00%	45.62	2.19%	$ -	$ 440,361	$ 7,524	$ 447,885	$ 451,404	$ 3,519
	Total	$ -	$ -	$ -	$ 922,122,521	$ 7,230,917	$ 914,891,604	$ 97,685,684					$ -	$ 38,642,354	$ 2,739,048	$ 41,381,402	$ 41,663,582	$ 282,180

General: Applicants are to complete this appendix to show the reasonability of the depreciation expense that is included in rate base via. Accumulated depreciation and the revenue requirement.
Applicants must provide a breakdown of depreciation and amortization expense in the above format for all relevant accounts. Balances presented in the table should exclude asset retirement obligations (AROs) and the related depreciation and accretion expense. These should be disclosed separately consistent with the Notes of historical Audited Financial

Notes:

1 This is the net book value of assets that existed as at the date of the utility's change in depreciation policies (i.e. as at Jan. 1, 2012 or Jan. 1, 2013). These assets are to be depreciated at the average remaining service life. This amount will not change in years subsequent to the date of the utility's change in depreciation policies. This column is expected to be used until the assets that existed as at the date of the utility's change in depreciation policies are fully depreciated.

2 This is the opening gross book value of assets that have been acquired after the date of the utility's change in depreciation policies (i.e. additions starting in 2012/2013 for those who changed policies Jan. 1, 2012/2013). These assets are to be depreciated at the revised service life. The amount is expected to be equal to the opening gross book value of the prior year plus the prior year's additions.

3 A recalculation should be performed to determine the average remaining life of opening balance of assets (i.e. excluding current year's additions) under the change in policies under CGAAP. For example, Asset A had a useful life of 20 years under CGAAP without the change in policies. On January 1 of the year of policy changes, Asset A was 3 years depreciated. As a result, Asset A would have a remaining service life of 17 years (20 years less 3 years) as at January 1 of the year of policy changes. Due to making the change in policies under CGAAP, management re-assessed the asset useful lives and concluded that the revised useful life of Asset A is now 30 years. Therefore, the average remaining useful life of the opening balance of Asset A is determined to be 27 years (30 years less 3 years) under the revised CGAAP as at January 1 of the year of policy changes.

4 The useful life used should be consistent with the OEB's regulatory accounting policies as set out in the Accounting Procedures Handbook for Electricity Distributors, effective Jan. 1, 2012 and also with the Report of the Board, Transition to International Financial Reporting Standards, EB-2008-0408, and the Kinectrics Report.

5 OEB policy of the "half-year" rule - the applicant must ensure that additions in the year attract a half-year depreciation expense in the first year. Deviations from this standard practice must be supported in the application.

6 The applicant must provide an explanation of material variances in evidence.

7 This should include assets in column A (excel column C) that become fully depreciated since the date of the policy change. The amount input in b (excel column D) should equal the net book value of the asset as at the date of depreciation policy change

8 This should include assets in column D (excel column F) that have become fully depreciated. The amount input in e (excel column G) should equal the gross book value of the asset

Appendix 2-C
Depreciation and Amortization Expense

This appendix is to be completed in conjunction with the accounting instructions in Appendix 2-B

Scenario that applies	Applicable Years and Accounting Standard	Year Reflected in Schedule Below	Accounting Standard Reflected in Schedule Below
Rebasing for the first time with depreciation policy changes made in 2012.	This appendix must be duplicated and completed for the years 2012 to 2021. The appendix for 2012 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2012 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Rebasing for the first time with depreciation policy changes made in 2013.	This appendix must be duplicated and completed for the years 2013 to 2021. The appendix for 2013 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2013 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased with depreciation policy changes in a prior rate application and rebasing MIFRS for the first time.	This appendix must be completed for 2014 to 2021. The appendix for 2014 is to be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased under MIFRS in a prior rate application	This appendix must be completed under MIFRS for each year for the earlier of: 1) all historical years back to its last rebasing; or 2) at least three years of historical actuals, in addition to Bridge Year and Test Year forecasts.	2018	MIFRS

		Book Values							Service Lives				Depreciation Expense					
Account	Description	Opening Net Book Value of Existing Assets as at Date of Policy Change (Jan. 1) 1	Less Fully Depreciated 7	Net Amount of Existing Assets Before Policy Change to be Depreciated	Opening Gross Book Value of Assets Acquired After Policy Change 2	Less Fully Depreciated 8	Net Amount of Assets Acquired After Policy Change to be Depreciated	Current Year Additions	Average Remaining Life of Assets Existing Before Policy Change 3	Depreciation Rate Assets Acquired After Policy Change	Life of Assets Acquired After Policy Change 4	Depreciation Rate on New Additions	Depreciation Expense on Assets Existing Before Policy Change	Depreciation Expense on Assets Acquired After Policy Change	Depreciation Expense on Current Year Additions 5	Total Current Year Depreciation Expense	Depreciation Expense per Appendix 2-BA Fixed Assets, Column J	Variance 6
		a	b	c = a-b	d	e	f = d- e	g	h	i = 1/h	j	k = 1/j	l = c/h	m = f/j	n = g*0.5/j	o = l+m+n	p	q = p-o
1611	Computer Software (Formally known as Account 1925)			$ -	$ 64,971,896	$ 5,450,194	$ 59,521,702	$ 1,656,811		0.00%	7.29	13.72%	$ -	$ 8,164,843	$ 113,636	$ 8,278,478	$ 8,972,088	$ 693,610
1612	Land Rights (Formally known as Account 1906)			$ -	$ 2,293,622	$ 4	$ 2,293,618	-$ 5,223		0.00%	38.69	2.58%	$ -	$ 59,282	-$ 67	$ 59,214	$ 59,148	-$ 66
1805	Land			$ -	$ 4,649,025		$ 4,649,025	$ 3,509		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1808	Buildings			$ -	$ 28,801,829	$ 238,001	$ 28,563,828	$ 860,484		0.00%	46.64	2.14%	$ -	$ 612,432	$ 9,225	$ 621,657	$ 774,847	$ 153,190
1810	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV			$ -	$ 86,786,028	$ 231,604	$ 86,554,424	$ 327,621		0.00%	24.45	4.09%	$ -	$ 3,540,058	$ 6,700	$ 3,546,758	$ 3,057,779	-$ 488,979
1820	Distribution Station Equipment <50 kV			$ -	$ 105,595,435	$ 2,905,328	$ 102,690,107	$ 11,020,767		0.00%	25.79	3.88%	$ -	$ 3,981,780	$ 213,664	$ 4,195,444	$ 3,890,510	-$ 304,934
1825	Storage Battery Equipment			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures			$ -	$ 117,400,041		$ 117,400,041	$ 11,013,471		0.00%	41.61	2.40%	$ -	$ 2,821,438	$ 132,342	$ 2,953,780	$ 3,079,814	$ 126,034
1835	Overhead Conductors & Devices			$ -	$ 108,616,907	$ 47,638	$ 108,569,269	$ 12,558,766		0.00%	43.00	2.33%	$ -	$ 2,524,867	$ 146,032	$ 2,670,899	$ 2,992,071	$ 321,172
1840	Underground Conduit			$ -	$ 144,674,403		$ 144,674,403	$ 38,532,726		0.00%	38.56	2.59%	$ -	$ 3,751,930	$ 499,646	$ 4,251,576	$ 4,751,068	$ 499,492
1845	Underground Conductors & Devices			$ -	$ 143,156,133	$ 483,024	$ 142,673,109	$ 15,797,489		0.00%	31.92	3.13%	$ -	$ 4,469,709	$ 247,454	$ 4,717,163	$ 5,024,001	$ 306,838
1850	Line Transformers			$ -	$ 79,264,375		$ 79,264,375	$ 8,450,827		0.00%	30.65	3.26%	$ -	$ 2,586,113	$ 137,860	$ 2,723,974	$ 2,766,069	$ 42,095
1855	Services (Overhead & Underground)			$ -	$ 61,034,096		$ 61,034,096	$ 6,319,026		0.00%	38.80	2.58%	$ -	$ 1,573,044	$ 81,431	$ 1,654,474	$ 1,735,758	$ 81,284
1860	Meters			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1860	Meters (Smart Meters)			$ -	$ 40,577,781		$ 40,577,781	$ 2,940,398		0.00%	9.21	10.86%	$ -	$ 4,405,839	$ 159,631	$ 4,565,470	$ 4,591,778	$ 26,308
1905	Land			$ -	$ 20,559,542		$ 20,559,542			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1908	Buildings & Fixtures			$ -	$ 32,433,353	$ 326,031	$ 32,107,322	$ 2,763,337		0.00%	19.97	5.01%	$ -	$ 1,607,778	$ 69,187	$ 1,676,965	$ 1,752,402	$ 75,437
1910	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)			$ -	$ 1,407,352	$ 265,335	$ 1,142,017	$ 208,480		0.00%	7.29	13.72%	$ -	$ 156,655	$ 14,299	$ 170,954	$ 147,809	-$ 23,145
1915	Office Furniture & Equipment (5 years)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 22/04)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)			$ -	$ 6,804,105		$ 6,804,105	$ 2,030,340		0.00%	5.11	19.57%	$ -	$ 1,331,527	$ 198,663	$ 1,530,191	$ 1,397,366	-$ 132,825
1930	Transportation Equipment			$ -	$ 17,351,961	$ 379,668	$ 16,972,293	$ 165,604		0.00%	10.26	9.75%	$ -	$ 1,654,220	$ 8,070	$ 1,662,290	$ 1,482,542	-$ 179,748
1935	Stores Equipment			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1940	Tools, Shop & Garage Equipment			$ -	$ 3,543,471		$ 3,543,471	$ 652,919		0.00%	8.44	11.85%	$ -	$ 419,843	$ 38,680	$ 458,523	$ 461,520	$ 2,997
1945	Measurement & Testing Equipment			$ -	$ 215,441		$ 215,441			0.00%	8.69	11.51%	$ -	$ 24,792	$ -	$ 24,792	$ 24,106	-$ 686
1950	Power Operated Equipment			$ -	$ 1,063,969	$ 8,744	$ 1,055,225	-$ 79,133		0.00%	15.00	6.67%	$ -	$ 70,348	-$ 2,638	$ 67,711	$ 84,639	$ 16,928
1955	Communications Equipment			$ -	$ 8,318,463		$ 8,318,463	$ 2,671,824		0.00%	8.72	11.47%	$ -	$ 953,952	$ 153,201	$ 1,107,153	$ 1,140,481	$ 33,328
1955	Communication Equipment (Smart Meters)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment			$ -	$ 250,120		$ 250,120	$ 5,071		0.00%	7.09	14.10%	$ -	$ 35,278	$ 358	$ 35,635	$ 32,994	-$ 2,641
1970	Load Management Controls Customer Premises			$ -	$ 134,245	$ 134,245	$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1975	Load Management Controls Utility Premises			$ -	$ 17,974		$ 17,974			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1980	System Supervisor Equipment			$ -	$ 7,718,025	$ 95,706	$ 7,622,319	$ 3,754,253		0.00%	11.86	8.43%	$ -	$ 642,691	$ 158,274	$ 800,965	$ 825,702	$ 24,737
1985	Miscellaneous Fixed Assets			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
2440	Contributions & Grants			$ -	-$ 95,130,215		-$ 95,130,215	-$ 22,598,352		0.00%	38.79	2.58%	$ -	-$ 2,452,442	-$ 291,291	-$ 2,743,733	-$ 2,949,679	-$ 205,946
1609	Capital Contributions Paid				$ 20,775,751		$ 20,775,751	$ 2,199,818		0.00%	45.00	2.22%	$ -	$ 461,683	$ 24,442	$ 486,126	$ 480,702	-$ 5,424
	Total	$ -	$ -	$ -	$ 1,013,285,128	$ 10,565,522	$ 1,002,719,606	$ 101,250,833					$ -	$ 43,397,660	$ 2,118,799	$ 45,516,459	$ 46,575,515	$ 1,059,056

General: Applicants are to complete this appendix to show the reasonability of the depreciation expense that is included in rate base via. Accumulated depreciation and the revenue requirement.
Applicants must provide a breakdown of depreciation and amortization expense in the above format for all relevant accounts. Balances presented in the table should exclude asset retirement obligations (AROs) and the related depreciation and accretion expense. These should be disclosed separately consistent with the Notes of historical Audited Financial

Notes:

1 This is the net book value of assets that existed as at the date of the utility's change in depreciation policies (i.e. as at Jan. 1, 2012 or Jan. 1, 2013). These assets are to be depreciated at the average remaining service life. This amount will not change in years subsequent to the date of the utility's change in depreciation policies. This column is expected to be used until the assets that existed as at the date of the utility's change in depreciation policies are fully depreciated.

2 This is the opening gross book value of assets that have been acquired after the date of the utility's change in depreciation policies (i.e. additions starting in 2012/2013 for those who changed policies Jan. 1, 2012/2013). These assets are to be depreciated at the revised service life. The amount is expected to be equal to the opening gross book value of the prior year plus the prior year's additions.

3 A recalculation should be performed to determine the average remaining life of opening balance of assets (i.e. excluding current year's additions) under the change in policies under CGAAP. For example, Asset A had a useful life of 20 years under CGAAP without the change in policies. On January 1 of the year of policy changes, Asset A was 3 years depreciated. As a result, Asset A would have a remaining service life of 17 years (20 years less 3 years) as at January 1 of the year of policy changes. Due to making the change in policies under CGAAP, management re-assessed the asset useful lives and concluded that the revised useful life of Asset A is now 30 years. Therefore, the average remaining useful life of the opening balance of Asset A is determined to be 27 years (30 years less 3 years) under the revised CGAAP as at January 1 of the year of policy changes.

4 The useful life used should be consistent with the OEB's regulatory accounting policies as set out in the Accounting Procedures Handbook for Electricity Distributors, effective Jan. 1, 2012 and also with the Report of the Board, Transition to International Financial Reporting Standards, EB-2008-0408, and the Kinectrics Report.

5 OEB policy of the "half-year" rule - the applicant must ensure that additions in the year attract a half-year depreciation expense in the first year. Deviations from this standard practice must be supported in the application.

6 The applicant must provide an explanation of material variances in evidence.

7 This should include assets in column A (excel column C) that become fully depreciated since the date of the policy change. The amount input in b (excel column D) should equal the net book value of the asset as at the date of depreciation policy change

8 This should include assets in column D (excel column F) that have become fully depreciated. The amount input in e (excel column G) should equal the gross book value of the asset

UPDATED - Appendix 2-C
Depreciation and Amortization Expense

This appendix is to be completed in conjunction with the accounting instructions in Appendix 2-B

Scenario that applies	Applicable Years and Accounting Standard	Year Reflected in Schedule Below	Accounting Standard Reflected in Schedule
Rebasing for the first time with depreciation policy changes made in 2012.	This appendix must be duplicated and completed for the years 2012 to 2021. The appendix for 2012 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2012 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Rebasing for the first time with depreciation policy changes made in 2013.	This appendix must be duplicated and completed for the years 2013 to 2021. The appendix for 2013 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2013 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased with depreciation policy changes in a prior rate application and rebasing MIFRS for the first time.	This appendix must be completed for 2014 to 2021. The appendix for 2014 is to be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased under MIFRS in a prior rate application	This appendix must be completed under MIFRS for each year for the earlier of: 1) all historical years back to its last rebasing; or 2) at least three years of historical actuals, in addition to Bridge Year and Test Year forecasts.	2019	MIFRS

		Book Values							Service Lives				Depreciation Expense					
Account	Description	Opening Net Book Value of Existing Assets as at Date of Policy Change (Jan. 1) 1	Less Fully Depreciated 7	Net Amount of Existing Assets Before Policy Change to be Depreciated	Opening Gross Book Value of Assets Acquired After Policy Change 2	Less Fully Depreciated 8	Net Amount of Assets Acquired After Policy Change to be Depreciated	Current Year Additions	Average Remaining Life of Assets Existing Before Policy Change 3	Depreciation Rate Assets Acquired After Policy Change	Life of Assets Acquired After Policy Change 4	Depreciation Rate on New Additions	Depreciation Expense on Assets Existing Before Policy Change	Depreciation Expense on Assets Acquired After Policy Change	Depreciation Expense on Current Year Additions 5	Total Current Year Depreciation Expense	Depreciation Expense per Appendix 2-BA Fixed Assets, Column J	Variance 6
		a	b	c = a-b	d	e	f = d- e	g	h	i = 1/h	j	k = 1/j	l = c/h	m = f/j	n = g*0.5/j	o = l+m+n	p	q = p-o
1611	Computer Software (Formally known as Account 1925)			$ -	$ 66,628,705	$ 7,533,163	$ 59,095,542	$ 1,921,467		0.00%	9.00	11.11%	$ -	$ 6,566,171	$ 106,748	$ 6,672,920	$ 6,143,340	-$ 529,580
1612	Land Rights (Formally known as Account 1906)			$ -	$ 2,288,399	$ 4	$ 2,288,395	$ 236,496		0.00%	39.00	2.56%	$ -	$ 58,677	$ 3,032	$ 61,709	$ 61,925	$ 216
1805	Land			$ -	$ 4,652,534		$ 4,652,534	$ 7,031		0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1808	Buildings			$ -	$ 29,662,313	$ 327,320	$ 29,334,993	$ 24,664		0.00%	38.00	2.63%	$ -	$ 771,974	$ 325	$ 772,298	$ 776,707	$ 4,409
1810	Leasehold Improvements			$ -	$ -		$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1815	Transformer Station Equipment >50 kV			$ -	$ 87,113,649	$ 309,325	$ 86,804,324	$29,717,361		0.00%	30.00	3.33%	$ -	$ 2,893,477	$ 495,289	$ 3,388,767	$ 3,327,564	-$ 61,203
1820	Distribution Station Equipment <50 kV			$ -	$ 116,486,704	$ 2,913,792	$ 113,572,912	$13,434,802		0.00%	30.00	3.33%	$ -	$ 3,785,764	$ 223,913	$ 4,009,677	$ 4,130,036	$ 120,359
1825	Storage Battery Equipment			$ -	$ -		$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1830	Poles, Towers & Fixtures			$ -	$ 128,238,649		$ 128,238,649	$ 9,347,374		0.00%	40.00	2.50%	$ -	$ 3,205,966	$ 116,842	$ 3,322,808	$ 3,311,715	-$ 11,093
1835	Overhead Conductors & Devices			$ -	$ 121,173,565	$ 89,197	$ 121,084,368	$ 7,379,518		0.00%	38.00	2.63%	$ -	$ 3,186,431	$ 97,099	$ 3,283,530	$ 3,233,029	-$ 50,501
1840	Underground Conduit			$ -	$ 183,207,129		$ 183,207,129	$33,680,556		0.00%	34.00	2.94%	$ -	$ 5,388,445	$ 495,302	$ 5,883,747	$ 5,633,685	-$ 250,062
1845	Underground Conductors & Devices			$ -	$ 158,561,750	$ 695,152	$ 157,866,598	$16,811,784		0.00%	30.00	3.33%	$ -	$ 5,262,220	$ 280,196	$ 5,542,416	$ 5,424,311	-$ 118,105
1850	Line Transformers			$ -	$ 87,689,119		$ 87,689,119	$ 9,114,220		0.00%	30.00	3.33%	$ -	$ 2,922,971	$ 151,904	$ 3,074,874	$ 3,023,783	-$ 51,091
1855	Services (Overhead & Underground)			$ -	$ 67,353,122		$ 67,353,122	$ 3,778,458		0.00%	38.00	2.63%	$ -	$ 1,772,451	$ 49,717	$ 1,822,167	$ 1,792,870	-$ 29,297
1860	Meters			$ -	$ -		$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1860	Meters (Smart Meters)			$ -	$ 42,379,461		$ 42,379,461	$ 5,261,159		0.00%	10.00	10.00%	$ -	$ 4,237,946	$ 263,058	$ 4,501,004	$ 5,067,650	$ 566,646
1905	Land			$ -	$ 20,559,542		$ 20,559,542	-$ 7,032		0.00%		0.00%	$ -	$ -	$ -	$ -	$ 2,707	$ 2,707
1908	Buildings & Fixtures			$ -	$ 35,196,689	$ 399,989	$ 34,796,700	$80,491,112		0.00%	24.00	4.17%	$ -	$ 1,449,863	$ 1,676,898	$ 3,126,761	$ 3,148,452	$ 21,691
1910	Leasehold Improvements			$ -	$ -		$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1915	Office Furniture & Equipment (10 years)			$ -	$ 1,615,831	$ 538,248	$ 1,077,583	$ 3,375,063		0.00%	10.00	10.00%	$ -	$ 107,758	$ 168,753	$ 276,511	$ 332,224	$ 55,713
1915	Office Furniture & Equipment (5 years)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1920	Computer Equipment - Hardware			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1920	Computer Equip.-Hardware(Post Mar. 22/04)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)			$ -	$ 8,599,983	$ 1,408,900	$ 7,191,083	$ 4,355,405		0.00%	6.00	16.67%	$ -	$ 1,198,514	$ 362,950	$ 1,561,464	$ 1,613,390	$ 51,926
1930	Transportation Equipment			$ -	$ 17,432,618	$ 675,181	$ 16,757,437	$ 1,716,783		0.00%	10.00	10.00%	$ -	$ 1,675,744	$ 85,839	$ 1,761,583	$ 1,700,698	-$ 60,885
1935	Stores Equipment			$ -	$ -		$ -	$ 560,703		0.00%	10.00	10.00%	$ -	$ -	$ 28,035	$ 28,035	$ 28,035	-$ 0
1940	Tools, Shop & Garage Equipment			$ -	$ 4,196,389	$ 302,427	$ 3,893,962	$ 378,633		0.00%	10.00	10.00%	$ -	$ 389,396	$ 18,932	$ 408,328	$ 447,027	$ 38,699
1945	Measurement & Testing Equipment			$ -	$ 215,441	$ 5,974	$ 209,467			0.00%	9.00	11.11%	$ -	$ 23,274	$ -	$ 23,274	$ 23,447	$ 173
1950	Power Operated Equipment			$ -	$ 984,836	$ 14,694	$ 970,142	$ 137,293		0.00%	11.00	9.09%	$ -	$ 88,195	$ 6,241	$ 94,435	$ 89,271	-$ 5,164
1955	Communications Equipment			$ -	$ 10,990,288	$ 30,391	$ 10,959,897	$ 4,307,702		0.00%	9.00	11.11%	$ -	$ 1,217,766	$ 239,317	$ 1,457,083	$ 1,481,019	$ 23,936
1955	Communication Equipment (Smart Meters)			$ -	$ -		$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1960	Miscellaneous Equipment			$ -	$ 255,191	$ 21,376	$ 233,815	$ 2,187		0.00%	7.00	14.29%	$ -	$ 33,402	$ 156	$ 33,558	$ 27,502	-$ 6,056
1970	Load Management Controls Customer Premises			$ -	$ 134,245		$ 134,245			0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1975	Load Management Controls Utility Premises			$ -	$ -		$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1980	System Supervisor Equipment			$ -	$ 11,472,277	$ 214,044	$ 11,258,233	$ 2,263,895		0.00%	10.00	10.00%	$ -	$ 1,125,823	$ 113,195	$ 1,239,018	$ 1,219,913	-$ 19,105
1985	Miscellaneous Fixed Assets			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	-	$ -
1990	Other Tangible Property			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	-	$ -
2440	Contributions & Grants			$ -	-$ 117,728,566		-$ 117,728,566	-$24,990,799		0.00%	32.00	3.13%	$ -	-$ 3,679,018	-$ 390,481	-$ 4,069,499	-$ 3,767,044	$ 302,455
1609	Capital Contributions Paid				$ 22,975,568		$ 22,975,568	$11,709,864		0.00%	45.00	2.22%	$ -	$ 510,568	$ 130,110	$ 640,678	$ 627,148	-$ 13,530
	Total	$ -	$ -	$ -	$ 1,112,335,431	$ 15,479,177	$ 1,096,856,254	$215,015,699					$ -	$ 44,193,778	$ 4,723,370	$ 48,917,147	$ 48,900,404	-$ 16,743

General: Applicants are to complete this appendix to show the reasonability of the depreciation expense that is included in rate base via. Accumulated depreciation and the revenue requirement.
Applicants must provide a breakdown of depreciation and amortization expense in the above format for all relevant accounts. Balances presented in the table should exclude asset retirement obligations (AROs) and the related depreciation and accretion expense. These should be disclosed separately consistent with the Notes of historical Audited Financial

Notes:

1 This is the net book value of assets that existed as at the date of the utility's change in depreciation policies (i.e. as at Jan. 1, 2012 or Jan. 1, 2013). These assets are to be depreciated at the average remaining service life. This amount will not change in years subsequent to the date of the utility's change in depreciation policies. This column is expected to be used until the assets that existed as at the date of the utility's change in depreciation policies are fully depreciated.

2 This is the opening gross book value of assets that have been acquired after the date of the utility's change in depreciation policies (i.e. additions starting in 2012/2013 for those who changed policies Jan. 1, 2012/2013). These assets are to be depreciated at the revised service life. The amount is expected to be equal to the opening gross book value of the prior year plus the prior year's additions.

3 A recalculation should be performed to determine the average remaining life of opening balance of assets (i.e. excluding current year's additions) under the change in policies under CGAAP. For example, Asset A had a useful life of 20 years under CGAAP without the change in policies. On January 1 of the year of policy changes, Asset A was 3 years depreciated. As a result, Asset A would have a remaining service life of 17 years (20 years less 3 years) as at January 1 of the year of policy changes. Due to making the change in policies under CGAAP, management re-assessed the asset useful lives and concluded that the revised useful life of Asset A is now 30 years. Therefore, the average remaining useful life of the opening balance of Asset A is determined to be 27 years (30 years less 3 years) under the revised CGAAP as at January 1 of the year of policy changes.

4 The useful life used should be consistent with the OEB's regulatory accounting policies as set out in the Accounting Procedures Handbook for Electricity Distributors, effective Jan. 1, 2012 and also with the Report of the Board, Transition to International Financial Reporting Standards, EB-2008-0408, and the Kinectrics Report.

5 OEB policy of the "half-year" rule - the applicant must ensure that additions in the year attract a half-year depreciation expense in the first year. Deviations from this standard practice must be supported in the application.

6 The applicant must provide an explanation of material variances in evidence.

7 This should include assets in column A (excel column C) that become fully depreciated since the date of the policy change. The amount input in b (excel column D) should equal the net book value of the asset as at the date of depreciation policy change

8 This should include assets in column D (excel column F) that have become fully depreciated. The amount input in e (excel column G) should equal the gross book value of the asset

UPDATED - Appendix 2-C
Depreciation and Amortization Expense

This appendix is to be completed in conjunction with the accounting instructions in Appendix 2-B

Scenario that applies	Applicable Years and Accounting Standard	Year Reflected in Schedule Below	Accounting Standard Reflected in Schedule
Rebasing for the first time with depreciation policy changes made in 2012.	This appendix must be duplicated and completed for the years 2012 to 2021. The appendix for 2012 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2012 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Rebasing for the first time with depreciation policy changes made in 2013.	This appendix must be duplicated and completed for the years 2013 to 2021. The appendix for 2013 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2013 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased with depreciation policy changes in a prior rate application and rebasing MIFRS for the first time.	This appendix must be completed for 2014 to 2021. The appendix for 2014 is to be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased under MIFRS in a prior rate application	This appendix must be completed under MIFRS for each year for the earlier of: 1) all historical years back to its last rebasing; or 2) at least three years of historical actuals, in addition to Bridge Year and Test Year forecasts.	2020	MIFRS

		Book Values							Service Lives				Depreciation Expense					
Account	Description	Opening Net Book Value of Existing Assets as at Date of Policy Change	Less Fully Depreciated 7	Net Amount of Existing Assets Before Policy Change to be Depreciated	Opening Gross Book Value of Assets Acquired After Policy Change 2	Less Fully Depreciated 8	Net Amount of Assets Acquired After Policy Change to be Depreciated	Current Year Additions	Average Remaining Life of Assets Existing Before Policy Change 3	Depreciation Rate Assets Acquired After Policy Change	Life of Assets Acquired After Policy Change 4	Depreciation Rate on New Additions	Depreciation Expense on Assets Existing Before Policy Change	Depreciation Expense on Assets Acquired After Policy Change	Depreciation Expense on Current Year Additions 5	Total Current Year Depreciation Expense	Depreciation Expense per Appendix 2-BA Fixed Assets, Column J	Variance 6
		a	b	c = a-b	d	e	f = d- e	g	h	i = 1/h	j	k = 1/j	l = c/h	m = f/j	n = g*0.5/j	o = l+m+n	p	q = p-o
1611	Computer Software (Formally known as Account 1925)			$ -	$ 66,603,570	$ 10,925,522	$ 55,678,048	$13,030,880		0.00%	9.00	11.11%	$ -	$ 6,186,450	$ 723,938	$ 6,910,388	$ 6,468,113	-$ 442,275
1612	Land Rights (Formally known as Account 1906)			$ -	$ 2,524,895	$ 4	$ 2,524,891	$ 8,306		0.00%	39.00	2.56%	$ -	$ 64,741	$ 106	$ 64,847	$ 59,409	-$ 5,438
1805	Land			$ -	$ 4,659,565		$ 4,659,565	$ 1,047		0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1808	Buildings			$ -	$ 29,686,977	$ 327,320	$ 29,359,657	$ 707,754		0.00%	38.00	2.63%	$ -	$ 772,623	$ 9,313	$ 781,935	$ 802,687	$ 20,752
1810	Leasehold Improvements			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1815	Transformer Station Equipment >50 kV			$ -	$ 115,599,760	$ 1,004,348	$ 114,595,412	$ 3,148,680		0.00%	30.00	3.33%	$ -	$ 3,819,847	$ 52,478	$ 3,872,325	$ 3,669,308	-$ 203,017
1820	Distribution Station Equipment <50 kV			$ -	$ 129,195,408	$ 3,513,471	$ 125,681,937	$ 5,860,007		0.00%	31.00	3.23%	$ -	$ 4,054,256	$ 94,516	$ 4,148,772	$ 4,450,661	$ 301,889
1825	Storage Battery Equipment			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1830	Poles, Towers & Fixtures			$ -	$ 137,470,488		$ 137,470,488	$ 9,394,503		0.00%	40.00	2.50%	$ -	$ 3,436,762	$ 117,431	$ 3,554,193	$ 3,480,842	-$ 73,351
1835	Overhead Conductors & Devices			$ -	$ 128,553,082	$ 135,161	$ 128,417,921	$16,910,513		0.00%	39.00	2.56%	$ -	$ 3,292,767	$ 216,801	$ 3,509,569	$ 3,592,858	$ 83,289
1840	Underground Conduit			$ -	$ 216,883,550	$ 371,435	$ 216,512,115	$23,166,955		0.00%	36.00	2.78%	$ -	$ 6,014,225	$ 321,763	$ 6,335,989	$ 6,137,186	-$ 198,803
1845	Underground Conductors & Devices			$ -	$ 175,230,833	$ 959,525	$ 174,271,308	$24,832,592		0.00%	31.00	3.23%	$ -	$ 5,621,655	$ 400,526	$ 6,022,181	$ 5,978,466	-$ 43,715
1850	Line Transformers			$ -	$ 94,890,921		$ 94,890,921	$ 8,055,161		0.00%	30.00	3.33%	$ -	$ 3,163,031	$ 134,253	$ 3,297,283	$ 3,187,549	-$ 109,734
1855	Services (Overhead & Underground)			$ -	$ 71,087,401	$ 44,179	$ 71,043,222	$ 4,568,833		0.00%	38.00	2.63%	$ -	$ 1,869,558	$ 60,116	$ 1,929,675	$ 1,911,293	-$ 18,382
1860	Meters			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1860	Meters (Smart Meters)			$ -	$ 47,198,912		$ 47,198,912	$ 5,077,444		0.00%	10.00	10.00%	$ -	$ 4,719,891	$ 253,872	$ 4,973,763	$ 5,049,583	$ 75,820
1905	Land			$ -	$ 19,942,005		$ 19,942,005	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	$ 4,047	$ 4,047
1908	Buildings & Fixtures			$ -	$ 94,650,962	$ 394,976	$ 94,255,986	$ 352,679		0.00%	31.00	3.23%	$ -	$ 3,040,516	$ 5,688	$ 3,046,204	$ 3,025,591	-$ 20,613
1910	Leasehold Improvements			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1915	Office Furniture & Equipment (10 years)			$ -	$ 4,344,722	$ 646,173	$ 3,698,549	$ 100,766		0.00%	10.00	10.00%	$ -	$ 369,855	$ 5,038	$ 374,893	$ 425,555	$ 50,662
1915	Office Furniture & Equipment (5 years)			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1920	Computer Equipment - Hardware			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1920	Computer Equip.-Hardware(Post Mar. 22/04)			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)			$ -	$ 10,046,414	$ -	$ 10,046,414	$ 1,459,982		0.00%	7.00	14.29%	$ -	$ 1,435,202	$ 104,284	$ 1,539,486	$ 1,762,186	$ 222,700
1930	Transportation Equipment			$ -	$ 18,838,678	$ 1,770,698	$ 17,067,980	$ 180,773		0.00%	11.00	9.09%	$ -	$ 1,551,635	$ 8,217	$ 1,559,852	$ 1,560,773	$ 922
1935	Stores Equipment			$ -	$ 560,703		$ 560,703	$ -		0.00%	10.00	10.00%	$ -	$ 56,070	$ -	$ 56,070	$ 56,225	$ 155
1940	Tools, Shop & Garage Equipment			$ -	$ 3,997,781	$ 577,242	$ 3,420,539	$ 449,596		0.00%	10.00	10.00%	$ -	$ 342,054	$ 22,480	$ 364,534	$ 446,365	$ 81,831
1945	Measurement & Testing Equipment			$ -	$ 209,467	$ 5,974	$ 203,493	$ -		0.00%	9.00	11.11%	$ -	$ 22,610	$ -	$ 22,610	$ 23,512	$ 902
1950	Power Operated Equipment			$ -	$ 1,122,129	$ 14,694	$ 1,107,435	$ 354,695		0.00%	14.00	7.14%	$ -	$ 79,103	$ 12,668	$ 91,770	$ 89,524	-$ 2,246
1955	Communications Equipment			$ -	$ 15,266,072	$ 31,917	$ 15,234,155	$ 1,012,516		0.00%	10.00	10.00%	$ -	$ 1,523,416	$ 50,626	$ 1,574,041	$ 1,560,031	-$ 14,010
1955	Communication Equipment (Smart Meters)			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -	$ -	$ -
1960	Miscellaneous Equipment			$ -	$ 198,958	$ 58,420	$ 140,538	$ 6,099		0.00%	10.00	10.00%	$ -	$ 14,054	$ 305	$ 14,359	$ 25,019	$ 10,660
1970	Load Management Controls Customer Premises			$ -	$ -		$ -	$ -		0.00%	10.00	10.00%	$ -	$ -	$ -	$ -	$ -	$ -
1975	Load Management Controls Utility Premises			$ -	$ -		$ -	$ -		0.00%	10.00	10.00%	$ -	$ -	$ -	$ -	$ -	$ -
1980	System Supervisor Equipment			$ -	$ 13,736,173	$ 600,651	$ 13,135,522	$ 1,013,957		0.00%	11.00	9.09%	$ -	$ 1,194,138	$ 46,089	$ 1,240,227	$ 1,235,550	-$ 4,677
1985	Miscellaneous Fixed Assets			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property			$ -	$ -		$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
2440	Contributions & Grants			$ -	-$ 142,719,366		-$ 142,719,366	-$36,003,198		0.00%	32.00	3.13%	$ -	-$ 4,459,980	-$ 562,550	-$ 5,022,530	-$ 5,089,115	-$ 66,585
1609	Capital Contributions Paid				$ 34,685,433		$ 34,685,433	$ 910,000		0.00%	45.00	2.22%	$ -	$ 770,787	$ 10,111	$ 780,899	$ 790,975	$ 10,076
	Total	$ -	$ -	$ -	$ 1,294,465,493	$ 21,381,710	$ 1,273,083,783	$ 84,600,540					$ -	$ 48,955,266	$ 2,088,070	$ 51,043,336	$ 50,704,193	-$ 339,143

General: Applicants are to complete this appendix to show the reasonability of the depreciation expense that is included in rate base via. Accumulated depreciation and the revenue requirement.

Applicants must provide a breakdown of depreciation and amortization expense in the above format for all relevant accounts. Balances presented in the table should exclude asset retirement obligations (AROs) and the related depreciation and accretion expense. These should be disclosed separately consistent with the Notes of historical Audited Financial

Notes:

1 This is the net book value of assets that existed as at the date of the utility's change in depreciation policies (i.e. as at Jan. 1, 2012 or Jan. 1, 2013). These assets are to be depreciated at the average remaining service life. This amount will not change in years subsequent to the date of the utility's change in depreciation policies. This column is expected to be used until the assets that existed as at the date of the utility's change in depreciation policies are fully depreciated.

2 This is the opening gross book value of assets that have been acquired after the date of the utility's change in depreciation policies (i.e. additions starting in 2012/2013 for those who changed policies Jan. 1, 2012/2013). These assets are to be depreciated at the revised service life. The amount is expected to be equal to the opening gross book value of the prior year plus the prior year's additions.

3 A recalculation should be performed to determine the average remaining life of opening balance of assets (i.e. excluding current year's additions) under the change in policies under CGAAP. For example, Asset A had a useful life of 20 years under CGAAP without the change in policies. On January 1 of the year of policy changes, Asset A was 3 years depreciated. As a result, Asset A would have a remaining service life of 17 years (20 years less 3 years) as at January 1 of the year of policy changes. Due to making the change in policies under CGAAP, management re-assessed the asset useful lives and concluded that the revised useful life of Asset A is now 30 years. Therefore, the average remaining useful life of the opening balance of Asset A is determined to be 27 years (30 years less 3 years) under the revised CGAAP as at January 1 of the year of policy changes.

4 The useful life used should be consistent with the OEB's regulatory accounting policies as set out in the Accounting Procedures Handbook for Electricity Distributors, effective Jan. 1, 2012 and also with the Report of the Board, Transition to International Financial Reporting Standards, EB-2008-0408, and the Kinectrics Report.

5 OEB policy of the "half-year" rule - the applicant must ensure that additions in the year attract a half-year depreciation expense in the first year. Deviations from this standard practice must be supported in the application.

6 The applicant must provide an explanation of material variances in evidence.

7 This should include assets in column A (excel column C) that become fully depreciated since the date of the policy change. The amount input in b (excel column D) should equal the net book value of the asset as at the date of depreciation policy change

8 This should include assets in column D (excel column F) that have become fully depreciated. The amount input in e (excel column G) should equal the gross book value of the asset

UPDATED - Appendix 2-C
Depreciation and Amortization Expense

This appendix is to be completed in conjunction with the accounting instructions in Appendix 2-B

Scenario that applies	Applicable Years and Accounting Standard	Year Reflected in Schedule Below	Accounting Standard Reflected in Schedule
Rebasing for the first time with depreciation policy changes made in 2012.	This appendix must be duplicated and completed for the years 2012 to 2021. The appendix for 2012 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2012 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Rebasing for the first time with depreciation policy changes made in 2013.	This appendix must be duplicated and completed for the years 2013 to 2021. The appendix for 2013 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2013 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased with depreciation policy changes in a prior rate application and rebasing MIFRS for the first time.	This appendix must be completed for 2014 to 2021. The appendix for 2014 is to be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased under MIFRS in a prior rate application	This appendix must be completed under MIFRS for each year for the earlier of: 1) all historical years back to its last rebasing; or 2) at least three years of historical actuals, in addition to Bridge Year and Test Year forecasts.	2021	MIFRS

		Book Values							Service Lives				Depreciation Expense					
Account	Description	Opening Net Book Value of Existing Assets as at Date of Policy Change	Less Fully Depreciated 7	Net Amount of Existing Assets Before Policy Change to be Depreciated	Opening Gross Book Value of Assets Acquired After Policy Change 2	Less Fully Depreciated 8	Net Amount of Assets Acquired After Policy Change to be Depreciated	Current Year Additions	Average Remaining Life of Assets Existing Before Policy Change 3	Depreciation Rate Assets Acquired After Policy Change	Life of Assets Acquired After Policy Change 4	Depreciation Rate on New Additions	Depreciation Expense on Assets Existing Before Policy Change	Depreciation Expense on Assets Acquired After Policy Change	Depreciation Expense on Current Year Additions 5	Total Current Year Depreciation Expense	Depreciation Expense per Appendix 2-BA Fixed Assets, Column J	Variance 6
		a	b	c = a-b	d	e	f = d- e	g	h	i = 1/h	j	k = 1/j	l = c/h	m = f/j	n = g*0.5/j	o = l+m+n	p	q = p-o
1611	Computer Software (Formally known as Account 1925)			$ -	$ 79,634,450	$ 17,064,281	$ 62,570,169	$ 6,988,497		0.00%	9.00	11.11%	$ -	$ 6,952,241	$ 388,250	$ 7,340,491	$ 7,305,676	-$ 34,815
1612	Land Rights (Formally known as Account 1906)			$ -	$ 2,533,201	$ 4	$ 2,533,197	$ 13,268		0.00%	39.00	2.56%	$ -	$ 64,954	$ 170	$ 65,124	$ 59,497	-$ 5,627
1805	Land			$ -	$ 4,660,612		$ 4,660,612	$ 1,569		0.00%		0.00%	$ -	$ -	$ -	$ -	$-	$ -
1808	Buildings			$ -	$ 30,394,731	$ 390,060	$ 30,004,671	$ 724,819		0.00%	38.00	2.63%	$ -	$ 789,597	$ 9,537	$ 799,134	$ 818,992	$ 19,858
1810	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$-	$ -
1815	Transformer Station Equipment >50 kV			$ -	$ 118,748,440	$ 1,429,027	$ 117,319,413	$ 8,247,498		0.00%	32.00	3.13%	$ -	$ 3,666,232	$ 128,867	$ 3,795,099	$ 3,757,680	-$ 37,419
1820	Distribution Station Equipment <50 kV			$ -	$ 134,959,234	$ 4,398,489	$ 130,560,745	$13,738,471		0.00%	32.00	3.13%	$ -	$ 4,080,023	$ 214,664	$ 4,294,687	$ 4,462,581	$ 167,894
1825	Storage Battery Equipment			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$-	$ -
1830	Poles, Towers & Fixtures			$ -	$ 146,551,288		$ 146,551,288	$ 8,715,471		0.00%	41.00	2.44%	$ -	$ 3,574,422	$ 106,286	$ 3,680,708	$ 3,673,027	-$ 7,681
1835	Overhead Conductors & Devices			$ -	$ 145,233,051	$ 196,375	$ 145,036,676	$11,400,338		0.00%	39.00	2.56%	$ -	$ 3,718,889	$ 146,158	$ 3,865,047	$ 3,938,401	$ 73,354
1840	Underground Conduit			$ -	$ 240,050,505	$ 438,127	$ 239,612,378	$25,696,125		0.00%	37.00	2.70%	$ -	$ 6,476,010	$ 347,245	$ 6,823,255	$ 6,713,783	-$ 109,472
1845	Underground Conductors & Devices			$ -	$ 199,704,356	$ 1,438,679	$ 198,265,677	$26,000,462		0.00%	32.00	3.13%	$ -	$ 6,195,802	$ 406,257	$ 6,602,060	$ 6,661,033	$ 58,973
1850	Line Transformers			$ -	$ 102,725,515		$ 102,725,515	$ 8,365,754		0.00%	31.00	3.23%	$ -	$ 3,313,726	$ 134,932	$ 3,448,658	$ 3,405,578	-$ 43,080
1855	Services (Overhead & Underground)			$ -	$ 75,656,234	$ 44,179	$ 75,612,055	$ 4,404,116		0.00%	38.00	2.63%	$ -	$ 1,989,791	$ 57,949	$ 2,047,740	$ 2,006,006	-$ 41,734
1860	Meters			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$-	$ -
1860	Meters (Smart Meters)			$ -	$ 51,855,664		$ 51,855,664	$ 7,339,435		0.00%	12.00	8.33%	$ -	$ 4,321,305	$ 305,810	$ 4,627,115	$ 4,812,311	$ 185,196
1905	Land			$ -	$ 19,942,005		$ 19,942,005			0.00%		0.00%	$ -	$ -	$ -	$ -	$ 4,047	$ 4,047
1908	Buildings & Fixtures			$ -	$ 95,003,641	$ 443,437	$ 94,560,204	$ 352,679		0.00%	31.00	3.23%	$ -	$ 3,050,329	$ 5,688	$ 3,056,018	$ 3,116,870	$ 60,852
1910	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$-	$ -
1915	Office Furniture & Equipment (10 years)			$ -	$ 4,445,488	$ 709,786	$ 3,735,702	$ 75,574		0.00%	10.00	10.00%	$ -	$ 373,570	$ 3,779	$ 377,349	$ 416,853	$ 39,504
1915	Office Furniture & Equipment (5 years)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$-	$ -
1920	Computer Equipment - Hardware			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$-	$ -
1920	Computer Equip.-Hardware(Post Mar. 22/04)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$-	$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)			$ -	$ 11,506,396	$ 1,360,639	$ 10,145,757	$ 1,463,823		0.00%	6.00	16.67%	$ -	$ 1,690,960	$ 121,985	$ 1,812,945	$ 1,884,900	$ 71,955
1930	Transportation Equipment			$ -	$ 18,991,686	$ 2,058,092	$ 16,933,594	$ 6,124,426		0.00%	16.00	6.25%	$ -	$ 1,058,350	$ 191,388	$ 1,249,738	$ 1,220,734	-$ 29,004
1935	Stores Equipment			$ -	$ 560,703		$ 560,703			0.00%	10.00	10.00%	$ -	$ 56,070	$ -	$ 56,070	$ 56,224	$ 154
1940	Tools, Shop & Garage Equipment			$ -	$ 4,447,377	$ 951,720	$ 3,495,657	$ 473,651		0.00%	10.00	10.00%	$ -	$ 349,566	$ 23,683	$ 373,248	$ 440,309	$ 67,061
1945	Measurement & Testing Equipment			$ -	$ 209,467	$ 5,974	$ 203,493			0.00%	10.00	10.00%	$ -	$ 20,349	$ -	$ 20,349	$ 23,447	$ 3,098
1950	Power Operated Equipment			$ -	$ 1,392,949	$ 20,015	$ 1,372,934	$ 163,845		0.00%	15.00	6.67%	$ -	$ 91,529	$ 5,462	$ 96,990	$ 99,140	$ 2,150
1955	Communications Equipment			$ -	$ 16,278,588	$ 410,286	$ 15,868,302	$ 3,476,464		0.00%	9.00	11.11%	$ -	$ 1,763,145	$ 193,137	$ 1,956,282	$ 1,786,969	-$ 169,313
1955	Communication Equipment (Smart Meters)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -	$-	$ -
1960	Miscellaneous Equipment			$ -	$ 205,057	$ 100,653	$ 104,404	$ 7,305		0.00%	12.00	8.33%	$ -	$ 8,700	$ 304	$ 9,005	$ 19,031	$ 10,026
1970	Load Management Controls Customer Premises			$ -	$ -		$ -	$ -		0.00%	10.00	10.00%	$ -	$ -	$ -	$ -	$ -	$ -
1975	Load Management Controls Utility Premises			$ -	$ -		$ -	$ -		0.00%	10.00	10.00%	$ -	$ -	$ -	$ -	$ -	$ -
1980	System Supervisor Equipment			$ -	$ 14,750,130	$ 1,175,775	$ 13,574,355	$ 1,576,567		0.00%	11.00	9.09%	$ -	$ 1,234,032	$ 71,662	$ 1,305,694	$ 1,261,664	-$ 44,030
1985	Miscellaneous Fixed Assets			$ -			$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property			$ -			$ -	$ -		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
2440	Contributions & Grants			$ -	-$ 178,722,564		-$ 178,722,564	-$ 40,195,489		0.00%	31.00	3.23%	$ -	-$ 5,765,244	-$ 648,314	-$ 6,413,558	-$ 6,700,322	-$ 286,764
1609	Capital Contributions Paid				$ 35,595,433		$ 35,595,433	$51,223,891		0.00%	45.00	2.22%	$ -	$ 791,010	$ 569,154	$ 1,360,164	$ 1,088,293	-$ 271,871
	Total	$ -	$ -	$ -	$ 1,377,313,637	$ 32,635,598	$ 1,344,678,039	$ 146,378,559					$ -	$ 49,865,358	$ 2,784,053	$ 52,649,411	$ 52,332,724	-$ 316,687

General: Applicants are to complete this appendix to show the reasonability of the depreciation expense that is included in rate base via. Accumulated depreciation and the revenue requirement.
Applicants must provide a breakdown of depreciation and amortization expense in the above format for all relevant accounts. Balances presented in the table should exclude asset retirement obligations (AROs) and the related depreciation and accretion expense. These should be disclosed separately consistent with the Notes of historical Audited Financial

Notes:

1 This is the net book value of assets that existed as at the date of the utility's change in depreciation policies (i.e. as at Jan. 1, 2012 or Jan. 1, 2013). These assets are to be depreciated at the average remaining service life. This amount will not change in years subsequent to the date of the utility's change in depreciation policies. This column is expected to be used until the assets that existed as at the date of the utility's change in depreciation policies are fully depreciated.

2 This is the opening gross book value of assets that have been acquired after the date of the utility's change in depreciation policies (i.e. additions starting in 2012/2013 for those who changed policies Jan. 1, 2012/2013). These assets are to be depreciated at the revised service life. The amount is expected to be equal to the opening gross book value of the prior year plus the prior year's additions.

3 A recalculation should be performed to determine the average remaining life of opening balance of assets (i.e. excluding current year's additions) under the change in policies under CGAAP. For example, Asset A had a useful life of 20 years under CGAAP without the change in policies. On January 1 of the year of policy changes, Asset A was 3 years depreciated. As a result, Asset A would have a remaining service life of 17 years (20 years less 3 years) as at January 1 of the year of policy changes. Due to making the change in policies under CGAAP, management re-assessed the asset useful lives and concluded that the revised useful life of Asset A is now 30 years. Therefore, the average remaining useful life of the opening balance of Asset A is determined to be 27 years (30 years less 3 years) under the revised CGAAP as at January 1 of the year of policy changes.

4 The useful life used should be consistent with the OEB's regulatory accounting policies as set out in the Accounting Procedures Handbook for Electricity Distributors, effective Jan. 1, 2012 and also with the Report of the Board, Transition to International Financial Reporting Standards, EB-2008-0408, and the Kinectrics Report.

5 OEB policy of the "half-year" rule - the applicant must ensure that additions in the year attract a half-year depreciation expense in the first year. Deviations from this standard practice must be supported in the application.

6 The applicant must provide an explanation of material variances in evidence.

7 This should include assets in column A (excel column C) that become fully depreciated since the date of the policy change. The amount input in b (excel column D) should equal the net book value of the asset as at the date of depreciation policy change

8 This should include assets in column D (excel column F) that have become fully depreciated. The amount input in e (excel column G) should equal the gross book value of the asset

UPDATED - Appendix 2-C
Depreciation and Amortization Expense

This appendix is to be completed in conjunction with the accounting instructions in Appendix 2-B

Scenario that applies	Applicable Years and Accounting Standard	Year Reflected in Schedule Below	Accounting Standard Reflected in Schedule
Rebasing for the first time with depreciation policy changes made in 2012.	This appendix must be duplicated and completed for the years 2012 to 2021. The appendix for 2012 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2012 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Rebasing for the first time with depreciation policy changes made in 2013.	This appendix must be duplicated and completed for the years 2013 to 2021. The appendix for 2013 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2013 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased with depreciation policy changes in a prior rate application and rebasing MIFRS for the first time.	This appendix must be completed for 2014 to 2021. The appendix for 2014 is to be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased under MIFRS in a prior rate application	This appendix must be completed under MIFRS for each year for the earlier of: 1) all historical years back to its last rebasing; or 2) at least three years of historical actuals, in addition to Bridge Year and Test Year forecasts.	2022	MIFRS

		Book Values							Service Lives				Depreciation Expense					
Account	Description	Opening Net Book Value of Existing Assets as at Date of Policy Change	Less Fully Depreciated 7	Net Amount of Existing Assets Before Policy Change to be Depreciated	Opening Gross Book Value of Assets Acquired After Policy Change 2	Less Fully Depreciated 8	Net Amount of Assets Acquired After Policy Change to be Depreciated	Current Year Additions	Average Remaining Life of Assets Existing Before Policy Change 3	Depreciation Rate Assets Acquired After Policy Change	Life of Assets Acquired After Policy Change 4	Depreciation Rate on New Additions	Depreciation Expense on Assets Existing Before Policy Change	Depreciation Expense on Assets Acquired After Policy Change	Depreciation Expense on Current Year Additions 5	Total Current Year Depreciation Expense	Depreciation Expense per Appendix 2-BA Fixed Assets, Column J	Variance 6
		a	b	c = a-b	d	e	f = d- e	g	h	i = 1/h	j	k = 1/j	l = c/h	m = f/j	n = g*0.5/j	o = l+m+n	p	q = p-o
1611	Computer Software (Formally known as Account 1925)			$ -	$ 86,622,947	$ 18,168,786	$ 68,454,161	$ 6,380,278		0.00%	8.00	12.50%	$ -	$ 8,556,770	$ 398,767	$ 8,955,538	$ 8,607,321	-$ 348,217
1612	Land Rights (Formally known as Account 1906)			$ -	$ 2,546,469	$ 4	$ 2,546,465	$ 13,040		0.00%	39.00	2.56%	$ -	$ 65,294	$ 167	$ 65,461	$ 59,760	-$ 5,701
1805	Land			$ -	$ 4,662,181		$ 4,662,181	$ 162,462		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1808	Buildings			$ -	$ 31,119,550	$ 393,954	$ 30,725,596	$ 8,365,966		0.00%	43.00	2.33%	$ -	$ 714,549	$ 97,279	$ 811,827	$ 934,231	$ 122,404
1810	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV			$ -	$ 126,995,938	$ 1,596,720	$ 125,399,218	$25,611,949		0.00%	30.00	3.33%	$ -	$ 4,179,974	$ 426,866	$ 4,606,840	$ 4,359,904	-$ 246,936
1820	Distribution Station Equipment <50 kV			$ -	$ 148,601,524	$ 5,423,510	$ 143,178,014	$10,005,389		0.00%	33.00	3.03%	$ -	$ 4,338,728	$ 151,597	$ 4,490,325	$ 4,699,714	$ 209,389
1825	Storage Battery Equipment			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures			$ -	$ 154,953,056		$ 154,953,056	$ 9,161,771		0.00%	41.00	2.44%	$ -	$ 3,779,343	$ 111,729	$ 3,891,072	$ 3,870,235	-$ 20,837
1835	Overhead Conductors & Devices			$ -	$ 156,402,845	$ 260,755	$ 156,142,090	$13,334,739		0.00%	38.00	2.63%	$ -	$ 4,109,002	$ 175,457	$ 4,284,459	$ 4,247,939	-$ 36,520
1840	Underground Conduit			$ -	$ 265,746,630	$ 646,304	$ 265,100,326	$22,225,040		0.00%	37.00	2.70%	$ -	$ 7,164,874	$ 300,338	$ 7,465,212	$ 7,282,382	-$ 182,830
1845	Underground Conductors & Devices			$ -	$ 225,345,749	$ 1,604,583	$ 223,741,166	$21,007,287		0.00%	31.00	3.23%	$ -	$ 7,217,457	$ 338,827	$ 7,556,284	$ 7,322,791	-$ 233,493
1850	Line Transformers			$ -	$ 110,870,702	$ 25,863	$ 110,844,839	$ 8,143,668		0.00%	31.00	3.23%	$ -	$ 3,575,640	$ 131,349	$ 3,706,989	$ 3,638,351	-$ 68,638
1855	Services (Overhead & Underground)			$ -	$ 80,060,350	$ 44,179	$ 80,016,171	$ 4,563,872		0.00%	38.00	2.63%	$ -	$ 2,105,689	$ 60,051	$ 2,165,740	$ 2,105,656	-$ 60,084
1860	Meters			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1860	Meters (Smart Meters)			$ -	$ 58,081,431	$ 6,259,912	$ 51,821,519	$ 7,014,822		0.00%	13.00	7.69%	$ -	$ 3,986,271	$ 269,801	$ 4,256,072	$ 4,261,148	$ 5,076
1905	Land			$ -	$ 19,942,005		$ 19,942,005			0.00%		0.00%	$ -	$ -	$ -	$ -	$ 4,047	$ 4,047
1908	Buildings & Fixtures			$ -	$ 95,356,320	$ 445,220	$ 94,911,100	$ 1,594,802		0.00%	31.00	3.23%	$ -	$ 3,061,648	$ 25,723	$ 3,087,371	$ 3,185,739	$ 98,368
1910	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)			$ -	$ 4,521,062	$ 879,564	$ 3,641,498	$ 75,574		0.00%	10.00	10.00%	$ -	$ 364,150	$ 3,779	$ 367,929	$ 407,568	$ 39,640
1915	Office Furniture & Equipment (5 years)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 22/04)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)			$ -	$ 12,970,219	$ 2,015,003	$ 10,955,216	$ 2,517,544		0.00%	6.00	16.67%	$ -	$ 1,825,869	$ 209,795	$ 2,035,665	$ 2,172,161	$ 136,496
1930	Transportation Equipment			$ -	$ 23,294,547	$ 3,685,023	$ 19,609,524	$ 5,223,986		0.00%	13.00	7.69%	$ -	$ 1,508,425	$ 200,923	$ 1,709,347	$ 1,577,489	-$ 131,858
1935	Stores Equipment			$ -	$ 560,703		$ 560,703			0.00%	10.00	10.00%	$ -	$ 56,070	$ -	$ 56,070	$ 56,224	$ 154
1940	Tools, Shop & Garage Equipment			$ -	$ 4,921,028	$ 1,286,544	$ 3,634,484	$ 474,390		0.00%	10.00	10.00%	$ -	$ 363,448	$ 23,720	$ 387,168	$ 441,144	$ 53,976
1945	Measurement & Testing Equipment			$ -	$ 209,467	$ 5,974	$ 203,493			0.00%	12.00	8.33%	$ -	$ 16,958	$ -	$ 16,958	$ 16,697	-$ 261
1950	Power Operated Equipment			$ -	$ 1,505,307	$ 131,713	$ 1,373,594			0.00%	13.00	7.69%	$ -	$ 105,661	$ -	$ 105,661	$ 102,206	-$ 3,455
1955	Communications Equipment			$ -	$ 19,755,052	$ 723,119	$ 19,031,933	$ 1,487,510		0.00%	9.00	11.11%	$ -	$ 2,114,659	$ 82,639	$ 2,197,299	$ 2,060,745	-$ 136,554
1955	Communication Equipment (Smart Meters)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment			$ -	$ 212,362	$ 150,806	$ 61,556	$ 307,972		0.00%	10.00	10.00%	$ -	$ 6,156	$ 15,399	$ 21,554	$ 30,554	$ 9,000
1970	Load Management Controls Customer Premises			$ -	$ -		$ -	$ 350,910		0.00%	10.00	10.00%	$ -	$ -	$ 17,546	$ 17,546	$ 17,545	-$ 1
1975	Load Management Controls Utility Premises			$ -	$ -		$ -	$ 203,443		0.00%	10.00	10.00%	$ -	$ -	$ 10,172	$ 10,172	$ 10,172	-$ 0
1980	System Supervisor Equipment			$ -	$ 16,326,697	$ 1,370,361	$ 14,956,336	$ 1,701,727		0.00%	12.00	8.33%	$ -	$ 1,246,361	$ 70,905	$ 1,317,267	$ 1,292,876	-$ 24,391
1985	Miscellaneous Fixed Assets			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
2440	Contributions & Grants			$ -	-$ 218,918,053		-$ 218,918,053	-$ 25,452,767		0.00%	30.00	3.33%	$ -	-$ 7,297,268	$ 424,213	-$ 7,721,481	-$ 8,012,479	-$ 290,998
1609	Capital Contributions Paid				$ 86,819,324		$ 86,819,324	$ 210,000		0.00%	45.00	2.22%	$ -	$ 1,929,318	$ 2,333	$ 1,931,652	$ 1,946,433	$ 14,781
	Total	$ -	$ -	$ -	$ 1,519,485,413	$ 45,117,897	$ 1,474,367,516	$ 124,685,374					$ -	$ 55,095,046	$ 2,700,949	$ 57,795,995	$ 56,698,553	-$ 1,097,442

General: Applicants are to complete this appendix to show the reasonability of the depreciation expense that is included in rate base via. Accumulated depreciation and the revenue requirement.

Applicants must provide a breakdown of depreciation and amortization expense in the above format for all relevant accounts. Balances presented in the table should exclude asset retirement obligations (AROs) and the related depreciation and accretion expense. These should be disclosed separately consistent with the Notes of historical Audited Financial

Notes:

1 This is the net book value of assets that existed as at the date of the utility's change in depreciation policies (i.e. as at Jan. 1, 2012 or Jan. 1, 2013). These assets are to be depreciated at the average remaining service life. This amount will not change in years subsequent to the date of the utility's change in depreciation policies. This column is expected to be used until the assets that existed as at the date of the utility's change in depreciation policies are fully depreciated.

2 This is the opening gross book value of assets that have been acquired after the date of the utility's change in depreciation policies (i.e. additions starting in 2012/2013 for those who changed policies Jan. 1, 2012/2013). These assets are to be depreciated at the revised service life. The amount is expected to be equal to the opening gross book value of the prior year plus the prior year's additions.

3 A recalculation should be performed to determine the average remaining life of opening balance of assets (i.e. excluding current year's additions) under the change in policies under CGAAP. For example, Asset A had a useful life of 20 years under CGAAP without the change in policies. On January 1 of the year of policy changes, Asset A was 3 years depreciated. As a result, Asset A would have a remaining service life of 17 years (20 years less 3 years) as at January 1 of the year of policy changes. Due to making the change in policies under CGAAP, management re-assessed the asset useful lives and concluded that the revised useful life of Asset A is now 30 years. Therefore, the average remaining useful life of the opening balance of Asset A is determined to be 27 years (30 years less 3 years) under the revised CGAAP as at January 1 of the year of policy changes.

4 The useful life used should be consistent with the OEB's regulatory accounting policies as set out in the Accounting Procedures Handbook for Electricity Distributors, effective Jan. 1, 2012 and also with the Report of the Board, Transition to International Financial Reporting Standards, EB-2008-0408, and the Kinectrics Report.

5 OEB policy of the "half-year" rule - the applicant must ensure that additions in the year attract a half-year depreciation expense in the first year. Deviations from this standard practice must be supported in the application.

6 The applicant must provide an explanation of material variances in evidence.

7 This should include assets in column A (excel column C) that become fully depreciated since the date of the policy change. The amount input in b (excel column D) should equal the net book value of the asset as at the date of depreciation policy change

8 This should include assets in column D (excel column F) that have become fully depreciated. The amount input in e (excel column G) should equal the gross book value of the asset

UPDATED - Appendix 2-C
Depreciation and Amortization Expense

This appendix is to be completed in conjunction with the accounting instructions in Appendix 2-B

Scenario that applies	Applicable Years and Accounting Standard	Year Reflected in Schedule Below	Accounting Standard Reflected in Schedule Below
Rebasing for the first time with depreciation policy changes made in 2012.	This appendix must be duplicated and completed for the years 2012 to 2021. The appendix for 2012 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2012 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Rebasing for the first time with depreciation policy changes made in 2013.	This appendix must be duplicated and completed for the years 2013 to 2021. The appendix for 2013 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2013 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased with depreciation policy changes in a prior rate application and rebasing MIFRS for the first time.	This appendix must be completed for 2014 to 2021. The appendix for 2014 is to be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased under MIFRS in a prior rate application	This appendix must be completed under MIFRS for each year for the earlier of: 1) all historical years back to its last rebasing; or 2) at least three years of historical actuals, in addition to Bridge Year and Test Year forecasts.		MIFRS

2023

		Book Values							Service Lives				Depreciation Expense					
Account	Description	Opening Net Book Value of Existing Assets as at Date of Policy Change (Jan 1) 1	Less Fully Depreciated 7	Net Amount of Existing Assets Before Policy Change to be Depreciated	Opening Gross Book Value of Assets Acquired After Policy Change 2	Less Fully Depreciated 8	Net Amount of Assets Acquired After Policy Change to be Depreciated	Current Year Additions	Average Remaining Life of Assets Existing Before Policy Change 3	Depreciation Rate Assets Acquired After Policy Change	Life of Assets Acquired After Policy Change 4	Depreciation Rate on New Additions	Depreciation Expense on Assets Existing Before Policy Change	Depreciation Expense on Assets Acquired After Policy Change	Depreciation Expense on Current Year Additions 5	Total Current Year Depreciation Expense	Depreciation Expense per Appendix 2-BA Fixed Assets, Column J	Variance 6
		a	b	c = a-b	d	e	f = d- e	g	h	i = 1/h	j	k = 1/j	l = c/h	m = f/j	n = g*0.5/j	o = l+m+n	p	q = p-o
1611	Computer Software (Formally known as Account 1925)			$ -	$ 93,003,225	$ 21,124,166	$ 71,879,059	$ 3,590,513		0.00%	8.00	12.50%	$ -	$ 8,984,882	$ 224,407	$ 9,209,289	$ 9,194,054	-$ 15,235
1612	Land Rights (Formally known as Account 1906)			$ -	$ 2,559,509	$ 4	$ 2,559,505	$ 12,296		0.00%	39.00	2.56%	$ -	$ 65,628	$ 158	$ 65,786	$ 60,014	-$ 5,772
1805	Land			$ -	$ 4,824,643		$ 4,824,643			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1808	Buildings			$ -	$ 39,485,516	$ 454,156	$ 39,031,360	$ 534,656		0.00%	43.00	2.33%	$ -	$ 907,706	$ 6,217	$ 913,923	$ 994,934	$ 81,011
1810	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV			$ -	$ 152,607,887	$ 1,975,414	$ 150,632,473	$ 3,602,046		0.00%	30.00	3.33%	$ -	$ 5,021,082	$ 60,034	$ 5,081,117	$ 4,672,709	-$ 408,408
1820	Distribution Station Equipment <50 kV			$ -	$ 158,510,732	$ 5,850,976	$ 152,659,756	$ 4,126,157		0.00%	33.00	3.03%	$ -	$ 4,626,053	$ 62,518	$ 4,688,571	$ 4,863,301	$ 174,730
1825	Storage Battery Equipment			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures			$ -	$ 163,801,124		$ 163,801,124	$ 9,876,018		0.00%	41.00	2.44%	$ -	$ 3,995,149	$ 120,439	$ 4,115,589	$ 4,081,762	-$ 33,827
1835	Overhead Conductors & Devices			$ -	$ 169,507,040	$ 329,139	$ 169,177,901	$13,582,445		0.00%	38.00	2.63%	$ -	$ 4,452,050	$ 178,716	$ 4,630,766	$ 4,586,713	-$ 44,053
1840	Underground Conduit			$ -	$ 287,971,670	$ 927,267	$ 287,044,403	$20,403,122		0.00%	37.00	2.70%	$ -	$ 7,757,957	$ 275,718	$ 8,033,675	$ 7,783,016	-$ 250,659
1845	Underground Conductors & Devices			$ -	$ 245,993,967	$ 1,879,195	$ 244,114,772	$18,820,790		0.00%	31.00	3.23%	$ -	$ 7,874,670	$ 303,561	$ 8,178,231	$ 7,871,614	-$ 306,617
1850	Line Transformers			$ -	$ 118,793,803	$ 77,452	$ 118,716,351	$ 7,823,557		0.00%	31.00	3.23%	$ -	$ 3,829,560	$ 126,186	$ 3,955,746	$ 3,854,763	-$ 100,983
1855	Services (Overhead & Underground)			$ -	$ 84,624,222	$ 44,179	$ 84,580,043	$ 4,595,931		0.00%	38.00	2.63%	$ -	$ 2,225,791	$ 60,473	$ 2,286,263	$ 2,207,425	-$ 78,838
1860	Meters			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1860	Meters (Smart Meters)			$ -	$ 63,967,085	$ 12,660,967	$ 51,306,118	$ 6,673,267		0.00%	13.00	7.69%	$ -	$ 3,946,624	$ 256,664	$ 4,203,289	$ 3,930,943	-$ 272,346
1905	Land			$ -	$ 19,942,005		$ 19,942,005			0.00%		0.00%	$ -	$ -	$ -	$ -	$ 4,047	$ 4,047
1908	Buildings & Fixtures			$ -	$ 96,951,122	$ 458,254	$ 96,492,868	$ 352,679		0.00%	31.00	3.23%	$ -	$ 3,112,673	$ 5,688	$ 3,118,362	$ 3,197,517	$ 79,155
1910	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)			$ -	$ 4,596,636	$ 974,302	$ 3,622,334	$ 50,383		0.00%	10.00	10.00%	$ -	$ 362,233	$ 2,519	$ 364,753	$ 400,102	$ 35,349
1915	Office Furniture & Equipment (5 years)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 22/04)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)			$ -	$ 15,487,763	$ 3,588,003	$ 11,899,760	$ 1,160,674		0.00%	7.00	14.29%	$ -	$ 1,699,966	$ 82,905	$ 1,782,871	$ 2,042,539	$ 259,668
1930	Transportation Equipment			$ -	$ 26,471,525	$ 5,136,421	$ 21,335,104	$ 2,233,064		0.00%	11.00	9.09%	$ -	$ 1,939,555	$ 101,503	$ 2,041,058	$ 1,991,963	-$ 49,095
1935	Stores Equipment			$ -	$ 560,703		$ 560,703			0.00%	10.00	10.00%	$ -	$ 56,070	$ -	$ 56,070	$ 56,224	$ 154
1940	Tools, Shop & Garage Equipment			$ -	$ 5,395,418	$ 1,698,582	$ 3,696,836	$ 461,809		0.00%	10.00	10.00%	$ -	$ 369,684	$ 23,090	$ 392,774	$ 442,658	$ 49,884
1945	Measurement & Testing Equipment			$ -	$ 209,467	$ 119,814	$ 89,653			0.00%	12.00	8.33%	$ -	$ 7,471	$ -	$ 7,471	$ 5,066	-$ 2,405
1950	Power Operated Equipment			$ -	$ 1,505,307	$ 325,124	$ 1,180,183	$ 115,377		0.00%	13.00	7.69%	$ -	$ 90,783	$ 4,438	$ 95,221	$ 82,798	-$ 12,423
1955	Communications Equipment			$ -	$ 21,242,562	$ 967,826	$ 20,274,736	$ 874,903		0.00%	9.00	11.11%	$ -	$ 2,252,748	$ 48,606	$ 2,301,354	$ 2,173,813	-$ 127,541
1955	Communication Equipment (Smart Meters)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment			$ -	$ 520,334	$ 166,402	$ 353,932	$ 16,787		0.00%	10.00	10.00%	$ -	$ 35,393	$ 839	$ 36,233	$ 43,258	$ 7,025
1970	Load Management Controls Customer Premises			$ -	$ 350,910		$ 350,910			0.00%	10.00	10.00%	$ -	$ 35,091	$ -	$ 35,091	$ 35,091	$ -
1975	Load Management Controls Utility Premises			$ -	$ 203,443		$ 203,443			0.00%	10.00	10.00%	$ -	$ 20,344	$ -	$ 20,344	$ 20,344	-$ 0
1980	System Supervisor Equipment			$ -	$ 18,028,424	$ 2,469,888	$ 15,558,536	$ 992,743		0.00%	12.00	8.33%	$ -	$ 1,296,545	$ 41,364	$ 1,337,909	$ 1,274,267	-$ 63,642
1985	Miscellaneous Fixed Assets			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
2440	Contributions & Grants			$ -	-$ 243,771,082		-$ 243,771,082	-$21,345,516		0.00%	30.00	3.33%	$ -	-$ 8,125,703	-$ 355,759	-$ 8,481,461	-$ 8,806,490	-$ 325,029
1609	Capital Contributions Paid				$ 87,029,324		$ 87,029,324	$ 100,000		0.00%	45.00	2.22%	$ -	$ 1,933,985	$ 1,111	$ 1,935,096	$ 1,950,895	$ 15,799
	Total	$ -	$ -	$ -	$ 1,640,374,285	$ 61,227,531	$ 1,579,146,754	$ 78,653,701					$ -	$ 58,773,993	$ 1,631,397	$ 60,405,390	$ 59,015,340	-$ 1,390,050

General: Applicants are to complete this appendix to show the reasonability of the depreciation expense that is included in rate base via. Accumulated depreciation and the revenue requirement.

Applicants must provide a breakdown of depreciation and amortization expense in the above format for all relevant accounts. Balances presented in the table should exclude asset retirement obligations (AROs) and the related depreciation and accretion expense. These should be disclosed separately consistent with the Notes of historical Audited Financial

Notes:

1 This is the net book value of assets that existed as at the date of the utility's change in depreciation policies (i.e. as at Jan. 1, 2012 or Jan. 1, 2013). These assets are to be depreciated at the average remaining service life. This amount will not change in years subsequent to the date of the utility's change in depreciation policies. This column is expected to be used until the assets that existed as at the date of the utility's change in depreciation policies are fully depreciated.

2 This is the opening gross book value of assets that have been acquired after the date of the utility's change in depreciation policies (i.e. additions starting in 2012/2013 for those who changed policies Jan. 1, 2012/2013). These assets are to be depreciated at the revised service life. The amount is expected to be equal to the opening gross book value of the prior year plus the prior year's additions.

3 A recalculation should be performed to determine the average remaining life of opening balance of assets (i.e. excluding current year's additions) under the change in policies under CGAAP. For example, Asset A had a useful life of 20 years under CGAAP without the change in policies. On January 1 of the year of policy changes, Asset A was 3 years depreciated. As a result, Asset A would have a remaining service life of 17 years (20 years less 3 years) as at January 1 of the year of policy changes. Due to making the change in policies under CGAAP, management re-assessed the asset useful lives and concluded that the revised useful life of Asset A is now 30 years. Therefore, the average remaining useful life of the opening balance of Asset A is determined to be 27 years (30 years less 3 years) under the revised CGAAP as at January 1 of the year of policy changes.

4 The useful life used should be consistent with the OEB's regulatory accounting policies as set out in the Accounting Procedures Handbook for Electricity Distributors, effective Jan. 1, 2012 and also with the Report of the Board, Transition to International Financial Reporting Standards, EB-2008-0408, and the Kinectrics Report.

5 OEB policy of the "half-year" rule - the applicant must ensure that additions in the year attract a half-year depreciation expense in the first year. Deviations from this standard practice must be supported in the application.

6 The applicant must provide an explanation of material variances in evidence.

7 This should include assets in column A (excel column C) that become fully depreciated since the date of the policy change. The amount input in b (excel column D) should equal the net book value of the asset as at the date of depreciation policy change

UPDATED - Appendix 2-C
Depreciation and Amortization Expense

This appendix is to be completed in conjunction with the accounting instructions in Appendix 2-B

Scenario that applies	Applicable Years and Accounting Standard	Year Reflected in Schedule Below	Accounting Standard Reflected in Schedule
Rebasing for the first time with depreciation policy changes made in 2012.	This appendix must be duplicated and completed for the years 2012 to 2021. The appendix for 2012 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2012 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Rebasing for the first time with depreciation policy changes made in 2013.	This appendix must be duplicated and completed for the years 2013 to 2021. The appendix for 2013 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2013 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased with depreciation policy changes in a prior rate application and rebasing MIFRS for the first time.	This appendix must be completed for 2014 to 2021. The appendix for 2014 is to be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased under MIFRS in a prior rate application	This appendix must be completed under MIFRS for each year for the earlier of: 1) all historical years back to its last rebasing; or 2) at least three years of historical actuals, in addition to Bridge Year and Test Year forecasts.		MIFRS

2024

		Book Values							Service Lives				Depreciation Expense					
Account	Description	Opening Net Book Value of Existing Assets as at Date of Policy Change	Less Fully Depreciated 7	Net Amount of Existing Assets Before Policy Change to be Depreciated	Opening Gross Book Value of Assets Acquired After Policy Change 2	Less Fully Depreciated 8	Net Amount of Assets Acquired After Policy Change to be Depreciated	Current Year Additions	Average Remaining Life of Assets Existing Before Policy Change 3	Depreciation Rate Assets Acquired After Policy Change	Life of Assets Acquired After Policy Change 4	Depreciation Rate on New Additions	Depreciation Expense on Assets Existing Before Policy Change	Depreciation Expense on Assets Acquired After Policy Change	Depreciation Expense on Current Year Additions 5	Total Current Year Depreciation Expense	Depreciation Expense per Appendix 2-BA Fixed Assets, Column J	Variance 6
		a	b	c = a-b	d	e	f = d- e	g	h	i = 1/h	j	k = 1/j	l = c/h	m = f/j	n = g*0.5/j	o = l+m+n	p	q = p-o
1611	Computer Software (Formally known as Account 1925)			$ -	$ 96,593,738	$ 22,235,713	$ 74,358,025	$ 2,672,828		0.00%	8.00	12.50%	$ -	$ 9,294,753	$ 167,052	$ 9,461,805	$ 9,617,635	$ 155,830
1612	Land Rights (Formally known as Account 1906)			$ -	$ 2,571,805	$ 4	$ 2,571,801	$ 12,370		0.00%	39.00	2.56%	$ -	$ 65,944	$ 159	$ 66,102	$ 60,424	-$ 5,678
1805	Land			$ -	$ 4,824,643		$ 4,824,643			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1808	Buildings			$ -	$ 40,020,172	$ 468,898	$ 39,551,274	$ 930,941		0.00%	43.00	2.33%	$ -	$ 919,797	$ 10,825	$ 930,622	$ 1,019,266	$ 88,644
1810	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV			$ -	$ 156,209,933	$ 2,130,709	$ 154,079,224	$ 5,429,195		0.00%	32.00	3.13%	$ -	$ 4,814,976	$ 84,831	$ 4,899,807	$ 4,810,909	-$ 88,898
1820	Distribution Station Equipment <50 kV			$ -	$ 162,540,708	$ 6,590,398	$ 155,950,310	$11,994,416		0.00%	34.00	2.94%	$ -	$ 4,586,774	$ 176,388	$ 4,763,162	$ 5,000,717	$ 237,555
1825	Storage Battery Equipment			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures			$ -	$ 173,363,439		$ 173,363,439	$ 8,186,322		0.00%	41.00	2.44%	$ -	$ 4,228,377	$ 99,833	$ 4,328,210	$ 4,291,482	-$ 36,728
1835	Overhead Conductors & Devices			$ -	$ 182,858,941	$ 465,400	$ 182,393,541	$11,967,313		0.00%	38.00	2.63%	$ -	$ 4,799,830	$ 157,465	$ 4,957,295	$ 4,917,860	-$ 39,435
1840	Underground Conduit			$ -	$ 308,374,792	$ 1,225,613	$ 307,149,179	$18,547,382		0.00%	37.00	2.70%	$ -	$ 8,301,329	$ 250,640	$ 8,551,969	$ 8,246,543	-$ 305,426
1845	Underground Conductors & Devices			$ -	$ 264,455,688	$ 2,230,916	$ 262,224,772	$17,644,613		0.00%	32.00	3.13%	$ -	$ 8,194,524	$ 275,697	$ 8,470,221	$ 8,377,879	-$ 92,342
1850	Line Transformers			$ -	$ 126,396,793	$ 240,236	$ 126,156,557	$ 7,349,154		0.00%	31.00	3.23%	$ -	$ 4,069,566	$ 118,535	$ 4,188,101	$ 4,055,629	-$ 132,472
1855	Services (Overhead & Underground)			$ -	$ 89,220,153	$ 44,179	$ 89,175,974	$ 4,435,769		0.00%	39.00	2.56%	$ -	$ 2,286,563	$ 56,869	$ 2,343,432	$ 2,312,462	-$ 30,970
1860	Meters			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1860	Meters (Smart Meters)			$ -	$ 69,685,044	$ 20,217,128	$ 49,467,916	$ 7,261,510		0.00%	14.00	7.14%	$ -	$ 3,533,423	$ 259,340	$ 3,792,762	$ 3,798,330	$ 5,568
1905	Land			$ -	$ 19,942,005		$ 19,942,005			0.00%		0.00%	$ -	$ -	$ -	$ -	$ 4,047	$ 4,047
1908	Buildings & Fixtures			$ -	$ 97,303,801	$ 459,258	$ 96,844,543	$ 352,679		0.00%	31.00	3.23%	$ -	$ 3,124,018	$ 5,688	$ 3,129,706	$ 3,216,137	$ 86,431
1910	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)			$ -	$ 4,647,019	$ 1,129,556	$ 3,517,463	$ 50,383		0.00%	10.00	10.00%	$ -	$ 351,746	$ 2,519	$ 354,265	$ 394,788	$ 40,523
1915	Office Furniture & Equipment (5 years)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 22/04)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)			$ -	$ 16,648,437	$ 5,507,530	$ 11,140,907	$ 887,744		0.00%	6.00	16.67%	$ -	$ 1,856,818	$ 73,979	$ 1,930,797	$ 1,973,655	$ 42,859
1930	Transportation Equipment			$ -	$ 27,203,561	$ 6,842,384	$ 20,361,177	$ 1,844,412		0.00%	10.00	10.00%	$ -	$ 2,036,118	$ 92,221	$ 2,128,338	$ 2,033,557	-$ 94,781
1935	Stores Equipment			$ -	$ 560,703		$ 560,703			0.00%	10.00	10.00%	$ -	$ 56,070	$ -	$ 56,070	$ 56,225	$ 155
1940	Tools, Shop & Garage Equipment			$ -	$ 5,857,227	$ 2,099,310	$ 3,757,917	$ 464,863		0.00%	10.00	10.00%	$ -	$ 375,792	$ 23,243	$ 399,035	$ 452,760	$ 53,725
1945	Measurement & Testing Equipment			$ -	$ 209,467	$ 213,881	-$ 4,414			0.00%	12.00	8.33%	$ -	-$ 368	$ -	-$ 368	$ 130	$ 498
1950	Power Operated Equipment			$ -	$ 1,620,684	$ 376,611	$ 1,244,073			0.00%	13.00	7.69%	$ -	$ 95,698	$ -	$ 95,698	$ 87,380	-$ 8,318
1955	Communications Equipment			$ -	$ 22,117,465	$ 1,255,667	$ 20,861,798	$ 781,255		0.00%	10.00	10.00%	$ -	$ 2,086,180	$ 39,063	$ 2,125,243	$ 2,136,078	$ 10,835
1955	Communication Equipment (Smart Meters)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment			$ -	$ 537,121	$ 215,901	$ 321,220			0.00%	10.00	10.00%	$ -	$ 32,122	$ -	$ 32,122	$ 41,268	$ 9,146
1970	Load Management Controls Customer Premises			$ -	$ 350,910		$ 350,910			0.00%	10.00	10.00%	$ -	$ 35,091	$ -	$ 35,091	$ 35,091	$ -
1975	Load Management Controls Utility Premises			$ -	$ 203,443		$ 203,443			0.00%	10.00	10.00%	$ -	$ 20,344	$ -	$ 20,344	$ 20,344	-$ 0
1980	System Supervisor Equipment			$ -	$ 19,021,167	$ 3,775,713	$ 15,245,454	$ 1,094,855		0.00%	14.00	7.14%	$ -	$ 1,088,961	$ 39,102	$ 1,128,063	$ 1,082,628	-$ 45,435
1985	Miscellaneous Fixed Assets			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
2440	Contributions & Grants			$ -	-$ 264,756,598		-$ 264,756,598	-$20,689,619		0.00%	30.00	3.33%	$ -	-$ 8,825,220	-$ 344,827	-$ 9,170,047	-$ 9,416,952	-$ 246,905
1609	Capital Contributions Paid				$ 87,129,324		$ 87,129,324	$ 2,130,000		0.00%	45.00	2.22%	$ -	$ 1,936,207	$ 23,667	$ 1,959,874	$ 1,958,654	-$ 1,220
	Total	$ -	$ -	$ -	$ 1,715,711,586	$ 77,725,005	$ 1,637,986,581	$ 83,348,385					$ -	$ 59,365,432	$ 1,612,288	$ 60,977,720	$ 60,584,926	-$ 392,794

General: Applicants are to complete this appendix to show the reasonability of the depreciation expense that is included in rate base via. Accumulated depreciation and the revenue requirement.

Applicants must provide a breakdown of depreciation and amortization expense in the above format for all relevant accounts. Balances presented in the table should exclude asset retirement obligations (AROs) and the related depreciation and accretion expense. These should be disclosed separately consistent with the Notes of historical Audited Financial

Notes:

1 This is the net book value of assets that existed as at the date of the utility's change in depreciation policies (i.e. as at Jan. 1, 2012 or Jan. 1, 2013). These assets are to be depreciated at the average remaining service life. This amount will not change in years subsequent to the date of the utility's change in depreciation policies. This column is expected to be used until the assets that existed as at the date of the utility's change in depreciation policies are fully depreciated.

2 This is the opening gross book value of assets that have been acquired after the date of the utility's change in depreciation policies (i.e. additions starting in 2012/2013 for those who changed policies Jan. 1, 2012/2013). These assets are to be depreciated at the revised service life. The amount is expected to be equal to the opening gross book value of the prior year plus the prior year's additions.

3 A recalculation should be performed to determine the average remaining life of opening balance of assets (i.e. excluding current year's additions) under the change in policies under CGAAP. For example, Asset A had a useful life of 20 years under CGAAP without the change in policies. On January 1 of the year of policy changes, Asset A was 3 years depreciated. As a result, Asset A would have a remaining service life of 17 years (20 years less 3 years) as at January 1 of the year of policy changes. Due to making the change in policies under CGAAP, management re-assessed the asset useful lives and concluded that the revised useful life of Asset A is now 30 years. Therefore, the average remaining useful life of the opening balance of Asset A is determined to be 27 years (30 years less 3 years) under the revised CGAAP as at January 1 of the year of policy changes.

4 The useful life used should be consistent with the OEB's regulatory accounting policies as set out in the Accounting Procedures Handbook for Electricity Distributors, effective Jan. 1, 2012 and also with the Report of the Board, Transition to International Financial Reporting Standards, EB-2008-0408, and the Kinectrics Report.

5 OEB policy of the "half-year" rule - the applicant must ensure that additions in the year attract a half-year depreciation expense in the first year. Deviations from this standard practice must be supported in the application.

6 The applicant must provide an explanation of material variances in evidence.

7 This should include assets in column A (excel column C) that become fully depreciated since the date of the policy change. The amount input in b (excel column D) should equal the net book value of the asset as at the date of depreciation policy change

8 This should include assets in column D (excel column F) that have become fully depreciated. The amount input in e (excel column G) should equal the gross book value of the asset

UPDATED - Appendix 2-C
Depreciation and Amortization Expense

This appendix is to be completed in conjunction with the accounting instructions in Appendix 2-B

Scenario that applies	Applicable Years and Accounting Standard	Year Reflected in Schedule Below	Accounting Standard Reflected in Schedule Below
Rebasing for the first time with depreciation policy changes made in 2012.	This appendix must be duplicated and completed for the years 2012 to 2021. The appendix for 2012 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2012 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Rebasing for the first time with depreciation policy changes made in 2013.	This appendix must be duplicated and completed for the years 2013 to 2021. The appendix for 2013 is to be completed under CGAAP (prior to changes in depreciation policies). The appendix for 2013 to 2014 must be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased with depreciation policy changes in a prior rate application and rebasing MIFRS for the first time.	This appendix must be completed for 2014 to 2021. The appendix for 2014 is to be completed under Revised CGAAP (after changes in depreciation policies). The appendix for 2014 to 2021 is to be completed under MIFRS (2014 if changes to MIFRS are material).		
Already rebased under MIFRS in a prior rate application	This appendix must be completed under MIFRS for each year for the earlier of: 1) all historical years back to its last rebasing; or 2) at least three years of historical actuals, in addition to Bridge Year and Test Year forecasts.		MIFRS

2025

		Book Values							Service Lives				Depreciation Expense					
Account	Description	Opening Net Book Value of Existing Assets as at Date of Policy Change (Jan 1) 1	Less Fully Depreciated 7	Net Amount of Existing Assets Before Policy Change to be Depreciated	Opening Gross Book Value of Assets Acquired After Policy Change 2	Less Fully Depreciated 8	Net Amount of Assets Acquired After Policy Change to be Depreciated	Current Year Additions	Average Remaining Life of Assets Existing Before Policy Change 3	Depreciation Rate Assets Acquired After Policy Change	Life of Assets Acquired After Policy Change 4	Depreciation Rate on New Additions	Depreciation Expense on Assets Existing Before Policy Change	Depreciation Expense on Assets Acquired After Policy Change	Depreciation Expense on Current Year Additions 5	Total Current Year Depreciation Expense	Depreciation Expense per Appendix 2-BA Fixed Assets, Column J	Variance 6
		a	b	c = a-b	d	e	f = d- e	g	h	i = 1/h	j	k = 1/j	l = c/h	m = f/j	n = g*0.5/j	o = l+m+n	p	q = p-o
1611	Computer Software (Formally known as Account 1925)			$ -	$ 99,266,566	$ 23,064,208	$ 76,202,358	$16,854,811		0.00%	8.00	12.50%	$ -	$ 9,525,295	$ 1,053,426	$ 10,578,720	$ 11,048,698	$ 469,978
1612	Land Rights (Formally known as Account 1906)			$ -	$ 2,584,175	$ 4	$ 2,584,171	$ 12,376		0.00%	39.00	2.56%	$ -	$ 66,261	$ 159	$ 66,419	$ 60,507	-$ 5,912
1805	Land			$ -	$ 4,824,643		$ 4,824,643	$ 779,683		0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1808	Buildings			$ -	$ 40,951,113	$ 493,054	$ 40,458,059	$ 1,416,046		0.00%	40.00	2.50%	$ -	$ 1,011,451	$ 17,701	$ 1,029,152	$ 1,046,267	$ 17,115
1810	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1815	Transformer Station Equipment >50 kV			$ -	$ 161,639,128	$ 2,262,273	$ 159,376,855	$ 9,223,210		0.00%	32.00	3.13%	$ -	$ 4,980,527	$ 144,113	$ 5,124,639	$ 5,003,121	-$ 121,518
1820	Distribution Station Equipment <50 kV			$ -	$ 174,438,943	$ 6,858,571	$ 167,580,372	$26,747,897		0.00%	35.00	2.86%	$ -	$ 4,788,011	$ 382,113	$ 5,170,123	$ 5,417,445	$ 247,322
1825	Storage Battery Equipment			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1830	Poles, Towers & Fixtures			$ -	$ 181,236,058		$ 181,236,058	$ 8,003,940		0.00%	41.00	2.44%	$ -	$ 4,420,392	$ 97,609	$ 4,518,001	$ 4,462,353	-$ 55,648
1835	Overhead Conductors & Devices			$ -	$ 194,595,710	$ 562,686	$ 194,033,024	$11,674,276		0.00%	38.00	2.63%	$ -	$ 5,106,132	$ 153,609	$ 5,259,741	$ 5,217,477	-$ 42,264
1840	Underground Conduit			$ -	$ 326,922,174	$ 1,696,920	$ 325,225,254	$18,528,470		0.00%	37.00	2.70%	$ -	$ 8,789,872	$ 250,385	$ 9,040,256	$ 8,650,400	-$ 389,856
1845	Underground Conductors & Devices			$ -	$ 281,741,232	$ 2,700,678	$ 279,040,554	$17,532,469		0.00%	32.00	3.13%	$ -	$ 8,720,017	$ 273,945	$ 8,993,962	$ 8,839,416	-$ 154,546
1850	Line Transformers			$ -	$ 133,525,380	$ 561,969	$ 132,963,411	$ 7,363,590		0.00%	32.00	3.13%	$ -	$ 4,155,107	$ 115,056	$ 4,270,163	$ 4,226,186	-$ 43,977
1855	Services (Overhead & Underground)			$ -	$ 93,655,922	$ 50,484	$ 93,605,438	$ 4,429,274		0.00%	40.00	2.50%	$ -	$ 2,340,136	$ 55,366	$ 2,395,502	$ 2,357,841	-$ 37,661
1860	Meters			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1860	Meters (Smart Meters)			$ -	$ 75,943,039	$ 24,306,431	$ 51,636,608	$ 6,783,965		0.00%	14.00	7.14%	$ -	$ 3,688,329	$ 242,284	$ 3,930,614	$ 3,974,133	$ 43,519
1905	Land			$ -	$ 19,942,005		$ 19,942,005			0.00%		0.00%	$ -	$ -	$ -	$ -	$ 4,047	$ 4,047
1908	Buildings & Fixtures			$ -	$ 97,656,480	$ 644,160	$ 97,012,320	$ 352,679		0.00%	31.00	3.23%	$ -	$ 3,129,430	$ 5,688	$ 3,135,118	$ 3,204,028	$ 68,910
1910	Leasehold Improvements			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1915	Office Furniture & Equipment (10 years)			$ -	$ 4,697,402	$ 1,195,926	$ 3,501,476	$ 50,383		0.00%	10.00	10.00%	$ -	$ 350,148	$ 2,519	$ 352,667	$ 392,323	$ 39,656
1915	Office Furniture & Equipment (5 years)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equipment - Hardware			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 22/04)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1920	Computer Equip.-Hardware(Post Mar. 19/07)			$ -	$ 17,536,181	$ 6,482,634	$ 11,053,547	$ 1,573,599		0.00%	7.00	14.29%	$ -	$ 1,579,078	$ 112,400	$ 1,691,478	$ 1,958,576	$ 267,098
1930	Transportation Equipment			$ -	$ 28,100,981	$ 8,025,548	$ 20,075,433	$ 467,753		0.00%	9.00	11.11%	$ -	$ 2,230,604	$ 25,986	$ 2,256,590	$ 2,158,407	-$ 98,183
1935	Stores Equipment			$ -	$ 560,703		$ 560,703			0.00%	10.00	10.00%	$ -	$ 56,070	$ -	$ 56,070	$ 56,224	$ 154
1940	Tools, Shop & Garage Equipment			$ -	$ 6,322,090	$ 2,415,709	$ 3,906,381	$ 468,679		0.00%	10.00	10.00%	$ -	$ 390,638	$ 23,434	$ 414,072	$ 461,217	$ 47,145
1945	Measurement & Testing Equipment			$ -	$ 209,467	$ 214,417	-$ 4,950			0.00%	10.00	10.00%	$ -	-$ 495	$ -	-$ 495	$ 103	$ 598
1950	Power Operated Equipment			$ -	$ 1,620,684	$ 394,085	$ 1,226,599	$ 461,909		0.00%	16.00	6.25%	$ -	$ 76,662	$ 14,435	$ 91,097	$ 89,388	-$ 1,709
1955	Communications Equipment			$ -	$ 22,898,720	$ 3,142,403	$ 19,756,317	$ 1,733,822		0.00%	11.00	9.09%	$ -	$ 1,796,029	$ 78,810	$ 1,874,839	$ 1,885,121	$ 10,282
1955	Communication Equipment (Smart Meters)			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1960	Miscellaneous Equipment			$ -	$ 537,121	$ 220,993	$ 316,128	$ 24,987		0.00%	10.00	10.00%	$ -	$ 31,613	$ 1,249	$ 32,862	$ 41,830	$ 8,968
1970	Load Management Controls Customer Premises			$ -	$ 350,910		$ 350,910			0.00%	10.00	10.00%	$ -	$ 35,091	$ -	$ 35,091	$ 35,091	$ -
1975	Load Management Controls Utility Premises			$ -	$ 203,443		$ 203,443			0.00%	10.00	10.00%	$ -	$ 20,344	$ -	$ 20,344	$ 20,344	-$ 0
1980	System Supervisor Equipment			$ -	$ 20,116,022	$ 4,768,457	$ 15,347,565	$ 1,533,324		0.00%	15.00	6.67%	$ -	$ 1,023,171	$ 51,111	$ 1,074,282	$ 1,081,462	$ 7,180
1985	Miscellaneous Fixed Assets			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
1990	Other Tangible Property			$ -			$ -			0.00%		0.00%	$ -	$ -	$ -	$ -		$ -
2440	Contributions & Grants			$ -	-$ 285,076,217		-$ 285,076,217	-$20,758,380		0.00%	31.00	3.23%	$ -	-$ 9,196,007	-$ 334,813	-$ 9,530,820	-$ 9,805,553	-$ 274,733
1609	Capital Contributions Paid				$ 89,259,324		$ 89,259,324	$ 7,300,000		0.00%	45.00	2.22%	$ -	$ 1,983,541	$ 81,111	$ 2,064,652	$ 2,013,783	-$ 50,869
	Total	$ -	$ -	$ -	$ 1,796,259,400	$ 90,061,610	$ 1,706,197,790	$ 122,558,762					$ -	$ 61,097,445	$ 2,847,695	$ 63,945,141	$ 63,900,235	-$ 44,906

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Applicants must provide a breakdown of depreciation and amortization expense in the above format for all relevant accounts. Balances presented in the table should exclude asset retirement obligations (AROs) and the related depreciation and accretion expense. These should be disclosed separately consistent with the Notes of historical Audited Financial

Notes:

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3 A recalculation should be performed to determine the average remaining life of opening balance of assets (i.e. excluding current year's additions) under the change in policies under CGAAP. For example, Asset A had a useful life of 20 years under CGAAP without the change in policies. On January 1 of the year of policy changes, Asset A was 3 years depreciated. As a result, Asset A would have a remaining service life of 17 years (20 years less 3 years) as at January 1 of the year of policy changes. Due to making the change in policies under CGAAP, management re-assessed the asset useful lives and concluded that the revised useful life of Asset A is now 30 years. Therefore, the average remaining useful life of the opening balance of Asset A is determined to be 27 years (30 years less 3 years) under the revised CGAAP as at January 1 of the year of policy changes.

4 The useful life used should be consistent with the OEB's regulatory accounting policies as set out in the Accounting Procedures Handbook for Electricity Distributors, effective Jan. 1, 2012 and also with the Report of the Board, Transition to International Financial Reporting Standards, EB-2008-0408, and the Kinectrics Report.

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6 The applicant must provide an explanation of material variances in evidence.

7 This should include assets in column A (excel column C) that become fully depreciated since the date of the policy change. The amount input in b (excel column D) should equal the net book value of the asset as at the date of depreciation policy change