

WATERLOO NORTH HYDRO

EB-2020-0059

2021 COST OF SERVICE APPLICATION

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Filing Requirement Page # Reference		Evidence Reference, Notes (Note: if requirement is Not applicable, please provide reasons)
GENERAL REQUIREMENTS		
Ch 1, Pg. 2	Certification by a senior officer that the evidence filed is accurate, consistent and complete	Exhibit 1 - 2.1.4
Ch 1, Pg. 3-4	Confidential Information - Practice Direction has been followed	Not applicable - no confidential information submitted
Ch 2, Pg. 1	Statement identifying all deviations from Filing Requirements	Exhibit 1 - 2.1.4
2	Chapter 2 appendices in PDF and live Microsoft Excel format; PDF and Excel copy of current tariff sheet	Completed - attachments to submission
3	If applicable, late applications filed after the commencement of the rate year for which the application is intended to set rates is converted to the following rate year.	Not applicable - filed prior to the commencement of rate year
3	Aligning rate year with fiscal year - request for proposed alignment	Not applicable - rate year is aligned with fiscal year
4	Text searchable and bookmarked PDF documents	Completed - throughout application
5	Links within Excel models not broken and models names so that they can be identified (e.g. RRWF instead of Attachment A)	Completed - attachments to submission
5	Materiality threshold; additional details beyond the threshold if necessary (for rate base, capital expenditures and OM&A)	Exhibit 1 - 2.1.4
RESS Guideline	Two hardcopies of application sent to OEB the same day as electronic filing (p10 of RESS Guideline)	Not applicable - as amended for COVID-19
EXHIBIT 1 - ADMINISTRATIVE DOCUMENTS		
Table of Contents		
6	Table of Contents listing major sections and subsections of the application. Electronic version of application appropriately bookmarked to provide direct access to each section	2.1.1 - Master Table of Contents included at beginning of Application. Each individual Exhibit has its own TOC which is appropriately bookmarked.
Executive Summary		
6	Summary identifying key elements of the proposals and the Business Plan underpinning application, as guided by the Rate Handbook including plain language information about its goals	Exhibit 1 - 2.1.2
Customer Summary		
7	Brief but complete summary of the application that will be posted as a stand-alone document on the OEB's website for review by the general public and be made available to customers of the applicant. Must include: main requests (with section references), description of impacts of requests, bill impact for customer at 750kWh as well as a typical consumer for a distributor's service area for each of the residential and small business customer classes	Exhibit 1 - 2.1.3
Administration		
7	Primary contact information (name, address, phone, fax, email)	Exhibit 1 - 2.1.4
7	Identification of legal (or other) representation	Exhibit 1 - 2.1.4
7	Applicant's internet address for viewing of application and any social media accounts used by the applicant to communicate with customers	Exhibit 1 - 2.1.4
7	Statement identifying customers materially affected by the application including any change to any rate or charge and specific statement of what individual customer or customer groups would be affected by the proposed change	Exhibit 1 - 2.1.4
7	Statement identifying where notice should be published and why	Exhibit 1 - 2.1.4
7	Bill impacts - distribution only impacts for 750 kWh residential and 2000 kWh GS<50 (sub-total A of Tariff Schedule and Bill Impact Spreadsheet Model) to be used for notice; proposed bill impacts based on alternative consumption profiles and customer groups as appropriate given consumption patterns of a distributors customers	Exhibit 1 - 2.1.4
7	Form of hearing requested and why	Exhibit 1 - 2.1.4
7	Requested effective date	Exhibit 1 - 2.1.4
7	Statement identifying and describing any changes to methodologies used vs previous applications	Exhibit 1 - 2.1.4
7	Identification of OEB directions from any previous OEB Decisions and/or Orders. The applicant must clearly indicate how these are being addressed in the current application (e.g., filing of a study as directed in a previous decision)	Exhibit 1 - 2.1.4
7 & 8	Reference to Conditions of Service - LDC does not need to file Conditions of Service, but must provide reference to website and confirm version is current; identify if there are changes to Conditions of Service (a) since last CoS application or (b) as a result of the current application. Confirmation that there are no rates and charges linked in the Conditions of Service that are not in the distributor's Tariff of Rates and Charges must be provided	Exhibit 1 - 2.1.4
8	Description of the corporate and utility organizational structure, showing the main units and executive and senior management positions within the utility. Include a corporate entities relationship chart, showing the extent to which the parent company is represented on the utility company's Board of Directors and a description of the reporting relationships between utility and parent company management. Also include any planned changes in corporate or operational structure, including any changes in legal organization and control	Exhibit 1 - 2.1.4
8	List of approvals requested (and relevant section of legislation), including accounting orders - a PDF copy of Appendix 2-A should be provided in this section	Exhibit 1 - 2.1.4, Exhibit 1 Attachment 1-1 (2-A - PDF)

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Distribution System Overview		
8	Description of Service Area (including map, communities served)	Exhibit 1 - 2.1.5, Exhibit 1 Attachment 1-13
8	Description of whether the distributor is a host distributor and/or embedded distributor. Identification of embedded and/or host distributors; if partially embedded provide %load from host distributor. If the distributor is a host, the applicant should identify whether there is a separate Embedded Distributor customer class or if any embedded distributors are included in other customer classes such as GS > 50 kW	Exhibit 1 - 2.1.5
8	Statement as to whether or not the distributor has had any transmission or high voltage assets deemed by the OEB as distribution assets and whether or not there are any such assets the distributor is seeking approval for in this application	Exhibit 1 - 2.1.5
Application Summary		
At a minimum, the items below must be provided. Applicants must also identify all proposed changes that will have a material impact on customers.		Exhibit 1 - 2.1.6
9	Revenue Requirement - service RR, increase/decrease ($ and %) from change from previously approved and main drivers	
9	Budgeting and Accounting Assumptions - economic overview and identification of accounting standard used for test year and brief explanation of impacts arising from any change in standards	Exhibit 1 - 2.1.6
9	Load Forecast Summary - load and customer growth, % change in kWh/kW and customer numbers, description of forecasting method(s) used for customer/connection and consumption/demand	Exhibit 1 - 2.1.6
9	Rate Base and DSP - major drivers of DSP, rate base for test year, change in rate base from last approved ($ and %), capital expenditures requested for the test year, change in capital expenditures from last approved ($ and %), summary of costs requested for renewable energy connections/expansions, smart grid, and regional planning initiatives, any O.Reg 339/09 planned recovery	Exhibit 1 - 2.1.6
9 & 10	OM&A Expense - OM&A for test year and change from last approved ($ and %), summary of drivers and cost trends, inflation assumed, total compensation for test year and change from last approved ($ and %).	Exhibit 1 - 2.1.6
10	Cost of Capital - summary table showing proposed capital structure and cost of capital parameters used in WACC. Statement regarding use of OEB's cost of capital parameters; summary of any deviations	Exhibit 1 - 2.1.6
10	Cost Allocation & Rate Design - summary of any deviations from OEB methodologies, significant changes proposed to revenue-to-cost ratios and fixed/variable splits and summary of proposed mitigation plans	Exhibit 1 - 2.1.6
10	Deferral and Variance Accounts - total disposition (RPP and non-RPP), disposition period, new accounts requested and any requested discontinuation of existing DVAs	Exhibit 1 - 2.1.6
10	Bill Impacts - total impacts ($ and %) for all classes for typical customers	Exhibit 1 - 2.1.6
Customer Engagement		
10	Discussion on how customers were informed of the proposals being considered for inclusion in the application and the value of those proposals to customers i.e. costs, benefits, and the impact on rates	Exhibit 1 - 2.1.7, more detail in Attachment 1-9a and 1-9b Customer Engagement Reports
10	Discussion of any feedback provided by customers and how the feedback shaped the final application	Exhibit 1 - 2.1.7
10	Impact of customer engagement activities on the development of the capital plan are to be filed as part of the capital plan requirements in Chapter 5	Exhibit 1 - 2.1.7
11	Reference to any other communication sent to customers about the application i.e. bill inserts, town hall meetings or other forms of out reach and the feedback received from customers through these engagement activities. Provide summary of feedback received through engagement activities.	All Engagement specific to the Application included in Attachment 1-9a and 1-9b Customer Engagement Reports
11	Complete Appendix 2-AC Customer Engagement Activities Summary - explicit identification of the outcomes of customer engagement in terms of the impacts on the distributor's plans, and how that information has shaped the application	Exhibit 1 - Attachment 1-1, impact on plans included in Exhibit 1 - 2.1.7
11	All responses to matters raised in letters of comment filed with the OEB	Exhibit 1 - 2.1.7 - None at date of filing
Performance Measurement		Exhibit 1 - 2.1.8
11	Discussion of performance for each of the distributor's scorecard measures over the last five years; drivers for its performance, plans for continuous improvement currently and going forward	
11 & 12	Identify performance improvement targets, forecast of efficiency assessment using the PEG forecasting model for the test year, discussion on how the results obtained from the PEG model has informed the business plan and application	Exhibit 1 - 2.1.8
Financial Information		Exhibit 1 - 2.1.9 and Attachments 1-11 and 1-12
12	Non-consolidated Audited Financial Statements for 3 most recent historical years (i.e. 2 years statements must be filed, covering 3 years of historical actuals)	
12	Detailed reconciliation of AFS with regulatory financial results filed in the application, including a reconciliation of the fixed assets in order to, as one example, separate non-distribution business. This must include identification of any deviations that are being proposed between AFS and regulatory financial results, including the identification of any prior OEB approvals for such deviations	Exhibit 1 - 2.1.9 and Attachment 1-16
12	Annual Report and MD&A for most recent year of distributor and parent company, as available and applicable	Exhibit 1 - 2.1.9 and Attachments 1-15 and 1-19
12	Rating Agency Reports, if available; Prospectuses, etc. for recent and planned public issuances	Exhibit 1 - 2.1.9 and Attachment 1-17
12	Any change in tax status	Exhibit 1 - 2.1.9
12	Existing accounting orders and departures from these orders, as well as any departures from the USoA	Exhibit 1 - 2.1.9
12	Accounting Standards used for financial statements and when adopted	Exhibit 1 - 2.1.9
12	Confirmation that accounting treatment of any non-utility business has segregated activities from rate regulated activities	Exhibit 1 - 2.1.9
Distributor Consolidation		
13	If a distributor has acquired or amalgamated with another distributor, identify any incentives that formed part of the acquisition or amalgamation transaction if the incentive represents costs that are being proposed to remain or enter rate base and/or revenue requirement. A distributor must specify whether any commitments made to shareholders are to be funded through rates	Exhibit 1 - 2.1.10 - No consolidation
13	List of exhibits in application in which incentives are discussed	Not applicable
13	Description of actual savings as a result of consolidation compared to what was in the approved consolidation application and explanation of how savings are sustainable and the efficacy of any rate plan approved as part of the MAADs application	Not applicable
13	Identify approved ACM or ICM from a previous Price Cap IR application it proposes be incorporated into rate base	Not applicable

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EXHIBIT 2 - RATE BASE		
Overview		
14	Completed Fixed Asset Continuity Schedule (Appendix 2-BA) - in Application and Excel format	Exhibit 2 - 2.2.1.2 and Attachment 2-1 (2-BA - PDF, Excel included with Chap. 2 Appendices)
14	For rate base, must include opening and closing balances, average of opening and closing balances for gross assets and accumulated depreciation (discussion of methodology if applicant uses an alternative method); working capital allowance (historical actuals, bridge and test year forecast)	Exhibit 2 - 2.2.1.1
14	Continuity statements (year end balance, including interest during construction and overheads). Explanation for any restatement (e.g. due to change in accounting standards) Year over year variance analysis; explanation where variance greater than materiality threshold Hist. OEB-Approved vs Hist. Actual (for the most recent historical OEB-approved year) Hist. Act. vs. preceding Hist. Act. (for the relevant number of years) Hist. Act. vs. Bridge Bridge vs. Test	Exhibit 2 - 2.2.1.1
14 & 15	Opening and closing balances of gross assets and accumulated depreciation must correspond to fixed asset continuity statements. If not, an explanation must be provided (e.g. CWIP, ARO). Reconciliation must be between net book value balances reported on Appendix 2-BA and balances included in rate base calculation	Exhibit 2 - 2.2.1.1 and Exhibit 2 - 2.2.1.2
15	Distributor may include in-service balances previously recorded in DVAs, such as MIST meters or renewable generation/smart grid related accounts, in its opening test year property, plant and equipment balances, if these costs have not been previously reviewed and approved for disposition, but disposition is being requested in this application. In this situation, the distributor must clearly show in its evidence (e.g. Appendix 2-BA) that the addition was included in the opening test year balances and must reconcile the closing bridge year and opening test year figures. Distributors must provide the same reconciliation for accumulated depreciation	Not applicable
Gross Assets - PP&E and Accumulated Depreciation		
15	Breakdown by function and by major plant account; description of major plant items for test year	Exhibit 2 - 2.2.1.2
15	Summary of approved and actual costs for any ICM(s) and/ or ACM approved in previous IRM applications	Not applicable
15	Continuity statements must reconcile to calculated depreciation expenses and presented by asset account	Exhibit 4 - 2.4.4
15	All asset disposals clearly identified in the Chapter 2 Appendices for all historical, bridge and test years and if any amounts related to gains or losses on disposals have been included in Account 1575 IFRS - CGAAP Transitional PP&E Amount	Exhibit 2 - 2.2.1.2
Allowance for Working Capital		Exhibit 2 - 2.2.1.3
16	Working Capital - 7.5% allowance or Lead/Lag Study or Previous OEB Direction	
16	Lead/Lag Study - leads and lags measured in days, dollar-weighted	Not applicable
16	Cost of Power must be determined by split between RPP and non-RPP Class A and Class B customers based on actual data, use most current RPP (TOU) price, use current UTR. Calculation must fully consider all other impacts resulting from the Ontario Electricity Rebate of 31.8% on the total bill. Distributors must complete Appendix 2-Z - Commodity Expense.	Exhibit 2 - 2.2.1.3, Attachment 2-1 (2-Za & 2-Zb - PDF, Excel included with Chap. 2 Appendices)
Capital Expenditures		Exhibit 2 - Attachment 2-2
17	DSP filed as a stand-alone document; a discrete element within Exhibit 2	
17	Overall summary of capital expenditures over the past five historical years, including the last OEB-approved amounts, as well as the bridge year and the test year. The summary must show capital expenditures, treatment of contributed capital, and additions and deductions from CWIP. As part of Exhibit 2, a distributor must also provide explanations of year-over-year variances and an explanation of the variance, if any, between the OEB-approved capital expenditure amount in the last rebasing year as compared to the actual expenditures for that year.	Exhibit 2 - 2.2.2.2
17	Complete Appendix 2-AB - four historical years must be actuals, forecasts for the bridge and test years; at a minimum, for historical years, applicants must provide actual totals for each DSP category. If no previous plan has been filed, applicants are only required to enter their planned total capital budget in the "plan" column for each historical year and for the bridge year including the OEB-approved amount for the last rebasing year	Exhibit 2 - 2.2.2.2 and Attachment 2-1 (2-AB - PDF, Excel included with Chap. 2 Appendices)
Policy Options for the Funding of Capital		
18	Distributor may propose ACM capital project coming into service during Price Cap IR (a discrete project documented in DSP). Provide cost and materiality calculations to demonstrate ACM qualification	Exhibit 2 - 2.2.2.3 - Not applicable
18	Distributor must establish need for and prudence of these projects based on DSP information; identification that distributor is proposing ACM treatment for these future projects, preliminary cost information	Exhibit 2 - 2.2.2.3 - Not applicable
18	Complete Capital Module Applicable to ACM and ICM	Exhibit 2 - 2.2.2.3 - Not applicable
Addition of Previously Approved ACM and ICM Project Assets to Rate Base		
19	Distributor with previously approved ACM(s) and/or ICM(s) - schedule of ACM/ICM amounts proposed to be incorporated into rate base. The distributors must compare actual capital spending with OEB-approved amount and provide an explanation for variances	Exhibit 2 - 2.2.2.4 - Not applicable
20	Balances in Account 1508 sub-accounts, reconciliation with proposed rate base amounts; recalculated revenue requirement should be compared with rate rider revenue	Exhibit 2 - 2.2.2.4 - Not applicable
20	Accelerated capital cost allowance (CCA) should not be reflected in the ACM/ICM revenue requirement associated with these projects. Distributors should include the impact of the CCA rule change associated with the ACM/ICM project(s) in Account 1592 - PILs and Tax Variances – CCA Changes sub-account for CCA changes	Exhibit 2 - 2.2.2.4 - Not applicable
Capitalization Policy and Capitalization		
20	Changes to capitalization policy since its last rebasing application as a result of the OEB's letter dated July 17, 2012 or for any other reasons, the applicant must identify the changes and the causes of the changes.	Exhibit 2 - 2.2.2.6
21	Appendix 2-D complete; identification of burden rates and burden rates prior to changes, if any	Exhibit 2 - 2.2.2.6 and Attachment 2-1 (2-D - PDF, Excel included with Chap. 2 Appendices)
Costs of Eligible Investments for the Connection of Qualifying Generation Facilities		
21 & 22	Generation Facilities - If applicable, proposal to divide the costs of eligible investments between the distributor's ratepayers and all Ontario ratepayers per O.Reg. 330/09. Request for rate protection exceeds the materiality threshold in section 2.0.8 of the Filing Requirements - Appendices 2-FA through 2-FC identifying all eligible investments for recovery	Exhibit 2 - 2.2.2.7 - Not applicable
Service Quality		
22	5 historical years of SQRs, explanation for any under-performance vs standard and actions taken	Exhibit 2 - 2.2.2.8
22	Completed Appendix 2-G; confirmation that the data is consistent with scorecard, or explanation of any inconsistencies	Exhibit 2 - 2.2.2.8 and Attachment 2-1 (2-G - PDF, Excel included with Chap. 2 Appendices)

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Ch5 p7-8	Where applicable, explanation for section headings other than Chapter 5 headings; cross reference table	DSP - Section 1.2
Ch5 p8-9	Distribution System Plan Overview - key elements, sources of cost savings, period covered, vintage of information on investment drivers, changes to asset management process since last DSP filing, dependencies	DSP - Section 2.1
Ch5 p9-10	Coordinated Planning with 3rd parties - description of consultations - deliverables of the Regional Planning Process, or status of deliverables - IESO letter in relation to REG investments (Ch 5 p9) and Dx response letter	DSP - Section 2.2
Ch5 p10-12	Performance Measurement - identify and define methods and measures used to monitor DSP performance - summary of performance and trends over historical period. Must include SAIFI and SAIDI for all interruptions and all interruptions excluding loss of supply - explain how information has affected DSP	DSP - Section 2.3
Ch5 p12	Realized efficiencies due to smart meters -documented capital and operating efficiencies realized as a result of the deployment and operationalization of smart meters and related technologies. Both qualitative and quantitative descriptions should be provided	DSP - Section 2.4
Ch5 p12-13	Asset Management Process Overview - description of AM objectives/corporate goals and how Dx ranks objectives for prioritizing investments	DSP - Section 3.1
Ch5 p13	Inputs/Outputs of the AM process and information flow for investments; flowchart recommended	DSP - Section 3.1.2.2
Ch5 p14	Overview of Assets Managed - description of service area (including evolution of features in forecast period affecting DSP), - description of system configuration - service profile and condition by asset type (tables and/or figures) - date data compiled - assessment of degree the capacity of system assets is utilized	DSP - Section 3.2 Appendix A - WNH Asset Condition Assessment (ACA) Report
Ch5 p14-15	Asset Lifecycle Optimization - description of asset lifecycle optimization policies and practices, including asset replacement and refurbishment, maintenance planning criteria and assumptions - description of asset life cycle risk management policies and practices, assessment methods and approaches to mitigation	DSP - Section 3.3
Ch5 p15-16	System Capability Assessment for REG - REG applications > 10 kW, number and MW of REG connections for forecast period, capacity of Dx to connect REG, connection constraints	DSP - Section 3.4 Appendix H - WNH Renewable Energy Generation (REG) Investment Plan
Ch5 p16	Capital Expenditure Plan Summary for significant projects and activities to be undertaken - capability to connect new load or Gx customers, total annual capex over forecast period by investment category, description of how AMP and Capex planning have affected capital expenditures for each category - list, description and total capital cost of material capital expenditures sorted by category (table recommended) - information related to Regional Planning Process (Needs Assessment Report, Regional Planning Status Letter, Regional Infrastructure Plan - as appropriate) - description of customer engagement - Dx expectations of system development over next 5 years - list, description and total capital cost of projects planned in response to customer preferences, to take advantage of technology based opportunities, to study innovative processes (table recommended)	DSP - Section 4.1
Ch5 p17-18	Capital Expenditure Planning Process Overview - description of capex planning objectives/criteria/ assumptions, relationship with AM objectives, policy on consideration of non-distribution alternatives, processes used to identify projects in each investment category, customer feedback and impact on plan, method and criteria used to priorities REG investments	DSP - Section 4.2
Ch5 p18	Rate-Funded Activities to Defer Distribution Infrastructure -CDM programs that target distributor-specific peak demand reductions to address a local constraint of the distribution system -demand response programs to reduce peak demand in order to defer capital investment -programs to improve the efficiency of the distribution system and reduce distribution losses -energy storage programs whose primary purpose is to defer specific capital spending for the distribution system	DSP - Section 4.2.6
Ch5 p19-20	Capital Expenditure Summary by Investment Category - completed Table 2 of Ch 5 for historical and forecast period, explanation of markedly different variances plan vs actual, explanation of markedly different variances year over year Table 2 of Ch 5 is provided in Excel format in Appendix 2-AB (must provide actual totals for historical years, as a minimum) - Must also complete Chapter 2 Appendix 2-AA, along with explanations of variances by project or category, the proposed accounting treatments, a statement should be provided that there are no expenditures for non-distribution activities in the applicant's budget	DSP - Section 4.3
Ch5 p20	Justifying Capital Expenditures -filings must enable OEB to assess whether and how a distributor's DSP delivers value to customers, including by controlling costs in relation to its proposed investments through appropriate optimization, prioritization, and pacing of capital-related expenditures -distributors should also keep pace with technological changes and integrate cost-effective innovative projects and traditional planning needs such as load growth, asset condition and reliability	DSP - Section 4.4
Ch5 p20-21	Overall Plan - comparative expenditures by category over historical period, forecast impact of system investment on O&M, drivers of investments by category, information related to Dx system capability assessment	DSP - Section 4.4.1
Ch5 p21-28	Material Investments - For each project that meets materiality threshold set in Ch 2 p5 - general information - total capital, customer attachments, dates, risks, variances, REG investments - evaluation criteria - may include: efficiency, customer value, reliability, etc. - category specific requirements for each project - system access, system renewal, system service, general plant (as applicable)	DSP - Section 4.4.2 Appendix B - 2021 Material Capital Investments

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EXHIBIT 3 - OPERATING REVENUE		
Load and Revenue Forecasts		
23	Explanation of causes, assumptions and adjustments for volume forecast, including economic assumptions and data sources for customer and load forecasts	Exhibit 3 - 2.3.1.1
23	Explanation of weather normalization methodology	Exhibit 3 - 2.3.1.1
23	Completed Appendix 2-IB; the customer and load forecast for the test year must be entered on RRWF, Tab 10	Exhibit 3 - Attachment 3-1 (2-IB - PDF, Excel included with Chap. 2 Appendices), Exhibit 6 - Attachment 6-1 (RRWF)
23 & 24	Multivariate Regression Model - rationale for choice, regression statistics, explanation of weather normalization methodology, sources of data for endogenous and exogenous variables, any binary variables used to either account for individual data points or to account for seasonal or cyclical trends or for discontinuities in the historical data, explanation of any specific adjustments made; data used in load forecast must be provided in Excel format, including derivation of constructed variables	Exhibit 3 - 2.3.1.1 and Attachment 3-2
24 & 25	NAC Model - rationale for choice, data supporting NAC variables, description of accounting for CDM including license conditions, discussion of weather normalization considerations	Exhibit 3 - 2.3.1.2
25	CDM Adjustment - If a distributor expects impacts from any CFF-related projects not deployed by April 2019 but for which a distributor is contractually obligated to complete, or for other programs delivered by the distributor after April 2019, a distributor may include these amounts as part of a CDM manual adjustment to the 2021 load forecast but must ensure that sufficient supporting evidence is provided for all estimated CDM savings	Exhibit 3 - 2.3.1.3
25	If a distributor proposes a CDM adjustment to its 2021 load forecast, it should document the CDM savings to be used as the basis for the 2021 LRAMVA threshold. In addition, the allocation of the CDM savings for the LRAMVA and the load forecast adjustment should be provided by customer class and for both kWh and, as applicable to a customer class, kW. The distributor should document its proposal adequately	Exhibit 3 - 2.3.1.3
25	Appendix 2-I - is provided as one approach for calculating the aggregate amounts for the LRAMVA and the corresponding CDM adjustment to the load forecast.	Exhibit 3 - 2.3.1.3 - Not applicable
Accuracy of Load Forecast and Variance Analyses		
25	Completed Appendix 2-IB	Exhibit 3 - 2.3.2 and Exhibit 3 - Attachment 3-1 (2-IB- PDF, Excel included with Chap. 2 Appendices)
25 & 26	For customer/connection counts - identification as to whether customer/connection count is shown in year end or average format, year-over-year variances in changes of customer/connection counts with explanation of major changes, explanations of bridge and test year forecasts by rate class, for last rebasing variance analysis between last OEB-approved and actuals with explanations for material differences	Exhibit 3 - 2.3.2
26	For consumption and demand - explanation to support how kWh are converted to kW for applicable demand-billed classes, year-over-year variances in kWh and kW by rate class and for system consumption overall (kWh) with explanations for material changes in the definition of or major changes over time (should be done for both historical actuals against each other and historical weather-normalized actuals over time), explanations of the bridge and test year forecasts by rate class, variance analysis between the last OEB-approved and the actual and weather-normalized actual results	Exhibit 3 - 2.3.2
26	For revenues - calculation of bridge year forecast of revenues at existing rates; calculation of test year forecasted revenues at each of existing rates and proposed rates	Exhibit 3 - Table 3-1 and Table 3-24
26 & 27	With respect to average consumption, for each rate class, distributors are to provide weather-actual and weather-normalized average annual consumption or demand per customer as applicable for the rate class for last OEB approved and historical, weather normalized average annual consumption or demand per customer for the bridge and test years, explanation of the net change in average consumption from last OEB-approved and actuals from historical, bridge and test years based on year-over-year variances and any apparent trends in data	Exhibit 3 - 2.3.2
Other Revenue		
27	Completed Appendix 2-H	Exhibit 3 - 2.3.3 and Exhibit 2 - Exhibit 3 - Attachment 3-1 (2-H - PDF, Excel included with Chap. 2 Appendices)
27	Variance analysis - year over year, historical, bridge and test	Exhibit 3 - 2.3.3
27	Any new proposed specific service charges, or proposed changes to rates or application of existing specific service charges	Exhibit 3 - 2.3.3
27	Revenue from affiliate transactions, shared services, corporate cost allocation. For each affiliate transaction, identification of the service, the nature of the service provided to affiliate entities, accounts used to record the revenue and associated costs (Appendix 2-N)	Exhibit 3 - 2.3.3, Exhibit 4 - 2.4.3.2, Attachment 4-1 (2-N - PDF, Excel included with Chap. 2 Appendices)
28	Distributors must identify any discrete customer groups that may be materially impacted by changes to other rates and charges	Exhibit 3 - 2.3.3

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EXHIBIT 4 - OPERATING COSTS		
Overview		
29	Brief explanation of test year OM&A levels, cost drivers, significant changes, trends, inflation rate assumed, business environment changes	Exhibit 4 - 2.4.1
Summary and Cost Driver Tables		
29	Summary of recoverable OM&A expenses; Appendix 2-JA	Exhibit 4 - 2.4.2 - Exhibit 4 - Attachment 4-1 (2-JA - PDF, Excel included with Chap. 2 Appendices)
29	Recoverable OM&A cost drivers; Appendix 2-JB	Exhibit 4 - 2.4.2 - Exhibit 4 - Attachment 4-1 (2-JB - PDF, Excel included with Chap. 2 Appendices)
29	OM&A programs table; Appendix 2_JC	Exhibit 4 - 2.4.2 - Exhibit 4 - Attachment 4-1 (2-JC - PDF, Excel included with Chap. 2 Appendices)
29	Recoverable OM&A Cost per customer and per FTE; Appendix 2-L	Exhibit 4 - 2.4.2 - Exhibit 4 - Attachment 4-1 (2-L - PDF, Excel included with Chap. 2 Appendices)
29	Identification of change in OM&A in test year in relation to change in capitalized overhead.	Exhibit 4 - 2.4.2 and Exhibit 2 - 2.2.2.6
30	OM&A variance analysis for test year with respect to bridge and historical years; Appendix 2-D	Exhibit 4 - 2.4.2 - Exhibit 4 - Attachment 4-1 (2-D - PDF, Excel included with Chap. 2 Appendices)
Program Delivery Costs with Variance Analysis		
30	Completed Appendix 2-JC OM&A Programs Table - completed by program; include variance analysis between test year costs against each of the last OEB approved costs and most recent actuals for variances that are outliers based on historical trend. The variance analysis should explain whether the change was within or outside the applicant's control	Exhibit 4 - 2.4.3 - Exhibit 4 - Attachment 4-1 (2-JC - PDF, Excel included with Chap. 2 Appendices)
30	For each significant change within the applicant's control describe business decision that was made to manage the cost increase/decrease and the alternatives	Exhibit 4 - 2.4.3
Workforce Planning and Employee Compensation		
30	Employee Compensation - completed Appendix 2-K	Exhibit 4 - 2.4.3 - Exhibit 4 - Attachment 4-1 (2-K - PDF, Excel included with Chap. 2 Appendices)
30	Description of previous and proposed workforce plans, including compensation strategy	Exhibit 4 - 2.4.3.1
30 & 31	Discussion of the outcomes of previous plans and how those outcomes have impacted their proposed plans including an explanation of the reasons for all material changes to headcount and compensation. Explanation for all years includes: - year over year variances, inflation rates used for forecasts, and the plan for any new employees - basis for performance pay, eligible employee groups, goals, measures, and review process for pay-for-performance plans, - relevant studies (e.g. compensation benchmarking)	Exhibit 4 - 2.4.3.1
31	For virtual utilities - Appendix K must also be completed in relation to the employees of the affiliates who are doing the work of the regulated utility. The status of pension funding and all assumptions used in the analysis must be provided. Three or fewer employees - the applicant must aggregate this category with the category to which it is most closely related. This higher level of aggregation must be continued, if required, to ensure that no category contains three or fewer employees.	Virtual Utilities - Not applicable Three or fewer employees have been aggregated together in 2.4.3.1
31	Details of employee benefit programs including pensions, other post-employment retirement benefits (OPEBs), and other costs charged to OM&A. A breakdown of the pension and OPEBs amounts included in OM&A and capital must be provided for the last OEB-approved rebasing application, and for historical, bridge and test years	Exhibit 4 - 2.4.3.1
31	Most recent actuarial report	Exhibit 4 - Attachment 4-3
31	Accounting method for pension and OPEBs; if cash method, sufficient supporting rationale. If proposing to change the basis in which pension and OPEB costs included in OM&A, quantification of impact of transition	Exhibit 4 - 2.4.3.1
Shared Services and Corporate Cost Allocation		
32	Identification of all shared services among affiliates and parent company; identification of the extent to which the applicant is a "virtual utility"	Exhibit 4 - 2.4.3.2
32	Allocation methodology for corporate and shared services, pricing methodology, list of costs and allocators, including any third party review	Exhibit 4 - 2.4.3.2
32	Completed Appendix 2-N for service provided or received for historical, bridge and test; including reconciliation with revenue included in Other Revenue	Exhibit 4 - 2.4.3.2 - Exhibit 4 - Attachment 4-1 (2-N - PDF, Excel included with Chap. 2 Appendices)
32	Shared Service and Corporate Cost Variance analysis - test year vs last OEB approved and test year vs most recent actual	Exhibit 4 - 2.4.3.2
32	Identification of any Board of Director costs for affiliates included in LDC costs	Exhibit 4 - 2.4.3.2
Non-Affiliate Services, One-Time Costs, Regulatory Costs		
33	Purchased Non-Affiliated Services - file a copy of procurement policy (signing authority, tendering process, non-affiliate service purchase compliance)	Exhibit 4 - Attachment 4-4
33	For material transactions that are not in compliance with procurement policy, or that were undertaken pursuant to exceptions contemplated within the policy, an explanation as to why as well as a summary of the nature and cost of the product, and a description of the specific methodology used for selecting the vendor	Exhibit 4 - 2.4.3.3 - Not applicable
33	Identification of one-time costs in historical, bridge, test; explanation of cost recovery in test (or future years). If no recovery of one-time costs is being proposed in the test year and subsequent IRM term, an explanation must be provided	Exhibit 4 - 2.4.3.4
33	Regulatory costs - breakdown of actual and anticipated regulatory costs, including OEB cost assessments and expenses related to the CoS application (e.g. legal fees, consultant fees), proposed recovery (i.e. amortized?) Completed Appendix 2-M	Exhibit 4 - 2.4.3.5 - Exhibit 4 - Attachment 4-1 (2-M - PDF, Excel included with Chap. 2 Appendices)
33	Information supporting the incremental level of the costs associated with the preparation and review of the current application. In addition, the applicant must identify over what period the costs are proposed to be recovered. For distributors, the recovery period would normally be the duration of the expected cost of service plus IRM term under the Price Cap IR option (i.e. five years). If the applicant is proposing a different recovery period, it must explain why it believes this is appropriate.	Exhibit 4 - 2.4.3.4 and 2.4.3.5

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LEAP, Charitable and Political Donations		
33 & 34	LEAP - the greater of 0.12% of forecasted service revenue requirement or $2,000 should be included in OM&A and recovered from all rate classes	Exhibit 4 - 2.4.3.6 and 2.4.3.7
34	Detailed information for all contributions that are claimed for recovery	Exhibit 4 - 2.4.3.6 and 2.4.3.7
34	Charitable Donations - the applicant must confirm that no political contributions have been included for recovery	Exhibit 4 - 2.4.3.7
Depreciation, Amortization and Depletion		
34	Explanations for any useful lives of an asset that are proposed that are not within the ranges contained in the Kinectrics Report	Exhibit 4 - 2.4.4
34 & 35	Depreciation, Amortization and Depletion details by asset group for historical, bridge and test years. Include asset amount and rate of depreciation/amortization. Must complete Appendix 2-C which must agree to accumulated depreciation in Appendix 2-BA under rate base	Exhibit 4 - 2.4.4 - Exhibit 4 - Attachment 4-1 (2-C - PDF, Excel included with Chap. 2 Appendices)
35	Identification of any Asset Retirement Obligations and associated depreciation, accretion expense	Exhibit 4 - 2.4.4
35	Identification of historical depreciation practice and proposal for test year. Variances from half year rule must be documented and supporting rationale provided	Exhibit 4 - 2.4.4
35	Copy of depreciation/amortization policy, or equivalent written description; summary of changes to depreciation/amortization policy since last CoS	Exhibit 4 - 2.4.4
35	Explanation of any deviations from the practice of depreciating significant parts or components of PP&E separately	Exhibit 4 - 2.4.4
35 & 36	For any depreciation expense policy or asset service lives changes since its last rebasing application: - identification of the changes and detailed explanation for the causes of the changes, including any changes subsequent to those made by January 1, 2013 -use of Kinectrics study or another study to justify changes in useful life - list detailing all asset service lives tied to USoA, detail differences in TUL from Kinectrics and explain differences outside of minimum and maximum TUL range from Kinectrics; Appendix 2-BB	Exhibit 4 - 2.4.4
PILs and Property Taxes		
36	Completed version of the PILs model (PDF and Excel); derivation of adjustments for historical, bridge, test years	Exhibit 4 - 2.4.5.1, Attachment 4-5 (PDF & Excel)
36	Supporting schedules and calculations identifying reconciling items	Exhibit 4 - 2.4.5.1, Attachment 4-5 (PDF & Excel)
36	Most recent federal and provincial tax returns	Exhibit 4 - 2.4.5.1 and Attachment 4-6
36	Financial Statements included with tax returns if different from those filed with application	Not applicable
36	Calculation of Tax Credits; redact where required (filing of unredacted versions is not required)	Exhibit 4 - 2.4.5.1
36	Supporting schedules, calculations and explanations for other additions and deductions	Exhibit 4 - 2.4.5.1
37	Completion of the integrity checks in the PILs Model	Exhibit 4 - 2.4.5.1
37	Accelerated CCA - distributors must bring forward the balance tracked in Account 1592 - PILs and Tax Variances – CCA Changes for review and disposition in its current cost-based rate application, as well as future cost-based rate applications.	Exhibit 4 - 2.4.5.1
38	Explanation of how taxes other than income taxes or PILS (e.g. property taxes) are derived	Exhibit 4 - 2.4.5.2
Non-recoverable and Disallowed Expenses		
38	Exclude from regulatory tax calculation any non-recoverable or disallowed expenses	Exhibit 4 - 2.4.5.3
Conservation and Demand Management		
40 - 43	LRAMVA - disposition of balance. Distributors must provide version 5 of LRAMVA Work Form (Excel) when making LRAMVA requests for remaining amounts related to CFF activity. An application for lost revenues should include: Participation and Cost reports in Excel format, made available by the IESO An application for lost revenues should also provide: - statement identifying the year(s) of new lost revenues and prior year savings persistence claimed in the LRAMVA disposition - statement confirming LRAMVA based on verified savings results supported by the distributors final CDM Report and Persistence Savings Report (both filed in Excel format). - LRAMVA claim may be based on the information in that report at the time of filing of the application, but it is expected that the claim will be updated when the Final CDM Results Report is issued, and that the approved disposition will reflect the Final Results Report - statement indicating that the distributor has relied on the most recent input assumptions available at the time of program evaluation - summary table with principal and carrying charges by rate class and resulting rate riders - statement providing the disposition period; rationale provided for disposing the balance in the LRAMVA if one or more classes do not generate significant rate riders - details for the forecasted CDM savings included in the LRAMVA calculation including reference to the OEBs approval, or an explanation if there are no forecast CDM savings - rationale confirming how rate class allocations for actual CDM savings were determined by class and program (Tab 3-A of LRAMVA Work Form) - statement confirming whether additional documentation was provided in support of projects that were not included in distributors final CDM Annual Report (Tab 8 of LRAMVA Work Form as applicable) - for a distributor's street lighting project(s) which may have been completed in collaboration with local municipalities, the following must be provided: Explanation of the methodology to calculate street lighting savings; Confirmation whether the street lighting savings were calculated in accordance with OEB-approved load profiles for street lighting projects; Confirmation whether the street lighting project(s) received funding from the IESO and the appropriate net-to-gross assumption used to calculate street lighting savings For the recovery of lost revenues related to demand savings from street light upgrades, distributors should provide the following information: o Explanation of the forecast demand savings from street lights, including assumptions built into the load forecast from the last CoS application o Confirmation that the street light upgrades represent incremental savings attributable to participation in the IESO program, and that any savings not attributable to the IESO program have been removed (for example, other upgrades under normal asset management plans) o Confirmation that the associated energy savings from the applicable IESO program have been removed from the LRAMVA workform so as not to double count savings (for example, if requesting lost revenue recovery for the demand savings from a street light upgrade program, the associated energy savings from the Retrofit program have been subtracted from the Retrofit total) o Confirmation that the distributor has received reports from the participating municipality that validate the number and type of bulbs replaced or retrofitted through the IESO program o A table, in live excel format, that shows the monthly breakdown of billed demand over the period of the street light upgrade project, and the detailed calculations of the change in billed demand due to the street light upgrade project (including data on number of bulbs, type of bulb replaced or retrofitted, average demand per bulb). For the recovery of lost revenues related to demand savings from other programs that are not included in the monthly Participation and Cost Reports of the IESO (for example Combined Heat and Power projects), distributors should provide the following information: The third party evaluation report that describes the methodology to calculate the demand savings achieved for the program year. In particular, if the proposed methodology is different than the evaluation approaches used by the IESO, an explanation must be provided explaining why the proposed approach is more appropriate, the rationale for net-to-gross assumptions used, a breakdown of billed demand and detailed level calculations in live excel format Participation and Cost Reports and detailed project level savings files made available by the IESO to support the clearance of energy- and/or demand-related LRAMVA balances where final verified results from the IESO are not available. These reports should be filed in excel format, similar to the previous Final Verified Annual Reports from 2015 to 2017. o If a distributor seeks to claim any additional program savings to December 31, 2019: - Related to CCF programs: an explanation must be provided as to how savings have been estimated based on the available data (i.e. IESO's Participation & Cost Reports) and/or rationale to justify the eligibility of the program savings - Related to other programs delivered by a distributor: an explanation and rationale should be provided to justify the eligibility of the additional program savings	Exhibit 4 - 2.4.6, 2.4.6.1 and 2.4.6.2 Exhibit 4 - Attachment 4-7 LRAMVA Workform (PDF & Excel) Exhibit 4 - Attachment 4-8 Persistence and P&C Reports (PDF & Excel)

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EXHIBIT 5 - COST OF CAPITAL AND CAPITAL STRUCTURE		
Capital Structure		
43	Statement that LDC adopts OEB's guidelines for cost of capital and confirms that updates will be done. Alternatively - utility specific cost of capital with supporting evidence	Exhibit 5 - 2.5.1
43	Completed Appendix 2-OA for last OEB approved and test year	Exhibit 5 - 2.5.2 - Attachment 5.1 (2-OA - PDF, Excel included with Chap. 2 Appendices)
43	Completed Appendix 2-OB for historical, bridge and test years	Exhibit 5 - 2.5.2 - Attachment 5.1 (2-OB - PDF, Excel included with Chap. 2 Appendices)
44	Explanation for any changes in capital structure	Exhibit 5 - 2.5.1 - Not applicable
Cost of Capital (Return on Equity and Cost of Debt)		
44	Calculation of cost for each capital component	Exhibit 5 - 2.5.2
44	Profit or loss on redemption of debt	Exhibit 5 - 2.5.2 - Not applicable
44	Copies of promissory notes or other debt arrangements with affiliates	Exhibit 5 - 2.5.2 - Attachment 5-2
44	Explanation of debt rate for each existing debt instrument	Exhibit 5 - 2.5.2
44	Forecast of new debt in bridge and test year - details including estimate of rate	Exhibit 5 - 2.5.2
44	If proposing any rate that is different from the OEB guidelines, a justification of the proposed rate(s), including key assumptions	Exhibit 5 - 2.5.2
44 & 45	Notional Debt - should attract the weighted average cost of actual long-term debt rather than the current deemed long-term debt rate issued by the OEB	Exhibit 5 - 2.5.2
Not-for-Profit Corporations		
45	The requested capital structure and cost of capital (including the proposed cost of long-term and short-term debt and proposed return on equity)	Exhibit 5 - 2.5.3 - Not applicable
45	Statement as to whether the revenues derived from the return on equity component of the cost of capital is to be used to build up operating and capital reserves or will be used for other purposes	Not applicable
45	If the revenues derived from the return on equity component of the cost of capital will be used to fund reserves, provide the specifications for each proposed reserve fund and a description of the governance (policies, procedures, sign-off authority, etc.) that will be applied	Not applicable
45	If the revenues derived from the return on equity component of the cost of capital will be used for other purposes, provide a statement as to whether these revenues will be used for non-distribution activities (in the situation where the excess revenues are greater than the amounts needed to fund distribution activities). Provide rationale supporting the use of the revenues in this manner. Also provide the governance (policies, procedures, sign-off authority, etc.) that will be applied to the funding of non-distribution activities	Not applicable
46	If there are approved reserves from previous OEB decisions provide the following: -the limits of any capital and/or operating reserves as approved by the OEB, and identifying the decisions establishing these reserve accounts and their limits -the current balances of any established capital and/or operating reserves	Not applicable
EXHIBIT 6 - REVENUE DEFICIENCY/SUFFICIENCY		
46	Revenue deficiency or sufficiency calculations net of electricity price differentials captured in the Retail Settlement Variance Accounts (RSVAs) and also net of any cost associated with low voltage (LV) charges or DVA balances of distribution expenditures/revenues being tracked through approved deferral and variance accounts for certain distribution assets (e.g. ICM and ACM capital projects, MIST meters) and for which disposition is not being sought in the application.	Exhibit 6 - 2.6
46	Summary of drivers for test year deficiency/sufficiency, how much each driver contributes; references in application evidence mapped to drivers	Exhibit 6 - 2.6
46	Impacts of any changes in methodologies to deficiency/sufficiency	Exhibit 6 - 2.6 - Not applicable
Revenue Requirement Work Form		
47	RRWF - in PDF and Excel. Revenue requirement, def/sufficiency, data entered in RRWF must correspond with other exhibits	Exhibit 6 - 2.6.1 and Attachment 6-1 (PDF & Excel)
47	If the enhanced RRWF cannot reflect a distributor's proposed rates accurately, the distributor must file its rate generator model	Not applicable

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EXHIBIT 7 - COST ALLOCATION		
Cost Allocation Study Requirements		
48	Completed cost allocation study using the OEB-approved methodology or a comparable model must be filed reflecting future loads and costs and be supported by appropriate explanations and live Excel spreadsheets. Sheets 11 and 12 of the RRWF must also be completed. Updated load profiles or scaled version of HONI CAIF. Model must be consistent with test year load forecast, changes to customer classes and load profiles.	Exhibit 7 - Attachment 7-1 (Cost Allocation Model), Attachment 7-2 (Load Profile), Exhibit 6 - Attachment 6-1 (RRWF)
48	Explanation provided if a distributor is unable to update its load profiles and confirm that it intends to put plans in place to update its load profiles the next time a cost allocation model is filed	Exhibit 7 - 2.7.1
49	Provide spreadsheet and a description with example calculations to show how the demand data in the cost allocation model was derived from the load forecast and load profiles	Exhibit 7 - Attachment 7-2 (Load Profile)
49	Description of weighting factors, and rationale for use of default values (if applicable)	Exhibit 7 - 2.7.1
49	If using OEB-issued model, hard copy of sheets I-6, I-8, O-1 and O-2 (first page). If using another model, the distributor must file equivalent information. A complete hard copy of the cost allocation model is not required, but the distributor must file a complete live Microsoft Excel cost allocation model, whether using the OEB-issued one or a different model, with the application.	Exhibit 7 - Attachment 7-1 (Cost Allocation Model Excel and PDF of requested sheets)
49 & 50	Host Distributor only - evidence of consultation with embedded Dx - statement regarding embedded Dx support for approach to allocation of costs - if embedded Dx is separate class - class in cost allocation study and RRWF, Sheet 11 - if new embedded Dx class - rationale and supporting evidence (cost of serving, load served, asset ownership information, distribution charges); include in cost allocation study and RRWF, Sheet 11 - if embedded Dx billed as GS customer - , include with the GS class in cost allocation model and Appendix 2-P. Provide cost of serving, load served, asset ownership information, distribution charges, appropriateness of rate class. File Appendix 2-Q.	Exhibit 7 - 2.7.1.1 - Attachment 7-1 (Cost Allocation) and Exhibit 6 - Attachment 6-1 (RRWF)
50	Unmetered Loads (including Street Lighting) - Confirmation of communication with unmetered load customers when proposing changes to the level of the rates and charges or the introduction of new rates and charges	Exhibit 7 - 2.7.1.1
50 & 51	microFIT - if the applicant believes that it has unique circumstances which would justify a certain rate, appropriate documentation must be provided	Exhibit 7 - 2.7.1.1
51	Standby Rates - distributors should request approval for its standby rates to be made final and provide evidence confirming that they have advised all affected customers of the proposal. A distributor that seeks changes to its standby charges, including a change in the methodology on which these rates are based, must provide full documentation supporting its proposal, and confirm that all affected customers have been notified of the proposed change(s).	Exhibit 7 - 2.7.1.1
51	New customer class or eliminated customer class - rationale and restatement of revenue requirement from previous CoS	Exhibit 7 - 2.7.1.2, 2.7.1.3 - Not applicable
Class Revenue Requirements		
52	To support a proposal to rebalance rates, the distributor must provide information on the revenue by class that would apply if all rates were changed by a uniform percentage. Ratios must be compared with the ratios that will result from the rates being proposed by the distributor.	Exhibit 7 - 2.7.2
Revenue to Cost Ratios		
53	If R:C ratios outside deadband based on model - distributors must include cost allocation proposal to bring them within the OEB-approved ranges. In making any such adjustments, distributors should address potential mitigation measures if the impact of the adjustments on the rates of any particular class or classes is significant.	Exhibit 7 - 2.7.3
53	If Cost Allocation Model other than OEB model used - exclude LV, exclude DVA such as smart meters	Not applicable

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EXHIBIT 8 - RATE DESIGN		
54	Monthly fixed charges - 2 decimal places; variable charges - 4 decimal places	Exhibit 8 - 2.8.1 - as demonstrated in proposed rate tables
Fixed Variable Proportion		
54	The following is to be provided in relation to the fixed/variable proportion of proposed rates: -Current F/V with supporting info -Proposed F/V proportion with explanation for any changes (billing determinants from proposed load forecast) -Table comparing current and proposed monthly fixed charges with the floor and ceiling as in cost allocation study Analysis must be net of rate adders, funding adders, and rate riders	Exhibit 8 - 2.8.1
Rate Design Policy		
55	Applicants that are still transitioning to fully fixed residential rates should refer to the approach to implementation of the policy, including mitigation expectations, was described in a letter from the OEB published on July 16, 2015	Exhibit 8 - 2.8.2 - Not applicable
RTSRs		
55	Retail Transmission Service Rate Work Form - PDF and Excel	Exhibit 8 - 2.8.3 - Attachment 8-2 (Excel and PDF)
55	RTSR information must be consistent with working capital allowance calculation	Exhibit 8 - 2.8.3
Retail Service Charges		
55	If proposing changes to Retail Service Charges or introduction of new rates and charges - evidence of consultation and notice	Exhibit 8 - 2.8.4 - no proposed changes
55	Distributors that are still using the Retail Service Costs Variance Accounts (RCVAs) will dispose of the balances and the RCVAs will be eliminated. Distributors should forecast retail services revenues based on the updated charges and include the costs of providing retail services in revenue requirement	Exhibit 8 - 2.8.4
Regulatory Charges		
56	If applying for a rate other than the generic rate set by the OEB, distributors must provide justification as to why their specific circumstances would warrant a different rate, in addition to a detailed derivation of their proposed rate	Exhibit 8 - 2.8.5
Specific Service Charges		
56	Specific Service Charge description/purpose/reason for new and revised SSC; calculations to support charges	Exhibit 8 - 2.8.6
56	Identification in the Application Summary all proposed changes that will have a material impact on customers, including charges that may affect a discrete group	Exhibit 8 - 2.8.6 and Exhibit 1 - 2.1.4
57	Identification of any rates and charges in Conditions of Service that do not appear on tariff sheet. Explain nature of costs, provide schedule outlining revenues or capital contributions recovered from these rates from last OEB-approved year to 2019 and the revenue forecasted for the bridge and test years. A proposal and explanation as to whether these charges should be included on tariff sheet	Exhibit 8 - 2.8.6
57	Ensure revenue from SSCs corresponds with Operating Revenue evidence	Exhibit 8 - 2.8.6
Wireline Pole Attachment Charge		
56	Record the excess incremental revenue as of September 1, 2018 until the effective date of its rebased rates in a new variance account related to pole attachment charge	Exhibit 8 - 2.8.6, Exhibit 9 2.9.3
57 & 58	Distributors applying for an LDC-specific pole attachment charge must file: - statement confirming the proposed distributor-specific pole attachment charge, the year of data used, effective date - statement discussing main cost drivers for changes to charge including rationale - table summarizing key inputs in calculation, statement confirming that the RRR data (i.e. Account 1830, 5120) and pre-tax weighted cost of capital are consistent with the data filed in other cost of service models - confirmation of the total number of poles and joint use poles in the rate calculation, and a table outlining the rate of pole replacements and percentage of poles depreciated over the past five years - confirmation of the number of attachers that are specific to the distributor's service territory, if a different attacher number than the default number of 1.3 is proposed. A description of the types of attachments on poles, and a discussion of contractual arrangements with other entities that affect the number of attachments, including overlashing attachments, that are counted as part of the LDC's distribution poles - explanation of changes to the hybrid equal sharing allocation rate, if applicable, and the drivers of the proposed change - description of the activities performed by the distributor to directly accommodate third party attachers. Distributors should include a discussion of the methodology, costs and data sources to calculate each component of direct costs. Distributors should show the detailed calculations of total administration and LOP costs, including staff time and labour rates, as applicable - use of utility-specific costs to determine the LDC-specific Power Deduction Factor and LDC-specific Maintenance Allocation Factor applicable to third parties. If a distributor chooses to adopt the default factors in its application for a custom charge, a distributor is still required to complete Table 8 and Table 10-a of the Pole Attachment Workform to substantiate the applicability of the default factors that were used in calculating the provincially approved charge.	Exhibit 8 - 2.8.6 - Not applicable

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Filing Requirement Page # Reference		30-Jun-20 Evidence Reference, Notes (Note: if requirement is Not applicable, please provide reasons)
Low Voltage Service Rates		
If the distributor is fully or partially embedded, information on the following must be provided:		
58	Forecast of LV cost, sum of host distributors charges	Exhibit 8 - 2.8.7
58	Low Voltage Cost (historical, bridge, test), variances and explanations for substantive changes	Exhibit 8 - 2.8.7
59	Support for forecast LV, e.g. Hydro One Sub-Transmission charges	Exhibit 8 - 2.8.7
59	Allocation of LV cost to customer classes (typically proportional to Tx connection revenue)	Exhibit 8 - 2.8.7
59	Proposed LV rates by customer class	Exhibit 8 - 2.8.7
Smart Meter Entity Charge		
59	Distributor must follow accounting guidance provided on March 23, 2018	Exhibit 8 - 2.8.8
Loss Factors		
59	Proposed SFLF and Total Loss Factor for test year	Exhibit 8 - 2.8.9
59	Statement as to whether LDC is embedded including whether fully or partially	Exhibit 8 - 2.8.9
59	Study of losses if required by previous decision	Not applicable
59	3-5 years of historical loss factor data - Completed Appendix 2-R	Exhibit 8 - 2.8.9 - Attachment 8-1 (2-R - PDF, Excel included with Chap. 2 Appendices)
59	If proposed loss factor >5%, explanation and action plan to reduce losses going forward	Exhibit 8 - 2.8.9 - Not applicable
60	Explanation of SFLF if not standard	Exhibit 8 - 2.8.9
Tariff of Rates and Charges		
60	Current and proposed Tariff of Rates and Charges filed in the Tariff Schedule/Bill Impacts Model - **must be filed in Excel format** Explanation and support of each change in the appropriate section of the application	Exhibit 8 - 2.8.10 and Exhibit 8 - Attachment 8-3 and 8-5
60	Explanation of changes to terms and conditions of service if changes affect application of rates	Exhibit 8 - 2.8.10 - no changes
60	Proposed tariffs must include applicable regulatory charges, and any other generic rates as ordered by the OEB	Exhibit 8 - 2.8.10
Revenue Reconciliation		
60	Calculations of revenue per class under current and proposed rates; reconciliation of rate class revenue and other revenue to total revenue requirement (i.e. breakout volumes, rates and revenues by rate component etc.)	Exhibit 8 - 2.8.11
60	Completed RRWF - Sheet 13 - rates and charges entered on this sheet should be rounded to the same decimal places as tariff	Exhibit 8 - 2.8.11 and Exhibit 6 - Attachment 6-1 (RRWF)
Bill Impact Information		
61	Completed Tariff Schedule and Bill Impacts Model. Bill impacts must identify existing rates, proposed changes to rates, and detailed bill impacts (including % change in distribution excluding pass through costs - Sub-Total A, % change in distribution - Sub-Total B, % change in delivery - Sub-Total C, and $ change in total bill)	Exhibit 8 - 2.8.12 and Exhibit 8 - Attachment 8-3
61	Impact of changes resulting from the as-filed application on representative samples of end-users (i.e. volume, % rate change and revenue). Commodity and regulatory charges held constant	Exhibit 8 - 2.8.12 and Exhibit 8 - Attachment 8-3
61	Rates and charges input in the tariff schedule and Bill Impacts Model rounded to the decimal places as shown on the existing tariff	Exhibit 8 - 2.8.12 and Exhibit 8 - Attachment 8-3
61	Bill impacts provided for typical customers and consumption levels. Must provide residential 750 kWh, residential at the lowest 10th percentile and GS<50 2,000 kWh. Bill impacts must be provided for a range of consumption levels relevant to the service territory.	Exhibit 8 - 2.8.12 and Exhibit 8 - Attachment 8-3
61	If applicable, for certain classes where one or more customers have unique consumption and demand patterns, the distributor must show a typical impact and provide an explanation	Not applicable
Rate Mitigation		
62	For distributors still in the process of moving to fully fixed residential rates - evaluation of bill impact for residential customer at 10th consumption percentile. Describe methodology for determination of 10th consumption percentile. File mitigation plan for whole residential class if impact >10% for these customers.	Exhibit 8 - 2.8.13.1 - Not applicable
62	Mitigation plan if total bill increase for any customer class is >10% including: specification of class and magnitude of increase, description of mitigation measures, justification, revised impact calculation. The Tariff Schedule and Bill Impacts Model must reflect any mitigation plan proposed.	Exhibit 8 - 2.8.13 and Exhibit 8 - 2.8.13.2 - Not applicable
62	Rate Harmonization Plans, if applicable - including impact analysis	Exhibit 8 - 2.8.13.3 - Not applicable

2021 Cost of Service Checklist

Waterloo North Hydro Inc.

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Filing Requirement Page # Reference		Evidence Reference, Notes (Note: if requirement is Not applicable, please provide reasons)
EXHIBIT 9 - DEFERRAL AND VARIANCE ACCOUNTS		
63	List of all outstanding DVA and sub-accounts; provide description of DVAs that were used differently than as described in the APH	Exhibit 9 - 2.9
63	Completed DVA continuity schedule for period following last disposition to present - live Excel format. Continuity schedule must show separate itemization of opening balances, annual adjustments, transactions, dispositions, interest and closing balances for all outstanding deferral and variance accounts. This includes all Account 1508 sub-accounts. A reconciliation of all the Account 1508 sub-accounts to the Account 1508 control account reported in the Electricity Reporting and Record-keeping Requirements	Exhibit 9 - 2.9 - Attachment 9-1
63	Confirm use of interest rates established by the OEB by month or by quarter for each year	Exhibit 9 - 2.9
63	Explanation if account balances in continuity schedule differs from trial balance in RRR and AFS	Exhibit 9 - 2.9
63	Identification of Group 2 accounts that will continue/discontinue going forward, with explanation	Exhibit 9 - 2.9.3
63	Statement as to any new accounts, and justification.	Exhibit 9 - 2.9.4
63 & 64	Statement whether any adjustments made to DVA balances previously approved by OEB on final basis - the OEB expects that no adjustment will be made to any deferral and variance account balances previously approved by the OEB on a final basis. Distributors to refer to OEB letter of October 2019 in addressing accounting or other errors in respect of Group 1 deferral and variance accounts that have previously been disposed of by the OEB on a final basis. Applicants must provide explanations for the nature and the amounts of adjustments, and include appropriate supporting documentation, under a section titled "Adjustments to Deferral and Variance Accounts".	Exhibit 9 - 2.9.3.2 - Attachment 9-3
64	Breakdown of energy sales and cost of power by USoA - as reported in AFS mapped and reconciled to USoA. Provide explanation if making a profit or loss on commodity.	Exhibit 9 - 2.9
64	Completed GA Analysis Workform for each year since the OEB last approved disposition of Account 1589 - Global Adjustment irrespective of whether they are seeking disposition of the Account 1589 – RSVA GA balance as part of their current application. If the distributor is adjusting the Account 1589 balance that was previously approved on an interim basis, the GA Analysis Workform is required to be completed from the year after the distributor last received final disposition for Account 1589.	Exhibit 9 - 2.9.1 - Attachment 9-2
64	Statement confirming distributor has complied with OEB guidance of February 21, 2019 on the accounting for Accounts 1588 and 1589	Exhibit 9 - 2.9.3.2
64	Completed 1589 Analysis Workform for residual balances that meet the eligibility requirements for dispositions of Account 1595 sub-accounts	Assuming this is referring to 1595 Analysis Workform based on the detailed Filing Requirements - 1595 Workform is discussed in 2.9. Per discussion with OEB Staff - the 1595 Workform is not required as there are no eligible balances for disposal.
Account 1575, IFRS-CGAAP Transitional PP&E Amounts		
64	For applicants that have already rebased under revised CGAAP, but have made further material transitional changes, these impacts should be recorded in Account 1575, and an explanation provided	Exhibit 9 - 2.9.1 - Not applicable
Retail Service Charges		
65	Retail Service Charges - if material debit or credit balance in 1518 or 1548, distributor must: - confirm variances are incremental costs of providing retail services; identify drivers for balances - provide schedule identifying all revenues and expenses listed by USoA that are incorporated into the variances - state whether Article 490 of APH has been followed; explanation if not followed	Exhibit 9 - 2.9.2
65	The OEB established a new variance account for electricity distributors that no longer used the RCVAs. The balance in the account would be refunded to ratepayers in a future rate application, and the new account subsequently closed. Distributors can forecast a balance up to December 31, 2020 or April 30, 2021 and the OEB may consider disposing of the forecasted amount	Exhibit 9 - 2.9.2
Disposition of Deferral and Variance Accounts		
65	Identify all accounts for which LDC is seeking disposition; identify DVA for which LDC is not proposing disposition and the reasons why	Exhibit 9 - 2.9.3
65	Statement whether DVA balances before forecasted interest match the last AFS; explain any variances	Exhibit 9 - 2.9
65	If the RRR balances do not agree to the year-end balances in the continuity schedule, a distributor must reconcile and explain the difference(s). For any utility specific accounts requested for disposition (e.g. Account 1508 sub-accounts), supporting evidence showing how the annual balance is derived must be provided. The relevant accounting order must also be provided	Exhibit 9 - 2.9 and 2.9.3
66	Request final disposition of residual balances for vintage Account 1595 sub-accounts only once. Distributors are expected to seek disposition of the audited account balance in the fourth rate year after the expiry of the rate rider	Exhibit 9 - 2.9
66	Proposed mechanisms for disposition with all relevant calculations: - allocation of each account (including rationale) - proposed billing determinants, including charge type, for recovery purposes in accordance with Rate Design Policy	Exhibit 9 - 2.9.3
66	Rate riders where volumetric rider is $0.0000 for one or more classes not included in the tariff for those classes	Exhibit 9 - 2.9.3
66	Propose rate riders for recovery or refund of balances that are proposed for disposition. The default disposition period is one year; if the applicant is proposing an alternative recovery period must provide explanation	Exhibit 9 - 2.9.3
66	Establish separate rate riders to recover balances in the RSVA's from Market Participants who must not be allocated the RSVA balances related to charges for which the MP's settle directly with the IESO	Exhibit 9 - 2.9.3
66 & 67	Proposed disposition of Account 1580 sub-account CBR Class B in accordance with the CBR Accounting Guidance. - In the DVA continuity schedule, applicants must indicate whether they serve any Class A customers during the period where Account 1580 CBR Class B sub-account balance accumulated. In the event that the allocated CBR Class B amount results in a volumetric rate rider that rounds to zero at the fourth decimal place in one or more rate classes, the entire balance in Account 1580 CBR Class B sub-account will be added to the Account 1580 – WMS control account to be disposed through the general purpose Group 1 DVA rate riders - Account 1580 sub-account CBR Class A is not to be disposed through rates proceedings but rather follow the OEB's accounting guidance - The DVA continuity schedule will allocate the portion of Account 1580 sub-account CBR Class B allocated to customers who transitioned between Class A and Class B based on consumption levels	Exhibit 9 - 2.9.3

2021 Cost of Service Checklist

Waterloo North Hydro Inc.

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		30-Jun-20
Filing Requirement Page # Reference		**Evidence Reference, Notes (Note: if requirement is Not applicable, please provide reasons)**
Global Adjustment		
68	Establishment of a separate rate rider included in the delivery component of the bill that would apply prospectively to Non-RPP Class B customers when clearing balances from the GA Variance Account	Exhibit 9 - 2.9.3.1
68	GA Analysis Workform in live Excel format for each year that has not previously been approved by the OEB for disposition (on an interim or final basis), irrespective of whether or not seeking disposition of Group 1 deferral and variance account balances. If the distributor is adjusting the Account 1589 GA balance that was previously approved on an interim basis, the GA Analysis Workform is required to be completed from the year after the distributor last received final disposition for Account 1589	Exhibit 9 - 2.9.3.1 - Attachment 9-2
68	As part of Note 5 in the GA Analysis Workform, reconciliation of any discrepancy between the actual and expected balance by quantifying differences pertaining to factors such as an outstanding IESO settlement true-up payment. The explanatory items should reduce the discrepancy and provide distributor-specific information to the OEB. Any remaining, unexplained discrepancy will be assessed for materiality and could prompt further analysis before disposition of the balance is approved. Any unexplained discrepancy that is greater than +/- 1% of the total annual IESO GA charges will be considered material and warrant further investigation.	Exhibit 9 - Attachment 9-2
69	Commodity Accounts 1588 and 1589 - confirmation as part of the application that the distributor has fully implemented the OEB's February 21, 2019 guidance effective from January 1, 2019.	Exhibit 9 - 2.9.3.2
69	In order to request for final disposition of historical balances as part of the current application, distributors must provide confirmation that these balances have been considered in the context of the accounting guidance and provide a summary of the review performed. Distributors must also discuss the results of the review, whether any systemic issues were noted, and whether any material adjustments to those balances have been recorded. A summary and description of each adjustment made to the historical balances must also be provided in the application.	Exhibit 9 - 2.9.3.2 - Attachment 9-3
69 & 70	Expectations of final disposition requests of commodity pass-through account balances are: - Some utilities may have received approval for interim disposition of historical account balances or did not request disposition of account balances in a prior rate application due to the threshold test. If these utilities have reviewed the balances in the context of the new accounting guidance and are confident that there are no systemic issues with their RPP settlement and related accounting processes, utilities may request final disposition of account balances. If these utilities identified errors or discrepancies that materially affect the ending account balances, utilities should adjust their account balances prior to requesting final disposition - Utilities that did not receive approval for disposition of historical account balances due to concerns noted should apply the accounting guidance to those balances and adjust the balances as necessary, prior to requesting final disposition. Adjustments to account balances will be considered on a case by case basis.	Exhibit 9 - 2.9.3.2
70	If February 21, 2019 accounting guidance not fully implemented, a distributor must provide an explanation as to why this guidance has not been implemented, the status of the implementation process, and the expected implementation date. In addition, the distributor must complete and submit Appendix A – GA Methodology Description that can be found in the GA Analysis Workform Instructions	Not applicable
70	Certification by the CEO, CFO or equivalent that distributor has robust processes and internal controls in place for the preparation, review, verification and oversight of account balances being proposed for disposition	Exhibit 9 - 2.9.3
Establishment of New Deferral and Variance Accounts		
70 & 71	New DVA - information provided which addresses that the requested DVA meets the following criteria: causation, materiality, prudence; include draft accounting order.	Exhibit 9 - 2.9.4

Waterloo North Hydro

EXHIBIT 1

ADMINISTRATION

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ATTACHMENT 1-18	Efficiency Model (PEG Model)
ATTACHMENT 1-19	Annual Report 2019

EXHIBIT 1: ADMINISTRATION

2.1 EXHIBIT 1: ADMINISTRATIVE DOCUMENTS

Application

IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c.15, 3 Schedule B, as amended (the "OEB Act");
AND IN THE MATTER OF an Application by Waterloo North Hydro Inc. under Section 78 of the OEB Act to the Ontario Energy Board for an Order or Orders approving or fixing just and reasonable rates and other service charges for the distribution of electricity as of January 1, 2021.
(this "Application")

Applicant's Name Waterloo North Hydro Inc. (the "Applicant" or "WNH").

Background

1. The Applicant is a corporation incorporated pursuant to the *Business Corporations Act* (Ontario) with its head office at 526 Country Squire Road, Waterloo, Ontario. The Applicant carries on the business of distributing electricity within the City of Waterloo, the Township of Wellesley and the Township of Woolwich.

2. The Application has been prepared pursuant to the OEB's Renewed Regulatory Framework for Electricity Distributors as detailed in the Report of the Board dated October 18, 2012 (the "RRFE").

3. Unless specifically stated otherwise in the Application, the Applicant followed Chapter 2 of the OEB's Filing Requirements for Electricity Distribution Rate Applications last revised on May 14, 2020.

4. The Applicant has prepared a Consolidated Distribution System Plan ("DSP") in accordance with Chapter 5 of the OEB's Filing Requirements for Electricity Transmission and Distribution Applications.

5. The Applicant acknowledges that the OEB will publish an update to the Cost of Capital Parameters and that these matters will affect the Revenue Requirement that the Applicant has requested in this Application.

6. The Applicant has filed a copy of the 2020 COS Checklist as an appendix to this Application.

2.1.2 EXECUTIVE SUMMARY AND BUSINESS PLAN

Introduction to Waterloo North Hydro Inc.

Waterloo North Hydro Inc. (WNH) is a medium sized Local Distribution Company (LDC) regulated and licensed by the Ontario Energy Board (OEB and at times referred to as "the Board"). With predecessors that date back to 1905, WNH was created in 1979 through Bill 55 as one of three regional electricity utilities. The amalgamation of Waterloo PUC with three other utilities and the Ontario Hydro area in between created a contiguous service territory that even today is still one of the largest contiguous LDCs in the province at 683 sq. km. Located within the Region of Waterloo (Region), WNH provides all regulated electricity distribution services to the City of Waterloo, the Township of Woolwich and the Township of Wellesley with the exception of the changes resulting from the elimination of Long Term Load Transfers (LTLT). As a result of the LTLT elimination,

WNH no longer serves 27 addresses in its service territory, but now serves 127 addresses in the Township of Perth East, the Township of Mapleton, the Township of Centre Wellington, the Township of Guelph/Eramosa and the City of Cambridge.

As at December 31, 2019, WNH distributed electricity to approximately 58,000 residential and commercial customers. WNH owns and operates a local distribution network consisting of approximately 21,800 poles, 7,800 transformers, 1,100 km of overhead lines, and 575 km of underground feeder lines. The network also includes four transformer stations connected to Hydro One transmission circuits and six distribution substations. At its local transformer stations WNH transforms electrical power it purchases from the Independent Electricity System Operator (IESO) to primary distribution voltages and distributes such power to WNH customers through the distribution network. WNH is also supplied by six sub-transmission or distribution feeders from neighbouring utilities; three from Hydro One's Elmira T.S., one from Hydro One's Fergus T.S., one from Kitchener Wilmot Hydro Inc. and one from Energy+.

WNH has only one location for staff to work from, located at 526 Country Squire Road. Put into service in December 2011, the LEED Silver building houses all needs for Administration, Customer Service, Engineering, IT Services, Operations, Fleet and Warehouse. Using geothermal systems for cooling, and heating, WNH continues to upgrade lighting, HVAC and other systems for improved energy efficiency.

WNH has a unique challenge different from many LDCs. Within the 683 sq. km service area of WNH, only 9.5% of the area is urban. A significant influence in the operating expense and capital investment planning for WNH is that the rural areas, the Townships of Woolwich and Wellesley, comprise 90.5% of WNH's total service area but account for only 23.1% of its customer base.

WNH needs to build a strong and reliable infrastructure covering a large service area with fewer customers per sq. km to bear the cost. WNH must look for efficient and resourceful

ways to provide excellent service.

Home to two prominent universities, a growing polytechnic college, many high-tech and knowledge-based businesses, and a growing agri-food industry, WNH operates in a robust local economy.

Key statistics on the WNH's Distribution System are shown in Table 1-1.

Table 1-1 WNH Key Distribution System Statistics

Key Distribution System Statistics (2019)	
Number of Customers	57,814
Energy Purchased	1,449 GWH
System Peak - All Time	294 MW
System Peak - 2019	271 MW
Service Territory	683 Sq. Kms
Service Territory - Rural %	90.5%
Circuit Kms	1,648 Kms
Number of Transformer Stations	4
Number of Distribution Stations	6
Control Room	24/7
Number of Poles	21,809
Fleet Vehicles	53

WNH's Purpose, Mission, Vision and Strategic Imperatives define the organization and guide strategic planning:

Purpose – Why we exist (the anchor of why were we created)

- Delivering electricity efficiently to our customers

Mission – What business are we in (may change over time but still anchored to purpose)

- To be of service to our customers by delivering electricity to homes and businesses in our communities – reliably, safely, 24 x 7.

Vision – What we want to be like in the future

- Our vision is to be the flexible, sustainable distribution platform for connecting consumers and producers of electricity, and be the trusted energy advisor of choice for our customers. We have earned this reputation by:

1. Improving **customer relations and loyalty**: customers come to us first. They have easy access for changes, questions etc.

2. Becoming a **leading edge energy provider** and we are known as a leader in Ontario in getting to Utility 2.0 and implementing Advanced Distribution Management System (ADMS).

3. Successfully **offering and charging for new services**: providing a range of behind-the-meter services, generation and smart home services, supplying energy to our customers regardless of source.

4. Having a **high performing and engaged leadership and workforce**: we have the right capabilities that enable us to be agile and responsive.

5. Sustaining and **growing the dividend.**

Strategic Imperatives

Each of the Strategic Imperatives is internally consistent with and contributes to achieving the corporate objectives outlined above.

1. Supply & Reliability
2. Health, Safety and Environment
3. Customer Service
4. Employee Relations and Development
5. Productivity and Cost Reduction
6. Organizational Effectiveness
7. Financial Performance
8. Shareholder and Community Relations
9. System Aesthetics

Renewed Regulatory Framework for Electricity Distributors

On October 18, 2012, the Board released its Report of the Board, Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach (the "RRFE Report"). The RRFE framework is a comprehensive performance-based approach to regulation that is based on the achievement of outcomes that ensure that Ontario's electricity system provides value for money for customers. The Board believes that emphasizing outcomes rather than activities, will better respond to customer preferences, enhance distributor productivity and promote innovation.

The Board has concluded that the following outcomes are appropriate for Distributors:

Customer Focus: services are provided in a manner that responds to identified customer preferences;

Operational Effectiveness: continuous improvement in productivity and cost performance is achieved; and utilities deliver on system reliability and quality objectives;

Public Policy Responsiveness: utilities deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board); and

Financial Performance: financial viability is maintained, and savings from operational effectiveness are sustainable.

WNH is ever mindful that there is a balancing act that it must consider when planning for the future: system reliability versus costs to the customers, all while complying with public policy. WNH utilizes its strategic imperatives to ensure a balanced approach to planning. Below WNH describes the alignment between each of its strategic imperatives and the RRFE outcomes, together with a description of how WNH implements each of its strategic imperatives.

Strategic Imperatives Implementation

1. Supply and Reliability

This encompasses the Board's Outcomes of Customer Focus and Operational Effectiveness.

Providing Supply to our Customers

WNH has been a summer peaking utility since 1996 and weather still remains the main factor impacting volatility in WNH's peak demand. Although the Region of Waterloo has been and continues to be a growing community, the growth in annual peak demand (MW) has moderated over the past decade. From 1992 to 2011, WNH's annualized growth rate in Summer System Peak Demand stood at 2.2%. Since 2015 WNH's annualized growth rate has declined to 1.0%.

Similarly, but to a greater extent, WNH's annualized growth rate in Winter System Peak Demand has declined from 1.1% to approximately 0.2%.

The main contributing factors leading to the decline in demand are believed to be a decline in customer growth rate, load shifting due to time-of-use rates, contributions from embedded generation, Conservation & Demand Management programs (CDM) and other conservation measures. WNH believes that the current factors influencing demand will continue with embedded generation having an even greater impact over the forecast period. For the period 2020 – 2025, WNH is forecasting an annualized growth rate of 1.0% in summer demand and 0.2% in winter demand.

Since 2011, WNH's customer growth rate has experienced a steady decline from 1.4% to 0.7% annually. A decreasing inventory of developable greenfield land, and the increasing penetration of bulk metered high rise condominium style housing within WNH's service area, has influenced the decrease. WNH does not foresee any additional major economic and development growth drivers occurring over the forecast years and has forecasted an overall customer growth rate of 0.72% over the 2021 – 2025 period.

WNH believes that good planning and investment decisions require a thorough understanding of its customer base. The diverse nature of WNH's customer base indicates the LDC is at very low risk of its largest customers discontinuing operations and stranding assets. No single customer in business sectors outside of Government/ Public Institutional poses a material risk.

There are however cost challenges in that overall capital investment and O&M costs per MW of demand supplied are higher for the larger number of low-volume customers. In addition, WNH notes an increasing trend in the connection of Load Displacement Generation (LDG) since 2018. Allocated and pending projects signal a significant increase in LDG between 2020 and 2025. As part of this Application, WNH is requesting a Standby Charge be approved for the Large Use and General Service > 50 kW customer classes

employing load displacement generation. This is described later in this Exhibit and in more detail in Exhibit 7.

Managing our Assets

Each year WNH maintains, refurbishes and replaces assets as they age, deteriorate or become obsolete and cannot perform their intended functions in a safe and reliable manner. WNH's proposed investments align with the Strategic Imperatives and with the Distribution System Plan (DSP) evaluation criteria of efficiency, customer value and reliability.

However, there is a balancing act that WNH must consider when planning for the future: system reliability and service versus the cost to customers. WNH follows guiding principles concerning capital investments and operating expenses:

- Support the growth and success of local business, the development community and the municipalities WNH serves.

- Support the community by providing a safe and reliable infrastructure.

- Implement intelligent technologies to minimize the impact and recovery time from electrical outages.

- Support green energy initiatives, provide environmental stewardship and support a culture of conservation.

- Train and equip WNH staff to work safely and efficiently.

- Invest in systems that support the operating needs and improve our ability to communicate with customers.

As part of this Application, WNH utilized its new Asset Management Software to assist with preparing WNH's Asset Condition Assessment program (ACA), Asset Management Plan (AMP) and distribution system performance metrics. Additionally, this system will improve WNH's ability to track the current age and condition of all assets, in order to ensure that WNH replaces the right assets at the right time. Further information about these activities can be found in the Distribution System Plan (DSP) attached in Exhibit 2 as Attachment 2-2.

All WNH capital investments are grouped into the four OEB categories as prescribed in Chapter 5.

1. **System Access** - WNH's second largest area of investment is in System Access projects. Expansions for new customer connections and municipal relocations are investments that form part of WNH's statutory obligation to serve. Included are also service connection upgrades and retail metering investments. These investments support WNH's strategic imperatives for supply and customer service.

2. **System Renewal** - The largest portion of the proposed investment plan that centres on the replacement of end-of-life assets. These investments are made to maintain the safety and performance of the distribution system and are aligned with WNH's strategic imperatives of supply & reliability, safety and environment. A renewed distribution system is better able to withstand poor weather conditions and also supports the connection of Renewable Energy Generation, electric vehicles and smart grid devices.

3. **System Service** - These investments are targeted to ensure the distribution system continues to meet its operational and performance objectives. Investments involving protection & control, smart grid enhancements and feeder interconnectivity support WNH's strategic imperatives of reliability, safety and organizational effectiveness.

4. **General Plant** - These investments are focused on providing tools, equipment and systems that support operating efficiency, customer service and worker productivity. Replacement of vehicles, IT software and hardware, tools & equipment make up the bulk of the investments and support WNH's strategic imperatives of productivity and cost reduction, organizational effectiveness and customer service.

WNH believes in a proactive and consistent renewal approach to maintain system performance while keeping bill impacts to customers manageable. The methodologies used and prioritization of replacing assets is explained in detail in the DSP.

There are other influences on our system and our investments. WNH's distribution system is built to quickly restore power after the loss of one or two key components of the grid. However, what happens when there is a major disruption to the system?

Industry analysis indicates that major storms are becoming more frequent. The increase in the severity and frequency of weather events is leading WNH to strengthen its distribution system. WNH is replacing the majority of rear-lot pole lines to decrease the number of overhead high voltage wires on private residential properties. Additionally, investments in 2021 include moving a number of residential services from overhead to underground in WNH's most heavily treed areas. Overhead services are highly vulnerable to falling tree branches during storm conditions. Power restoration is slow as there is normally collateral damage to customer owned equipment which requires a licenced electrician to repair and the Electrical Safety Authority (ESA) to inspect. This initiative was added to the DSP in response to feedback from WNH's 2019 customer engagement activities.

WNH is installing smart switches, remotely controlled from its office, to quickly restore power to as many customers as possible. WNH is adding to the number of interconnection lines between major points of supply to reduce the time to restore customers and increase

the tie points available under major storm outages.

WNH's Outage Management System (OMS) went into service in 2015. This technology has improved the accuracy of recording both customers affected and interruption minutes over the historical period. WNH suspects that this has also worsened its baseline reliability performance measures due to improved accuracy over the previous manual system.

WNH implemented Survalent's Fault Location, Isolation, and Service Restoration (FLISR) software application that, combined with SCADA and other grid modernization devices, reroutes power in the event of a fault to restore power to as many customers as possible, as quickly as possible. These technologies provide automatic self-healing on the portions of the system unaffected by the fault, ultimately improving restoration times. Since 2016, in areas where these technologies have been implemented, WNH customers have saved approximately 6.6 million minutes of interruption, averaging 1.64 million minutes saved annually. In 2019 WNH estimates 1.7 million customer minutes were saved; a 30% reduction in outage minutes. WNH customers have also experienced a steady decline in momentary interruptions (MAIFI) since 2015; a 50% reduction from 6.44 to 3.19 annual interruptions per customer.

In addition, shorter restoration times reduce the customer's lost revenue associated with a loss of power event. WNH has yet to quantify the value to customers of interrupted service, however, WNH expects these savings to increase as it expands these technologies over its remaining customers.

These investments also improve situational awareness of operating staff during power outage events leading to more informed, effective and efficient restoration of power to customers.

Information systems need to evolve to meet the greater demands and expectations that WNH customers and other stakeholders place on modern electrical systems. WNH

implemented its new industry leading JOMAR Softcorp Customer Information System (CIS) in 2017. The new CIS allows for:

- fast and efficient changes in billing parameters and rate changes
- easily configurable on-bill messaging changes to support corporate and regulator notices
- easy customer online access to billing and consumption data
- lower operation and maintenance costs than previous system
- supports customer centric website portal and My Account features
- capability of supporting the Green Button Data standard which will facilitate near real-time open data access for customers using third party applications

Waterloo Region has been and continues to be a growing community. Ensuring an adequate electrical supply in this growing economy is foremost. Local government and business leaders go to great lengths to attract business to the Region in what is a very competitive global economy. Opportunities lost due to inadequate supply not only impact future WNH revenue opportunities but also community jobs, tax base and secondary development.

Reliability is a prominent consideration as it is the key measure of how well WNH is fulfilling its mandate to supply electricity to its customers. The importance of electrical supply reliability has been a consistent message from all stakeholders, through many consultations. It is the cornerstone of prosperity for the community we serve.

WNH has engaged with its customers in many ways which will be fully described later in

this Exhibit.

To provide alignment with its Corporate Values and Strategic Imperatives, WNH manages its assets while recognizing realistic service and performance goals. Customer expectations for the delivery of safe, reliable electricity at a reasonable price have to be respected. The following considerations are critical to WNH's asset management strategy:

- Activities should demonstrate good stewardship in the long term up-keep and growth of the distribution system;
- Service delivery should be safe, fair and consistent within all customer groups;
- Performance measures should demonstrate progress towards and/or achievement of the goals within reasonable budget considerations;
- Maintenance plans should be consistent with good utility practice but capture specific items from the annual assessments and any specific customer needs;
- Capital budgets should justify proposed expenditures and be flexible to respond to new priorities;
- The asset management strategy should create opportunities for improved efficiencies;
- The asset management strategy should find the right balance between capital investments and O&M costs so that the total cost over the life of the asset is minimized; and

- The asset management strategy should include annual reviews of asset management goals, strategies and outcomes.

Reliability

WNH is committed to maintaining distribution system reliability and quality to achieve or outperform the targets established by the OEB through the following objectives:

- Managing, maintaining and operating the distribution system in a manner that will cost effectively minimize: (i) the average number of hours that power to customers is interrupted; and (ii) the frequency of such interruptions.

- Managing and maintaining the distribution system to meet power quality standards in accordance with good utility practice, all applicable standards and guidelines and WNH's Conditions of Service. WNH endeavours to maintain steady state voltage limits, under normal operating conditions, at the Customer's delivery points, as specified in the latest edition of the Canadian Standards Association (CSA), C235.

- As shown in Table 1-2, WNH has managed, maintained and operated the distribution system in a cost efficient manner to maintain the average number of hours and times that power to a customer is interrupted is within the acceptable targets.

- It can be seen from Table 1-2 that Supply Reliability and Major Events have impacted WNH's System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) performance from 2015 - 2019. WNH set range targets for adjusted SAIDI and SAIFI to be no more than that of the previous 2011 – 2015 period; SAIDI (0.470 - 0.750) and SAIFI (0.850 – 1.590).

Table 1-2 - WNH Reliability Performance and Targets

	2015	2015 EME	2016	2016 EME	2017	2017 EME	2018	2018 EME	2019	2019 EME	WNH TARGETS
Exclusive of Supply											
SAIDI (Duration)	0.893	0.688	2.601	0.709	0.860	0.761	1.833	0.918	1.079	0.850	0.470 - 0.750
SAIFI (Frequency)	1.593	1.436	2.624	1.145	1.582	1.497	1.645	1.318	1.443	1.287	0.850 - 1.590
	2015	**2015 EME**	**2016**	**2016 EME**	**2017**	**2017 EME**	**2018**	**2018 EME**	**2019**	**2019 EME**	
Inclusive of Supply											
SAIDI (Duration)	1.053	0.694	2.867	0.738	0.863	0.765	2.086	0.925	1.126	0.895	
SAIFI (Frequency)	1.787	1.529	2.986	1.232	1.612	1.527	1.862	1.419	1.839	1.648	
ME = Major Events		2 ME		3 ME		1 ME		2 ME		1 ME	
EME = Excluding Major Events											

		5 Year Average Indices	
	WNH TARGETS	**Excluding ME**	**Including ME**
Exclusive of Supply			
SAIDI (Duration)	0.470 - 0.750	0.785	1.453
SAIFI (Frequency)	0.850 - 1.590	1.337	1.777
Inclusive of Supply			
SAIDI (Duration)		0.803	1.599
SAIFI (Frequency)		1.471	2.017
EME = Excluding Major Events			

2. Health, Safety and Environment

This encompasses the Board's Outcomes of Public Policy Responsiveness, Organizational Effectiveness and Financial Performance.

WNH believes as a corporation it has a legal and moral duty to carry out its business in a manner that is safe to its workers, customers and the general public. Safety has been and

continues to be high on WNH's list of Strategic Imperatives. Loss prevention is about more than safety; it is also about preventing loss in all areas of the business. This focus supports cost reduction and organizational effectiveness objectives.

WNH has an excellent workplace safety record and remains committed to maintaining this with the following safety related objectives:

- Minimize lost time due to accidents involving WNH employees or contractors;

- Target: Zero (0) lost-time injuries due to accidents involving WNH employees or contractors. WNH has achieved more than five consecutive years with zero lost-time injuries;

- Minimize public safety incidents caused by factors within WNH's control, such as equipment failure or work procedures;

- Maintain compliance with all relevant Electrical Safety Authority (ESA) standards and guidelines.

In 2019 WNH received two prestigious national safety awards. WNH was awarded a Gold Award in the Psychological Safety category and a Silver Award in the Utilities category from Canada's Safest Employers. WNH was specifically recognized for the robust mental health component of its corporate wellness program. WNH provides annual support for Bell Let's Talk Day and Movember fundraising and awareness. WNH also focuses on public safety by holding safety training sessions for first responders, contractors and other community organizations. In addition, the school safety program annually reaches most of the schools in the WNH service area, and the electrical safety poster contest is a great safety awareness program for students, teachers and parents.

WNH received an 82% score in the 2019 Public Awareness Safety Survey.

WNH is a founding member of a local conservation organization - Sustainable Waterloo Region whose mandate is to help organizations achieve carbon reductions through collaboration and education. WNH is committed to energy efficiency and conservation for its customers.

WNH participates in many local annual events.

3. Customer Service

This encompasses the Board's Outcomes of Customer Focus, Operational Effectiveness and Financial Performance.

Services to our Customers

Beyond construction and maintenance of the physical distribution system, WNH provides a number of other services to our customers. Some notables include:

- In 2019 WNH handled 13,648 underground cable locates for the safety of public and contractors, as well as prevention of outages. The request for locates increases in number each year.

- Since 2014, WNH has connected 4,038 new services in a timely manner.

- Of the approximately 26,000 telephone calls that were received by Customer Service in 2019, WNH employees answered 91% within 30 seconds.

One of WNH's Corporate Values is '*Service – WNH recognizes its commitment to be of service to customers, employees and the community and its contribution to the success of*

each'. WNH has Customer Service level expectations and targets that are both adopted and imposed. There are many aspects to customer service and all strategic objectives can have positive or negative influences. These influences when rolled up into a single customer service objective provide better insight and balance to WNH's investment decision making process.

WNH strongly believes in Customer Service and strives to always provide great service to customers. A comprehensive discussion of WNH's customer engagement efforts, the customer feedback and preferences identified as a result of these efforts, and the steps WNH is taking to ensure that customer preferences are being addressed as part of its business activities, are included in a more comprehensive discussion in the Customer Engagement and Customer Focus section later in this Exhibit.

A brief overview of feedback from customers includes:

- WNH received 96% on the 2018 UtilityPULSE Customer Satisfaction Survey from our customers versus the 89% average for Ontario LDCs (Source 2018 UtilityPULSE Survey in Attachment 1-7).

- The overwhelming majority (89%) of customers are satisfied with the service they receive from WNH. In fact, all large business respondents are satisfied with the service they receive from WNH (Source Customer Engagement Survey Report by Brickworks Communications, Attachment 1-9).

- The use of social media not only allows WNH to provide its customers with timely updates during outages and inform them of regular events and useful information, it allows the customers to provide feedback to WNH. WNH is grateful for the positive tweets from customers that recognize and appreciate the hard work that its employees have provided. During the April 15, 2018 freezing rain storm WNH received tweets such as "@wnhydro Cheers to the workers at @wnhydro. Must

have been a long night for them, but the power was back on quickly. Thanks!"

- During another storm that occurred on May 4, 2018 WNH received tweets such as "@wnhydro thank you for all your hard work on getting the power on again!"

Firmly rooted in the local communities, WNH is well positioned to identify and respond to customer preferences through its business planning processes. WNH is committed to maintaining the following customer and community focus objectives:

- Assisting customers in becoming better informed about safe, economical and efficient uses of electricity.
- Maintaining service quality and customer satisfaction rates at or above industry targets.
- Scheduled appointments Met on Time: *Target:* 90%; *Achieved 2019:* 98.6%
- Target: 65% telephone calls answered on time. Achieved 2019: 90.7%
- Target: 98% billing accuracy. Achieved 2019: 99.9%
- Target: "A" rating on customer satisfaction survey results. Achieved 2018: "A" rating (Data is shown for 2018 as this is only completed every two years; this is the most current result)
- Facilitating local economic development by providing timely responses to new customer connection or service expansion requests.
- Target: 90% of new residential/small business services connected on time. Achieved 2019: 100%
- Target: 90% of low voltage customers (i.e. 750V or less) connected on time. Achieved 2019: 100%
- Target: 90% of high voltage customers (i.e. greater than 750V) connected on time. Achieved 2019: 100%
- Coordinating infrastructure replacement requirements with the Municipalities and the Region to minimize costly duplicative civil and construction work.

Customer Service Improvements

In addition to the above noted metrics, efficiency efforts will result in customer service improvements, including:

1. Continue to offer a web-based Customer Portal to enable customers to view their hourly electricity usage to help them better understand Time-of-Use consumption profiles and to quantify savings from conservation initiatives.

2. WNH offers an e-billing option to its customers. This has proven to be a popular and convenient service for customers to store information and review past consumption and costs at their leisure. Paperless billing together with the Customer Portal is leveraging web-based technology to provide the customer with a better experience when doing business with WNH. WNH has deployed to its customers several online 24 x 7 customer facing applications which include 'Online Account Inquiry & E-bill Presentment' (with automated e-bill notification) as well as electricity consumption presentation. This has proven to be a popular and convenient service for customers for receiving their bills, reviewing their account payment activity and related costs, and analyzing their past electricity consumption.

3. In 2017 WNH went live with its new CIS. This system allows for more efficient billing practices, quick bill presentment changes and better tracking of customer information which helps to improve the customer service experience.

4. WNH uses social media extensively to keep its customers informed. This is especially important during an outage, since ongoing information shared with customers is very valuable. WNH utilizes both Facebook and Twitter to communicate with customers.

5. Finally, based on feedback received from 2019 customer engagement processes, WNH will assist its customers in conservation education, be proactive in its communications during an outage and continue to provide high quality services. WNH will always review new technologies to find better ways to communicate with customers.

4. Employee Relations and Development

This encompasses the Board's Outcomes of Customer Focus and Operational Effectiveness.

Developing Staff for the Future

WNH's staffing levels have decreased slightly over the last five years, due to increased efficiencies in certain areas of the business which are offset by the increased need to maintain and analyze new software systems that support the distribution network.

WNH hires apprentices approximately three years in advance of pending retirements of trades and technical staff in order to train and provide experience to new staff before existing staff leave. The continuity and transfer of knowledge does not entirely make up for the skills deficit WNH experiences when employees retire, but it does leave WNH better able to carry on effective operations.

WNH has had little success finding experienced staff, and as a result generally hires into training positions and develops its own staff. To support this recruitment program, WNH hires Co-op trades apprentices and Co-op engineering students for each four-month term. These opportunities provide apprentices and engineering students with valuable work experience, return value to WNH for the work they perform, and provide WNH an opportunity to evaluate possible future employees.

WNH utilizes a mixture of permanent staff, part-time staff and contractor services to execute its investment plans in a cost effective manner.

Two of WNH's Corporate Values are '*Service – WNH recognizes its commitment to be of service to customers, employees and the community and its contribution to the success of each*' and '*Safety and Environmental Stewardship - WNH is committed to its responsibility for the health and safety of employees, the protection of the public and safeguarding of the environment'*. WNH is committed to its employees and their development.

WNH works hard to build a culture of continuous improvement, where employees feel valued, trusted, empowered and are a respected team member. These employees will then, in turn, look out for the needs of the business through a culture of continuous improvement. Examples of employee led and supported continuous improvement is detailed in the next section '5. Productivity and Cost Reduction'.

WNH's success in empowering their employees has resulted in performance and customer satisfaction improvements, an excellent employee safety record and a steady reduction of employee sick time.

WNH has been listed on Waterloo's Top Employers four consecutive years (2017-2020). This special designation recognizes the employers in the Kitchener-Waterloo area that lead their industries in offering exceptional places to work. Employers are evaluated by the editors of Canada's Top 100 Employers using the same eight criteria as the national competition: (1) Physical Workplace; (2) Work Atmosphere & Social; (3) Health, Financial & Family Benefits; (4) Vacation & Time Off; (5) Employee Communications; (6) Performance Management; (7) Training & Skills Development; and (8) Community Involvement. Employers are compared to other organizations in their field to determine which offers the most progressive and forward-thinking programs. WNH continues to strive to be a desirable employer in the Region.

5. Productivity and Cost Reduction

This encompasses the Board's Outcomes of Customer Focus, Operational Effectiveness and Financial Performance.

The Strategic Imperatives of Productivity and Cost Reduction, Organizational Effectiveness, and Customer Service are inextricably linked. Productivity and Cost Reductions are never static; WNH is constantly searching for ways to improve efficiency and productivity performance to provide better value service for its customers. Some efficiency improvements may lead to direct cost savings, other efficiency improvements may lead to a more effective utilization of resources, allowing WNH to do more with less.

WNH understands that its own success and that of its customers depends upon the affordability of the services it delivers. WNH actively investigates opportunities to improve value and lower the costs of its operations without sacrificing customer service levels. Although cost pressures such as labour and material inputs, regulatory requirements and service levels continue to increase, WNH continues to focus on improvements in these areas.

WNH presents its objectives below, along with customer feedback and examples of productivity and cost efficiencies it has implemented.

WNH is committed to continuously improving and works towards the following objectives:

- Identify and implement measures that will lead to sustainable long-term efficiencies that utilize resources more effectively
- Target: Maintain in Group 3 as determined using the PEG methodology. Achieved: Group 3 in most recent OEB Scorecard (2018)
- Actively monitor and manage WNH's productivity performance

- Target: Doing more (increased workload) with less by maintaining consistent staffing levels and managing and, to the extent practical, minimizing overtime and sick time levels. Achieved: Reducing redundant positions and closely monitoring OT and sick time.
- Automating work processes to decrease time-consuming manual tasks
- Working safely and continuous training for all employees
- Improving co-ordination and planning of capital projects

Productivity and cost reduction examples are provided below and demonstrate WNH's commitment to finding productivity and cost savings, as well as increasing service to its customers.

- WNH's Outage Management System (OMS) went into service in 2015. This technology has improved the accuracy of recording both customers affected and interruption minutes over the historical period. WNH suspects that this has also worsened its baseline reliability performance measures. The implementation of grid modernization technology by WNH has saved approximately 1.64 million customer outage minutes annually. This has also had the effect, in some outage events, to reduce the customer outage minutes below the major event day (MED) threshold. Where in the past, the entire outage minutes for such an event would have fallen under a MED event and not contributed to the performance record, the customer outage minutes are now reduced but add to the performance record.

- WNH implemented Survalent's Fault Location, Isolation, and Service Restoration (FLISR) software application that, combined with Supervisory Control and Data Acquisition (SCADA) and other grid modernization devices, reroutes power in the event of a fault to restore power to as many customers as possible, as quickly as possible. These technologies provide automatic self-healing on the portions of the

system unaffected by the fault, ultimately improving restoration times. Since 2016, in areas where these technologies have been implemented, WNH customers have saved approximately 6.6 million customer minutes of interruption, averaging 1.64 million customer minutes saved annually. In 2019, WNH estimates 1.7 million customer minutes were saved; a 30% reduction in outage minutes. WNH customers have also experienced a steady decline in momentary interruptions (MAIFI) since 2015; a 50% reduction from 6.44 to 3.19 annual momentary interruptions per customer. In addition, shorter restoration times reduce the customer's lost revenue associated with a loss of power event. WNH has yet to quantify the value to customers of interrupted service, however, WNH expects these savings to increase as it expands these technologies over its remaining customers. These investments also improve situational awareness for operating staff during power outage events leading to more informed, effective and efficient restoration of power to customers.

- Starting in 2010, with larger scale deployment beginning in 2014, WNH has been installing pole-mounted Electronic Vacuum Reclosers (EVR) and retrofitting existing submersible Vista switchgear with remotely operated switches on our distribution feeders. These are automated switches that communicate with our SCADA system. This technology aids WNH System Operators in the Control Room to identify line segments affected by a sustained fault. These switches allow Operators to isolate the affected line sections and restore power to those that are unaffected. This results in lower customer outage minutes and more efficient dispatching of a trouble crew to the fault location. Savings related automated switching and the avoided cost of sending trucks would be in the order of $20,000 annually. WNH expects to continue investing in these automated switches into the forecast period.

- System Renewal investments made between 2016 – 2019, allowed WNH to retire the last five of its 4.16 kV municipal transformer stations from service. WNH has also been able to retire all of the remaining 4.16 kV lines and distribution

transformers in the City of Waterloo and the Town of Elmira. Similarly, WNH has retired two 8.32 kV transformer stations. One more 8.32 kV transformer station is planned for retirement by the end of 2020. Portions of the remaining 8.32 kV lines in the rural areas will continue to be retired over the forecast period through continuing renewal investments. These assets have been replaced with ones that operate at higher voltages and are more efficient. New lines generally incorporate higher voltages, larger conductor and increased pole strength. As a result, the distribution system is better able to withstand adverse weather conditions; provide increased capacity and siting options for the connection of renewable energy generation, electric vehicles, and energy storage; provide increased physical space for third party communications and smart grid devices; and reduce power quality issues and losses.

- Elimination of 4.16 kV and 8.32 kV assets reduces the need to stock parts/equipment specific to that voltage class, leading to supply chain and inventory efficiencies. The retired stations referred to above are currently in various stages of decommissioning and environmental remediation. Once work is complete, O&M savings will be approximately $19,000 annually for each station. WNH also avoids the need for further capital renewal investments for the related distribution station buildings & equipment.

- WNH's 2019 system losses have been calculated to be 3.2% of purchased energy. The five-year average from 2014 – 2018 is 3.5% having fluctuated between 3.2% and 3.7%. This is well below the OEB's recommended threshold of 5% as set out in the OEB's document "Ontario Electricity Distributor Practices Relating to Management of System Losses (June 23, 2008)". WNH's loss factor is also consistently lower than the Ontario LDC average of 3.8% over the same period. Annual savings from lower losses flow directly to the benefit of WNH's customers by lowering the cost of power.

- WNH has a long established practice of cross training staff in key areas to better allocate resources and adjust to shifting work programs. As new subdivision underground design has decreased at WNH, staff have been able to move to areas of increased workload such as overhead renewal, generator connections and overhead line relocation design. Line staff rotate through overhead and underground areas regularly so as to be familiar with technologies and practices in both areas. WNH's stations staff were formed into one cohesive workgroup and take a holistic approach to maintaining stations equipment rather than the traditional approach of having multiple groups with overlapping responsibilities. These and other efforts make for more efficient work programs; keep employees engaged in their work and reduce risk of staff turnover. One of the greatest benefits to these initiatives arise during storm and power outages when more qualified assistance is available to respond.

- Proactive maintenance programs assist assets in reaching their life expectancy and in some cases, can extend asset life. Although some capital expenditures may be deferred, these activities have a tendency to increase O&M costs.

- WNH looks for opportunities in the purchase of tools, equipment and systems, to select those that offer labour saving capabilities. WNH has had positive experiences with automated testing equipment, battery powered hand tools, enhanced design software, field tablets and more. These are incremental savings that help to reduce the upward pressure on future O&M costs.

- WNH implemented METSCO Energy Solutions Inc. (METSCO) Asset Analysis, Prioritization and Optimization Tool (ENGIN) and Health Index Frameworks to assist in the preparation of its asset management plans. The Health Index Frameworks cover WNH's major asset categories and brings greater standardization to asset condition assessment criteria and asset health grading.

Improvements have been made in data collection, validation and warehousing processes to enhance the completeness and quality of the data. The use of electronic hand-held devices for the collection of field inspection and asset condition assessment data has also been implemented.

- WNH is also investing in condition based, continuous online monitoring of its large grid connected power transformers. Being WNH's single largest valued assets, continuous online monitoring will allow for more timely and less costly intervention if asset health unexpectedly deteriorates. This activity aligns with the Long-Term Energy Plan (LTEP) goal of "Improving Value and Performance for Consumers"

- WNH is a founding member of the Utilities Standards Forum (USF), an organization consisting of 53 Ontario LDCs that pool resources, initiatives and funding in the areas of Engineering, Operations, Regulatory, Customer Service and IT program management. WNH continues to realize savings in the form of reduction of effort through the use of: common standards development; staff training; shared policies process and product discovery; and ready access to the expertise of other utilities for consultation and problem solving. In addition to design standards, the USF Engineering Forum has developed guidelines for asset inspection, joint use attachment agreements, non-linear pole loading analysis, and tendering.

- WNH participates in joint purchasing as a member of GridSmartCity Cooperative. WNH benefits from material standardization and joint purchasing initiatives that reduces the per unit costs and can lead to more easily shareable materials with other utilities during storm events.

- WNH's new CIS allows for quick and cost effective changes to messages and billing parameter changes requested by the Ministry of Energy, Northern Development and Mines and the OEB. Due to user defined fields and configuration, WNH is able

to use internal staff to make billing calculation or on-bill messaging changes without the assistance of the vendor. Where other LDC's discuss high costs and long lead time requirements, WNH is able to maneuver quickly at a low cost.

Despite numerous regulatory obligations driving increasing workload, the need for Key Accounts management, and increasing software systems that require maintenance and analysis, WNH has slightly decreased the number of Full Time Equivalents (FTEs) between 2016 Actual and 2021 Forecasted as shown in Table 1-3. WNH has worked to reduce staffing levels where there are redundancies such as in Administration and Finance in order to accommodate the need for additional staff in IT, Asset Management and Key Accounts.

Table 1-3 - Number of Full-time Employees

Type	2016 Board Approved	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test	2021 vs 2016 Actual
Permanent FTE	123.87	121.01	117.93	112.43	111.52	115.34	121.00	(0.01)
Student/Contracts FTE	8.25	8.63	7.14	11.33	10.47	7.08	7.38	(1.25)
Total FTE	**132.12**	**129.64**	**125.07**	**123.76**	**121.99**	**122.42**	**128.38**	**(1.26)**

In the 2021 Test Year and future years, WNH will continue to make cost reduction and productivity improvement measures a priority.

6. Organizational Effectiveness

This encompasses the Board's Outcomes of Customer Focus, Operational Effectiveness and Financial Performance.

One of WNH's Corporate Values is *'Commitment to Excellence - WNH strives for high reliability and quality through continuous improvement, leadership and excellence'*.

WNH considers organizational effectiveness as a key factor in supporting cost reduction, improvements in health, safety and environment, timeliness of service delivery, O&M execution and capital investment planning. WNH's organization effectiveness initiatives include projects and activities undertaken based on, among other factors, customers' preference, technology based opportunities and other innovative process, services, business models or technologies.

As demonstrated above in the Productivity and Cost Reduction Strategic Imperative section, WNH has implemented a number of efficiencies and cost saving measures. Many of these measures not only reduce costs, which ultimately reduce rates for WNH's customers, they also increase WNH's level of service and some benefit the environment in emissions reductions.

The examples provided above are sustainable. They demonstrate WNH's commitment to continuous improvement in productivity and cost performance. They also enhance WNH's system reliability and quality objectives.

7. Financial Performance

This encompasses the Board's Outcomes of Operational Effectiveness, Financial Performance, and Customer Focus.

WNH's Financial Performance Strategic Initiative focuses on three main areas, namely:

- Manage controllable costs - WNH uses a number of measures including Cost per Customer, Cost per Km and Cost per MWh in its monitoring of the costs. As demonstrated in the Productivity and Cost Reduction Strategic Imperative section above, WNH has implemented a number of measures to reduce its cost and increase its efficiencies.

- Earn the allowable return - WNH employs net income to reinvest back into its distribution system and to provide a fair return on investment to the shareholders.

- Manage debt and investments - WNH prudently manages its debt level to match investments required to achieve WNH's financial objectives.

WNH continues to achieve strong financial performance by balancing system reliability and service, while minimizing controllable costs associated with operating, maintenance, and administration. By being financially responsible, which includes providing its shareholder with a rate of return consistent with the OEB's allowed return on equity, as provided in Table 1-4 below, WNH is able to reinvest in its distribution system to provide safe and reliable electricity to its customers.

Table 1-4 - WNH Profitability: Regulatory Return on Equity

Year	2016	2017	2018	2019	Average
Percentage of Profitability	10.13%	8.37%	8.20%	7.13%	8.46%
ROE Most Recent Application	9.19%	9.19%	9.19%	9.19%	9.19%

8. Shareholder and Community Relations

This encompasses the Board's Outcomes of Customer Focus and Public Policy Responsiveness.

One of WNH's Corporate Values is '*Service - WNH recognizes its commitment to be of service to customers, employees and the community and its contribution to the success of each'.*

WNH takes its role seriously within the community by allowing customers the opportunity to engage with the utility. WNH has described its many ways of ongoing customer engagement, as well as engagement specific to this Application throughout the Exhibits. WNH also participates in many community events, allowing it to obtain and share feedback with its customers. Examples include:

- WNH has conducted Customer Service Surveys for a number of years in order to determine customers' preferences and incorporate the feedback into its business and operational plans as applicable.

- WNH conducts Open Houses to inform its customers in areas that will be impacted by its work plans.

- WNH believes that educating the next generation provides a valuable service to the community. WNH conducted Electrical Safety Awareness Presentations to over 3,000 students in 2019.

- WNH actively participates in the local Chamber of Commerce, on the Board of Directors, on Committees, and supporting events allowing WNH to interact with local business persons to hear any of their electricity concerns and provide industry education.

- WNH is a founding member of a local conservation organization, Sustainable Waterloo Region. WNH is committed to energy efficiency and conservation for its customers.

- WNH plays an active role in annual community events including municipal open house events, programs at the two universities and the polytechnic college, THEMUSEUM's kids inspiring change, the United Way, the Food Bank, and farm

safety days. All of these provide one-on-one interaction with customers.

- WNH also participated in a local annual event 'Doors Open' in which members of the public are offered access to architecturally and socially significant buildings in the area. WNH received much interest and participation from the community, over 300 people toured WNH's Service Centre.

- WNH regularly meets with its shareholders to discuss its business plans, rates and the impact on customers.

- WNH has detailed its extensive consultations with the local municipal planning and economic staff, from the three municipal shareholders of WNH's parent company.

WNH is also committed to actively supporting provincial and local public policy objectives through the implementation of Smart Meters and Time-of-Use Pricing, meeting mandated Conservation and Demand Management Targets, enabling Renewable Generation, transitioning to IFRS accounting standards, the implementation of Low-income Energy Assistance Program (LEAP), and the implementation of the Ontario One Call system.

9. System Aesthetics

This encompasses the Board's Outcomes of Customer Focus and Operational Effectiveness.

WNH consults with various stakeholder groups in the community and has provided an opportunity for them to express their support for more aesthetically pleasing forms of distribution system construction. WNH adheres to service levels as prescribed in its Conditions of Service, overarching regulations, adopted standards and good utility practice. Although not ranked as high as other strategic objectives, aesthetics is taken into

consideration on all projects and when balanced with other strategic objectives positive outcomes can be realized.

In addition to the above Strategic Imperatives, WNH conducts its business and has prepared this Application with support of Public Policy Responsiveness.

Public Policy Responsiveness

While WNH's Strategic Imperatives do not directly address this objective, WNH has, and will continue to, demonstrate its commitment and capabilities in delivering government mandated programs. The quantity of public policy initiatives has increased and the time frame for compliance has decreased. This has increased pressure on staff and WNH as a whole to ensure that it is compliant and customers are receiving what has been promised to them. Included in the following list are some of the mandated programs that have been introduced since WNH's 2016 COS:

- Implementation of the Fair Hydro Plan Act (2017)
- Implementation of the Ontario Rebate for Electricity Consumers Act (2016)
- The Ontario Electricity Support Program (OESP) (2016)
- The cancellation and centralization of Conservation and Demand Management (CDM) (2019 & 2020)
- Implementation of the Ontario Electricity Rebate (2019)
- Implementation of changes to Customer Service Rules (2019 & 2020)
- Installation of Metering Inside the Settlement Timeframe (MIST) meters for > 50 kW customers (2014)
- Continued connection of Renewable Generation
- Implementation of the OEB's standardized accounting process for RPP settlement (2019)
- Implementation of the OEB Cyber Security Framework (2018)

- Implementation of COVID-19 Billing Changes (2020)
- Implementation of Time of Use Opt-Out (2020)

Keeping in line with the Strategic Imperatives and the RRFE, the Capital Investments for 2021-2025 reflect the priorities and needs required as per WNH's DSP. WNH believes that the key to maintaining system performance while keeping the bill impact to our customers manageable over the long term is a proactive and consistent renewal approach to managing assets.

On the operating side, WNH continues to apply pressure to maintain and where possible reduce operating costs while still maintaining the service to customers that they expect and ask for. WNH looks to automate work processes to decrease manual tasks, eliminating duplication and increasing efficiency. WNH continues to work safely with zero lost time injuries in 2019. In addition, WNH seeks to improve coordination and planning of capital projects with the municipalities, other utilities and other stakeholders.

WNH believes its Application presents a well-balanced, well thought out proposal for sustaining and improving the WNH electricity distribution system in the best interest of its customers.

WNH has included a copy of the Business Plan in Attachment 1-10.

2.1.3 CUSTOMER SUMMARY

Waterloo North Hydro (WNH) has applied to the Ontario Energy Board for a change in the distribution rates that it charges its customers. The distribution rates are based on the amount of capital investments made by WNH as well as the cost to operate and maintain the capital investments, along with a percentage for a return on equity. The impact to residential and small business (GS > 50 kW) customers for the 2021 proposed rates compared to the 2020 rates is:

Rate Class	kWh	Total Bill Impact	
		$	%
Residential	750	0.97	0.8%
GS < 50 kW	2,000	(1.32)	-0.4%

WNH has a service area of 683 sq. km. that provides electricity distribution to approximately 58,000 residential, commercial and industrial customers. WNH is incorporated under the Ontario Business Corporations Act and is 100% municipally owned by the City of Waterloo, the Township of Woolwich and the Township of Wellesley.

The full Application includes information on the amount and location of capital investments being made in the service territory along with the costs to operate and maintain the system, produce bills, and provide customer support. WNH employs approximately 128 local staff. The full Application can be found on WNH's website (www.wnhydro.com).

Since WNH last rebased, WNH has achieved the following:

- Successful implementation of a new Customer Information System that has allowed for:

i) Fast and efficient implementation of billing changes
ii) Easy customer online access to billing and consumption data
iii) Improved customer web portal and My Account features

In addition, WNH plans to offer further upgrades to this system which would allow for added features such as:

i) Better communication (Outage notifications, pro-active high bill alerts and payment reminders, campaigns around electrical safety)
ii) Self-service online (interactive website, online chat, comparing usage with area)
iii) Summary billing (a single invoice for customers with multiple premises).

- Implemented its Outage Management System and a public facing Customer Outage Map to inform the public of outages and estimated time to restore.
- Implemented automatic self-healing network using automated switches to speed up outage restoration.
- Introduced a risk based asset management software to improve asset health analytics and prioritization of capital expenditures.
- Continued grid modernization by enhancing its communication network and installing automated switches in the field to speed up outage restoration.
- From 2015-2017 WNH rerouted distribution plant along the Light Rail Transit (LRT) corridor.
- Implemented Government Initiatives such as the Fair Hydro Plan, Ontario Energy Rebate and COVID-19 Off-Peak Billing.
- Provided electrical safety education to local Emergency Response Teams, Contractors, Elementary Schools and the public.

WNH also won the following prestigious awards:

- Waterloo Region Top Employer – 2017, 2018, 2019, 2020
- Electrical Safety Authority Consumer and Home Safety Award 2017 and 2019
- Region of Waterloo's Platinum Healthy Workplace Award – 2015, 2016, 2017
- 2019 Gold Award in the Psychological Safety – Canada's Safest Employer
- 2019 Silver Award in the Utilities category – Canada's Safest Employer
- 2018 Greater Kitchener Waterloo Chamber of Commerce Health & Wellness in the Workplace Award

In the coming years, WNH plans to:

- Continue its approach of proactive and consistent renewal to maintain system performance while keeping bill impacts to customers manageable.
- Continue to invest in grid modernization in order to quickly restore power to as many customers as possible.
- Continue to facilitate Distributed Energy Resources and Net Metering. Support Virtual Net Metering when allowed by regulation.
- Replace WNH's 15-year-old Enterprise Resource Planning Software (ERP). WNH's current ERP system, which was a mature product at the time of its installation in 2005 is at end-of-life.

The Application that accumulates to the rate impacts noted above include a capital and operating plan for 2021. The total capital budget for 2021 is $19.0 Million and the total operating budget for 2021 is $16.2 Million. These capital expenditures allow WNH to:

- accommodate road construction
- connect new customers
- replace and refurbish aging poles, transformers and wires

- ensure a reliable supply of electricity
- monitor distribution system
- replace and refurbish aging buildings, trucks and tools as well as software systems

The operating budget allows WNH the ability to maintain systems and assets, provide tree trimming to assist in reducing outages, offer locate services to customers, provide accurate bills and responsive customer services, ensure that WNH is protected through cyber security and ensure that our staff is well trained on how to do their work safely and effectively.

In order to accomplish the items listed above, WNH requires annual revenues of $39,298,087. Broken down by customer this is an increase of 1.5% for residential customers over 2020 rates and 1.3% for GS < 50 kW (small business) customers.

With the approval of this Rate Application, while costs will increase as indicated, WNH customers will continue to enjoy reliable service with minimal outages, will see improved customer portal options and will continue to have their needs met by WNH.

2.1.4 ADMINISTRATION

The Applicant's Address for Service

The Applicant:

Waterloo North Hydro Inc.
526 Country Squire Rd
Waterloo, ON
N2J 4G8

Primary Application Contact:

Mr. Albert P. Singh
Telephone: (519) 888-5542
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Vice President Finance and Chief Financial Officer:

Mr. Albert P. Singh
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The Applicant's Legal Representation:

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M5H 3Y5

Primary Legal Contact:

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Internet Address and Social Media:

Internet: https://www.wnhydro.com
Facebook: https://www.facebook.com/wnhydro;
Twitter: https://twitter.com/wnhydro; and
LinkedIn: https://www.linkedin.com/company/waterloo-north-hydro-inc

Publication Information

Residents, businesses and institutions in the City of Waterloo, the Township of Wellesley and the Township of Woolwich who receive electricity distribution services from WNH will be affected by the Application.

WNH proposes to publish the Notice of Application in The Record (Waterloo Region) newspaper. The Record has the highest paid circulation in the WNH service territory.

Table 1-5 Bill Impacts for Notice

Residential (750 kWh)	$0.70 per month
General Service less than 50 kW (2,000 kWh)	$4.81 per month

The Application and related materials will be posted on the WNH website, and will be available for viewing at the following internet address: http://www.wnhydro.com/en/our-company/Rate_Application.asp.

Materiality Threshold

In accordance with the Chapter 2 Filing Requirements, an applicant must provide justification for changes from year to year to its rate base, capital expenditures and OM&A above a materiality threshold. WNH's materiality threshold is computed as 0.5% of the proposed distribution revenue requirement for distributors with a distribution revenue requirement greater than $10 million and less than or equal to $200 million. The materiality threshold as per the Filing Requirements is $196,490 as provided in Table 1-6. WNH has used a threshold of $190,000 for assessing materiality for the purposes of this Application.

Table 1-6 - WNH's Materiality threshold for 2021 Test Year

Description	2021 Test Year
Base Revenue Requirement	39,298,087
Materiality Threshold 0.5%	196,490
Materiality Used	**190,000**

Material Impacts

Based on the bill impacts noted above, there are no proposed changes in the Application that will have a material impact on any customer class. However, WNH is seeking approval to implement a Standby Charge for the Large Use and General Service > 50 kW customers with load displacement generation.

Bill Impacts

All customers will be affected by the proposed rate change. A summary of the Bill Impacts is provided in Table 1-24 later in this section.

Form of Hearing

The Applicant requests that this Application be disposed of by way of a written hearing. A written hearing will be the most prudent and cost effective means to process the application.

Proposed Effective Date of Rate Order

1. The Applicant requests that the OEB make its Rate Order effective January 1, 2021 in accordance with the Filing Requirements.

2. In the event that the OEB is unable to provide a Decision and Order in this Application for implementation by the Applicant as of January 1, 2021, the Applicant requests that the OEB declare its current rates interim, effective January 1, 2021, pending the implementation of the OEB's Rate Order for the 2021 rate year.

Statement of Deviation of Filing Requirements

WNH has not deviated from the Chapter 2 of the OEB's Filing Requirements for Electricity Distribution Rate Applications last revised on May 14, 2020.

Change in Methodology

The methodologies used in this Application are consistent with those applied in WNH's last Cost of Service (COS) Application (EB-2015-0108). Historical amounts are the same as approved by the Board in EB-2015-0108. WNH has also made changes as required as the Filing Requirements have evolved since the 2016 COS Application.

Pro-Forma Projections

The pro-forma projections for the 2021 Test Year have been prepared in accordance with WNH's usual process, with the following exceptions:

1. Rates for distribution and sales of electricity are assumed to be constant for the entire 2021 Test Year.
2. Regulatory costs have been normalized over the five-year application period consistent with Section 2.4.3.4 of the Chapter 2 Filing Requirements.

Identification of Board Directives from Previous Board Decisions

2016 COS – EB-2015-0108 – Rate Decision and Order

WNH had three approved items in its 2016 COS that requires follow up in this Application, which includes:

1. Wireless and Wireline Pole Attachments
2. MS Disposition
3. OPEB Forecast Cash versus Forecast Accrual Differential Deferral Account

1508 Other Regulatory Asset – Sub-account Wireless and Wireline Variance Account

Waterloo North Hydro shall establish a new variance account 1508 Other Regulatory Asset – Sub-account Wireless and Wireline Variance Account, to record two items: 1) the net (less any related costs) incremental revenues received from any wireless attachments during the IRM period; and 2) any changes in revenue received due to any change in the currently regulated wireline attachment rate of $22.35 per attachment per pole per year. For clarity, this is a symmetrical account that reflects changes to the rate rather than change in number of wireline attachments.

1. The net (less any related costs) incremental revenues received from any wireless attachments during the IRM period. These incremental revenues will be recorded as follows:

Accounting Entry:
Debit - Account 4210, Rent from Electric Property
Credit - Account 1508, Other Regulatory Asset – Sub-account Wireless and Wireline Variance Account

2. Any changes in revenue received due to any change in the currently regulated wireline attachment rate of $22.35 per attachment per pole per year;

Accounting Entry:
Debit/Credit - Account 4210, Rent from Electric Property
Credit/Debit - Account 1508, Other Regulatory Asset – Sub-account Wireless and Wireline Variance Account

3. The account is symmetrical that reflects changes to the rate rather than change in number of wireline attachments;

4. The balance in the variance account is to be disposed of at Waterloo North Hydro's next COS Filing; and

5. Carrying charges, at the Ontario Energy Board's Prescribed Interest Rate for Deferral and Variance Accounts, would be applied until final disposition.

WNH has followed this guidance and is requesting to clear this sub-account in this Application – refer to Exhibit 9. Per the Report of the Ontario Energy Board *Wireline Pole Attachment Charges* (EB-2015-0304) dated March 22, 2018, it notes, "at the time of rebasing, LDCs may choose to select the provincially approved charge or to use utility specific costs and pursue an LDC-specific pole attachment charge that better reflects their cost structures, using the OEB's updated methodology." WNH has elected to use the provincially approved charge for this Application and this has been used for the Test Year (2021). WNH also requests to discontinue this sub-account after it is cleared through this Application.

1508 Other Regulatory Asset – Sub-account MS Disposition

Waterloo North Hydro shall establish a new deferral/variance account 1508 Other Regulatory Asset – Sub-account MS Disposition, to capture net gains and losses on disposition of various Municipal Station properties inclusive of remediation costs and taxes. Upon disposition, the balance of this account will be distributed with 75% to ratepayers and 25% to Waterloo North Hydro. For clarity, this account is not symmetrical since ratepayers will not owe a credit to Waterloo North Hydro if this account is in a net loss scenario at the time of disposition. The balance in the variance account is to be disposed of at Waterloo North Hydro's next COS Filing.

1. The net gains and losses on disposition of various Municipal Station properties inclusive of remediation costs;

Accounting Entry:
Debit/Credit - Account 4355/4360, Gain/Loss on Disposition of Utility and Other Property
Debit/Credit - Account 1508, Other Regulatory Asset –Sub-account MS Disposition

2. Upon disposition, the balance of this account will be distributed with 75% to ratepayers and 25% to Waterloo North Hydro;

3. The account is not symmetrical since ratepayers will not owe a credit to Waterloo North Hydro if this account is in a net loss scenario at the time of disposition;

4. The balance in the variance account is to be disposed of at Waterloo North Hydro's next COS Filing; and
5. Carrying charges, at the Ontario Energy Board's Prescribed Interest Rate for Deferral and Variance Accounts, would be applied until final disposition.

WNH has followed this guidance and is requesting to clear this sub-account in this Application – refer to Exhibit 9. WNH also requests to discontinue this sub-account after it is cleared through this Application.

Waterloo North Hydro Inc. (Waterloo North Hydro) shall establish the following deferral account effective January 1, 2016.

Account 1508 Other Regulatory Assets, Subaccount – OPEB Forecast

Cash versus Forecast Accrual Differential Deferral Account

Waterloo North Hydro shall establish the OPEB Forecast Cash versus Forecast Accrual Differential Deferral Account for the purpose of recording the difference in revenue requirement each year between both the capitalized and OM&A components of OPEBs accounted for using a forecasted cash basis (as to be reflected in rates if this settlement is accepted by the Ontario Energy Board) and the capitalized and OM&A components of OPEBs accounted for using a forecasted accrual basis.

If the Board determines that LDCs must only include in rates OPEBs accounted for using a forecasted cash basis, Waterloo North Hydro will seek to discontinue this account without seeking disposition of the amounts recorded in this account. If the Board determines that LDCs may recover OPEBs in rates using a forecasted accrual accounting methodology, Waterloo North Hydro will seek disposition of this account to recover the amounts so recorded in its next COS rate application.

Waterloo North Hydro will propose a disposition period over which the account should be recovered depending on the quantum in the account and the potential rate impacts at the time.

Carrying charges, at the Ontario Energy Board's Prescribed Interest Rate for Deferral and Variance Accounts, would be applied until final disposition.

On May 18, 2017 the OEB released their report *Regulatory Treatment of Pension and Other Post-Employment Benefits (OPEBs) Costs.* In this report it was determined that the OEB will use the pension and OPEB accounts determined through accrual accounting in rate-setting, unless that method does not result in just and reasonable rates. If the accrual accounting method is used, a variance account will be used to track the difference between the forecasted accrual amount in rates and actual cash payment(s) made. Based on this result, WNH would like to clear and discontinue this sub-account. WNH will then begin using the generic sub-account under Account 1522 to continue to track the variance between accrual and cash which will be cleared at the next rate filing.

RPP Settlement True-Up: New Accounting Guidance

On February 21, 2019, the OEB issued its letter entitled *Accounting Guidance related to Accounts 1588 Power, and 1589 RSVA Global Adjustment*. The accounting guidance was effective January 1, 2019 and was to be implemented by August 31, 2019. WNH completed this implementation of the guidance in 2019 with true-ups for 2017 and 2018 being disposed of in its 2019 and 2020 IRM Applications. 2017 and 2018 were considered final in the 2020 IRM Application. 2019's true-up for dates prior to August 2019 were accrued and settled with the IESO in early 2020 therefore the new guidance is fully implemented and disposals of 1588 and 1589 accounts in this Application are compliant with the guidance. However, as a result of the first year-end review of the new process in 2020 for year-end 2019, it was discovered that an accrued liability had previously been set up in error. This amount is requested to be disposed of and is detailed in Exhibit 9 of this Application.

Statement Regarding Conditions of Service

The current version of WNH's Condition of Service is publically available for online viewing, printing and downloading from WNH's website https://www.wnhydro.com/en/our-company/resources/Waterloo_North_Hydro_Conditions_of_Service_2015-03-16.pdf.

There have been no changes to the current Conditions of Service since the last filing. The Conditions of Service will be updated as a result of this Application for the proposed Standby/Capacity Reserve Charges.

There are no rates or charges listed in the Conditions of Service that are not on the distributor's Tariff of Rates and Charges.

Corporate Structure

Waterloo North Hydro Holding Corporation (WNHHC), incorporated March 1, 2000 under the Business Corporations Act (Ontario), is the parent holding company of Waterloo North Hydro Inc. The City of Waterloo, the Township of Woolwich and the Township of Wellesley are the shareholders of WNHHC, with ownership interests of 73.2%, 20.2% and 6.6%, respectively. WNHHC also owns one-third (33.3%) of Grand River Energy Solutions Corporation (GRE). The other owners of GRE are Energy+ Inc. (33.3%) and Kitchener Power Corporation Inc. (33.3%). GRE is a generation and renewable energy solutions company whose mission is to help customers reach their energy management goals by tapping into the benefits of clean energy technologies such as solar, combined heat and power, electric vehicle integration, and carbon reduction goals.

The municipal Shareholders appoint directors to the Board of Waterloo North Hydro Holding Corporation. The Holding Corporation Board appoints the directors to the Waterloo North Hydro Inc. Board of Directors. Each Board consists of nine (9) Directors and the respective Board of Directors manages the business affairs of each corporation. Four of the five independent directors from the business community are different for the two Boards to maintain independence between the Boards. Figure 1-1 and Figure 1-2 demonstrate reporting relationships between management and the parent company.

Figure 1-1: WNH Ownership Structure

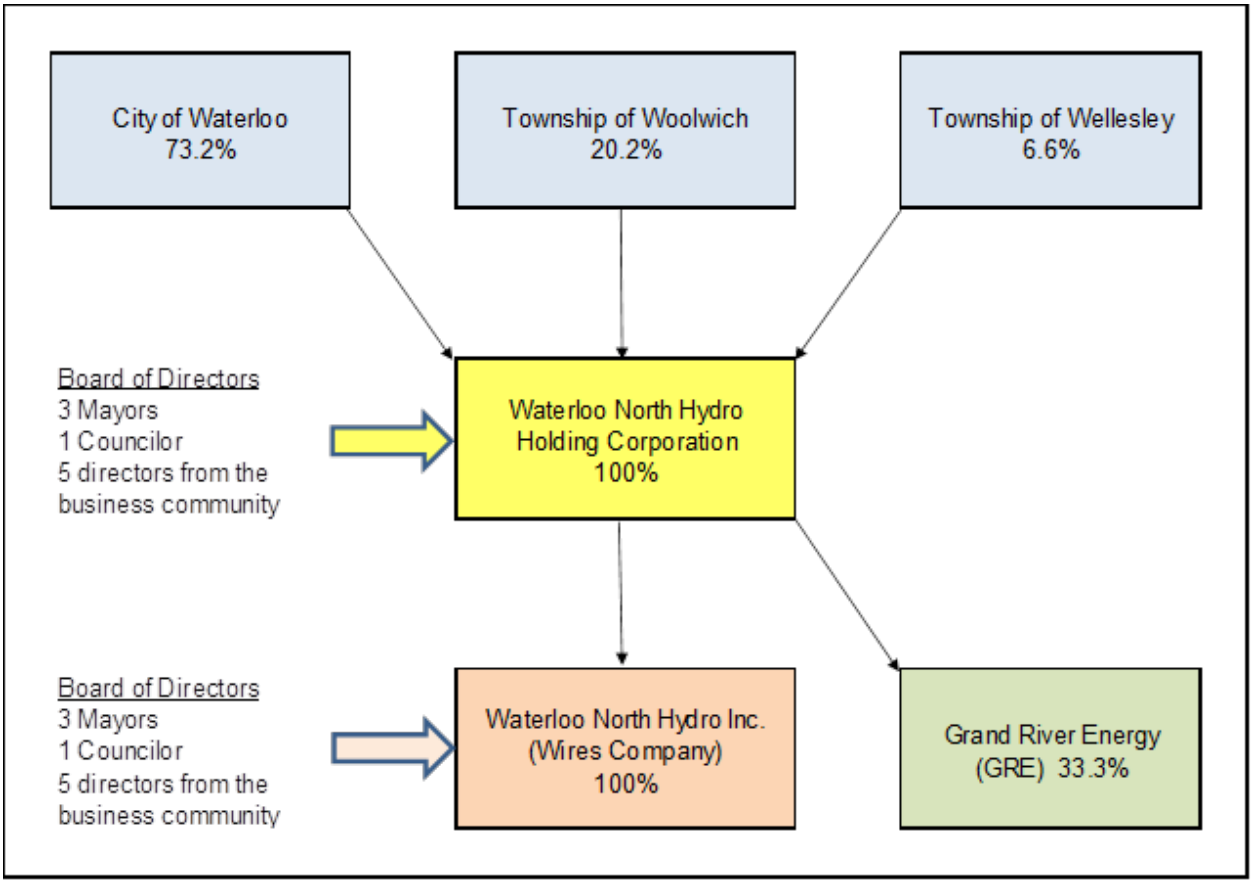
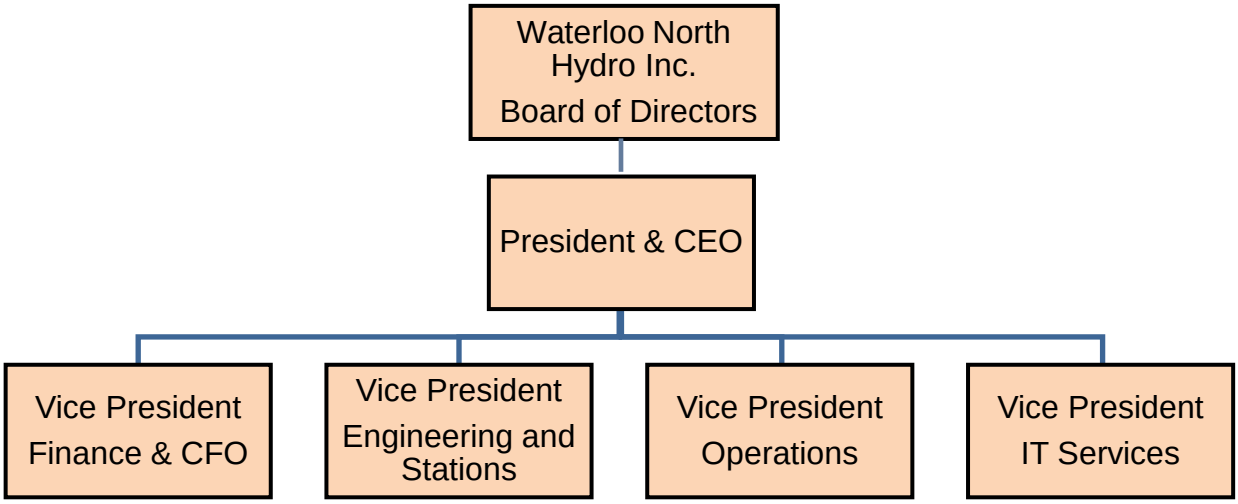


Figure 1-2: High Level Utility Organization Chart for Waterloo North Hydro Inc.



There are no planned changes in corporate or operational structure, as well as no changes to its legal organization and control.

List of Specific Approvals Requested

In this proceeding, WNH is requesting the following approvals:

1. Approval to charge distribution rates effective January 1, 2021 to recover a Service Revenue Requirement of $39,298,087 which includes a Revenue Deficiency of $2,624,364 as detailed in Exhibit 6. The schedule of Proposed Rates is set out in Exhibit 8.

2. Approval of the Distribution System Plan as outlined in Exhibit 2.

3. Approval of revised Low Voltage Rates as proposed and described in Exhibit 8.

4. Approval to adjust the Retail Transmission Rates – Network and Connection as detailed in Exhibit 8.

5. Approval to continue to charge Wholesale Market and Rural Rate Protection Charges approved in the Board Decision and Order in the matter of WNH's 2020 Distribution Rates (*EB-2019-0071*).

6. Approval to continue the Specific Service Charges and Transformer Allowance approved in the Board Decision and Order in the matter of WNH's 2020 Distribution Rates (*EB-2019-0071*) with the exception of the addition of four new charges (discussed below in point 7) and the removal of the Credit Check Charge and the Notification Charge.

7. Approval to add the following Specific Services Charges: Disconnect/Reconnect at Meter – During Regular Hours, Disconnect/Reconnect at Meter– After Regular Hours, Disconnect/Reconnect at Pole/Transformer – During Regular Hours, Disconnect/Reconnect at Pole/Transformer – After Regular Hours. This is described in Exhibit 8.

8. Approval to implement a Standby Charge for the Large Use and General Service > 50 kW customer classes employing load displacement generation. This is described in Exhibit 7.

9. Approval to use gross load billing for Retail Transmission Rates – Network and Connection charges for customers who have load displacement generation as detailed in Exhibit 8.

10. Approval of the Proposed Loss Factors as detailed in Exhibit 8.

11. Approval to continue to use the Transformer Allowance and Primary Metering Allowance for transformer losses most recently approved as part of the last Cost of Service Application (EB-2015-0108). Listed in Exhibit 8.

12. Approval to charge the Board's updated Pole Attachment Charge, effective January 1, 2021.

13. Approval of the Rate Riders for a one-year disposition of the Group 1, Group 2 and Other Deferral and Variance Accounts as detailed in Exhibit 9.

14. Approval to discontinue the use of Retail Cost Variance Accounts (RCVAs) 1518 and 1548.

15. Approval of the Rate Riders for a one-year disposition of the Lost Revenue Adjustment Mechanism Variance Account ("LRAMVA") for lost revenue as presented in Exhibits 4 and 9 of this Application.

16. Approval to dispose of the Power Liability Variance as described in Exhibit 9.

17. Approval to create Account 1592 – PILS and Tax Variance – CCA Changes sub-account as described in Exhibit 9.

18. Approval to create Account 1509 – Impacts Arising from the COVID-19 Emergency sub-account as described in Exhibit 9.

19. Such other approvals as WNH may advise and the OEB may deem as just and reasonable.

WNH has completed OEB Appendix 2-A List of Requested Approvals, which is included in Attachment 1-1 and live Excel format (Waterloo_Appl_2021_Filing_Req_Chap2_Appendices_2021_COS_20200630).

Certification

I, Rene W. Gatien, President and Chief Executive Officer of Waterloo North Hydro Inc. certify that the evidence filed is accurate, consistent, and complete to the best of my knowledge.



Rene W. Gatien, P. Eng., MBA, ICD.D
President and CEO

2.1.5 DISTRIBUTION SYSTEM OVERVIEW

Application Overview

Service Area	**Description of the Applicant:**
COMMUNITY SERVED:	City of Waterloo, Township of Wellesley, Township of Woolwich
TOTAL SERVICE AREA:	683 sq. km
RURAL SERVICE AREA:	618 sq. km (90.5%)
DISTRIBUTION TYPE:	Electricity Distribution
SERVICE AREA POPULATION:	173,686 (excludes LTLT population)
MUNICIPAL POPULATION:	173,686
BOUNDARIES:	West: Hydro One North: Hydro One East: Hydro One South: Hydro One, Energy+ and Kitchener Wilmot Hydro Inc.

A map of WNH's distribution service territory is provided in Attachment 1-13.

Identification of Embedded or Host Utilities

WNH became a Host Distributor on May 1, 2006 and Hydro One Networks Inc. (HONI) became embedded to WNH at the Elmira Transformer Station. Prior to this date, WNH was embedded to HONI at this metering point. HONI owns and operates the Elmira TS which is located inside the service area of WNH. WNH established an Embedded Distributor Class in its 2011 COS. HONI owns the circuits that cross into WNH's service territory and reside on WNH's poles. WNH receives pole rental revenue from HONI. WNH does not have any capital costs invested in its Embedded Distributor rate class, WNH only has operating costs. Proposed Costs assigned to this rate class in this Application are $2,216. WNH has included the Embedded Distributor in its Proposed Rate Order, the Distribution Variable Only Rate is based on the cost of $2,216.

WNH is embedded to Kitchener Wilmot Hydro Inc., Energy+ and Hydro One Networks Inc., and has included in its Distribution Rates Low Voltage Charges since May 1, 2006. WNH respectfully requests the continuation of Low Voltage Charges in its Distribution Rates as detailed in Exhibit 8. Details on WNH's system supply is provided in the DSP Appendix J – WNH System Supply & Capacity Study Section 3 - WNH Electrical Supply. From 2016 to 2019 7.9% of WNH's Average Peak Load was delivered from < 50 kV sources.

Deemed Distribution Assets

In WNH's 2006 COS Filing (EB-2005-0448) the OEB deemed WNH's four transformer stations and their corresponding equipment as distribution assets. There are no additional such assets that WNH is asking the OEB to deem as distribution assets in the present Application.

2.1.6 APPLICATION SUMMARY

This Application was prepared using financial actuals for 2016 - 2019 as well as forecasted budgets for 2020 and 2021. Table 1-7 below lists the main elements of this Application which are further discussed in this Application.

Table 1-7 Application Summary

Application Summary	2021 Test
Revenue Requirement	
Base Revenue Requirement	39,298,087
Revenue Offsets	2,250,668
Service Revenue Requirement	**41,548,755**
Revenue Deficiency	2,624,364
Rate Base	244,685,394
Working Capital	16,129,505
OM&A (excluding Property Taxes)	15,777,057
Capital Expenditures	19,048,512

Revenue Requirement

WNH's requested Service Revenue Requirement for the 2021 Test Year is $41,548,755 which provides for the recovery of the following:

- Operation, Maintenance and Administration Expenses;
- Property Taxes;
- Depreciation/Amortization Expense;
- Payments in Lieu of Income Taxes (PILs); and
- Return on Rate Base (Debt Interest Expense + Return on Equity)

The Service Revenue requirement represents an increase of $6,568,431 or 18.8% over the

2016 Board approved amount of $34,980,324.

Table 1-8 below compares the revenue requirement calculations to the 2016 Board approved and the 2021 Test Year.

Table 1-8 Revenue Requirement Computation

Application Summary	2016 Board Approved	2021 Test
Average Net Fixed Assets	194,362,699	228,555,889
Working Capital Allowance	14,295,518	16,129,505
Rate Base	**208,658,217**	**244,685,394**
Working Capital Allowance	7.50%	7.50%
Regulated Return on Capital	12,568,049	13,310,227
OM&A including Property Taxes	13,649,068	16,248,677
Amortization Expense	8,077,849	11,100,527
PILs	685,358	889,324
Service Revenue Requirement	**34,980,324**	**41,548,755**
Less: Revenue Offsets	1,223,596	2,250,668
Base Revenue Requirement	**33,756,728**	**39,298,087**

Based on the projected load forecast and customer growth for the 2021 Test Year, as provided for in this Application, WNH has estimated a revenue deficiency of $2,624,364 or 6.7% based on its current rates. The computation of the revenue deficiency is show in Table 1-9 below, as provided in Exhibit 6.

Table 1-9 Calculation of Revenue Deficiency

Application Summary	2016 Board Approved	2021 Revenue at Existing Rates	2021 Proposed	Revenue Deficiency
	(A)	(B)	(C)	(D)
OM&A, including LEAP	13,159,334	14,643,063	15,777,057	1,133,994
Depreciation	8,077,849	8,988,634	11,100,527	2,111,893
Property Tax	489,734	544,952	471,620	(73,332)
Return on Rate Base	7,670,276	8,535,107	8,338,878	(196,229)
PILs	685,358	762,633	889,324	126,691
Deemed Interest	4,897,773	5,450,002	4,971,349	(478,653)
Total	**34,980,324**	**38,924,391**	**41,548,755**	**2,624,364**

The revenue deficiency of $2,624,364 for the 2021 Test Year is principally as a result of increases in the following components:

- increase in OM&A;
- increased depreciation; and
- an increase in PILs; partially offset by decreases in property tax, return on rate base and deemed interest.

These factors are further explained below:

2021 Test Year OM&A expenses, including LEAP donation, have increased from 2016 Board Approved and are discussed thoroughly in Exhibit 4.

Depreciation has increased as a result of the increase in net fixed assets in service. The 2016 Board Approved average net fixed assets was $194,362,699 compared to $228,555,889 in the 2021 Test Year (Exhibit 2). Details with respect to the increases in the net fixed assets is provided in evidence in Exhibit 2.

PILs has increased as a result of higher utility income before taxes (Exhibit 4).
Property taxes have decreased since 2016 Board Approved based on current projections

(Exhibit 4).

Return on Rate Base has decreased as the approved rate of return used in this Application is lower compared to 2016 as discussed in Exhibit 5.

Deemed interest has decreased due to the decrease in commercial interest rates since 2016 as discussed in Exhibit 5.

The Working Capital Allowance has increased due to a $35,193,190 increase in Average Net Fixed Assets, increases in OM&A as well as a substantial increase in Cost of Power Expenses. This is discussed in more detail in Exhibit 2.

Budgeting and Accounting Assumptions

In accordance with the Board's letter dated July 12, 2020, WNH adopted capitalization and depreciation policies under CGAAP that were compliant with International Financial Reporting Standards on January 1, 2013. These changes were included in WNH's 2016 Cost of Service Application (EB-2015-0108). Changes were made at that time to move certain capital costs to OM&A in accordance with the guidance. There have been no additional changes resulting from the transition to IFRS. As a result, there are no additional impacts resulting from the transition to IFRS from CGAAP in this COS Application.

All years covered in this Application are presented in MIFRS.

Developing WNH's budget is a key process as it identifies past successes as well as future initiatives and projections for capital and operating costs. Assumptions provided by the management team for the capital and operating budgets are tested to ensure they support WNH's Strategic Imperatives as well as being prudent and financially sustainable. Both the 2020 Bridge and 2021 Test Years have been compiled using the MIFRS method

of presentation. The 2020 Bridge Year Forecast is based on forecasted balances. WNH provides detailed explanations in the applicable sections of the Application for the major components of the budget: Revenue, OM&A and Capital.

Economic Overview

1. Revenue

a) The Total Customer/Connections are forecasted to slightly increase based on the forecast by rate classes which reflect current conditions in WNH's service area

b) Other revenues were viewed on an item-by-item basis and were either based on a historical indicator or on future Strategic Initiatives

The forecast of customers by rate class was determined using a geomean analysis. This analysis is discussed further in Exhibit 3.

WNH notes that it has only met its 2016 Board Approved revenue forecast in 2018 as demonstrated in Table 1-10. The 2016 Board Approved assumptions returned values higher than it achieved and these amounts are unrecoverable. The shortfalls of the 2016 Board Approved revenue forecast versus actuals are shown in Table 1-10.

Table 1-10 Revenue Shortfall

2016 Board Approved	2016 Actual	2017 Actual	2018 Actual	2019 Actual
$ 34,011,388	$ 33,906,808	$ 34,154,084	$ 35,332,431	$ 35,231,919
Price Cap		1.60%	0.90%	1.20%
Customer Increase		1.40%	1.09%	0.71%
Expected Increase		**3.00%**	**1.99%**	**1.91%**
Expected Revenue	$ 34,011,388	$ 34,311,665	$ 35,123,682	$ 35,490,828
$ Variance	(104,580)	(157,581)	208,749	(258,909)
% Variance	-0.31%	-0.46%	0.59%	-0.73%
Cumulative Variance		**-0.8%**	**-0.2%**	**-0.9%**

2. Operating Maintenance and Administration Expenses

a) OM&A expenses have been developed based on each Supervisor and Manager's work plans using a bottom up approach. They must consider Senior Management's overall spending plan in an effort to contain costs, but still provide an acceptable level of service and reliability and be mindful of customer rate impacts.

b) Staffing levels are based on the estimated time required to complete the work plans and hiring replacement for future retirements. The 2021 Test Year employee complement is forecasted to increase from the 2020 Bridge Year due to additional IT support, Key Accounts moving from CDM and an Asset Management Employee.

c) The Collective Agreement expired on March 31, 2020. The new contract has not yet been ratified by the Union members due to COVID-19 implications. WNH has made assumptions on the forecasted Union wage increases. These assumptions align with recent industry wage settlements. Non-union wage increases considered similarly to the Union wage increases.

d) Regulatory costs for this Application and other One-Time Costs have been normalized over the five-year life of the Application.

e) WNH used an inflation rate of 2% for 2020 and 2021 where the expense increase could not be specifically identified.

3. Amortization

a) Amortization has been calculated based on the revised useful lives and on a MIFRS basis.

4. PILs

a) Regulatory PILS have been calculated using the Board Approved Model.

b) PILS are forecasted to increase due to a higher projected net income.

5. Capital

a) The Capital Budget was formulated on a project by project basis.

b) Distribution asset related projects were prioritized based on multiple factors as explained in the Distribution System Plan.

c) General Plant related projects were submitted by Supervisors and Department Managers based on a project by project basis. Major projects were based on a fleet replacement schedule, work equipment requirements, or IT assessments.

Load Forecast Summary

As a starting point WNH used the same regression analysis methodology approved by the Ontario Energy Board (the "Board") in its 2016 Cost of Service ("COS") Application (EB-2015-0108) and updated the analysis for actual power purchases to the end of 2019. The updated regression analysis substituted Number of Customers for Employment in Kitchener-Waterloo-Cambridge. Due to a high degree of collinearity between the two variables, it would not be desirable to include both together. When compared in isolated models, the regression model which included Number of Customers had a higher R Square value than the model with Employment. Therefore, Number of Customers was selected. WNH also added in a variable for Persistent CDM. The previous Application had CDM Activity as an adjustment to the output to the model post-regression analysis.

WNH found Persistent CDM to be statistically significant and improved the R Square value of the regression model when included. Persistent CDM has been adjusted for the half-year-rule.

The regression model had an R Square of 95.7% and a MAPE of 2.10%.

Based on the load forecast methodology, the 2021 Test Year kWh forecast is 1,431,623,886 kWh, a 39,584,200 kWh or 2.7% decrease from the 2016 Board Approved amount. WNH's decrease from the 2016 Board Approved amounts is attributable to the high uptake and success of conservation and demand management (CDM) programs and is offset by a growth in customer count. Forecasted average customer count for the 2021 Test Year is 74,029, a 3,846 or 5.5% increase from the 2016 Board Approved amount. Table 1-11 summarizes the customers/connections and their respective consumption and demand compared to the 2016 Board Approved amounts. The forecasting method for the average number of customers and connections is based on the historic geomean.

Table 1-11 Test Year Compared to 2016 Board Approved

Rate Class	2016 Board Approved			2021 Test Year			Variance		
	#	kWh	kW	#	kWh	kW	#	kWh	kW
Residential	49,453	408,868,804		51,719	395,056,934		2,266	(13,811,870)	-
GS < 50 kW	5,642	196,732,916		5,989	195,573,807		347	(1,159,109)	-
GS > 50 kW	695	728,547,534	1,787,340	774	697,140,723	1,764,636	79	(31,406,811)	(22,704)
Large User	1	94,944,937	173,364	1	95,699,867	169,287	-	754,930	(4,077)
Unmetered Scattered Load	563	3,140,372		540	2,947,114		(23)	(193,258)	-
Streetlighting	13,828	7,594,660	21,115	15,005	3,347,727	9,302	1,177	(4,246,933)	(11,813)
Embedded Distributor	1	31,378,863	71,406	1	41,857,714	103,033	-	10,478,851	31,627
Total	**70,183**	**1,471,208,086**	**2,053,225**	**74,029**	**1,431,623,886**	**2,046,258**	**3,846**	**(39,584,200)**	**(6,967)**

Rate Base and DSP

The Rate Base for the 2021 Test Year of $244,685,394 is an increase of $36,027,177 or 17.3% compared to the 2016 Board Approved Rate Base of $208,658,217. WNH is not adding any assets to Rate Base as a result of a previous Price Cap IR Application.

Table 1-12 below, provides a Summary of Rate Base for the period 2016 through the 2021 Test Year.

Table 1-12 Summary of Rate Base

Description	2016 Board Approved	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Reporting Basis	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**
Gross Fixed Assets Opening Balance	332,881,281	331,035,728	348,262,734	362,590,468	377,491,930	394,222,378	413,367,112
Gross Fixed Assets Closing Balance	348,948,838	348,262,734	362,590,468	377,491,930	394,222,378	413,367,112	430,000,639
Average Gross Fixed Assets	**340,915,060**	**339,649,230**	**355,426,599**	**370,041,199**	**385,857,154**	**403,794,745**	**421,683,876**
Accumulated Depreciation Opening Balance	142,300,708	142,282,955	150,506,090	159,098,931	167,512,048	176,974,560	187,638,253
Accumulated Depreciation Closing Balance	150,804,014	150,506,090	159,098,931	167,512,048	176,974,560	187,638,253	198,617,718
Average Accumulated Depreciation	**146,552,361**	**146,394,520**	**154,802,509**	**163,305,490**	**172,243,304**	**182,306,408**	**193,127,987**
Average Net Book Value	**194,362,699**	**193,254,710**	**200,624,090**	**206,735,709**	**213,613,850**	**221,488,338**	**228,555,889**
Working Capital Allowance	**14,295,518**	**14,920,539**	**13,687,994**	**13,673,082**	**14,086,467**	**16,957,953**	**16,129,505**
Rate Base	**208,658,217**	**208,175,249**	**214,312,084**	**220,408,791**	**227,700,317**	**238,446,291**	**244,685,394**

The variance between the 2021 Test Year and the 2016 Board Approved is mainly attributed to:

- An increase in the average gross capital assets in service of $80,768,816 or 23.7% due to the net capital investments in distribution system, including general plant, over the five-year period.

- An increase in working capital allowance due to increases in rate base, OM&A and cost of power expenses. This is more thoroughly explained in Exhibit 4.

WNH's Board Approved capital expenditures in 2016 were $22,806,721. For 2021, the proposed capital expenditures are projected to decrease to $19,048,512. The main reason for the decrease was the impact of the LRT project in 2016. A detailed review of the 2021 Test Year capital expenditures can be found in the DSP. The main drivers in the DSP are replacing end-of-life assets or refurbishing assets to extend their original service life, customer requests for expansion and connections, roadway relocations, and investments in distribution automation and grid modernization. The DSP and WNH's

Capital Expenditure Plan seeks to find the right balance between capital investments in new infrastructure, and operating and maintenance costs so that the combined total cost over the life of an asset is optimized.

It can be seen that the 2021 forecast is not out of line with historical and forecast expenditures. Each investment decision has been supported by one or more identifiable drivers and WNH's Corporate Strategic Imperatives. This is reflective of WNH's belief that over the forecast period, investment drivers will remain characteristically similar to 2021 and that there are no foreseen extraordinary expenditures. These capital expenditures are spread out over four categories (as seen in Table 1-13 below): System Renewal (SR), System Access (SA), System Service (SS) and General Plant (GP).

Table 1-13 Proposed Capital Investments

OEB Investment Category	Test Year	Forecast Period				Total	Average
	2021	2022	2023	2024	2025	2021 - 2025	2021 - 2025
	Budget	Forecast	Forecast	Forecast	Forecast		
System Access	5,840	6,166	6,305	6,448	6,592	31,351	6,270
System Renewal	8,096	9,372	9,548	9,693	9,951	46,660	9,332
System Service	2,294	1,346	1,288	1,211	1,212	7,351	1,470
General Plant	2,819	3,567	3,594	2,063	2,222	14,265	2,853
Totals	**19,049**	**20,451**	**20,735**	**19,415**	**19,977**	**99,627**	**19,925**

As previously noted, WNH has developed its DSP in accordance with Chapter 5 of the Ontario Energy Board's Filing Requirements for Electricity Distribution Applications Consolidated Distribution System Plan Filing Requirements dated May 14, 2020 (Chapter 5). The DSP incorporates matters pertaining to asset condition, asset management, renewable energy generation, and regional planning.

The DSP has been prepared by a consultant hired by WNH. WNH retained METSCO Energy Solutions Inc. (METSCO) to advise on and assist with the preparation of the DSP and the Asset Condition Assessment as well as the implementation of the Asset

Management Software.

WNH is not applying for recovery of incremental OM&A expenses incurred over the past five years for Renewable Generation connections/expansions, smart grid or regional planning initiatives.

Operations, Maintenance and Administration Expense

WNH is proposing recovery through distribution rates of $16,248,677 for Operating, Maintenance and Administration (OM&A) costs in the 2021 Test Year, which represent an overall increase of 19.0% or $2,599,609 from the 2016 Board Approved. The following Table 1-14 summarizes the changes.

Table 1-14 OM&A for 2016 Board Approved and 2021 Test Year

Expenses	2016 Board Approved	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Distribution Expenses - Operation	5,689,381	5,818,874	5,949,887	6,021,921	6,269,001	6,039,717	6,310,421
Distribution Expenses - Maintenance	1,613,140	1,543,946	1,608,420	1,963,196	1,497,703	1,867,332	1,903,411
Billing and Collecting	2,802,731	2,728,245	2,823,342	3,100,765	2,966,160	3,008,184	3,137,007
Community Relations	142,200	104,616	129,492	200,330	244,189	347,738	508,564
Administrative and General Expenses	2,869,882	2,584,121	3,054,727	3,223,637	3,482,548	3,778,758	3,869,654
Property Tax	489,734	471,270	448,350	444,419	458,134	462,373	471,620
LEAP	42,000	42,000	42,000	42,000	42,000	42,000	48,000
Total	**13,649,068**	**13,293,072**	**14,056,218**	**14,996,268**	**14,959,735**	**15,546,102**	**16,248,677**

The proposed OM&A expenditures for the 2021 Test Year have been derived through a detailed budgeting and business planning process, which is aligned with WNH's business plan and strategic imperatives. These expenditures are required to allow WNH to maintain the distribution business service quality and reliability standards in compliance with the Distribution System Code and other regulatory bodies (IESO, Ministry of Energy, ESA, etc.). The OM&A costs in the 2021 Test Year reflect the resourcing mix and investments required to meet customer and broader public policy requirements. Without this resourcing and investments, WNH will struggle to meet the 2021 and future workloads.

WNH used an inflation rate of 2% in 2020 and 2021 where the expense increase could not be specifically identified for non-wage related expenses, which is within the range of rates set out in Toronto Dominion Bank's October 2019 quarterly economic forecast. Inflationary impacts are not material enough to be identified separately.

The proposed OM&A budget includes several substantial incremental costs over the 2016 OM&A budget including OEB Cost Assessment, Cyber Security, Full Cost of Monthly Billing, Loss of Allocation of CDM Costs, Changes to Collection Costs and Customer Service Rules, Asset Management, Key Accounts, and Decrease in Administration Recovery. WNH attempts to control costs within inflation however this is challenging to do with the many industry changes since 2016.

WNH's workforce planning is discussed in more detail in Exhibit 4, however, Table 1-15 below replicates Appendix 2-K of Chapter 2, and summarizes the employee complement, compensation and benefits for 2016 Board Approved, 2016-2019 Actual, 2020 Bridge Year and 2021 Test Year. All compensation is included whether expensed or capitalized and for the 2021 Test Year this represents a $1,757,580 or 12.6% increase over the 2016 Board Approved. The number of employees is based on the computation of the number of FTEs.

Table 1-15 Employee Costs

	2016 Board Approved*	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Average Number of Employees (FTEs including Part-Time)							
Management (including executive)	26	26	24	22	22	23	24
Non-Management (union and non-union)	106	104	101	102	100	99	104
Total	**132**	**130**	**125**	**124**	**122**	**122**	**128**
Total Salary and Wages including overtime and incentive pay							
Management (including executive)	$ 3,010,470	$ 3,243,281	$ 3,134,770	$ 2,991,903	$ 2,653,091	$ 3,135,253	$ 3,324,720
Non-Management (union and non-union)	$ 8,243,197	$ 8,516,357	$ 8,538,221	$ 8,757,354	$ 9,129,297	$ 8,954,038	$ 9,482,775
Total	**$ 11,253,667**	**$ 11,759,638**	**$ 11,672,991**	**$ 11,749,257**	**$ 11,782,388**	**$ 12,089,291**	**$ 12,807,495**
Total Benefits (Current + Accrued)							
Management (including executive)	$ 701,194	$ 727,195	$ 738,740	$ 691,877	$ 616,727	$ 718,384	$ 746,268
Non-Management (union and non-union)	$ 2,020,941	$ 2,021,790	$ 2,001,509	$ 2,005,875	$ 2,129,630	$ 2,047,005	$ 2,179,619
Total	**$ 2,722,135**	**$ 2,748,985**	**$ 2,740,249**	**$ 2,697,752**	**$ 2,746,357**	**$ 2,765,389**	**$ 2,925,887**
Total Compensation (Salary, Wages, & Benefits)							
Management (including executive)	$ 3,711,664	$ 3,970,476	$ 3,873,510	$ 3,683,780	$ 3,269,818	$ 3,853,637	$ 4,070,988
Non-Management (union and non-union)	$ 10,264,138	$ 10,538,147	$ 10,539,730	$ 10,763,229	$ 11,258,927	$ 11,001,043	$ 11,662,394
Total	**$ 13,975,802**	**$ 14,508,623**	**$ 14,413,240**	**$ 14,447,009**	**$ 14,528,745**	**$ 14,854,680**	**$ 15,733,382**

**2016 Board Approved - there was an error due to not including Line Supervisors in the management total. The correct amount is shown above.*

Cost of Capital

WNH has not deviated from the OEB's methodology for calculating the Cost of Capital. WNH is using the current OEB's cost of capital parameters as issued by the Board on October 31, 2019. WNH will update its cost of capital parameter to reflect future Board issued cost of capital parameters for rates with effective dates in 2021 prior to the issuance of the Board's decision for its Application. WNH confirms that there have been no changes to its deemed capital structure since it last rebased in 2016 (EB-2015-0108). WNH has borrowed additional funds from CIBC in each year since it last rebased in 2016. These borrowings have kept the capital structure consistent from year-to-year.

Table 1-16 Deemed Capital Structure

Appendix 2-OA
Capital Structure and Cost of Capital

Test Year: 2021

Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
		(%)	($)	(%)	($)
	Debt				
1	Long-term Debt	56.00%	$137,023,821	3.43%	$4,702,195
2	Short-term Debt	4.00% (1)	$9,787,416	2.75%	$269,154
3	**Total Debt**	60.0%	$146,811,236	3.39%	$4,971,349
	Equity				
4	Common Equity	40.00%	$97,874,158	8.52%	$8,338,878
5	Preferred Shares		$ -		$ -
6	**Total Equity**	40.0%	$97,874,158	8.52%	$8,338,878
7	**Total**	100.0%	$244,685,394	5.44%	$13,310,227

Notes
(1) 4.0% unless an applicant has proposed or been approved for a different amount.

Cost Allocation and Rate Design

WNH has not deviated from the Board's Cost Allocation and Rate Design methodology. In addition, there are no significant changes proposed to Revenue-to-Cost Ratios and Fixed/Variable splits.

No rate mitigation plans are required as no rate class has an increase greater than 10%.

WNH notes that it has not directly allocated costs to its Embedded Distributor rate class, it has maintained the same methodology it employed in its 2016 COS Cost Allocation Model. This method only uses number of bills and a meter reading factor as inputs for the

Embedded Distributor class in the cost allocation model. Other input variables such as number of customers and demand units are not used in the cost allocation model for this class. The outcome of this method means such items as billing, collecting and meter reading costs are directly allocated to the Embedded Distributor class but the model also indirectly allocates administration costs as well as some general service capital.

In connection with preparing its rate application, WNH has consulted with HONI and advised HONI that it is WNH's intent to allocate cost in the same manner as all of the other rate classes which is consistent with the approved 2016 COS methodology and not directly allocate costs to the Embedded Distributor rate class. WNH provided HONI with the necessary supporting evidence. HONI concluded that*: "Hydro One has reviewed the material provided by WNH. Based on the cost allocation model and other evidence provided, I am fine with the proposed cost allocation methodology used to develop the embedded distributor rates."*

In this Application, WNH has used the 2021 version of the cost allocation model released by the OEB on May 20, 2020 to conduct a 2021 Test Year cost allocation study consistent with the OEB's cost allocation policies. The model has been loaded with 2021 Test Year costs, customer numbers and demand values for WNH. The data used in the updated cost allocation study is consistent with WNH's cost data that supports the proposed 2021 revenue requirement outlined in this Application.

In the March 31, 2011, Cost Allocation Report, the OEB stated that "default weighting factors should now be utilized only in exceptional circumstances". Distributors are therefore now expected to develop their own weighting factors. WNH has developed weighting factors as outlined in Exhibit 7 based on discussions with staff experienced in the subject area.

Table 1-17 below, Allocated Costs, provides the combined allocated Board Approved cost by rate class from the prior 2016 cost study along with the WNH results from the 2021 cost allocation study.

Table 1-17 Allocated Costs

Classes	2016 Board Approved Cost Allocation Study	%	2021 Proposed Cost Allocation Study	%
Residential	$ 18,260,988	52.20%	$ 22,709,871	54.66%
GS < 50 kW	$ 5,261,206	15.04%	$ 6,433,333	15.48%
GS > 50 kW	$ 10,167,367	29.07%	$ 11,010,096	26.50%
Large User	$ 937,129	2.68%	$ 1,050,402	2.53%
Unmetered Scattered Load	$ 97,398	0.28%	$ 120,662	0.29%
Street Lighting	$ 254,785	0.73%	$ 222,226	0.53%
Embedded Distributor	$ 1,450	0.00%	$ 2,165	0.01%
Total	**$ 34,980,323**	**100.00%**	**$ 41,548,755**	**100.00%**

In a letter dated June 12, 2015, the OEB reminded distributors to be mindful of material changes to load profiles and proposed changes, as appropriate, in Cost of Service Applications. WNH proposes to use the same methodology as was used in the 2016 Cost of Service Application to determine the demand data for the 2021 cost allocation model. This methodology involves applying a scaling factor to the 2004 weather normalized volumes supporting the 2004 load profiles to determine an estimate of the 2021 weather normalized load profiles. Once that is completed, the same methodology used by Hydro One on the 2004 load profiles to determine the demand data for the original cost allocation study is applied to the 2021 load profiles to determine the 2021 demand data. WNH has provided an Excel spreadsheet named “Load profile model 2004 Hydro One data scaled to 2021” to show how the 2021 demand data is determined, in Attachment 7-2.

Table 1-18 below, proposed Revenue to Cost Ratios, summarizes WNH’s proposed revenue to cost ratios for the 2021 Test Year as well as the Board Approved ranges.

Table 1-18 Revenue to Cost Ratios

Rate Class	2016 Board Approved	2021 Updated Cost Allocation Study	2021 Proposed Ratios	Board Targets
	%	%	%	%
Residential	102.98%	100.22%	100.22%	85 - 115
GS < 50 kW	102.48%	99.13%	99.13%	80 - 120
GS > 50 kW	94.49%	101.70%	101.70%	80 - 120
Large User	85.00%	86.10%	86.10%	85 - 115
Unmetered Scattered Load	120.00%	106.45%	105.46%	80 - 120
Streetlighting	102.98%	81.16%	81.16%	80 - 120
Embedded Distributor	100.00%	110.72%	105.45%	80 - 120

The 2021 Cost Allocation Model indicates that the Revenue to Cost Ratios for all classes are within the Board's range. The Board has not set a target range for the Embedded Distributor rate class so WNH has assumed a range of 80 – 120%. WNH is proposing to maintain status quo ratios. Slight differences are due to rounding.

Table 1-19 below, sets out WNH's proposed 2021 electricity distribution rates based on:
(i) the cost allocation methodology and proposed revenue-to-cost ratios,
(ii) the proposed fixed-variable ratios; and
(iii) the proposed transformer allowance.

WNH has calculated its proposed distribution rates by rate class based on the proposed Rate Design model in Exhibit 8.

Table 1-19 Proposed Rates

Rate Class	Proposed Monthly Service Charge	Unit of Measure	Proposed Distribution Volumetric Charge before Transformer Allowance
Residential	$ 34.34	$/kWh	$ -
GS < 50 kW	$ 36.12	$/kWh	$ 0.0180
GS > 50 kW	$ 134.98	$/kW	$ 5.7042
Large User	$ 7,886.68	$/kW	$ 4.5445
Unmetered Scattered Load	$ 11.88	$/kWh	$ 0.0147
Street Lighting	$ 0.38	$/kW	$ 10.5989
Embedded Distributor	$ -	$/kW	$ 0.0215
Transformer Allowance		$/kW	$ (0.6000)

Table 1-20 below shows the proposed fixed/variable portion for each rate class.

Table 1-20 Proposed Fixed/Variable Portion

Rate Class	Fixed Revenue Portion	Variable Revenue Portion
Residential	100.00%	0.00%
GS < 50 kW	42.87%	57.13%
GS > 50 kW	11.64%	88.36%
Large User	10.95%	89.05%
Unmetered Scattered Load	63.92%	36.08%
Street Lighting	40.65%	59.35%
Embedded Distributor	0.00%	100.00%

Based upon the customer bill impacts, and as further summarized below in Table 1-24 in Bill Impacts, WNH is not proposing rate mitigation.

WNH is proposing a Standby Charge for the GS > 50 kW and Large User Classes, when a customer in the class has load displacement generation or storage. Customers within these classes are increasingly installing load displacement generation facilities that, when in use, reduce the amount of power taken from WNH's distribution system and ultimately

impacts the amount of distribution revenue earned by WNH. WNH's proposal would apply to those customers that would continue to require WNH to provide full supply to the customer's facility during periods when the generator is not in service, which could be planned or unplanned. As part of the process, WNH would consult with the customer and determine whether the supply of power from the WNH distribution system will be needed when the generation is not running. Assuming this is the case, a contracted capacity reserve value would be established. On a monthly basis the peak load taken by the customer will be determined by the load reading meter. The peak load will be charged the Distribution Volumetric Rate for the applicable rate class. If the load taken is less than the contracted capacity reserve value, the difference between that value and the load taken will be charged a Standby Charge which will be equivalent to the distribution volumetric rate for the applicable rate class. If the load taken is equal to or greater than the contracted capacity reserve value, the Standby Charge will not be applied. WNH is proposing a Standby charge as a matter of fairness to all customers. Absent a standby rate, other WNH customers will be required to cross-subsidize the costs associated with providing back-up services to customers with load displacement generation. WNH does not believe that this is either just or reasonable.

More detail on proposed Standby Charges are included in Exhibit 7.

Deferral and Variance Accounts

WNH has included in this Application, a request for approval for the disposition of Group 1, Group 2 and Other Deferral and Variance Accounts (DVAs) balances as at December 31, 2019 and the forecasted interest through December 31, 2020.

WNH has followed the Board's guidance in the Accounting Procedures Handbook and FAQ's (APH) for recording amounts in the deferral and variance accounts. Such guidance also includes the Report of the Board on Electricity Distributors' Deferral and Variance

Account Review Initiative ("EDDVAR Report").

WNH is requesting a net disposition of $652,746 for Group 1 and $685,314 for Group 2 and Other to be paid to customers. Table 1-21 summarizes:

- The principle account balances in each of the deferral and variance accounts, and sub-accounts proposed for disposition; and
- Interest on the deferral and variance accounts up to December 31, 2020. Interest has been computed to December 31, 2020 to align to the proposed effective date for disposition commencing January 1,2021.

Table 1-21 Deferral and Variance Accounts to be Disposed

		Principal Amounts	Carrying Charges to Dec 31, 2020	Total
Group 1 Accounts				
LV Variance Account	1550	125,986	2,106	128,092
Smart Metering Entity Charge Variance Account	1551	(64,391)	(1,111)	(65,502)
RSVA - Wholesale Market Service Charge	1580	(683,723)	(12,660)	(696,383)
RSVA - Retail Transmission Network Charge	1584	410,410	7,241	417,651
RSVA - Retail Transmission Connection Charge	1586	255,270	4,377	259,647
RSVA - Power (excluding Global Adjustment)	1588	564,596	10,593	575,189
RSVA - Global Adjustment	1589	54,593	1,110	55,703
Disposition and Recovery/Refund of Regulatory Balances (2016)	1595	(24,273)	-	(24,273)
Subtotal Group 1 Accounts		**638,468**	**11,656**	**650,124**
Group 2 and Other Accounts				
Other Regulatory Assets - Sub-Account - OEB Fees	1508	199,331	5,758	205,089
Other Regulatory Assets - Sub-Account - Other - Wireline Attachments	1508	(524,373)	(4,896)	(529,269)
Other Regulatory Assets - Sub-Account - MS Disposition	1508	(490,515)	(8,278)	(498,793)
Other Regulatory Assets - Sub-Account - OPEB	1508	197,798	3,419	201,217
Retail Cost Variance Account - Retail	1518	(72,701)	(1,825)	(74,526)
Retail Cost Variance Account - STR	1548	(2,096)	(59)	(2,155)
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Stranded Meter Costs	1555	(26,528)	-	(26,528)
LRAM Variance Account	1568	1,413,647	-	1,413,647
Variance CGAAP	1576	34,187	-	34,187
PILs and Tax Variance for 2006 and Subsequent Years - Recover PILs	1592	(246,746)	(4,392)	(251,138)
Other Deferred Credits	2425	(2,621,628)		(2,621,628)
Subtotal Group 2 and Other Accounts		**(2,139,624)**	**(10,273)**	**(2,149,897)**

WNH is requesting the disposition of its deferral and variance accounts over a period of one-year, effective January 1, 2021.

Table 1-22 summarizes the billing determinants and allocators used for the rate rider computations, including the split between RPP and non-RPP customers.

Table 1-22 Billing Determinants

Rate Class	Total Metered kWh	Total Metered kW	# of Customers / Connections	Distribution Revenue	Metered kWh for WMP	Metered kW for WMP	Metered kWh for Non-RPP	Metered kW for Non-RPP
Residential	395,056,934		51,719	21,315,456			5,570,303	
GS < 50 kW	195,573,807		5,989	6,055,336			17,855,889	
GS > 50 kW	697,140,723	1,764,636	774	10,774,523	9,216,027	22,951	628,348,253	1,590,467
Large User	95,699,867	169,287	1	863,967			95,699,867	169,287
Street Lighting	3,347,727	9,302	5	120,471			3,327,727	9,302
Unmetered Scattered Load	2,947,114		14	166,118			-	-
Embedded Distributor	41,857,714	103,033	1	2,216			41,857,714	103,033
	1,431,623,886	**2,046,258**	**58,503**	**39,298,087**	**9,216,027**	**22,951**	**792,659,753**	**1,872,089**

Table 1-23 contains a list all Group 2 and other accounts which WNH will continue or discontinue on a go-forward basis. WNH is requesting two new sub-accounts as part of this Application: Account 1592 – PILS and Tax Variances – CCA Changes – Sub Account – Incentive Phase Out and Account 1509 – Impacts Arising from the COVID-19 Emergency Sub-Account – Load Forecast Variance. The details of these accounts are discussed in Exhibit 9.

Table 1-23 Group 2 Accounts

USoA	Account Name	Continue or Discontinue	Explanation
1508	Other Regulatory Assets - Sub Account - Cost Assessment Variance 2016	Discontinue	WNHI is seeking recovery of the balance at December 31, 2019, and forecasted balance up to December 31, 2020 in this Application
1508	Other Regulatory Assets - Sub Account - Wireless and Wireline Variance Account	Discontinue	WNHI is seeking recovery of the balance at December 31, 2019, and forecasted balance up to December 31, 2020 in this Application
1508	Other Regulatory Assets - Sub Account - MS Disposition	Discontinue	WNHI is seeking recovery of the balance in this Application and no balance will accumulate in this account past 2020
1508	Sub-account OPEB Forecast Cash versus Forecast Accrual Differential Deferral Account	Discontinue	WNHI is seeking recovery of the balance at December 31, 2019, and forecasted balance up to December 31, 2020 in this Application
1518	Retail Cost Variance Account - Retail	Discontinue	WNHI is seeking recovery of the balance at December 31, 2019, and forecasted balance up to December 31, 2020 in this Application
1548	Retail Cost Variance Account - STR	Discontinue	WNHI is seeking recovery of the balance at December 31, 2019, and forecasted balance up to December 31, 2020 in this Application
1555	Smart Meter Capital and Recovery Offset Variance - Sub-Account - Stranded Meter Costs	Discontinue	WNHI is seeking recovery of the balance in this Application and no balance will accumulate in this account past 2020
1568	LRAM Variance Account	Continue	Balances will continue to accumulate in this account in 2020
1576	Accounting Changes Under CGAAP Balance + Return Component	Discontinue	WNHI is seeking recovery of the balance in this Application and no balance will accumulate in this account past 2020
1592	PILs and Tax Variance for 2006 and Subsequent Years- Sub-account CCA Changes	Continue	Balances will continue to accumulate in this account in 2020

WNH is also requesting to dispose of the Power Liability. This item is discussed in detail in Exhibit 9.

Bill Impacts

Table 1-24 summarizes the customer bill impacts by customer rate class for typical consumers based upon the proposed distribution rates, load forecast, and disposition of deferral and variance accounts provided for in this Application.

Table 1-24 Bill Impacts

Rate Impact Summary of Typical Monthly Usage by Rate Class								
Rate Class	**kWh**	**kW**	**# of Connections**	**2020 Bill $**	**2021 Bill $**	**$ Difference**	**Total Bill Impact %**	**Distribution Bill Impact %**
Residential	750			116.39	117.36	0.97	0.8%	7.1%
GS < 50 kW	2,000			293.50	292.18	(1.32)	-0.4%	7.1%
GS > 50 kW	100,000	250		16,064.13	16,159.59	95.46	0.6%	6.8%
Large User	8,000,000	14,500		1,187,477.63	1,190,332.65	2,855.02	0.2%	7.2%
Unmetered Scattered Load	150		1	28.85	29.13	0.28	1.0%	6.0%
Street Lighting	50	0	1	746.37	770.61	24.24	3.1%	7.2%
Embedded Distributor	2,615,000	6,000		349,281.57	349,183.60	(97.97)	0.0%	1.9%
Residentail - 10% consumption percentile	299			62.45	63.18	0.73	1.2%	7.1%
Residential - Retailer	750			104.73	106.20	1.47	1.4%	7.1%
GS < 50 kW - Retailer	2,000			262.76	263.71	0.95	0.4%	7.1%
Total								

2.1.7 CUSTOMER ENGAGEMENT

This Section details the activities WNH has taken with respect to Customer Engagement.

Customer Engagement has always been important to the success of WNH. WNH recognizes its commitment to be of service to customers, employees and the community and its contribution to the success of each. WNH engages its customers through day-to-day contact and regular business activities. WNH has differentiated Customer Engagement into three categories: Ongoing Communications, Consultations Specific to the Application and Future Activities. A list of Customer Engagement Activities can be found in Attachment 2-1, Appendix 2-AC.

On-Going Communications

Some of the ways that WNH is connecting with customers through ongoing communications in 2019 are:

- 26,032 inbound phone calls were answered by WNH Customer Service staff on many different topics of concern to customers including account information,

services such as e-billing, TOU rates, outages, conservation programs, payment, bill components, etc.;

- 8,526 inbound written enquires were responded to by WNH in 2019. The majority of the topics included in these enquires were similar to those listed above;

- 164 elementary school Electrical Safety Awareness presentations, reaching 62% of the schools, to help students recognize and respect electrical system hazards;

- 13,648 locates were completed to allow customers to safely build on their property without danger of electrical contact;

- Many customers have requested paperless electricity bills and 20,539 customers have signed up for e-billing which represents 35% of WNH's customers. WNH has proposed in this Application to increase e-billing to 45% of its customers by the end of 2021 and has recognized the resulting savings.

- Many customers have expressed an interest in reviewing their electricity consumption and 28,071 customers have signed up to use a web portal to look at TOU data.

- Bill inserts, brochure handouts and traditional marketing channels were utilized about topics of interest and relevance to customers.

- Customers are contacted each year to discuss vegetation management activities that will be performed on their property.

- Many WNH employees live in the communities that WNH serves. The employees are involved in service groups, business associations, and the Chamber of Commerce where both feedback and education are provided.

Construction Projects

WNH follows three main processes for consulting with our customers on major construction projects:

- Individual Line Rebuild process
- Area Plan Development process
- Line Relocation process

For the Individual Line Rebuild process, customers abutting the project area are contacted at the start of design to inform them of plans to rebuild the line (Pre-Design notice) as well as to solicit information about any concerns that should be incorporated into the design. The draft design is completed based on project needs informed by customer input. If this design differs significantly from what is existing (for example, line is proposed to be on the opposite side of the road, additional circuits are proposed, poles are planned to be more than five ft taller than existing, or submersible transformers are planned to be changed to pad mounted type), the customers are contacted again to describe the differences in design, the reasons for it, and asked for comments (Preliminary Design Complete Notice). Once input is received, the design is finalized, and a Pre-Construction notification is sent to the customers notifying them of the construction timelines and details. If the design does not differ substantially from what's already in place, only the Pre-Design and Pre-Construction notifications are issued.

Area Plan Development process applies only where WNH plans to rebuild a number of lines within a neighborhood and the rebuild plans would result in significant changes (e.g. a back-lot supplied subdivision or an old neighborhood with short poles). In this case,

WNH notifies customers of the commencement of the Area Plan Development, seeks input regarding concerns to be addressed, develops options, communicates those options to the entire neighborhood (usually at an Open House), incorporates feedback, finalizes the desired approach, and notifies all customers via an Area Plan Development Complete letter. From that point on, individual line sections get scheduled for rebuild and further customer consultation happens according to the Individual Line Rebuild process as described above.

For Line Relocation projects, the municipality communicates to the customers throughout their design and consultation process if relocation of hydro plant will be required. WNH works closely with the municipality to minimize relocation impact and communicates the final outcome to the customers via Pre-Construction notification sent prior to start of our work.

High Consumption Energy Users

WNH has also made significant efforts to engage the largest energy consumers in the City of Waterloo, Townships of Wellesley and Woolwich to work on issues of importance to them. These engagement issues include electricity rates and pricing, billing inquiries, electrical supply concerns, demand response, energy conservation, metering and sub-metering, monitoring and changing electricity demands. WNH's experience with this approach is that larger electricity consumers are very busy with their core responsibilities and they have a tolerance for the right amount of engagement that benefits their business.

Municipal Government Consultations

WNH regularly consults with local municipal planning and economic development staff from the City of Waterloo, Township of Woolwich, Township of Wellesley and the Region of Waterloo. The purpose of the consultations are to share planning and development information that will aid in the timely, coordinated and cost effective delivery of services

for both WNH and the municipalities. The value of the information may be immediate and considered in current design and construction decisions, or longer term to be used in system planning. These consultations can be initiated by either party and vary in format and timing.

Some examples are:

a) With 4 municipal planning departments with which to interact, WNH receives development information to be reviewed and taken into consideration on a regular basis. A portion of these transmittals require WNH to respond with comment or action. Some develop into further discussions and meetings. These consultations have the greatest impact on current and following year investments.

b) On a monthly basis WNH participates in the City of Waterloo Utilities Coordinating Committee. This is a standing committee that meets to discuss local development and includes other stakeholders such as the Region of Waterloo, Bell, Rogers, and Union Gas. These consultations have their greatest impact on current and following years' investments.

c) The municipalities and WNH initiate ad hoc consultations normally regarding larger and longer term commercial and residential developments. These consultations can be as brief as one meeting or can last months to several years depending on the timing and scale of development. There may also be other participants such as customers, developers, and other agencies. These consultations can have an impact on WNH's DSP.

d) On an annual basis WNH consults with economic development and planning departments regarding larger and longer term development. This information is taken into consideration in the development of WNH's annual budgets, long term

load forecast and 5-year capital forecast. These consultations have their greatest impact on WNH's DSP.

Development Community

a) On an ad hoc basis and during the normal course of business, WNH Engineering Staff consult with Builders, Developers and Real Estate companies. WNH uses these opportunities to gather information on the trends and timing of development. These consultations are initiated by both parties as the need arises.

b) On an annual basis WNH solicits information from the development community to feed into WNH's annual budget, long term load forecast and 5-year capital forecast. These consultations have an impact on the current year and WNH's DSP.

Independent Electricity System Operator (IESO)

WNH has been undergoing long term consultations with the IESO in three areas:

1. Regional Infrastructure Planning (RIP)
2. Conservation and Demand Management (CDM)
3. Wholesale Meter Service

Regional Infrastructure Planning

Regional Infrastructure Planning has been addressed above under Municipal Government Consultations.

Conservation and Demand Management (CDM)

WNH has been offering IESO Province-Wide Conservation and Demand Management (CDM) programs from 2011 through 2020. On March 21, 2019 the Ministry of Energy, Northern Development and Mines directed the IESO to discontinue the current 2015 - 2020 Conservation First Framework (CFF) and implement a new interim framework, in support of the government's goal to reduce electricity costs for customers. The IESO is centrally delivering a reduced suite of energy-efficiency programs with a focus on business and industrial programs and continued programming for low-income consumers and Indigenous communities beginning April 1, 2019 until December 31, 2020. WNH is currently still engaged in a small number of local programs. Prior to the elimination of CFF, engagement and consultation with stakeholders including the IESO, customers, trade allies, associations, government and non-government organizations had occurred frequently as part of engagement, promotion, and delivery of the CDM programs. WNH has worked with its regional LDCs to develop a refined delivery model that best suits regional needs. In addition, consultation with regional LDCs was used to identify and pursue opportunities for regional collaboration on design and implementation of programs that satisfy regional needs and requirements.

WNH believes that locally offering CDM programs allowed for the success of conservation within Ontario as the LDCs used their customer relationships and local knowledge to offer programs and incentives that were best suited for each customer. As shown in the customer engagement results in Attachment 1-9, customers continue to value this relationship with WNH. WNH has determined that to best suit customer needs and preferences, it will continue to offer services to help customers with energy efficiency, energy planning and demand management through rate base.

Transmitter (Hydro One)

WNH owns and operates grid connected transformer stations connected to Hydro One Networks (HONI) 115 kV and 230 kV transmission lines. HONI is WNH's only transmitter. WNH regularly consults with Hydro One to share planning and operational information that will aid in the timely, coordinated and cost effective delivery of services for both parties. The value of the information may be immediate and considered in current design, construction and operational decisions, or longer term to be used in system planning. These consultations can be initiated by either party and vary in format and timing. Most of WNH's engagement with HONI will be over operational issues; especially supply point reliability.

Some examples are:

a) On a regular basis WNH operations and stations staff and their HONI counterparts communicate and coordinate over daily operations, planned and emergency maintenance. These communications can be initiated by either party.

b) On an as needed basis, WNH senior engineering and operations staff initiate consultations with more senior HONI staff, mainly over supply point reliability concerns. Transmission reliability has been and will continue to be a concern over the forecast period.

c) On an annual basis WNH meets with HONI senior staff at a Large Customer Conference hosted by HONI. Both parties use this opportunity to share information, concerns and challenges on transmission supply and reliability issues. This information is taken into consideration in the development of WNH's annual budgets and 5-year capital forecast.

d) Regional Infrastructure Planning (RIP) - WNH belongs to the "KWCG Region" which is in Group 1 of HONI's Regional Infrastructure Groups. Since 2010, Hydro One along with WNH have been active participants in the IESO's IRRP process currently under way.

Wholesale Meter Service

WNH owns its grid connected Transformer Stations, has all its metered points of supply registered in the wholesale market and is also a registered Wholesale Meter Service Provider. This results in various and frequent consultations with the IESO on matters of operations, planning and settlement.

Embedded Distributors

HONI is registered as an Embedded Distributor to WNH on the Elmira TS 33M2 feeder. WNH consulted with HONI regarding any forecast impacts by load or Renewable Energy Generation connections on the 33M2 feeder from Elmira TS. Hydro One responded by saying that each connection request will be assessed individually as per the established process between the two parties. WNH does not foresee any impacts from the Embedded Distributor on this DSP. No investments to support this Embedded Distributor have been included in this Application.

UtilityPULSE Customer Satisfaction Survey

WNH has engaged UtilityPULSE, Simul Corporation to perform Electric Utility Customer Satisfaction Surveys (EUCSS) to obtain actionable and measureable feedback from WNH customers. The survey has been performed every two years as part of WNH's overall commitment to continuous improvement. The UtilityPULSE survey reviewed responses from households and small businesses that pay or look after the electricity bills from WNH. In 2018 WNH had achieved an "A" rating in customer satisfaction as shown in Attachment

1-7 UtilityPULSE Customer Satisfaction Survey. Among other criteria, the UtilityPULSE Customer Satisfaction Survey measured WNH's customer satisfaction level based on the customer care provided and WNH's company image and management operations.

Overall, WNH was at or above Ontario industry results on customer service metrics. Results of the survey include:

- When asked about customer satisfaction, 96% of respondents answered either very satisfied or fairly satisfied. WNH was informed that they were one of two utilities in Canada who achieved this score.

- 87% of the respondents agreed that WNH is a trusted and trustworthy company

- 94% of the surveyed customers reported that WNH provides consistent and reliable electricity

- 92% reported that WNH conducts accurate billings

- 89% reported that WNH dealt professionally with customers' problems

- 90% reported that WNH delivers on its service commitments to customers

WNH customers reported that WNH's priority investments should include the following items as "high priority":

- Pro-actively maintaining and upgrading equipment

- Reducing response times to outages

- Investing more in the electricity grid to reduce the number of outages and to increase reliability and safety

As the results indicate, WNH's commitment to customer service has been recognized and WNH will continue this service. WNH is also mindful of the customers' preferences for WNH's priority investments in its ongoing investment plan.

Public Safety Survey

On November 25, 2015 the OEB released the scorecard measures for LDCs on public safety. These measures required that each LDC will execute a public safety survey every two years. WNH conducted its most recent Public Awareness of Electrical Safety Survey in Fall 2019. This report is included at Attachment 1-8. WNH's Public Safety Awareness Index Score is 82%. WNH believes public safety is extremely important and will continue to focus on ways to communicate public safety throughout its service territory.

Consultations Specific to the Application

In response to the Board's Filing Requirements to engage customers on the specific proposals contained in this Application, in February 2019 WNH commissioned Brickworks Communications to conduct an engagement survey of its customers. The purpose of this survey process was to obtain customer input regarding Waterloo North Hydro's business plans for the period 2021 to 2025, and to gather information from them about service and cost. WNH has used the results of the customer engagement to shape the business plan, budget for 2021, and long term plans for the forecast period for this Application.

Complete copies of the Brickworks Communication Reports are included in Attachment 1-9.

Based on the experience from its 2016 COS process, WNH has amended its process for its 2021 COS customer engagement. WNH determined that customer engagement would be most effective to be completed in two separate phases. Phase one would be a brief survey to gather high level insights, information and feedback from its customers prior to completing its business plan. WNH would then use the business plan to shape the 2020 and 2021 budgets and forecast period. The second phase would be a series of engagement consultations to ensure that WNH 'got it right' when developing its business plan using the high level needs and preferences. WNH also used this opportunity to provide more education to customers on the distribution system, WNH's role in the system and to clarify areas where the first survey resulted in opposing preferences from customers.

The first phase of consultation included an online survey that was open to all customer classes. WNH promoted the survey with an e-blast to its customer base as well as notifications on its website and social media. The result was 4,355 customers completed the online survey from February 5th - 22nd, 2019 with 96% being residential, 3% - GS < 50 kW and 1% - GS > 50 kW. From the results, both quantitative and qualitative, the business plan was developed based on key themes. It also indicated areas where customers needed to be more informed.

The survey results identified that the number one customer priority is to have "Reliable" electricity, followed by "Safe" electricity.

Table 1-25 Key Themes from Phase One Engagement

Priority	Customer Preferences - Next 5 Years
1	WNH provides electricity that is "Reliable" (fewer outages)
2	WNH provides electricity that is "Safe"
3	WNH provides electricity at low cost (at the expense of reliability and customer service)
4	WNH invests in innovative solutions such as smart grid, battery storage, solar and smart home technologies
5	WNH provides excellent customer service

Quantitative results are included in the Brickworks Communication Report in Attachment 1-9. In addition to the specific questions asked, customers were asked to provide open ended comments regarding any other areas of interest to them. There were 1,134 comments received in total. These comments were then summarized and grouped under common themes and highlighted in Table 1-26.

Table 1-26 – Qualitative Results Summary from Phase One Engagement

Topics	%
Cost is too high, don't want increases	19.2
Postive feedback - happy with WNH	11.5
Looking to improve environmental impact, focus on renewables	10.1
Interest in their own generation or alternatives (while reducing cost)	7.5
Delivery should be based on usage, not flat fee	6.5
Not happy with TOU pricing / consider changing / adding different rate for overnight EV charging	6.1
Delivery fee should already include updates, maintenance costs, should not require increases	4.3
Would like adjustments to billing practices (easier registration, quicker billing period, etc.)	4.3
Prefer underground	4.0
Feel that they are unable to change consumption or price - rentals, businesses, seniors	3.6
Would like discounts for certain groups of customers - students, seniors, rentals	3.4
Reduce power outages, do not like momentary outages, remove more trees to limit outages	3.2
Would like more updated communication channels - move away from telephone, better use of website or online tools	3.1
Want WNH App - check usage, pay bills, compare to neighbours	3.1
Miscellaneous improvement suggestions - remove smart meters, more outage protection around poles/tranformers from animal contact and vehicles	2.8
Keep utility local, some would like regional amalgamation consideration	2.0
Concerned for privacy of information	1.9
Concerned about Hydro mismanagement, governance, wages	1.5
Issues or questions on survey itself	1.1
Had negative experience with WNH	0.7

WNH used both the qualitative and quantitative results to prepare the business plan. WNH determined that reliability and safety is most important however to those that cost is important; it is very important. Some areas where WNH wanted further clarification in the second phase included focus on innovation, renewables and generation, willingness to pay for underground services and customer service initiatives.

The second phase of consultation encompassed four core elements of customer engagement.

1. Online Survey: The online survey was promoted through social media, email blasts to customers for whom email addresses were available, as well as WNH's website. This survey was available to any WNH customer who wanted to participate.

2. Random Telephone Surveys: Brickworks Communications conducted telephone surveys among Residential and General Service (GS < 50 kW) customers to provide a generalizable assessment of WNH's investment plan and rate implications. The telephone survey asked similar questions to those in the Online Survey. Customers were randomly selected by Brickworks Communications from a customer list provided by WNH. The outcome of the consultations resulted in findings on the needs and the preferences of WNH's Residential and General Service < 50 kW customer base.

3. Mid-Market & Large Business Workshop: General Service customers over 50 kW (GS > 50 kW) were engaged through a WNH organized breakfast meeting workshop. This workshop included a presentation delivered by WNH's CEO on the utility's proposed capital and operating plans, its DSP and rate implication for this rate class, a Q&A session with WNH senior management, and the administration of a Brickworks Communications survey to collect customer preferences and needs as related to WNH's proposed plans, DSP and rate implications.

4. Large User Consultation Meeting: Senior team members from WNH met with representatives for its Large Use customer. WNH's CEO presented its proposed capital and operating plans, its DSP and rate implication for this rate class. WNH and the Large Use customer discussed specific implications and projects within the Application that will impact them.

The online survey resulted in 2,393 completed responses and the telephone survey had 600 respondents. The online and telephone surveys were completed from November 14 to November 29, 2019.

The Mid-Market & Large Business Workshop held on November 28, 2019 resulted in 32 completed surveys which were done in paper format and modified from the online version to eliminate questions that specifically related to residential customers and focused on areas of interest for business customers.

Summary of Results and Highlights

The summary and highlights completed by Brickworks Communications from these four elements are included here:

Results from both the online and telephone survey components reveal similar opinions with respect to most indicators, despite the extensive background information contained in the online survey in relation to the abridged text read in the telephone survey. For instance, findings from both surveys reveal a high level of understanding (somewhat & completely) of the role that Waterloo North Hydro plays in the electricity system, including where revenue comes from and what portion of their bill relates to WNH, including 98% of online and 97% of telephone respondents. However, more online participants said they were completely aware (53%) than telephone respondents (49%), while more phone customers said somewhat aware (48%) in relation to those online (45%). Among the 32

businesses that completed paper questionnaires, 18 said they were completely aware and 14 somewhat aware.

In a question only asked to the 32 businesses, 18 answered they somewhat and 14 very well understand the cost drivers that Waterloo North Hydro is responding to. Customers were presented with choosing among three options, including (a) service enhancements that they were told would increase costs, (b) having a lower priority on service while favoring lower cost alternatives and (c) continuing with current levels of customer service. Overall, the WNH client base prefers a continuation of current customer service levels, including 69% of telephone and a slightly lower 65% of online respondents. Next most named by 21% of telephone and 24% of online participants was decreasing costs with lower levels of customer service, while only 6% from both surveys want increased service (4% of phone and 6% of online participants were unsure).

As WNH currently exceeds regulated provincial standards in the area of answering calls within 30 seconds, most customers do not want to see service levels decreased in order to save 15¢ per month or $1.80 per year. This includes two-thirds of telephone and 63% of online survey respondents. Only slightly more than a quarter or 26% of phone and 28% of online survey participants are willing to decrease service levels to lower costs; 7% and 9% respectively did not know or were unsure.

There is demand among customers for WNH to provide environmental alternatives and to focus on connecting or investing in renewable energy solutions or new technologies (at additional costs). Only 26% of telephone survey respondents want WNH to continue investing in traditional infrastructure, while a 65% majority from the phone poll want more money invested in renewables (26%), new technologies (6%) or both renewables and new technologies (33%) at additional costs. Ten percent did not know or were unsure. Among online participants there is a similar demand for investing in new technologies and renewables at additional costs – 64%. This includes 31% that want investment in both renewables and new technologies, 25% in renewables and 5% in new technologies. Only

one-quarter want to continue investing in traditional infrastructure and 11% were unsure. Among the 32 businesses, 18 want both investments in renewables and new technologies, six more money in renewables and five investments in new technologies, while only two said to continue investing in traditional infrastructure and one was unsure.

Despite the aforementioned demand for renewables and new technologies, a majority of customers are not willing to pay more for WNH to install more underground lines than they do today, if it means an increase in customer rates. Fifty-six percent of telephone respondents said they are not willing to pay more to increase the amount of underground distribution, while 26% are willing, but almost two in ten or 19% are undecided. Opposition was stronger among online participants as almost six in ten (59%) answered they would not be willing to pay more to increase underground lines, compared to one-quarter that are willing – 16% did not know.

Customers in both the online and telephone surveys rated their interest in ten improvements or upgrades, being told that there would be a cost impact associated with them.

Education rated highest, with more online participants favoring conservation than those by telephone safety. Automated outage notifications also rated highly, followed by an interactive website – with stronger results from the online component. Of mid-level importance was comparing consumption and automated alerts for usage, while results were lower for an online chat feature and alerts for bill due dates. Low importance was attached to automated alerts estimating bills and very low for extended office hours.

More customers responding to the online poll (75%) claimed to receive an e-bill than those to the telephone survey (38%). 15 of the 32 businesses get an e-bill. After being told of the cost associated with traditional paper billing, they were asked what is preventing them from registering to receive an e-bill. The main mentions from telephone respondents related to not being aware of the cost savings (31%), closely followed by the

perceived convenience of receiving a bill by mail (29%) and that a hard copy by mail serves as a reminder to pay (20%). Among online participants, most named was not being aware of the cost savings (31%), closely followed by the perceived convenience of receiving a bill by mail (26%) and that a hard copy by mail serves as a reminder to pay (20%). Among businesses, most named by five was not being aware of the cost savings, followed by three that responded convenience and three that it is a reminder to pay.

On the issue of tree trimming, customers support the status quo. Most (65% telephone & 63% online) back the current process of more frequent tree trimming with enough clearance to balance reliability, aesthetic, and environmental concerns. Twenty-four percent of telephone and 27% of online respondents want less frequent trimming, but more branches cut to ensure fewer outages or lower wait times to restore power, while only 4% (both surveys) want less trimming because of aesthetic or environmental reasons.

System Renewal

Slightly more than six in ten or 61% of telephone survey respondents feel the level of system renewal expenditures is just right to meet the objectives of safety, reliability and cost. Only 6% said it is too low, 11% too high, while 22% were unsure.

Among online participants, almost six in ten or 58% feel the level of expenditures is just right to meet the objectives of safety, reliability and cost. Only 5% said it is too low, 14% too high, while 23% were unsure.

Of the small businesses, 27 said the level is appropriate, three too low and two were unsure.

System Service

Among telephone respondents, 93% feel it is somewhat (46%) or very important (47%) to modernize the grid, compared to only 3% that feel it is unimportant – 4% did not know.

While a similar 92% of online participants said it is important to modernize, more answered very important (51%) compared to the telephone survey, while 41% answered somewhat important and 4% were unsure.

With respect to the GS > 50 kW businesses, 23 answered very important and nine somewhat important.

When asked to rank in order of priority preference five reliability outcomes, the highest scored was reducing the time to restore power during extreme weather, next by reducing outages during extreme weather, outages overall and then their overall length. Lowest scored was improving the quality of power, judged by momentary interruptions.

Among the 32 small businesses, reducing the overall number of outages ranked first, followed by the length of outages, the length of time to restore power during extreme weather, and the number of outages during extreme weather. Also scored lowest was improving the quality of power, judged by momentary interruptions.

General Plant

Two-thirds of customers responding to the phone survey feel the current level of expenditures is just right. Only 3% said too low, 10% too high, while two in ten were unsure. Sixty-five percent of online participants are of the opinion the level of general plant expenditures is just right, while 7% feel it is too low. Nine percent stated it is too high, while 19% were unsure. For businesses, 26 claimed it was appropriate, three too low and three did not know.

With respect to future capital expenditures, results show that 68% of telephone and 64% of online participants feel the overall level is just right, 7% phone (8% online) said it is too high, 7% too low (same for both), while 18% of phone and 21% of online respondents were unsure.

Capital Investments

For telephone respondents, 70% feel WNH has focused on the right areas for capital investments, only 3% do not. A significant 27% answered do not know. The number dips among online respondents as 64% feel WNH has focused on the right areas, while only 3% do not. However, more than three in ten or 32% answered do not know. Out of the 32 businesses, 28 stated WNH is focused on the right areas, while four were unsure.

When those that do not feel WNH is focused on the right areas or did not know were asked in a follow-up about what they think needs to be addressed, most were unsure (82% - phone & 86% online). Among those providing answers, most mentions related to renewables or environmental upgrades, equipment / general upgrades and lower prices.

After being read or presented with a background to rate increases, customers were then asked which of three statements best reflected their view on the topic. There is a sense that while rate increases are disliked they are necessary – 51% from the telephone and 53 % from the online survey hold this view. A core segment feel they are reasonable (32% telephone & 31% online), while few consider them unreasonable (13% telephone & 14% online) and the undecideds are low (4% telephone & 2% online). The same pattern held for businesses as 20 answered that while they don't like the idea, they are necessary, ten think them reasonable, only one said it is unreasonable and one was unsure.

Overall, there appears to be buy-in with the direction being taken by WNH as a strong majority including 84% of telephone and 83% of online participants feel WNH's investment plan is headed in the right direction. Results are even stronger on the

perception among customers of how WNH is preparing for the future. Most of those responding by telephone or 88% said the utility is doing a good job in planning for the future as did 90% of online participants and all 32 businesses.

Large User Consultation

No formal documentation was prepared after the Large User Consultation Meeting however no issues were noted related to the rate increase specifically. The Large User customer representative was interested in the cost allocation methodology which was discussed at a high level and at a more detailed level in the final stages before filing submission.

Changes After Engagement

After phase two, WNH made the following adjustments to the plan:

1. While cost is not a number one priority for customers, for some cost is very important. WNH revisited its OM&A expenses and found opportunities to cut $242,393. The majority of these decreases were in delaying or staggering start dates of new employees due to retirements, removal of one customer service position and some adjustments to contracted services that can be brought in house. While WNH believes these cuts to be manageable, further cuts to areas such as customer service will hurt customer service quality which it was determined that customers do not want.

2. A significant group of customers would like more overhead services moved underground. While this is not the majority, WNH determined that this customer group was large enough to make adjustments in the plan. WNH reviewed the rebuild areas and have added $200,000 to the capital budget in 2021 to move some sections of overhead services in heavily treed areas to underground

services. This will accomplish two things: 1) will decrease the risk of outages in these areas and 2) will improve aesthetics.

3. A large theme that came from this customer engagement that was not as evident in the 2016 COS is that there is a focus by customers on innovation. Customers would like WNH to focus on innovative investments in both systems and renewable opportunities and are willing to pay for it. WNH has made an adjustment to increase the 2020 capital budget by $173,500 to install innovative, customer friendly upgrades to its CIS. Some of these upgrades include:

- Better communication (outage notifications, pro-active high bill alerts and payment reminders, campaigns around electrical safety)

- Self-service online (interactive website, online chat, comparing usage with area)

- Summary billing (a single invoice for customers with multiple premises)

4. On a similar note, WNH has been investing in smart switches and reclosers since 2010. This was an area that customers, in particular the business customers were impressed with and supported. WNH has increased the investment in reclosers by $48,655 in 2021.

5. While customers largely agreed with the proposed plan and spending, due to the increases to capital expenditures noted above, WNH determined to delay the capital spend for a new Enterprise Resource Planning System (ERP). The original plan had WNH spending $1,250,000 in 2021. This has been deferred to the forecast period to be spent in 2022.

6. While customers largely agreed with the proposed plan and spending, modifying the plan to accommodate the aforementioned customer preferences did increase

2021 forecast capital expenditures by approximately $422,000. To accommodate these preferences and being sensitive to the customer's feedback on cost sensitivity, WNH further adjusted the plan to delay the capital spend for a new Enterprise Resource Planning System (ERP).

7. Lastly, while not a cut, WNH has left the OM&A dollars in the plan for two Key Accounts employees. These individuals were former CDM employees who still play a large role in assisting customers with energy efficiency, energy planning and general customer communication and education throughout our service territory. It was clear that education on efficiency and safety is very important to customers. Also business customers are very interested in having these services available to them. Although the government has cut the decentralized CDM program, there is still a need for energy efficiency and demand management on the grid which will in turn help all customers with cost savings.

WNH also took the opportunity at this time to make adjustments to the budget that were found between the first budget and rate impacts but were not due to customer engagement efforts. Revenue offsets were increased by $209,633, mainly due to an increase in pole attachment rates since the last COS. Adjustments were made to borrowing requirements which decreased the interest expense by $196,257. There were additional non-material increases to depreciation (due to capital changes noted above) and a small increase to LEAP based on the change to revenue requirement from the last COS. These changes will decrease the rate impact that was provided to customers during customer engagement.

Overall, many customers commented that while they don't like cost increases, they found the process to be very informative and helpful to understanding WNH's business. They also felt engaged and were satisfied with being consulted.

Embedded Distributor Class

In connection with preparing its rate application, WNH has consulted with HONI and advised HONI that it is WNH's intent to allocate cost in the same manner as all of the other rate classes which is consistent with the approved 2011 COS methodology and not directly allocate costs to the Embedded Distributor rate class. WNH provided HONI with the necessary supporting evidence. HONI responded with the following: "*Hydro One has reviewed the material provided by WNH. Based on the cost allocation model and other evidence provided, HONI has communicated to WNH that it has no objections with the proposed cost allocation methodology used to develop the embedded distributor rates."*

Unmetered Loads

WNH communicates with Unmetered Scattered Load (USL) customers, including Street Lighting customers, to assist them in understanding the regulatory context in which distributors operate and how it affects unmetered load customers. This communication takes place on an on-going basis and is not driven by the rate application process, but regular business practice. The customers who are part of these rate classes have accounts in other rate classes as well and were invited to participate in the customer engagement activities previously discussed.

Ongoing Communications

On-bill messaging, bill inserts, television advertising, re-formatting the bill and general radio and newspaper advertising will continue to be utilized to assist with the education process and to address top customer priorities.

WNH will continue its ongoing customer engagement activities and will continue to take customer preferences into consideration in its business planning.

Customer engagement and satisfaction will continue to be a top priority for WNH.

WNH has completed OEB Appendix 2-AC Customer Engagement Activities Summary, which is included in Attachment 2-1.

There have been no letters of comment filed with OEB as of the submission date as part of this Application.

2.1.8 PERFORMANCE MEASUREMENT

In connection with the RRFE outcomes, WNH posted its 2018 scorecard and MD&A on September 16, 2019, which is included as Attachment 1-15.

Table 1-27 New Residential/Small Business Services Connected on Time

Indicator	2014	2015	2016	2017	2018
New Residential/Small Business Services Connected on Time	100.00%	100.00%	100.00%	100.00%	100.00%

WNH prides itself on its ability to connect services on time and ensure that customers are able to use their services when they are ready for them. WNH works with customers and customer representatives to ensure very timely responses to their requests. WNH will continue to strive for this standard in future years.

Table 1-28 Scheduled Appointments Met On Time

Indicator	2014	2015	2016	2017	2018
Scheduled Appointments Met On Time	99.60%	100.00%	98.10%	96.40%	99.33%

Similarly, to above, WNH focuses on ensuring high levels of customer service when requested to meet with customers or customer representatives. It is very rare for WNH to miss an appointment or require an appointment to be rescheduled. Where this could occur is during a major outage, inclement weather or illness.

Table 1-29 Telephone Calls Answered On Time

Indicator	2014	2015	2016	2017	2018
Telephone Calls Answered On Time	88.80%	88.10%	86.70%	72.77%	92.72%

Although the OEB standard is to have 65% of calls answered on time, WNH has an internal goal of 90% in order to maintain its high level of customer service. In 2017, WNH implemented its new CIS. There was a learning curve for Customer Service Representatives and therefore the percentage dipped, however still well above the OEB minimum. In 2018, WNH returned to normal service levels.

Table 1-30 First Contact Resolution

Indicator	2014	2015	2016	2017	2018
First Contact Resolution	99.93%	99.95%	99.92%	99.90%	99.87%

WNH measures First Contact Resolution as all telephone calls resolved on first contact. WNH strives to handle each call received by the Call Centre quickly, efficiently and to the customer's satisfaction without requiring escalation. Over 99% of the phone calls received are resolved on first contact.

Table 1-31 Billing Accuracy

Indicator	2014	2015	2016	2017	2018
Billing Accuracy	99.96%	99.95%	99.73%	99.97%	99.97%

WNH creates and issues close to 700,000 bills a year as a result of switching to monthly billing. During this change to monthly billing, WNH also moved to a new billing system and was able to maintain the same low error rate.

Table 1-32 Customer Satisfaction Survey Results

Indicator	2014	2015	2016	2017	2018
Customer Satisfaction Survey Results	96.00%	96.00%	92.00%	92.00%	96.00%

In 2018, WNH engaged an independent third party to conduct customer satisfaction surveys. The survey asks customers questions on a wide range of topics including: overall satisfaction with WNH, customer service, outages, cost, billing and corporate image, customer expectations and needs. This feedback is then incorporated into WNH's planning process and forms the basis of plans to improve customer satisfaction, meet the needs of customers and address areas of improvement. In 2018, WNH received a satisfaction score of 96% from its customers which is an improvement from

the 2016 survey of 92%, WNH's results are above the provincial average of 89%. WNH believes that its customer feedback and the satisfaction score reflect the efforts that we continue to make in the community, listening to customer feedback and incorporating it into our business plans.

Table 1-33 Level of Public Awareness

Indicator	2014	2015	2016	2017	2018
Level of Public Awareness	N/A	82.00%	82.00%	82.00%	82.00%

In 2015, the OEB introduced the Level of Public Awareness which attempts to measure the level of awareness of key electrical safety precautions among the public in the electricity distributor's service territory. Utilities are required to carry out a survey as developed by the Electrical Safety Authority every two years. WNH was able to maintain a score of 82% in 2019, which was the same score received in 2017 and 2015.

WNH's Electrical Safety Community Outreach Program is the main vehicle by which WNH promotes and delivers public safety messaging to the community it serves. This program has a variety of facets, the main ones being:

- elementary school safety program;
- children's day camps and boy scout meetings;

- local summer camps and farm safety days;
- electrical awareness program for first responders;
- contractor electrical safety program;
- additional Public Engagement including bill inserts, print ads, social media, WNH website and radio.

WNH also partners with a number of organizations to provide cost effective and quality programs including, KWH, Energy+, Alectra, ESA, Infrastructure Health & Safety Association (IHSA), Ministry of Labour (MOL), Technical Standards and Safety Authority (TSSA) and others.

While WNH is satisfied with these results, the utility will strive to improve upon this score through public education initiatives going forward.

Table 1-34 Level of Compliance with Ontario Regulation 22/04

Indicator	2014	2015	2016	2017	2018
Level of Compliance with Ontario Regulation 22/04	C	C	C	C	C

This component of the public safety measure is expected to address the level of distributor compliance to Ontario Regulation 22/04, which governs the safe design and construction of electrical distribution systems. Measurement includes an audit and declaration of compliance submitted by the distributor and due diligence inspections completed by the Electrical Safety Authority. WNH fully complies with the Ontario Regulation 22/04 safety standard.

Table 1-35 Serious Electrical Incident Index

Indicator	2014	2015	2016	2017	2018
Serious Electrical Incident Index - Number of General Public Incidents	0	1	1	1	6

Indicator	2014	2015	2016	2017	2018
Serious Electrical Incident Index - Rate per 10, 100, 1000 km of line	0	0.633	0.618	0.618	3.645

WNH has been averaging one Serious Electrical Incident (SEI) per year over the historical period with the exception of 2017 (2018 OEB scorecard) when the number of serious electrical incidents rose to six. The Electrical Safety Authority's (ESA) criteria at the time included motor vehicle accidents and other incidents beyond the control of the LDC. Of the six incidents, three were beyond the control of WNH; two of these were as a result of motor vehicle accidents hitting a pole and a transformer and the third was a customer owned overhead conductor that failed. Of the three within the control of WNH, two were the result of #4 and #6 ACSR primary overhead conductors failing and falling to the ground. The conductor failure was as a result of age and metal fatigue. Repairs were made and both lines involving these incidents were rebuilt in 2019. The third incident was the result of a failed connection which caused an un-energized neutral conductor to fall to the ground. The connector and conductor were repaired.

Based on ESA's new criteria which came into effect in 2018, the 2017 score would have been three. It is important to note that there were no personal injuries in any event noted. WNH reviews these incidents and makes appropriate adjustments to system renewal and maintenance activities as required.

Table 1-36 Efficiency Assessment

Indicator	2014	2015	2016*	2017	2018
Efficiency Assessment	3	3	3	3	3

The total costs for Ontario's local electricity distribution companies are evaluated by the OEB to produce a single efficiency ranking. The electricity distributors are divided into five groups based on the magnitude of the difference between their respective actual and predicted costs. WNH consistently maintains its place in Group 3, where a Group 3 distributor is defined as having actual costs within +/- 10 percent of predicted costs. Group 3 is considered "average efficiency" – in other words, WNH's costs are within the average cost range for distributors in the Province of Ontario. WNH's forward looking goal is to maintain its efficiency ranking. Due to the size of the service territory and the costs to construct and maintain assets for the territory, WNH believes it would be very difficult to move into Group 2 or higher.

When the 2016 Scorecard was published, WNH had made a request to the OEB to correct a material misstatement in the data used for capital additions in 2016*. The error has been verified with OEB staff and corrected on the 2017 and 2018 Benchmarking Report, however the OEB did not change this to reflect the correct information on the Scorecard as a matter of policy. The actual verified data places WNH in Group 3 for 2016, however, the Scorecard has the original incorrect information placing WNH in Group 4.

Table 1-37 Average Number of Hours that Power to a Customer is Interrupted

Indicator	2014	2015	2016	2017	2018
Average Number of Hours that Power to a Customer is Interrupted	0.47	0.69	0.71	0.76	0.92

WNH continues to view reliability of electricity service as a high priority for its customers and as such developed programs several years ago for the continuous improvement of reliability. The program includes a constant review of reliability within the 24 x 7 control room and a response plan for any areas of the distribution system experiencing a degradation in reliability. This, combined with WNH's commitment to review the worst performing feeders on an ongoing basis to improve reliability, will ensure customers continue to receive high value from their electricity service. Compared to the industry

average number of hours that power is interrupted to a customer per year provided in the Yearbook of Distributors, WNH is below the industry average.

However, WNH has not met its performance target with respect to SAIDI. WNH has and continues to focus a portion of its asset inspection programs and capital expenditures to bring its system reliability in line with OEB targets. Specifically, WNH's introduction of FLISR and increased number of remotely controlled switching devices in the field have started to yield results. More detailed information can be found in Section 2.3.3.2 of the DSP and Appendix K – Distribution System Reliability Report (2019).

Table 1-38 Average Number of Times that Power to a Customer is Interrupted

Indicator	2014	2015	2016	2017	2018
Average Number of Times that Power to a Customer is Interrupted	0.91	1.42	1.15	1.50	1.32

WNH has adopted a proactive, balanced approach to distribution system planning and infrastructure investment and replacement programs to address immediate risks associated with end-of-life assets, to manage distribution system risks, to ensure the safe and reliable delivery of electricity, and to balance customer and utility affordability. Compared to the industry average number of times that power to a customer is interrupted per year provided in the Yearbook of Distributors, WNH is below the industry average.

However, WNH has not met its performance target with respect to SAIFI. WNH has and continues to focus a portion of its asset inspection programs and capital expenditures to bring its system reliability in line with OEB targets. Specifically, WNH's introduction of FLISR and increased number of remotely controlled switching devices in the field have started to yield results. More detailed information can be found in Section 2.3.3.2 of the DSP and Appendix K – Distribution System Reliability Report (2019).

WNH had a Major Event Audit in 2018 and had a minor revision in 2015 which changed

SAIFI by 0.02. SAIFI should be 1.436 as provided in Appendix 2-G, found in Attachment 2-1.

Table 1-39 Total Cost per Customer

Indicator	2014	2015	2016*	2017	2018
Total Cost per Customer	$ 760	$ 762	$ 785	$ 773	$ 819

Total cost per customer is calculated as the sum of WNH's capital and operating costs per customer. The total increase since 2014 (5 years) is 7.8% which is an average of 1.6% per year.

WNH's initial cost performance result for 2016 was $809/customer at the time the 2016 Scorecard was published. As noted above, WNH discovered a material misstatement in the data used for capital additions in 2016 and made a request to the OEB to correct this error*. WNH had submitted to the OEB revised data on capital additions that would have resulted in a Total Cost per Customer of $785/customer. The error has been verified with OEB staff and corrected on the 2017 Benchmarking Report, however the OEB did not change this to reflect the correct information on the 2017 Scorecard as a matter of policy.

WNH will continue to replace distribution assets proactively along a carefully managed timeframe in a manner that balances system risks and customer rate impacts.

Table 1-40 Total Cost per Km of Line

Indicator	2014	2015	2016*	2017	2018
Total Cost per Km of Line	$ 26,299	$ 26,109	$ 27,251	$ 26,800	$ 28,499

This measure uses the same total cost that is used in the Cost per Customer calculation above - the total cost is divided by the kilometers of line that WNH operates. The total increase since 2014 is 8.4% which is an average of 1.7% per year. WNH continues to seek innovative solutions to help ensure cost/km of line remains competitive and is

affordable for our customers.

The Scorecard has the incorrect Total Cost per Km Line for 2016 ($28,094) as the OEB did not change the 2016 data on the Scorecard as a matter of policy*. The 2016 rate should be $27,251 (verified and corrected).

Table 1-41 Net Cumulative Energy Savings

Indicator	2014	2015	2016	2017	2018
Net Cumulative Energy Savings	N/A	15.54%	29.69%	65.16%	80.00%

On March 20, 2019, Ministerial Directives to the Ontario Energy Board (OEB) and the Independent Electricity System Operator (IESO) discontinued the 2015 - 2020 Conservation First Framework (CFF) and established a scaled down Interim Framework for the balance of 2019 and 2020, to be delivered centrally by the IESO.
As part of the Conservation First Framework, which was to run from 2015 to 2020, WNH was assigned a target of 82.38 GWh. WNH's 2018 interim unverified results, as reported by the IESO, shows a net cumulative energy savings, as of the end of 2018 of 65.9 GWh, which equates to 80.0% of the original six-year target.

Table 1-42 Renewable Generation Connection Impact Assessments Completed on Time

Indicator	2014	2015	2016	2017	2018
Renewable Generation Connection Impact Assessments Completed on Time	100.00%	87.50%	80.00%	100.00%	100.00%

Electricity distributors are required to conduct Connection Impact Assessments (CIAs) within 60 days of receiving a complete application package. It is WNH's goal to meet this requirement 100% of the time. In 2015 and 2016 WNH did not meet the OEB target of 90%. In each year, one was missed. The most recent exception in 2016 was a result of miscommunication involving an agreement with another distributor. WNH modified its procedures and improved its monitoring. This situation has not reoccurred.

Table 1-43 Distribution System Plan Implementation Progress

Indicator	2014	2015	2016	2017	2018
Distribution System Plan Implementation Progress	99.73%	119.44%	23.05%	41.81%	61.36%

Distribution System Plan (DSP) implementation progress is a performance measure instituted by the OEB in 2014. Consistent with other new measures, utilities were given an opportunity to define it in the manner that best fits their organization. The DSP outlines WNH's forecasted capital expenditures over the next five (5) years that are required to maintain and expand the electricity system to serve current and future customers. The "Distribution System Plan Implementation Progress" measure is intended to assess WNH's effectiveness at planning and implementing the DSP.

WNH's last application was filed for rates effective January 1, 2016. The application and DSP were approved by the OEB in the Fall of 2015. In 2018, during the third year of the current five year DSP (2016 - 2020), WNH has reported 61.36% in its Distribution System Plan Implementation Progress as at December 31, 2018. This measure was calculated by comparing WNH's actual capital expenditures from 2016 - 2018 and compared to the total five-year capital expenditures as per the DSP. By the end of 2020, WNH intends to reach 100% of its implementation progress before the new DSP time frame begins.

Table 1-44 New Micro-embedded Generation Facilities Connected On Time

Indicator	2014	2015	2016	2017	2018
New Micro-embedded Generation Facilities Connected On Time	100.00%	100.00%	100.00%	100.00%	100.00%

WNH has connected all its micro-embedded generation facilities within the prescribed time limit. WNH has consistently met 100% of its micro-embedded generation facilities connections on time, well above the industry target of 90%.

Table 1-45 Liquidity: Current Ratio

Indicator	2014	2015	2016	2017	2018
Liquidity: Current Ratio (Current Assets/Current Liabilities)	0.89	0.94	1.01	1.08	1.08

The current ratio is a liquidity ratio that measures a company's ability to pay short-term and long-term obligations. To gauge this financial metric, the current ratio considers the total current assets of a company relative to that company's total current liabilities. WNH is maintaining a current ratio that allows it to have a margin of safety to cover financial obligations on a timely basis.

Table 1-46 Leverage: Total Debt

Indicator	2014	2015	2016	2017	2018
Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio	1.24	1.33	1.23	1.18	1.14

The OEB uses a deemed capital structure of 60% debt, 40% equity for electricity distributors when establishing rates. This deemed capital mix is equal to a debt to equity ratio of 1.5 (60/40). A debt to equity ratio of more than 1.5 indicates that a distributor is more highly leveraged than the deemed capital structure. A high debt to equity ratio may indicate that an electricity distributor may have difficulty generating sufficient cash flows to make its debt payments. A debt to equity ratio of less than 1.5 indicates that the distributor is less levered than the deemed capital structure. WNH's ratios between 2014 and 2018 are well below the OEB threshold of 1.5.

Table 1-47 Profitability

Indicator	2014	2015	2016	2017	2018
Profitability: Regulatory - Deemed (included in rates)	9.58%	9.58%	9.19%	9.19%	9.19%

Indicator	2014	2015	2016	2017	2018
Return on Equity - Achieved	7.26%	6.65%	10.13%	8.37%	8.20%

WNH's current distribution rates were approved by the OEB and include an expected (deemed) regulatory return on equity of 9.19%. The OEB allows a distributor to earn within +/- 3% of the deemed return on equity. Since 2016, when the new COS rates were implemented, WNH has been well within the ROE threshold.

WNH has used most of the measures that are included on the OEB scorecard for many years prior to the scorecards being released by the OEB. WNH used this internal scorecard to set targets and measure its performance against itself. The measures that were not originally incorporated in WNH's corporate scorecard that is presented to the Board of Directors have subsequently been added in order to align the two scorecards.

Additional measures that are provided on WNH's internal scorecard include:

- Distribution system loss percentage
- Percentage of budgeted capital investments completed
- Percentage of OEB mandated inspections completed
- Percentage of scheduled maintenance completed
- Controllable costs per customer
- Controllable costs per MWh
- Employee engagement index
- Employee absenteeism
- Training and development percentage
- Percentage of succession plans in place for key management positions
- Competitive ranking of distribution rates of peers
- Percentage of regulatory filings completed on schedule
- Completion of schedule rate filings and
- Interest rate coverage

All of these measures in addition to those in the OEB scorecard help to ensure that WNH

is monitoring key aspects of the business and assessing areas to improve performance.

Efficiency Assessment

In Table 1-48 WNH has included its PEG Efficiency Assessment Projection.

Table 1-48 Efficiency Assessment Projection

Cost Benchmarking Summary	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Actual Total Cost	47,080,286	48,161,078	49,642,169	51,047,474
Predicted Total Cost	42,726,853	44,382,134	46,211,843	48,169,993
Difference	4,353,433	3,778,944	3,430,326	2,877,481
Percentage Difference (Cost Performance)	9.7%	8.2%	7.2%	5.8%
Three-year Average Performance			8.3%	7.0%
Stretch Factor Cohort				
Annual Result	3	3	3	3
Three-Year Average			3	3

Since inception of the PEG model, WNH has been in Cohort 3. WNH actively monitors its performance and cost spending on an ongoing basis. During the annual budget preparation, business plan development and forecast planning, WNH would take the corrective measures required to ensure that it remains in Cohort 3 or higher. Since 2019, during annual budget, WNH prepares an Efficiency Assessment Projection similar to that included in Table 1-48. After all budgets have been prepared this calculation is done to determine if costs and plans need to be adjusted. WNH acknowledges that due to the service territory size and capital asset requirements, it would be very difficult to achieve Cohort 1 or 2 based on the PEG Model inputs. WNH's goal is to maintain Cohort 3 and improve its percentage within Cohort 3. As demonstrated, WNH projects to be in Cohort 3 through 2021 however the percentage is trending downward indicating WNH is becoming more efficient.

2.1.9 FINANCIAL INFORMATION

Audited Financial Statements

Copies of WNH's 2019 and 2018 Audited Financial Statements are provided in Attachments 1-11 and 1-12.

Reconciliation between Audited Financial Statements and Regulatory Accounting

Reconciliations of WNH's Audited Financial Statements to the annual RRR Trial Balance for 2017, 2018 and 2019 are provided as Attachment 1-16.

Existing/Proposed Accounting Orders

The 2021 COS Application is to be filed on a MIFRS accounting basis, as such, WNH has prepared its Application on an MIFRS basis. WNH has not departed from the Accounting Procedures Handbook. WNH does not have any accounting orders.

Accounting Standards used for General Purpose Financial Statements

WNH adopted IFRS on January 1, 2015 and continues to use IFRS for General Purpose Financial Statements.

Compliance with the Uniform System of Accounts

WNH has followed the accounting principles and main categories of accounts as stated in the Board's Accounting Procedures Handbook (the "APH") and the Uniform System of Accounts ("USoA") in the preparation of this Application.

Accounting Treatment of Non-Utility Businesses

WNH was previously engaged in the delivery of the IESO's Conservation and Demand Management Programs and continues to provide Street Light Maintenance and Construction Services. The accounting for these activities is segregated from WNH's rate regulated activities in accordance with the Board's Accounting Procedures Handbook for Electricity Distributors.

Annual Report and MD&A for Distributor and Parent Company

Waterloo North Hydro Holding Corporation (Parent Company) does not publish an annual report or an MD&A. WNH has included its 2019 Annual Report in Attachment 1-19 and its 2018 OEB Scorecard and MD&A in Attachment 1-15.

Rating Agency Reports

WNH has established a credit rating with DBRS beginning in early 2016. DBRS has rated WNH as 'A(low)/Stable' since 2016. The 2020 Credit Rating Report is provided in Attachment 1-17.

Prospectus or Information Circulars

WNH does not have any publicly traded debt or equity. WNH currently has no plans to issue public debt or equity in the 2021 Test Year.

Changes in Tax Status

WNH is a corporation incorporated pursuant to the Ontario Business Corporations Act and has not had a change in tax status since its last COS Application.

2.1.10 DISTRIBUTOR CONSOLIDATION

WNH has not acquired or amalgamated with another distributor since its last rebasing application.

Waterloo North Hydro

ATTACHMENT 1-1

REQUIRED OEB APPENDICES

File Number:	EB-2020-0059
Exhibit:	1
Tab:	
Schedule:	
Page:	59
Date:	30-Jun-20

Appendix 2-A
List of Requested Approvals

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

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

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

Waterloo North Hydro Inc. is seeking the following approvals in this application:

1		Approval to charge distribution rates effective January 1, 2021 to recover a Service Revenue Requirement of $39,298,087 which includes a Revenue Deficiency of $2,624,364 as detailed in Exhibit 6. The schedule of Proposed Rates is set out in Exhibit 8.
2		Approval of the Distribution System Plan as outlined in Exhibit 2.
3		Approval of revised Low Voltage Rates as proposed and described in Exhibit 8.
4		Approval to adjust the Retail Transmission Rates – Network and Connection as detailed in Exhibit 8.
5		Approval to continue to charge Wholesale Market and Rural Rate Protection Charges approved in the Board Decision and Order in the matter of WNH's 2020 Distribution Rates (EB-2019-0071).
6		Approval to continue the Specific Service Charges and Transformer Allowance approved in the Board Decision and Order in the matter of WNH's 2020 Distribution Rates (EB-2019-0071) with the exception of the addition of four new charges (discussed below in point 7) and the removal of the Credit Check Charge and the Notification Charge.

7		Approval to add the following Specific Services Charges: Disconnect/Reconnect at Meter – During Regular Hours, Disconnect/Reconnect at Meter– After Regular Hours, Disconnect/Reconnect at Pole/Transformer – During Regular Hours, Disconnect/Reconnect at Pole/Transformer – After Regular Hours. This is described in Exhibit 8.
8		Approval to implement a Standby Charge for the Large Use and General Service > 50 kW customer classes with load displacement generation. This is described in Exhibit 7.
9		Approval to use gross load billing for Retail Transmission Rates – Network and Connection charges for customers who have load displacement generation as detailed in Exhibit 8.
10		Approval of the Proposed Loss Factors as detailed in Exhibit 8.
11		Approval to continue to use the Transformer Allowance and Primary Metering Allowance for transformer losses most recently approved as part of the last Cost of Service application (EB-2015-0108). Listed in Appendix 8.
12		Approval to charge the Board’s updated Pole Attachment Charge, effective January 1, 2021.
13		Approval of the Rate Riders for a one-year disposition of the Group 1, Group 2 and Other Deferral and Variance Accounts as detailed in Exhibit 9.
14		Approval to discontinue the use of Retail Cost Variance Accounts (RCVAs) 1518 and 1548.
15		Approval of the Rate Riders for a one-year disposition of the Lost Revenue Adjustment Mechanism Variance Account ("LRAMVA") for lost revenue as presented in Exhibits 4 and 9 of this application.

16		Approval to dispose of the Power Liability Variance as described in Exhibit 9.
17		Approval to create a 1592 – PILS and Tax Variance – CCA Changes sub account as described in Exhibit 9.
18		Approval to create a 1509 – Impacts Arising from the COVID-19 Emergency sub account as described in Exhibit 9.
19		Such other approvals as WNH may advise and the OEB may deem as just and reasonable.

Appendix 2-AC
Customer Engagement Activities Summary

Provide a list of customer engagement activities	Provide a list of customer needs and preferences identified through each engagement activity	Actions taken to respond to identified needs and preferences. If no action was taken, explain why.
Enhanced Customer Engagement - Distribution System Plan & Cost of Service Rate Application		
Brickworks Communication - Customer Consultation Online Surveys - February 2019 (all customers) and November 2019 (residential/small commercial customers)	Customers want continued delivery of high quality services, reliability of service, affordable electricity costs, assistance to reduce consumption and thereby costs, as well as better information when outages occur.	Refer to Exhibit 1 - WNH's Response to Customer Preferences
Brickworks Communication - Customer Consultation Telephone Surveys - November 2019 (residential/small commercial customers)	Customers want continued delivery of high quality services, reliability of service, affordable electricity costs, assistance to reduce consumption and thereby costs, as well as better information when outages occur.	Refer to Exhibit 1 - WNH's Response to Customer Preferences
Large Business - Breakfast meeting on November 28th, 2019	Customers want continued delivery of high quality services, reliability of service, affordable electricity costs, assistance to reduce consumption and thereby costs, as well as better information when outages occur.	Refer to Exhibit 1 - WNH's Response to Customer Preferences
Large User	Customers want continued delivery of high quality services, reliability of service, affordable electricity costs, assistance to reduce consumption and thereby costs, as well as better information when outages occur.	Refer to Exhibit 1 - WNH's Response to Customer Preferences
Customers with Load Displacements	Customers want continued delivery of high quality services, reliability of service, affordable electricity costs, assistance to reduce consumption and thereby costs, as well as better information when outages occur.	Refer to Exhibit 1 - WNH's Response to Customer Preferences
Embedded Distributors	Customers want continued delivery of high quality services, reliability of service, affordable electricity costs, assistance to reduce consumption and thereby costs, as well as better information when outages occur.	Refer to Exhibit 1 - WNH's Response to Customer Preferences
On going Customer Engagement		
Approximately 4,000-7,000 customer walk ins per year to office for service	Need to explain the bill, need to make payment arrangements, account balances, billing inquiries, services such as e-Billing, TOU rates, outages, conservation programs, bill components	Maintain this service option including an ability to make payment in person. Trained all front office staff to handle majority of issues
26,032 Inbound phone calls to WNH in 2019	Need to explain the bill, need to make payment arrangements, account balances, billing inquiries, services such as e-Billing, TOU rates, outages, conservation programs, bill components	Trained all front office staff to handle inquiries
8,526 inbound written enquires were responded to by WNH in 2019	Need to explain the bill, need to make payment arrangements, account balances, billing inquiries, services such as e-Billing, TOU rates, outages, conservation programs, bill components	Trained all front office staff to handle inquiries
Annual vegetation control program	Need to confirm scope of work on each property to safely establish right of way	Notices of Annual Tree Trimming to all customers in the area with an explanation as to why this work is necessary. If customers have further inquiries they are directed to call the operations department at WNH
Approximately 100 Forestry Customer Calls in 2019	Requests to cut back trees interfering with power lines	Customers required to sign off on work consent before work begins. WNH will continue to investigate all customer requests.
Locating electrical infrastructure, approximately 13,000 requests per year	Need to build new infrastructure requires electrical plant to be safely located so construction can proceed	Locates are all now scheduled through On1Call as mandated by the Government of Ontario. On1Call then contacts our contractor to schedule the locates
Approximately 5,000 power outaged routed calls and service calls to the control room in 2019	Customer request for information on power outages	Developing and utilizing Outage Management Software as well as increase usage of social media updates
Electrical Safety Awareness training - 164 Elementary school presentations in 2019	Need for elementary students to understand and respect electrical system hazards as well as need for future electricity consumers to understand Ontario's electrical system	Offer an in-classroom program for elementary school students in the Region of Waterloo
Construction Projects Including: Line Rebuilds, Area Plan Development, and Line Relocations	Need for coordinated, multi utility infrastructure development according to customer schedule and budgets	WNH solicits information about plans and requests input and/or concerns from customers. Depending on the project various notifications are done - see details in exhibit 1. Pre-Construction notices are sent describing timelines and details.
High Consumption Energy Users	Need to control electricity consumption, need to understand the bill, need to reduce electricity costs	Business customer breakfast sessions, meetings through Chamber of Commerce, individual customer meetings, provide expert advise on metering, supply and power quality issues
Municipal Government Consultations	Need for shared information on planning and development	Plans need to be communicated in order to ensure appropriate design or construction decisions and system planning
Customer Demand Work	Customer require new services, service upgrades, increased transformation, sevice new developments including subdivisions	Requests are managed through a customer que with appropriate prioritzation
Trouble call response	Customer need for power restoration	24/7 coverage with ability to call in necessary resources to respond to most contingency situations
Participation in conservation programs - Businesses	Business customer needs to participate in the energy conservation programs include education on energy conservation and the value it provides customers, information on the programs available, support to help customers identify projects, complete program applications and implement energy conservation projects.	Up until the centralization of the Conservation First Frame work and the Save on Energy programs, WNH continued to actively promote and engage customers in the Business Save on Energy programs through email marketing, social media, customer information and engagement breakfasts and direct in-person engagement and energy conservation support (site walk through to identify projects, developing business cases for energy conservation projects, energy conservation project application support). Since 2015 WNH has assisted 566 business customers with implement over 1,300 energy efficiency projects through the replacement of old equipment including lighting, heating and cooling equipment, motors, pumps, fans and process equipment, resulting in an savings to customers of 68.97 GWh's and $11.3 Million, with incentives of $8.95 Million.
Participation in conservation programs - Residents	Residential customer needs to participate in the energy conservation programs include education on energy conservation and the value it provides , information on the programs available and how to apply to or participate in the energy conservation programs, and a way to validate the energy conservation project savings.	Up until the centralization of the Conservation First Frame work and the Save on Energy programs, WNH continued to actively promote and engage customers in the residential Save on Energy programs through email marketing, retail events, on bill messaging, social media and the corporate website.

Roving Energy Managers	Need for technical expertise to identify and implement commercial, institutional and industrial conservation projects	WNH continues to deploy Energy Efficiency Advisors to provide commercial, institutional and industrial customers with energy conservation support including identifying projects, building the business case for the projects, completing and submitting applications for projects, and closing out and completing program requirements once projects had been implemented
UtilityPulse Customer Satisfaction Survey 2018	Customers want low price and high value, customer service, company leadership, the business to be a good corporate steward, operational effectiveness and power quality/reliability. Customers require various communication channels to be kept informed	Working on a communication plan as to how we can better inform our customers on information that is important to them. i.e. current usage, energy savings, and outage information
UtilityPulse Public Awareness of Electrical Safety Survey 2019	WNH reviews the results of these surveys to address gaps in public understanding of the risks associated with electricity	Working on a communication plan as to how we can better inform our customers on information that is important to them. i.e. current usage and outage information
Conducts Open House meetings	Customers are informed of engineering design changes planned in their community and how they will be impacted.	WNH takes customer feedback into account when finalizing designs if practical.
Chamber of Commerce events	WNH actively participates in its local Chamber of Commerce both on the Board of Directors and at events to interact with local business persons	WNH staff are able to hear their electricity concerns, provide industry education and assistance where needed.
Sustainable Waterloo Region	WNH was a founding member of a local carbon reduction and energy conservation organization, Sustainable Waterloo Region. WNH is committed to conservation for its customers and organizations.	WNH continues to demonstrate its role as a leader in environmental stewardship by committing to reduce its carbon footprint in the community.
Doors Open Waterloo Event	WNH participated in a local annual event 'Doors Open' in which members of the public tour local area businesses. WNH received much interest and participation from the community, over 300 people toured WNH 's facilities.	Management was on hand to meet with WNH customers and discussed electricity concerns and electricity conservation practices
Shareholder Meetings	WNH regulary meets with its shareholders to discuss WNH's plans, rates and the impact on customers.	WNH takes shareholder feedback and integrates into strategic planning
Online Web Forms	On an annual basis, WNH serves approximately 45,900 customers at its customer service counter. The top two reasons a customer comes to WNH's customer service counter are to open up a new account, or to make a payment. Customer satisfaction scores indicated that customers prefer to use online, self-service tools, and through Google Analytics, WNH determined that many customers are accessing the website from the Customer Forms page, suggesting that there is a strong desire to complete applications online and that customers are specifically looking for web forms.	In 2015, WNH launched an updated website and included more self-serve options for customers, including digital forms and flexible options to provide new account details. In 2016, WNH introduced mobile-responsive forms to allow customers flexible options for opening, closing and updating their account information. In 2017, WNH launched a new online platform called "FormBuilder" that allows the utility to create forms that are both accessible and optimized for mobile use. Since being launched, web access to online forms has consistently been one of the most-used features on the website, with approximately 55,000 views and more than 30,000 forms completed and submitted, and continuing to grow.
MyAccount Online	WNH's customer portal, My Account allows customers to provide feedback on features they would like to see or features that aren't working the way they believe they should. As of December 3, 2018, approximately 13,000 customers have registered for MyAccount, and there have been more than 32,000 logins for commercial and residential customers since January 1, 2017. WNH Communications and IT team routinely review the feedback provided on the internal pages of MyAccount in an effort to respond to this feedback in a timely basis. Review of this feedback revealed that on the landing page dashboard of MyAccount, customers wanted an easy way to see what they currently owe, biling and payment history, access to past bills, consumption information, a way to compare bills and consumption over a period of time.	To address the issues identified with MyAccount, WNH worked with SilverBlaze, the company that hosts WNH's MyAccount online portal, to add up to 24 months of past bills and to improve the MyAccount dashboard to show billing and payment activity and display the information more prominently. The improvements to the dashboard are still pending roll out to ensure abosolute security of customer data, but are anticipated to be rolled out in 2019/2020. In 2019, WNH will continue to explore ways to improve the MyAccount experience for customers, including making it easier for customers to register their accounts for My Account and e-billing at the time they open their account, and to provide tools and resources within My Account that customers who use the service find valuable.

Waterloo North Hydro

ATTACHMENT 1-2

BOARD MANDATE

Background:

The business of Waterloo North Hydro Inc. (WNH) is integral to the well-being and the infrastructure of the City of Waterloo, the Township of Wellesley and the Township of Woolwich. It is in the best interests of the Community of Customers and the Residents of Waterloo, Wellesley and Woolwich, whom the business affects, that WNH conducts its affairs on a commercially prudent and sustaining basis.

Waterloo North Hydro Inc. will provide a reliable, safe and efficient electricity distribution system.

Distribution rates will be set by the Ontario Energy Board and according to the rules of the Ontario Energy Board. The Board of Directors of WNH will be apprised of rate applications and provide guidance to Management.

WNH is at all times subject to such licences, codes, policies, rules, orders, interim orders, approvals, consents and other actions of any regulator.

WNH will provide its services with regard for customer satisfaction, energy conservation and environmental responsibility.

Board Mandate:

The Board of Directors is responsible for ensuring WNH conduct its affairs in accordance with the above, and all legal requirements.

The Shareholders' Agreement in effect from time to time between the Corporation of the City of Waterloo ("City of Waterloo"), the Corporation of the Township of Woolwich ("Township of Woolwich"), the Corporation of the Township of Wellesley (“Township of Wellesley”) and Waterloo North Hydro Holding Corporation, outlines in broad terms the expectations of the Shareholders relating to the principles of corporate governance and the management of the business and affairs of Waterloo North Hydro Holding Corporation.

Waterloo North Hydro Inc. as a subsidiary and the Board of Directors of WNH Inc. are one-step removed from the Municipal Shareholders, however many of the expectations of the Shareholders’ Agreement apply to WNH Inc.

In accordance with direction to the Board of Waterloo North Hydro Holding Corporation from time to time, the Shareholders expect that WNH, through the Board of Directors and senior management for Waterloo North Hydro Inc. will:

1. Establish policies to develop and maintain a balanced financial and capitalization structure while maintaining just and reasonable rates for customers in a manner consistent with the policies established by the Shareholders.
2. Provide the Shareholder with the maximum Rate of Return permitted pursuant to energy legislation in accordance with the financial performance objectives of the Shareholders.
3. Manage all risks related to the business through the adoption of appropriate risk management strategies and internal controls.
4. Develop a long range Strategic Plan, consistent with the maintenance of a viable, competitive business and preservation of the value of the business.
5. Develop a Dividend Guideline consistent with sound financial principles, with the intention of providing the Shareholders with the maximum rate of return permitted under energy legislation and applicable orders, rules, and regulations.
6. Declare any dividend or distribution of capital.
7. Recognize that the Board's role is to,
    a. Establish governance structures and committees required by the Shareholders agreement and other committees as deemed appropriate by the Board from time to time;
    b. Hire and assess the President & CEO's performance and delegate accountability to the President & CEO's;
    c. Set corporate goals/strategic direction and monitor alignment of operations;
    d. Approve the Business Plan, Budget and Annual Report; and
    e. Take corrective action as necessary.

Document Approval

Approved by: (signature on original copy only and not on posted version)		2015 04 16
	Tim Jackson, Chair Waterloo North Hydro Holding Corporation	**Date**



ATTACHMENT 1-3

CODE OF CONDUCT

This document is applicable to Directors of Waterloo North Hydro Holding Corporation and Directors of Waterloo North Hydro Inc. (collectively "Waterloo North Hydro").

To enhance teamwork and effective governance among Board members, we publicly commit ourselves, collectively and individually, to the following protocols.

1. To represent and support the needs and interests of the organization.

2. To operate with honesty and integrity, including compliance with Board Policy on Confidentiality and Conflict of Interest.

3. To set clear goals for ourselves.

4. To communicate accurate and complete information at all times in our discussions and deliberations as we conduct Board business. This includes keeping the Board appropriately informed of knowledge or issues that could impact the operations of the organization or the Board.

5. To refer public inquiries to the President & CEO and/or the CFO, or the Board Chair.

6. To understand individual Board members do not have authority; only the Board as a whole has authority, with the understanding that the Board Chair and/or President & CEO will communicate the position(s) of the Board on controversial or sensitive issues. When the Board delegates specific authority to a committee or individuals, the committee or individual is responsible to keep the Board appropriately informed in a timely manner.

7. To disclose Board or organizational information only in accordance with the Policy on Confidentiality and Conflict of Interest.

8. In the release of any information referred to in (7) above, to follow any Board protocols, including the recognition of the Board Chair and the President & CEO, as appropriate, as the spokespersons for the organization.

9. To seek to understand concerns/issues or differences of opinion and constructively and professionally provide feedback or recommendations for resolution while keeping Board meetings efficient and effective.

10. To agree to ask the Board Chair or the President & CEO to place an item on the agenda instead of bringing it up unexpectedly at the meeting, ultimately keeping surprises to other Board members or to the President & CEO as the exception, not the rule.

11. To recognize that the Board's role is to:

    - Establish governance structures;
    - Hire and assess the President & CEO's performance and delegate accountability to the President & CEO;
    - Set corporate goals/strategic direction and monitor alignment of operations;
    - Approve the Business Plan, Budget and Annual Report; and
    - Take corrective action as necessary.

We recognize that it may put the organization, the Board of Directors, or individual Directors at risk if we do not follow the principles inherent in this protocol and attached Confidentiality and Conflict of Interest Policy. The risks may include, but are not limited to:

- Loss of reputation or constituent support;
- Legal liability or regulatory non-compliance; and
- Threats to ongoing viability

I, individually as a Director, acknowledge that failure to comply with this protocol may result in sanctions by the Board.

_____ _____

Signature of Director Date

_____

Name (please print)

Document Approval

Approved by: (signature on original copy only and not on posted version)		2015 04 16
	Tim Jackson, Chair Waterloo North Hydro Holding Corporation	**Date**

Waterloo North Hydro

ATTACHMENT 1-4

AUDIT COMMITTEE MANDATE

Purpose:

This is a joint Committee of the Boards of Waterloo North Hydro Inc. ("WNH Inc.") and Waterloo North Hydro Holding Corporation ("WNH Holding Corporation"). The Committee shall consist of no less than three Board members from the independent Directors on the two Boards. The majority of the Committee will be WNH Inc. Board Members and at least one member shall be from the WNH Holding Corporation Board. A quorum of the Audit Committee shall be a simple majority of the Committee members.

The purpose of the Audit Committee is to oversee the work of the Auditors. The Audit Committee should be composed of independent directors. All members of the Committee should be financially literate and at least one member should have accounting or related financial expertise. The external auditors will report to the Boards of WNH Inc. and WNH Holding Corporation through the Audit Committee.

The role of the Audit Committee includes:

1. Recommend the appointment of external auditors to the Boards of WNH Inc. and WNH Holding Corporation, and to the Shareholders.

2. Consult with the Auditors (both with and without the presence of management) with regard to the audit plans, the adequacy of the internal accounting controls and similar matters, and review management responses.

3. Review any "Management Letter" sent by the external auditor to the corporations.

4. Review the audited financial statements of the corporations with both management and external auditors; recommend approval of the statements to the Board of Directors of each corporation.

5. Monitor compliance and ensure the corporations keep appropriate records in accordance with IFRS (International Financial Reporting Standards), and with all relevant laws and regulations governing the prudent financial operation of the corporations.

6. Recommend to the Board of WNH Inc. the dividend amount to pay to WNH Holding Corporation in accordance with the current dividend guidelines.

7. Review the Enterprise Risk Management Program of WNH Inc. and WNH Holding Corporation including their policies and processes with respect to risk identification, assessment and management.

Document Approval

Approved by: (signature on original copy only and not on posted version)		
	Tim Jackson, Chair Waterloo North Hydro Holding Corporation	**Date**

Waterloo North Hydro

ATTACHMENT 1-5

COMPENSATION & HR COMMITTEE MANDATE

Department: Board of Directors Document Owner: Rene W. Gatien Prepared By: Rene W. Gatien	Waterloo North Hydro Holding Corporation Waterloo North Hydro Inc. **COMPENSATION AND HUMAN RESOURCE COMMITTEE MANDATE**	Issued Date: 2015 06 18 Review Date as per GNC Committee 2021 04 01 Review Frequency: 5 year Page: 1 of 2

Purpose:

This is a joint Committee of the Boards of Waterloo North Hydro Inc. ("WNH Inc.") and Waterloo North Hydro Holding Corporation ("WNH Holding Corporation"). The Committee shall consist of no less than three Board members from the independent Directors on the two Boards. The majority of the Committee will be WNH Inc. Board Members and at least one member shall be from the WNH Holding Corporation Board.

The Role of this Committee is to review the remuneration packages for the President & CEO and Senior Management of WNH Inc., and to ensure that the corporation's remuneration policies and practices are consistent with the corporation's Strategic Goals.

Some of the Committee functions shall be as follows:

1. Review and recommend to the full Board of WNH Inc. the salary, bonus and other benefits, direct and indirect, of the President & CEO.
2. Recommend salary guidelines for management from time-to-time.
3. Review the Corporation's policies in the area of management benefits and perquisites from time-to-time.
4. Review and recommend to both Boards the appropriate remuneration for Board members from time-to-time.
5. Initiate with the WNH Holding Corporation when required, the process to replace the President & CEO and the need to strike an Executive Search Committee.

Document Approval

Approved by: (signature on original copy only and not on posted version)		2015 06 18
	Tim Jackson, Chair Waterloo North Hydro Holding Corporation	**Date**

Waterloo North Hydro

ATTACHMENT 1-6

GOVERNANCE COMMITTEE MANDATE

Purpose:

This is a Committee of the Board of Waterloo North Hydro Holding Corporation (the Corporation). The Committee shall consist of no less than three (3) Board members from the independent Directors on the Board. A quorum of the Governance and Nominating Committee (GNC) shall be a simple majority of the number of Committee members.

The Role of this Committee is to ensure that appropriate governance practices are in place for the Boards of the Corporation and of Waterloo North Hydro Inc. (WNH). The Committee will develop corporate governance policies for recommendation to the Board of the Corporation.

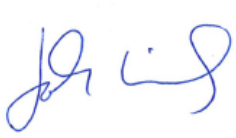
This Committee is also responsible to ensure that the Boards of the Corporation and WNH are comprised of individuals who possess the skills, qualifications and experience to contribute collectively to effective Board governance, and to assist the Board in identifying qualified individuals to become Board members.

Roles and Responsibilities:

1. Review and monitor industry best practices regarding corporate and regulatory governance standards and practices applicable to the Corporation and make recommendations to the Board as appropriate.
2. Monitor the effectiveness of the Board's governance practices and recommend to the Board appropriate policy changes.
3. Annually review Board committee structure, and ensure it is appropriate.
4. Recommend to the Board the appointment of Directors to the positions of Chair and Vice-Chair for the Boards of the Corporation and WNH for the ensuing year.
5. The GNC Chair will seek input from the Corporation's Board Chair and WNH's Board Chair on Committee composition. The GNC will recommend to the Corporation's Board the appointment of Directors to the Board committees.
6. Annually review the current service of the independent Directors for each of the Boards of the Corporation and WNH to plan retirements of existing Board members at staggered intervals for Board continuity. It is expected that Board members will normally serve up to eight (8) years.
7. Initiate the recruiting process when required to fill a vacancy on either Board.
8. When required, recommend to the Board of Directors of the Corporation, nominee for appointment to the Board of WNH.

9. When required, recommend to the appropriate Municipal Council as Shareholder of the Corporation, nominee for appointment to the Board of the Corporation.

Document Approval

Approved by: (signature on original copy only and not on posted version)		February 27, 2020
	John Milloy, Chair Waterloo North Hydro Holding Corporation	**Date**

Waterloo North Hydro

ATTACHMENT 1-7

UTILITYPULSE CUSTOMER SATISFACTION SURVEY

Waterloo North Hydro Inc.

2018 Electric Utility Customer Satisfaction Survey



20 YEARS ANNIVERSARY

UtilityPULSE

Summary

The purpose of this report is to profile the connection between Waterloo North Hydro Inc. (Waterloo North Hydro) and its customers.

The primary objective of the Electric Utility Customer Satisfaction Survey is to provide information to support discussions about improving customer care at every level in your utility.

The UtilityPULSE Report Card® and survey analysis contained in this report is intended to capture the state of mind or perceptions about your customers' need and wants – the information contained in this report will help guide your discussions for making meaningful improvements.

This survey report is privileged and confidential material, and no part may be used outside of Waterloo North Hydro Inc. without written permission from UtilityPULSE, the electric utility survey division of Simul Corporation.

All comments and questions should be addressed to:

Sid Ridgley, UtilityPULSE division, Simul Corporation

Toll free: 1-888-291-7892 or Local: 905-895-7900

Email: sidridgley@utilitypulse.com or sridgley@simulcorp.com



Feedback, Information & Insights

Eighteen months ago, customers were very angry about the quickly increasing costs of electricity over the previous 5 or more years. In fact, some years were double-digit increases while wages and inflation hovered around the 2% mark. We know this because the number of survey respondents in the Ontario benchmark survey who said they 'sometimes worry about paying their bill' grew from 21% to 31% and the number of At Risk customers grew from 11% to 17%.

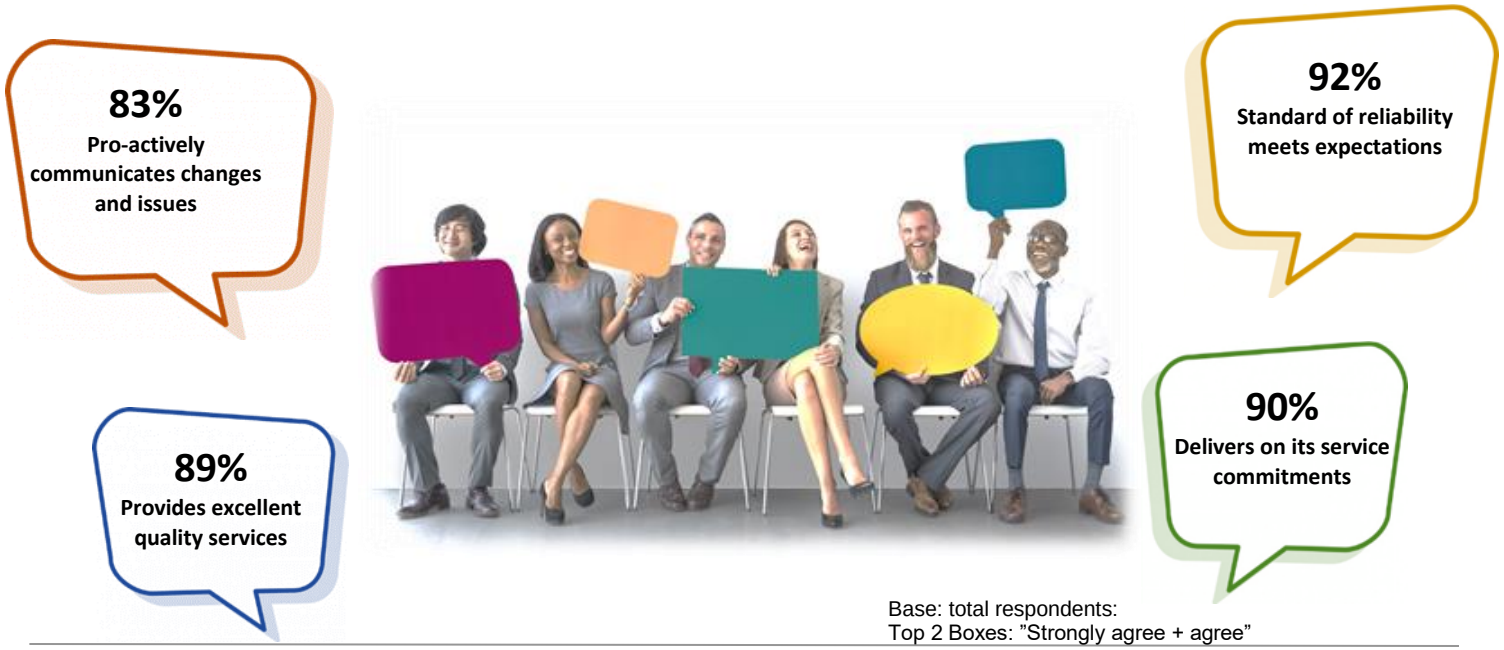
Data from the Waterloo North Hydro and Ontario benchmark surveys show the level of "anger" has dramatically reduced. Whether changes in perception were created by the Liberal Government's Spring 2016 reduction by 25% in electricity prices, or the change to a Conservative government June 2018, or the promise of further reductions in electricity prices, or improvements in the economy, or improvements that LDCs have made in managing outages while improving customers service, or all of the above - a major shift towards a more positive view has taken place. Customers who have a positive view of their LDC and the industry exhibit less resistance to change.

For Waterloo North Hydro in the Fall 2018 survey 14% of respondents and 21% of the Ontario benchmark respondents said they 'sometimes worry about paying their bill.' Also, the At Risk customer respondent levels were 4% for Waterloo North Hydro and 13% for the Ontario benchmark. To be clear, customers are still concerned about the costs of electricity as shown by very low scores in the attribute "The cost of electricity is reasonable when compared to other utilities such as gas, cable or telephone."



Your survey was conducted from September 17 - October 17, 2018, and is based on 403 one-on-one telephone interviews with residential and small commercial customers who pay or look after the electricity bill. Also, survey findings for Waterloo North Hydro are enhanced with the inclusion of data from our UtilityPULSE database and the independently produced Ontario and National Benchmarks.

Helping the LDC generate higher levels of customer satisfaction, or maintaining their current high level, will be based on doing the core job as promised by being professional, efficient and cost-effective. But expectations continue to change. For Fall 2018, three key observations emerge from examining the trends in data from the UtilityPULSE database. They are: customers want to know they have been heard, they have reasonable access to services, and, their LDC is pro-actively communicating – especially during emergency situations.



Base: total respondents:
Top 2 Boxes: "Strongly agree + agree"



The Core Responsibilities

Waterloo North Hydro survey respondents agree strongly + agree somewhat (Top 2 boxes), their LDC: Provides consistent, reliable electricity 94%, Quickly handles outages and restores power 94%, Accurate billing 92% and Makes electricity safety a top priority for employees, contractors, and the public 87%.

Issues: Billing and Blackouts, the "Killer B's"

In a world, which is becoming more complex, and where people are time-pressed, outage and billing issues are likely to motivate customers to contact their LDC.

Problems: Blackouts

Percentage of Respondents indicating that they had a Blackout or Outage problem in the last 12 months			
	Waterloo North Hydro	National	Ontario
2018	37%	39%	44%

Base: total respondents



Problems: Billing issues

Percentage of Respondents indicating that they had a Billing problem in the last 12 months			
	Waterloo North Hydro	National	Ontario
2018	5%	9%	9%

Base: total respondents





While it is true, Waterloo North Hydro receives very good operational scores, it also has a responsibility to professionally and quickly deal with issues customers contact them about. In a complex electricity industry world, this puts additional strain on the skills and competencies of everyone who interacts with customers.

Customer Service

Satisfaction with Customer Service			
Top 2 Boxes: 'very + fairly satisfied'	**Waterloo North Hydro**	**National**	**Ontario**
The time it took to contact someone	86%	66%	64%
The time it took someone to deal with your problem	88%	72%	65%
The helpfulness of the staff who dealt with you	91%	70%	64%
The knowledge of the staff who dealt with you	89%	70%	64%
The level of courtesy of the staff who dealt with you	95%	78%	70%
The quality of information provided by the staff who dealt with you	88%	73%	61%

Base: total respondents who contacted the utility

Traditionally LDCs handle inbound, or customer initiated communications when there are issues. However, more and more customers have an expectation their LDC will also be proficient with outbound communications regarding the important issues.

Communication channels preferred by customers

Most, if not all, of our LDC clients, expect that customers will utilize the electronic channels for getting information or dealing with issues. By doing so, costs for the LDC should decrease. However, in a world where customers expect some outbound contact, they expect their LDC to use those channels to communicate directly with them. Therefore, when problems do occur, and the LDC must initiate contact with their customer, it would be beneficial to the process if customers were contacted via channels they most prefer.



Primary Source of Information

Primary Source for getting information on …					
	Corporate website	Twitter	Facebook	Bill Inserts	eBlasts
A power outage	39%	6%	3%	5%	3%
An issue with your bill	35%	0%	1%	10%	3%
General corporate news	35%	2%	3%	16%	3%
Electricity safety information	42%	1%	2%	19%	3%
Energy conservation tips	38%	2%	3%	24%	3%
Changes in electricity rates	34%	1%	2%	31%	4%

Base: total respondents

Communication about Billing issues

Waterloo North Hydro customers' preferred or primary method for Waterloo North Hydro to contact them about billing issues are as follows:

Preferred method of communication to receive notice of a billing issue		
	Ontario LDCs	Waterloo North Hydro
Telephone	56%	59%
Voice Mail	2%	2%
Text	7%	4%
Email	34%	34%
Don't know	1%	1%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility



Communication during Unplanned Outages

In times of emergency, be they extreme weather events or major equipment failures that cause blackouts and unplanned outages, customer communication can help customers understand what to expect next and when disrupted electricity service might be restored. Early and effective communication helps increase confidence in and credibility of the electricity service provider.

Method of communication Customers prefer their LDC uses during an UNPLANNED OUTAGE						
Recorded Telephone Message	**Email Notice**	**Posted on the Website**	**Social Media**	**Local Radio**	**Local TV**	**Text Message**
36%	25%	5%	3%	8%	3%	19%

Base: total respondents

Notice the difference in the preferred channel based on subject matter. Waterloo North Hydro shouldn't, for example, assume a customer who prefers email for a billing issue will want an email for outage issues. These added variables add complexity to capturing and then using each customers' preferences. Getting the most out of your CRM system is becoming increasingly important.





Preferred Communication Platforms

Which communication platform or platforms would you prefer Waterloo North Hydro use …	
Social media	16%
Newspaper	14%
Radio	16%
Bill inserts	27%
Website	27%
Email / eBlasts	48%
Other	8%

Base: total respondents

Which of the following methods would you most like to see Waterloo North Hydro contact you by…	
Live chat	2%
Phone call	45%
Email	41%
Text/SMS Message	9%
In-person visit	2%

Base: total respondents



Providing communication platforms that are effective and meet customers' needs is key to improving the customer experience. To do this, Waterloo North Hydro must understand how customers communicate with you, and how they would like Waterloo North Hydro to communicate with them in future. Knowing this will allow Waterloo North Hydro to: allocate resources where they are most needed; tailor services to meet customers' needs; and, identify where improvements can be made.

However, while most customers appear to have capacity and willingness to use digital channels, there are also customers who do not for a variety of reasons, such as a lack of ability or resources, or due to a preference for other channels. Waterloo North Hydro will need to consider how these customers can be supported and encouraged to use digital services in the future.

Customers were asked about their level of satisfaction with the information provided by Waterloo North Hydro on the following:

Satisfaction with information provided		
Top 2 Boxes: 'very + fairly satisfied'	**Ontario LDCs**	**Waterloo North Hydro**
The amount of information available to you about energy conservation	82%	82%
The quality of information available when outages occur	73%	78%
The electricity safety education provided to the public	74%	75%
The timeliness and relevance of information for things such as planned outages, construction activity, tree trimming.	78%	77%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility

While providing information is important, one must ensure that it is neither overwhelming the audience to the point of turning them off, or not providing enough information causing recipients to feel you have not adequately looked after them.

Amount of Information received is …			
	LESS than you would like	**About the RIGHT amount**	**MORE than you need**
Safety	7%	81%	5%
Energy Efficiency	12%	77%	7%
Billing and Account Questions	4%	86%	4%
Outages	13%	75%	4%
Construction projects and planning	15%	69%	7%

Base: total respondents



Communication Score – New for 2018

The pressure to communicate via multiple communication platforms continues to increase. There is also an expectation the utility will, from an outbound perspective, contact the customer via their preferred channel.



Communication Score		
	Ontario LDCs	Waterloo North Hydro
Communication Score	79%	80%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility

Future Communication Efforts

Respondents were asked on which topics Waterloo North Hydro should focus their future communication efforts.

Future Communication Efforts should focus on …	
	Waterloo North Hydro
Safety	15%
Energy Efficiency	30%
Billing and Account Questions	10%
Outages	10%
Construction projects and planning	8%

Base: total respondents



Respondents were asked: ***"Is there a topic other than the ones we've talked about that you would like Waterloo North Hydro to provide more information about?"*** Base: total respondents



14%
wanted **additional information.**



85%
Required **no further information.**



ADDITIONAL TOPICS mentioned:

- Prices/costs/fees
- Communication with customers
- Rebates
- Payment options
- My usage/my neighbour's consumption
- Potential mergers
- SMART meters
- Outage map





The Convenience of Services Score – New for 2018



Rising customer expectations and demands means customers expect to be able to contact you 24 hours a day, seven days a week using various communication avenues, i.e. Telephone, your website and/or even social media. Customers expect flexible and more personalized services. Providing customers with clear, easy to access services and information which is easy to understand has a significant impact on the customer experience.

Providing customers with clear, easy to access services and information which is easy to understand has a significant impact on the customer experience.

Access to services		
Top 2 Boxes: 'very + somewhat satisfied'	**Ontario LDCs**	**Waterloo North Hydro**
The availability of call-centre staff Monday to Friday from 8:30 am to 4:30 pm	76%	75%
The 24/7 availability of system operators to respond to outages	77%	80%
The online self-serve options for managing your account	63%	67%
The online self-serve options for request services	56%	61%
The 24/7 availability of outage map on the website	n/a	66%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility





Based on customer responses, Waterloo North Hydro has rated 81% for Convenience of Services while Ontario LDCs rated 79%.

Use of Technology

Technology is fundamentally reshaping customer care in both the short and longer terms. The expectation is, technology will reduce the number of inbound calls by empowering customers to get the technical or service support they need to solve many of the problems which exist.

Respondents were asked whether they used the following forms of technology:

Use of technology			
	Yes	**No**	**Don't know/Refusal**
Access the internet for information	83%	17%	0%
Have a social media account	54%	44%	1%
Use online banking services	71%	25%	3%
Shop online	64%	34%	2%

Base: total respondents

Social Media

Social media is evolving, and it gives companies the opportunity to proactively identify customer issues which will help the utility address problems quickly thereby minimizing the impact on the broader customer base. 54% of Waterloo North Hydro customers indicated they had a social media account.



Which social media accounts do you have …	
Facebook	58%
Twitter	24%
YouTube	34%
LinkedIn	38%

Base: total respondents who claimed to have social media accounts

Do you follow Waterloo North Hydro in …	Yes	No	Don't know
Facebook	5%	95%	0%
Twitter	29%	70%	1%
YouTube	3%	97%	0%
LinkedIn	4%	95%	1%

Base: total respondents who claimed to have social media accounts

Credibility & Trust Index

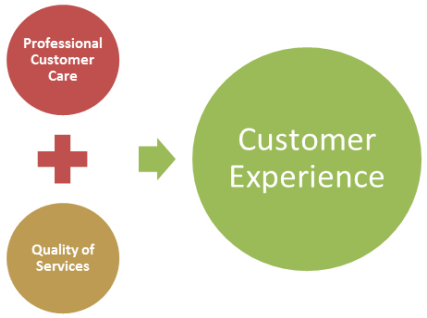
As society becomes more complicated and complex, the opportunities for failure increase. A key to healthy relationships with customers is to be trusted, trustworthy and credible.

Waterloo North Hydro Credibility & Trust score is 87% while the Ontario benchmark is 81% and the National benchmark is 82%.



Customer Experience Performance rating (CEPr)

Do customers believe they will have a good experience if/when they do contact their LDC? Or do they believe they must prepare for 'war'? Of course, subject matter and customer affinity levels play a role in determining how a customer might prepare for interaction with a professional at Waterloo North Hydro.



Customer Experience Performance rating (CEPr)			
	Waterloo North Hydro	**National**	**Ontario**
CEPr: all respondents	89%	84%	83%

Base: total respondents

Ensuring that the customer experience is a good one, requires high quality services and well-trained people. Survey respondents gave Waterloo North Hydro excellent operational and representative scores.

Operational Attributes			
	Waterloo North Hydro	**National**	**Ontario**
Provides consistent, reliable energy	94%	89%	90%
Quickly handles outages and restores power	94%	87%	86%
Accurate billing	92%	86%	87%

Base: total respondents with an opinion



Representative Attributes			
	Waterloo North Hydro	National	Ontario
Deals professionally with customers' problems	89%	83%	82%
Is 'easy to do business with'	90%	82%	82%
Customer-focused and treats customers as if they're valued	83%	80%	79%

Base: total respondents with an opinion

Customer Centric Engagement Index

The term "customer engagement" is used by many but understood by few. The purpose of customer engagement is to have two-way interactions which build understanding between the stakeholders and stronger professional business-like relationships. Customers who are highly engaged are more inclined to look past costs and money issues and be more supportive of what the LDC wants to do or accomplish.

As we have stated in previous reports: Customer Engagement is about how customers think, feel and act towards the organization. Ensuring customers respond positively requires they be rationally satisfied with the services provided AND emotionally connected to the LDC and its brand.

Utility Customer Centric Engagement Index (CCEI)			
	Waterloo North Hydro	National	Ontario
CCEI	86%	81%	80%

Base: total respondents



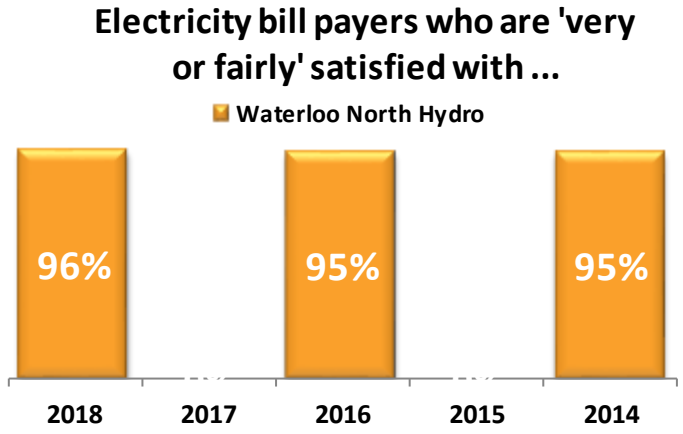
Customer Satisfaction

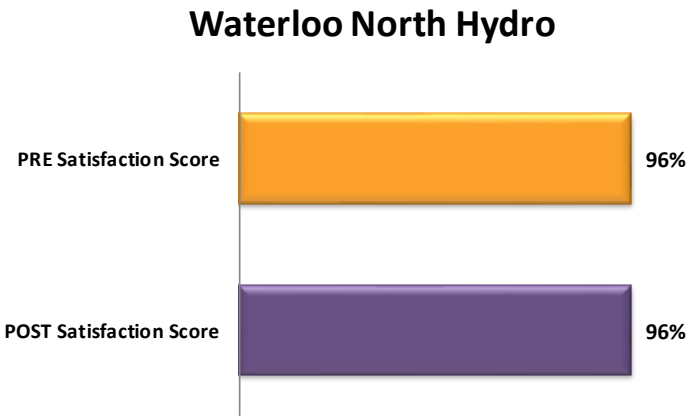
By itself, this metric is not good enough to gain a picture of how well an LDC is doing but it is a measure about whether the LDC is “doing the job” as expected. However, without satisfaction, there is no gateway to loyalty.

SATISFACTION SCORES – Electricity customers’ satisfaction			
Top 2 Boxes: ‘very + fairly satisfied’	**Waterloo North Hydro**	**National**	**Ontario**
PRE: Initial Satisfaction Scores	96%	91%	91%
POST: End of Interview	96%	91%	89%

Base: total respondents

The real prize is in the development of a relationship with customers. More good things exist when a customer has a high affinity for the LDC than when they dislike it. At Risk customers are more likely to complain than other customers when there are issues. Secure customers are more likely to support the direction of their LDC.







Loyalty Groups

Customer Loyalty Groups				
Waterloo North Hydro	**Secure**	**Favorable**	**Indifferent**	**At Risk**
2018	34%	19%	43%	4%

Base: total respondents

In the monopoly world of the LDC, loyalty is an attitudinal metric. In private industry, it is a behavioural metric.

Customer Commitment

Electricity customers' loyalty – … Is a company that you would like to continue to do business with			
	Waterloo North Hydro	**National**	**Ontario**
Top 2 Boxes: 'Definitely + Probably' would continue	90%	80%	78%

Base: total respondents

Customer Advocacy

Electricity customers' loyalty – … is a company that you would recommend to a friend or colleague			
	Waterloo North Hydro	**National**	**Ontario**
Top 2 boxes: 'Definitely + Probably' would recommend	87%	76%	70%

Base: total respondents



UtilityPULSE Report Card®

The purpose of the UtilityPULSE Report Card is to provide electric utilities with a snapshot of performance – on the things customers deem to be important.

Waterloo North Hydro's UtilityPULSE Report Card®

Performance

	CATEGORY	Waterloo North Hydro	National	Ontario
1	**Customer Care**	**A**	**B+**	**B+**
	Price and Value	B+	B	B
	Customer Service	A	A	B+
2	**Company Image**	**A**	**B+**	**B+**
	Company Leadership	A	B+	B+
	Corporate Stewardship	A	A	B+
3	**Management Operations**	**A+**	**A**	**A**
	Operational Effectiveness	A+	A	A
	Power Quality and Reliability	A+	A	A
	OVERALL	**A**	**A**	**B+**

Base: total respondents





Looking to the future, where to from here?

Technological advances, social disruptions, and other issues will continue for everyone in the LDC industry. Fixing the ills of yesterday are not possible, but instilling confidence that the LDC can handle future customer needs & wants strengthens the customer-supplier relationship. By engaging stakeholders and obtaining their input in undertaking a priority planning process helps to build "prepared minds"—that is, to make sure that the LDC decision makers have a solid understanding of customer priorities, and what the business might need to change or make investments in.

High priority items based on information taken from our UtilityPULSE database include: ‘Pro-actively maintaining and upgrading equipment,’ ‘Reducing response times to outages,’ and ‘Investing more in the electricity grid to reduce outages and to increase reliability and safety.’

The high scoring attributes demonstrate Waterloo North Hydro's operational effectiveness, while the low scoring attributes point to a need for more marketing communications and/or PR types of activities.

Highest scoring attributes

High scoring attributes			
Top 2 Boxes: ‘Strongly + Somewhat agree’	**Waterloo North Hydro**	**National**	**Ontario**
Provides consistent, reliable electricity	94%	89%	90%
Makes electricity safety a top priority for employees and contractors	87%	87%	86%
Quickly handles outages and restores power	94%	87%	86%
Has a standard of reliability that meets expectations	92%	88%	88%

Base: total respondents with an opinion



Lowest scoring attributes

Low scoring attributes			
Top 2 Boxes: 'Strongly + Somewhat agree'	**Waterloo North Hydro**	**National**	**Ontario**
Spends money prudently	84%	73%	66%
Operates a cost-effective electricity system	78%	70%	71%
Provides good value for your money	79%	72%	71%
Cost of electricity is reasonable when compared to other utilities	70%	66%	61%

Base: total respondents with an opinion

Paying for electricity

Fall 2018 data shows dramatic changes in customers' ability to pay. Whether the change is due to price reductions, or anticipated price reductions, or a better economy, is unclear. Ability to pay is highly correlated to satisfaction. The number one billing problem, for 20 years, is "the amount is too high."

Is paying for electricity a worry or a major problem?				
	Not a worry	**Sometimes**	**Often**	**Depends**
Waterloo North Hydro	78%	14%	5%	1%
National	71%	18%	7%	0%
Ontario	68%	21%	8%	1%

Base: total respondents



Numbers at a Glance

	Waterloo North Hydro	National	Ontario
Customer Satisfaction: Initial	96%	91%	91%
Customer Satisfaction: Post	96%	91%	89%
Communication Score	80%	--	79%
Overall Satisfaction with the most recent experience	95%	78%	77%
Convenience of Services Score	81%	--	79%
Customer Experience Performance Rating (CEPr)	89%	84%	83%
Customer Centric Engagement Index (CCEI)	86%	81%	80%
Credibility & Trust Index	87%	82%	81%
UtilityPulse Report Card©	A	A	B+

Over the past 5-6 years LDCs have witnessed their customers move from being concerned about costs, to worried about cost, to being upset about costs and being angry about costs – and now returning to what we believe is a concern about costs. From a human nature point-of-view, when people are angry, they tend to look back in time to find someone or something to blame for their predicament. Now that customers have returned to being concerned, they are more apt to be looking forward while putting more focus on identifying and determining how they might handle future issues. The data from our Fall 2018 interviews with over 9,000+ customers shows there is support for making pro-active investments in reliability, outage restoration, outage management, and communications.





We believe, for many in society, from 2008 to mid-2017 survival was the key goal, less so in 2018. The outlook for the economy is better; wages are improving and, job openings are more plentiful – therefore putting more focus on the future.

The good news is Waterloo North Hydro remains what we call an influential brand company. The safe, reliable distribution of electricity to homes and businesses is a job which makes life better, more interesting and meaningful for consumers and customers. As a company which affects the daily life of people and businesses – an influential brand – it must consistently demonstrate that it is credible, trusted, future-oriented, cares about customers, cares about safety, cares about the environment, is professional, has high standards and is a valued corporate citizen.



The industry is far more complex today than it was 20 years ago when we conducted the 1st Annual Customer Satisfaction survey for electric utilities. Data shows that being customer-centric is important for ensuring future success of the LDC. Customers want respect.

We recommend leveraging the results from your 2018 customer satisfaction survey by having meaningful conversations with everyone about your customers' – satisfaction, concerns, wants, etc. LDCs with a constructive employee culture with high levels of employee engagement and empowerment will have an easier time defining a future path forward.



Sid Ridgley

Simul/UtilityPULSE
Email: sidridgley@utilitypulse.com or sridgley@simulcorp.com

November 2018

Good things happen when workplaces work. You'll receive both strategic and pragmatic guidance about how to improve Customer satisfaction & Employee engagement with leaders who lead and a front-line which is inspired. We provide training, consulting, surveys, diagnostic tools, and keynotes. The electric utility industry is a market segment we specialize in. Both large and small utilities have received actionable insights. For 20 years we have been talking to 1000's of utility customers in Ontario and across Canada and we have expertise which is beneficial to every utility.

Culture, Leadership & Performance – Organizational Development	**Focus Groups, Surveys, Polls, Diagnostics**	**Customer Service Excellence**
Leadership development	Diagnostics ie. Change Readiness, Leadership Effectiveness, Managerial Competencies	Service Excellence Leadership
Strategic Planning	Surveys & Polls	Telephone Skills
Teambuilding	Customer Satisfaction and Loyalty Benchmarking Surveys	Customer Care
Organizational Culture Transformation	Organization Culture Surveys	Dealing with Difficult Customers

Benefit from our expertise in Customer Satisfaction, Leadership development, Strategy development or review, and Front-line & Top-line driven-change. We're experts in helping you assess and then transform your organization's culture to one where achieving goals while creating higher levels of customer satisfaction is important. Anyone can present data, or design programs – we believe having an understanding of the industry before doing so is crucial. Call us when creating an organization where more employees satisfy more customers more often, is important.

Your personal contact is:

Sid Ridgley, CSP

Phone: (905) 895-7900 x 29 E-mail: sridgley@simulcorp.com

Waterloo North Hydro Inc.

2018 Electric Utility Customer Satisfaction Survey



20 YEARS ANNIVERSARY

UtilityPULSE

The purpose of this report is to profile the connection between Waterloo North Hydro Inc. (Waterloo North Hydro) and its customers.

The primary objective of the Electric Utility Customer Satisfaction Survey is to provide information to support discussions about improving customer care at every level in your utility.

The UtilityPULSE Report Card® and survey analysis contained in this report is intended to capture the state of mind or perceptions about your customers' need and wants – the information contained in this report will help guide your discussions for making meaningful improvements.

This survey report is privileged and confidential material, and no part may be used outside of Waterloo North Hydro Inc. without written permission from UtilityPULSE, the electric utility survey division of Simul Corporation.

All comments and questions should be addressed to:

Sid Ridgley, UtilityPULSE division, Simul Corporation

Toll free: 1-888-291-7892 or Local: 905-895-7900

Email: sidridgley@utilitypulse.com or sridgley@simulcorp.com



Feedback, Information & Insights

Eighteen months ago, customers were very angry about the quickly increasing costs of electricity over the previous 5 or more years. In fact, some years were double-digit increases while wages and inflation hovered around the 2% mark. We know this because the number of survey respondents in the Ontario benchmark survey who said they 'sometimes worry about paying their bill' grew from 21% to 31% and the number of At Risk customers grew from 11% to 17%.

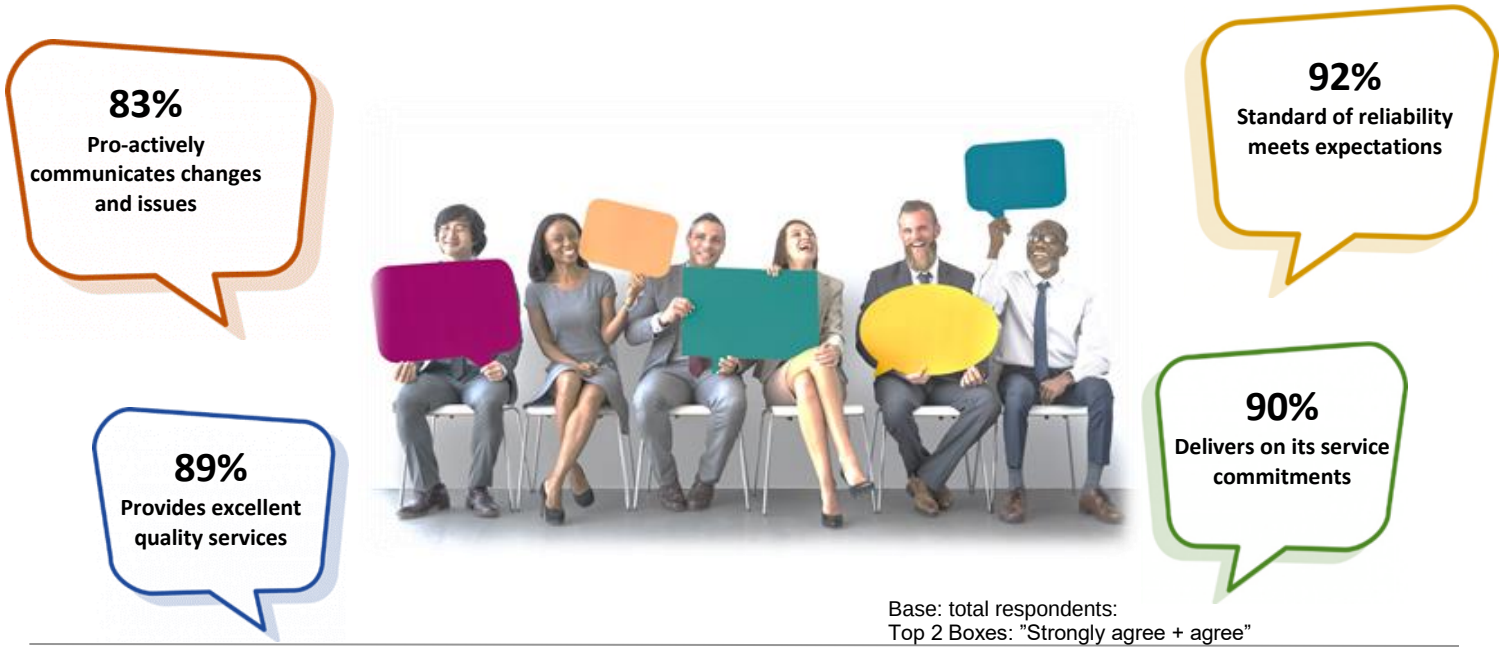
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Base: total respondents:
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Traditionally LDCs handle inbound, or customer initiated communications when there are issues. However, more and more customers have an expectation their LDC will also be proficient with outbound communications regarding the important issues.

Communication channels preferred by customers

Most, if not all, of our LDC clients, expect that customers will utilize the electronic channels for getting information or dealing with issues. By doing so, costs for the LDC should decrease. However, in a world where customers expect some outbound contact, they expect their LDC to use those channels to communicate directly with them. Therefore, when problems do occur, and the LDC must initiate contact with their customer, it would be beneficial to the process if customers were contacted via channels they most prefer.



Primary Source of Information

Primary Source for getting information on …					
	Corporate website	Twitter	Facebook	Bill Inserts	eBlasts
A power outage	39%	6%	3%	5%	3%
An issue with your bill	35%	0%	1%	10%	3%
General corporate news	35%	2%	3%	16%	3%
Electricity safety information	42%	1%	2%	19%	3%
Energy conservation tips	38%	2%	3%	24%	3%
Changes in electricity rates	34%	1%	2%	31%	4%

Base: total respondents

Communication about Billing issues

Waterloo North Hydro customers' preferred or primary method for Waterloo North Hydro to contact them about billing issues are as follows:

Preferred method of communication to receive notice of a billing issue		
	Ontario LDCs	Waterloo North Hydro
Telephone	56%	59%
Voice Mail	2%	2%
Text	7%	4%
Email	34%	34%
Don't know	1%	1%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility



Communication during Unplanned Outages

In times of emergency, be they extreme weather events or major equipment failures that cause blackouts and unplanned outages, customer communication can help customers understand what to expect next and when disrupted electricity service might be restored. Early and effective communication helps increase confidence in and credibility of the electricity service provider.

Method of communication Customers prefer their LDC uses during an UNPLANNED OUTAGE						
Recorded Telephone Message	**Email Notice**	**Posted on the Website**	**Social Media**	**Local Radio**	**Local TV**	**Text Message**
36%	25%	5%	3%	8%	3%	19%

Base: total respondents

Notice the difference in the preferred channel based on subject matter. Waterloo North Hydro shouldn't, for example, assume a customer who prefers email for a billing issue will want an email for outage issues. These added variables add complexity to capturing and then using each customers' preferences. Getting the most out of your CRM system is becoming increasingly important.





Preferred Communication Platforms

Which communication platform or platforms would you prefer Waterloo North Hydro use …	
Social media	16%
Newspaper	14%
Radio	16%
Bill inserts	27%
Website	27%
Email / eBlasts	48%
Other	8%

Base: total respondents

Which of the following methods would you most like to see Waterloo North Hydro contact you by…	
Live chat	2%
Phone call	45%
Email	41%
Text/SMS Message	9%
In-person visit	2%

Base: total respondents



Providing communication platforms that are effective and meet customers' needs is key to improving the customer experience. To do this, Waterloo North Hydro must understand how customers communicate with you, and how they would like Waterloo North Hydro to communicate with them in future. Knowing this will allow Waterloo North Hydro to: allocate resources where they are most needed; tailor services to meet customers' needs; and, identify where improvements can be made.

However, while most customers appear to have capacity and willingness to use digital channels, there are also customers who do not for a variety of reasons, such as a lack of ability or resources, or due to a preference for other channels. Waterloo North Hydro will need to consider how these customers can be supported and encouraged to use digital services in the future.

Customers were asked about their level of satisfaction with the information provided by Waterloo North Hydro on the following:

Satisfaction with information provided		
Top 2 Boxes: 'very + fairly satisfied'	**Ontario LDCs**	**Waterloo North Hydro**
The amount of information available to you about energy conservation	82%	82%
The quality of information available when outages occur	73%	78%
The electricity safety education provided to the public	74%	75%
The timeliness and relevance of information for things such as planned outages, construction activity, tree trimming.	78%	77%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility

While providing information is important, one must ensure that it is neither overwhelming the audience to the point of turning them off, or not providing enough information causing recipients to feel you have not adequately looked after them.

Amount of Information received is …			
	LESS than you would like	**About the RIGHT amount**	**MORE than you need**
Safety	7%	81%	5%
Energy Efficiency	12%	77%	7%
Billing and Account Questions	4%	86%	4%
Outages	13%	75%	4%
Construction projects and planning	15%	69%	7%

Base: total respondents



Communication Score – New for 2018

The pressure to communicate via multiple communication platforms continues to increase. There is also an expectation the utility will, from an outbound perspective, contact the customer via their preferred channel.



Communication Score		
	Ontario LDCs	Waterloo North Hydro
Communication Score	79%	80%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility

Future Communication Efforts

Respondents were asked on which topics Waterloo North Hydro should focus their future communication efforts.

Future Communication Efforts should focus on …	
	Waterloo North Hydro
Safety	15%
Energy Efficiency	30%
Billing and Account Questions	10%
Outages	10%
Construction projects and planning	8%

Base: total respondents



Respondents were asked: ***"Is there a topic other than the ones we've talked about that you would like Waterloo North Hydro to provide more information about?"*** Base: total respondents



14%
wanted **additional information.**



85%
Required **no further information.**



ADDITIONAL TOPICS mentioned:

- Prices/costs/fees
- Communication with customers
- Rebates
- Payment options
- My usage/my neighbour's consumption
- Potential mergers
- SMART meters
- Outage map





The Convenience of Services Score – New for 2018



Rising customer expectations and demands means customers expect to be able to contact you 24 hours a day, seven days a week using various communication avenues, i.e. Telephone, your website and/or even social media. Customers expect flexible and more personalized services. Providing customers with clear, easy to access services and information which is easy to understand has a significant impact on the customer experience.

Providing customers with clear, easy to access services and information which is easy to understand has a significant impact on the customer experience.

Access to services		
Top 2 Boxes: 'very + somewhat satisfied'	**Ontario LDCs**	**Waterloo North Hydro**
The availability of call-centre staff Monday to Friday from 8:30 am to 4:30 pm	76%	75%
The 24/7 availability of system operators to respond to outages	77%	80%
The online self-serve options for managing your account	63%	67%
The online self-serve options for request services	56%	61%
The 24/7 availability of outage map on the website	n/a	66%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility





Based on customer responses, Waterloo North Hydro has rated 81% for Convenience of Services while Ontario LDCs rated 79%.

Use of Technology

Technology is fundamentally reshaping customer care in both the short and longer terms. The expectation is, technology will reduce the number of inbound calls by empowering customers to get the technical or service support they need to solve many of the problems which exist.

Respondents were asked whether they used the following forms of technology:

Use of technology			
	Yes	**No**	**Don't know/Refusal**
Access the internet for information	83%	17%	0%
Have a social media account	54%	44%	1%
Use online banking services	71%	25%	3%
Shop online	64%	34%	2%

Base: total respondents

Social Media

Social media is evolving, and it gives companies the opportunity to proactively identify customer issues which will help the utility address problems quickly thereby minimizing the impact on the broader customer base. 54% of Waterloo North Hydro customers indicated they had a social media account.



Which social media accounts do you have …	
Facebook	58%
Twitter	24%
YouTube	34%
LinkedIn	38%

Base: total respondents who claimed to have social media accounts

Do you follow Waterloo North Hydro in …	Yes	No	Don't know
Facebook	5%	95%	0%
Twitter	29%	70%	1%
YouTube	3%	97%	0%
LinkedIn	4%	95%	1%

Base: total respondents who claimed to have social media accounts

Credibility & Trust Index

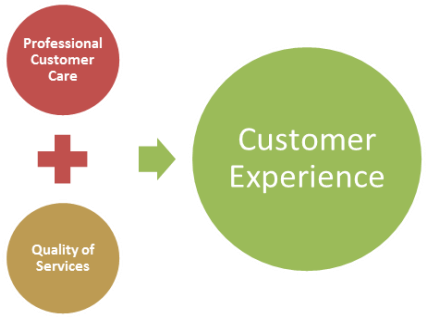
As society becomes more complicated and complex, the opportunities for failure increase. A key to healthy relationships with customers is to be trusted, trustworthy and credible.

Waterloo North Hydro Credibility & Trust score is 87% while the Ontario benchmark is 81% and the National benchmark is 82%.



Customer Experience Performance rating (CEPr)

Do customers believe they will have a good experience if/when they do contact their LDC? Or do they believe they must prepare for 'war'? Of course, subject matter and customer affinity levels play a role in determining how a customer might prepare for interaction with a professional at Waterloo North Hydro.



Customer Experience Performance rating (CEPr)			
	Waterloo North Hydro	**National**	**Ontario**
CEPr: all respondents	89%	84%	83%

Base: total respondents

Ensuring that the customer experience is a good one, requires high quality services and well-trained people. Survey respondents gave Waterloo North Hydro excellent operational and representative scores.

Operational Attributes			
	Waterloo North Hydro	**National**	**Ontario**
Provides consistent, reliable energy	94%	89%	90%
Quickly handles outages and restores power	94%	87%	86%
Accurate billing	92%	86%	87%

Base: total respondents with an opinion



Representative Attributes			
	Waterloo North Hydro	National	Ontario
Deals professionally with customers' problems	89%	83%	82%
Is 'easy to do business with'	90%	82%	82%
Customer-focused and treats customers as if they're valued	83%	80%	79%

Base: total respondents with an opinion

Customer Centric Engagement Index

The term "customer engagement" is used by many but understood by few. The purpose of customer engagement is to have two-way interactions which build understanding between the stakeholders and stronger professional business-like relationships. Customers who are highly engaged are more inclined to look past costs and money issues and be more supportive of what the LDC wants to do or accomplish.

As we have stated in previous reports: Customer Engagement is about how customers think, feel and act towards the organization. Ensuring customers respond positively requires they be rationally satisfied with the services provided AND emotionally connected to the LDC and its brand.

Utility Customer Centric Engagement Index (CCEI)			
	Waterloo North Hydro	National	Ontario
CCEI	86%	81%	80%

Base: total respondents



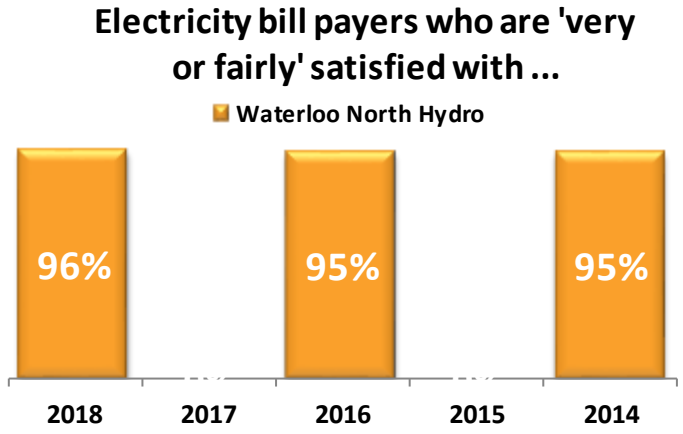
Customer Satisfaction

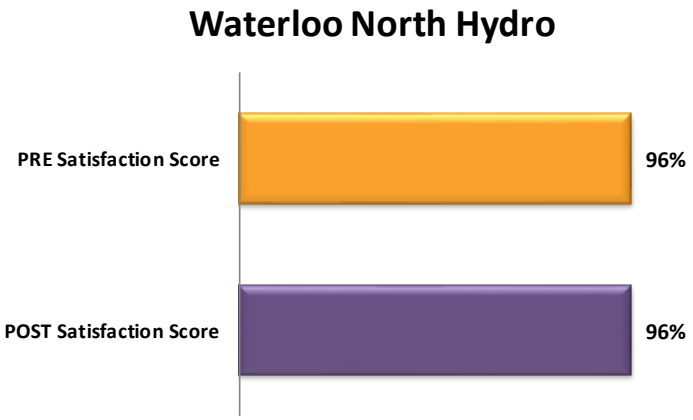
By itself, this metric is not good enough to gain a picture of how well an LDC is doing but it is a measure about whether the LDC is “doing the job” as expected. However, without satisfaction, there is no gateway to loyalty.

SATISFACTION SCORES – Electricity customers’ satisfaction			
Top 2 Boxes: ‘very + fairly satisfied’	**Waterloo North Hydro**	**National**	**Ontario**
PRE: Initial Satisfaction Scores	96%	91%	91%
POST: End of Interview	96%	91%	89%

Base: total respondents

The real prize is in the development of a relationship with customers. More good things exist when a customer has a high affinity for the LDC than when they dislike it. At Risk customers are more likely to complain than other customers when there are issues. Secure customers are more likely to support the direction of their LDC.







Loyalty Groups

Customer Loyalty Groups				
Waterloo North Hydro	**Secure**	**Favorable**	**Indifferent**	**At Risk**
2018	34%	19%	43%	4%

Base: total respondents

In the monopoly world of the LDC, loyalty is an attitudinal metric. In private industry, it is a behavioural metric.

Customer Commitment

Electricity customers' loyalty – … Is a company that you would like to continue to do business with			
	Waterloo North Hydro	**National**	**Ontario**
Top 2 Boxes: 'Definitely + Probably' would continue	90%	80%	78%

Base: total respondents

Customer Advocacy

Electricity customers' loyalty – … is a company that you would recommend to a friend or colleague			
	Waterloo North Hydro	**National**	**Ontario**
Top 2 boxes: 'Definitely + Probably' would recommend	87%	76%	70%

Base: total respondents



UtilityPULSE Report Card®

The purpose of the UtilityPULSE Report Card is to provide electric utilities with a snapshot of performance – on the things customers deem to be important.

Waterloo North Hydro's UtilityPULSE Report Card®

Performance

	CATEGORY	Waterloo North Hydro	National	Ontario
1	**Customer Care**	**A**	**B+**	**B+**
	Price and Value	B+	B	B
	Customer Service	A	A	B+
2	**Company Image**	**A**	**B+**	**B+**
	Company Leadership	A	B+	B+
	Corporate Stewardship	A	A	B+
3	**Management Operations**	**A+**	**A**	**A**
	Operational Effectiveness	A+	A	A
	Power Quality and Reliability	A+	A	A
	OVERALL	**A**	**A**	**B+**

Base: total respondents





Looking to the future, where to from here?

Technological advances, social disruptions, and other issues will continue for everyone in the LDC industry. Fixing the ills of yesterday are not possible, but instilling confidence that the LDC can handle future customer needs & wants strengthens the customer-supplier relationship. By engaging stakeholders and obtaining their input in undertaking a priority planning process helps to build "prepared minds"—that is, to make sure that the LDC decision makers have a solid understanding of customer priorities, and what the business might need to change or make investments in.

High priority items based on information taken from our UtilityPULSE database include: ‘Pro-actively maintaining and upgrading equipment,’ ‘Reducing response times to outages,’ and ‘Investing more in the electricity grid to reduce outages and to increase reliability and safety.’

The high scoring attributes demonstrate Waterloo North Hydro's operational effectiveness, while the low scoring attributes point to a need for more marketing communications and/or PR types of activities.

Highest scoring attributes

High scoring attributes			
Top 2 Boxes: ‘Strongly + Somewhat agree’	**Waterloo North Hydro**	**National**	**Ontario**
Provides consistent, reliable electricity	94%	89%	90%
Makes electricity safety a top priority for employees and contractors	87%	87%	86%
Quickly handles outages and restores power	94%	87%	86%
Has a standard of reliability that meets expectations	92%	88%	88%

Base: total respondents with an opinion



Lowest scoring attributes

Low scoring attributes			
Top 2 Boxes: 'Strongly + Somewhat agree'	**Waterloo North Hydro**	**National**	**Ontario**
Spends money prudently	84%	73%	66%
Operates a cost-effective electricity system	78%	70%	71%
Provides good value for your money	79%	72%	71%
Cost of electricity is reasonable when compared to other utilities	70%	66%	61%

Base: total respondents with an opinion

Paying for electricity

Fall 2018 data shows dramatic changes in customers' ability to pay. Whether the change is due to price reductions, or anticipated price reductions, or a better economy, is unclear. Ability to pay is highly correlated to satisfaction. The number one billing problem, for 20 years, is "the amount is too high."

Is paying for electricity a worry or a major problem?				
	Not a worry	**Sometimes**	**Often**	**Depends**
Waterloo North Hydro	78%	14%	5%	1%
National	71%	18%	7%	0%
Ontario	68%	21%	8%	1%

Base: total respondents



Numbers at a Glance

	Waterloo North Hydro	National	Ontario
Customer Satisfaction: Initial	96%	91%	91%
Customer Satisfaction: Post	96%	91%	89%
Communication Score	80%	--	79%
Overall Satisfaction with the most recent experience	95%	78%	77%
Convenience of Services Score	81%	--	79%
Customer Experience Performance Rating (CEPr)	89%	84%	83%
Customer Centric Engagement Index (CCEI)	86%	81%	80%
Credibility & Trust Index	87%	82%	81%
UtilityPulse Report Card©	A	A	B+

Over the past 5-6 years LDCs have witnessed their customers move from being concerned about costs, to worried about cost, to being upset about costs and being angry about costs – and now returning to what we believe is a concern about costs. From a human nature point-of-view, when people are angry, they tend to look back in time to find someone or something to blame for their predicament. Now that customers have returned to being concerned, they are more apt to be looking forward while putting more focus on identifying and determining how they might handle future issues. The data from our Fall 2018 interviews with over 9,000+ customers shows there is support for making pro-active investments in reliability, outage restoration, outage management, and communications.





We believe, for many in society, from 2008 to mid-2017 survival was the key goal, less so in 2018. The outlook for the economy is better; wages are improving and, job openings are more plentiful – therefore putting more focus on the future.

The good news is Waterloo North Hydro remains what we call an influential brand company. The safe, reliable distribution of electricity to homes and businesses is a job which makes life better, more interesting and meaningful for consumers and customers. As a company which affects the daily life of people and businesses – an influential brand – it must consistently demonstrate that it is credible, trusted, future-oriented, cares about customers, cares about safety, cares about the environment, is professional, has high standards and is a valued corporate citizen.



The industry is far more complex today than it was 20 years ago when we conducted the 1st Annual Customer Satisfaction survey for electric utilities. Data shows that being customer-centric is important for ensuring future success of the LDC. Customers want respect.

We recommend leveraging the results from your 2018 customer satisfaction survey by having meaningful conversations with everyone about your customers' – satisfaction, concerns, wants, etc. LDCs with a constructive employee culture with high levels of employee engagement and empowerment will have an easier time defining a future path forward.



Sid Ridgley

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November 2018



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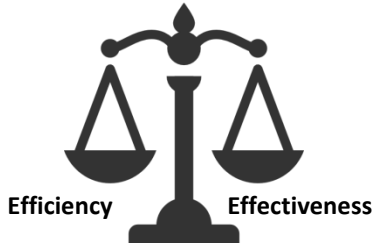


Satisfaction (pre & post)

As stated multiple times over many years, measuring satisfaction is an important starting point, for the creation of loyal customers. However, it is a misnomer to conclude that highly satisfied customers are also customers with a high affinity or loyalty quotient. One can be satisfied but not necessarily loyal. But it is true to conclude that the LDC (its people) must do the job as expected and required before there can be a positive emotional connection.

We've stated in the past, a focus on satisfaction prompts an organization to continue to evolve in ways which make sense to those who pay the bills. A focus on satisfaction is a focus on effectiveness in the delivery of service to the customer. Satisfied customers who trust their LDC may be more likely to seek advice, i.e. energy efficiency methods and may be more receptive to important messages, i.e. safety, new capital projects, etc.

About ratings/measures:



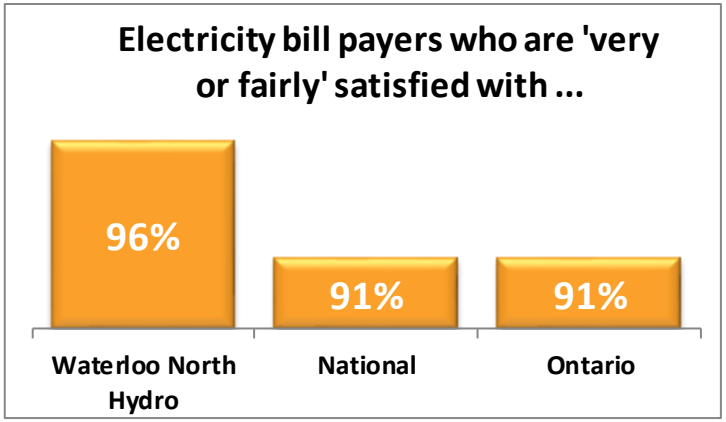
- Satisfaction is not a program; it is an outcome.
- ***Efficiency*** *is about achieving objectives with the minimum amount of people, time, money and other resources.*
- ***Effectiveness*** *ratings are measures keeping the organization and its people more future focused than efficiency ratings*

Finding the right balance between efficiency and effectiveness measures is difficult.

Efficiency ratings won't lead to satisfaction, but they can lead to dissatisfaction. Taking 90 seconds to answer the phone will create an agitated customer who, for the most part starts off being dissatisfied with the service – before you've even had a chance to deal with or solve their problem. Answering the phone in 20 seconds but not solving the customer's problem is not going to ameliorate the customer's perception about the transaction.

Customer expectations of their electricity LDC have evolved past the "provide electricity reliably, safely and billed both accurately with fair pricing". They do expect their LDC to be ethical, forward-thinking, competent and trustworthy.

- **Satisfaction** happens when utility core services meet or exceed customer's needs, wants, or expectations.
- **Loyalty** occurs when a customer makes an emotional connection with their electric utility on a diverse range of expectations beyond core services.



Base: total respondents

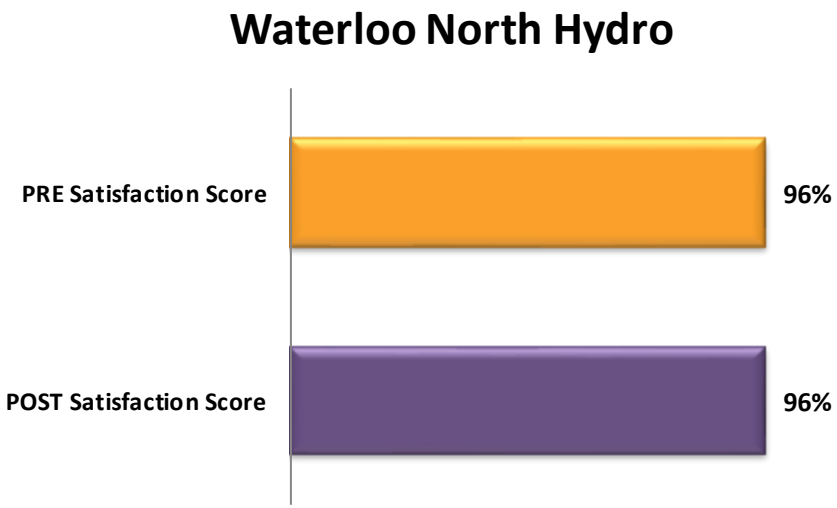
Satisfaction alone does not make a customer loyal; a willingness to commit and advocate for a company along with satisfaction identifies the three basic customer attitudes which underpin loyalty profiles. While satisfaction is

an important component of loyalty, the loyalty definition needs to incorporate more attitudinal and emotive components.

Electricity bill payers who are 'very or fairly' satisfied with…					
	2018	2017	2016	2015	2014
Waterloo North Hydro	96%	-	95%	-	95%
National	91%	90%	86%	89%	89%
Ontario	91%	85%	81%	86%	83%

Base: total respondents / (-) not a participant of the survey year

In the Simul/UtilityPULSE Customer Satisfaction survey, the overall satisfaction question is asked both at the beginning (PRE) and the end (POST). Asking the general satisfaction question at the start of the survey avoids bias, and we obtain a spontaneous rating. This allows measurement of customers' overall impressions of the utility before prompting them to think of specific aspects of the relationship. After we have asked about specific aspects of the customer experience, we gain a more *considered* (or conditioned) response.



Base: total respondents

As with any enterprise, Waterloo North Hydro has an obligation to satisfy its customers. But the rewards for satisfying customers go far beyond “obligation”. Customers with high levels of satisfaction handle problems far better than customers with low satisfaction. Stronger relationships with customers generate higher levels of involvement and participation. For employees, serving customers who are very satisfied are more enjoyable interactions than with customers who are very dissatisfied. Satisfied and engaged employees who work in an organizational culture which promotes service excellence with empowerment is an important key for completing the job both efficiently and effectively.



SATISFACTION SCORES – Electricity customers’ satisfaction			
Top 2 Boxes: ‘very + fairly satisfied’	**Waterloo North Hydro**	**National**	**Ontario**
PRE: Initial Satisfaction Scores	96%	91%	91%
POST: End of Interview	96%	91%	89%

Base: total respondents

A mutual correlation exists between employee and customer attitudes and loyalty. Employees who are trained well, have the right tools and are focused on successful outcomes for customers contribute greatly to the customers' perception of their utility. There is a direct, irrefutable link between empowered and engaged employees and customer satisfaction – after all -- y*our employees are part of your brand and they deliver the promises you make.*

Waterloo North Hydro

SATISFACTION SCORES – Electricity customers' satisfaction		
Top 2 Boxes: 'very + fairly satisfied'	**Residential**	**Commercial**
Satisfaction Scores	96%	95%

Base: total respondents

SATISFACTION SCORES – Electricity customers' satisfaction [kwh usage]			
Top 2 Boxes: 'very + fairly satisfied'	**kWh Group 1**	**kWh Group 2**	**kWh Group 3**
Satisfaction Scores	98%	95%	94%

Base: total respondents

SATISFACTION SCORES – Electricity customers' satisfaction [Income]			
Top 2 Boxes: 'very + fairly satisfied'	**<$30K**	**$30 – 75K**	**$75K +**
Satisfaction Scores	94%	96%	98%

Base: total respondents

Customer Service

As written in previous years, given the rapidly expanding availability and use of technology finding an appropriate balance between automated self-service and human-interactive service is a huge challenge for all involved in providing service to customers. Customer Service is about the experience your customers have with your utility, your products, and your service – regardless of the channel for used for delivering customer service. The goal is to ensure each of your customers receives high-quality customer service and an experience which meets or exceeds their expectations - on each and every interaction with the LDC.

Given the increased complexity for delivery customer service, we have seen a shift towards a stronger focus on the touch points which create the customer experience.

Most of us want the same things when we are customers: We want to be treated with respect. We want to be listened to. We don't want to be bounced around or ignored or treated as inferior. The customer experience is largely defined by the outcomes generated when customers have a need, want to solve a problem, or simply want answers to issues/concerns they face.

With more technology there will be more shifting of calls away from the call centre. However, the volume of calls which remain are and will be more complex and challenging. We're already witnessing the fact that calls are taking longer to deal with customer issues.



Customers are more concerned about outcomes, and they want their issue, problem or concern to be dealt with in a professional, knowledgeable, and timely manner. Respondents were asked about six aspects of their most recent experience with a representative from Waterloo North Hydro.

- Information – the quality of information provided
- Staff attitude – the level of courtesy
- Professionalism – the knowledge of staff
- Delivery – helpfulness of staff
- Timeliness – the length of time it took to get what they needed
- Accessibility – how easy it was to contact someone



Base: total respondents who contacted the utility

Satisfaction with Customer Service			
Top 2 Boxes: 'very + fairly satisfied'	**Waterloo North Hydro**	**National**	**Ontario**
The time it took to contact someone	86%	66%	64%
The time it took someone to deal with your problem	88%	72%	65%
The helpfulness of the staff who dealt with you	91%	70%	64%
The knowledge of the staff who dealt with you	89%	70%	64%
The level of courtesy of the staff who dealt with you	95%	78%	70%
The quality of information provided by the staff who dealt with you	88%	73%	61%

Base: total respondents who contacted the utility

Overall satisfaction with most recent experience			
	Waterloo North Hydro	**National**	**Ontario**
Top 2 Boxes: 'very + fairly satisfied'	95%	78%	77%

Base: total respondents who contacted the utility

Every interaction with a customer is an opportunity to generate higher levels of affinity. It is fool-hardy to view the ratings shown above as ratings for the "call-centre" because every person in Waterloo North Hydro interacts with a customer or supports those who do have person-to-person contact with a customer. Empowerment is the backbone of the service recovery principle. In the face of error or problems, acting quickly and decisively, being empowered and turning a dissatisfied customer into a satisfied one tends to have a positive impact.

Customer Focus – Service Quality



Current measures in the LDC scorecard are: New Residential Services Connected on Time; Scheduled Appointments Met on Time; and, Telephone Calls Answered on Time. These are good examples of efficiency measures as all are time-based. Showing up on time may not create satisfaction; not showing up on time will cause dissatisfaction.

UtilityPULSE findings from working with many LDCs over the past few years indicate it is much harder to get great ratings from customers who may not know much about their LDC's standards for service. Despite this, service quality ratings for Waterloo North Hydro are very good and above the Ontario benchmark.

Other dimensions of Service Quality which customers value include:

Customer Service Quality			
Top 2 boxes, 'strongly + somewhat agree'	**Waterloo North Hydro**	**National**	**Ontario**
Deals professionally with customers' problems	89%	83%	82%
Customer-focused and treats customers as if they're valued	83%	80%	79%
Is a company that is 'easy to do business with'	90%	82%	82%

Base: total respondents with an opinion

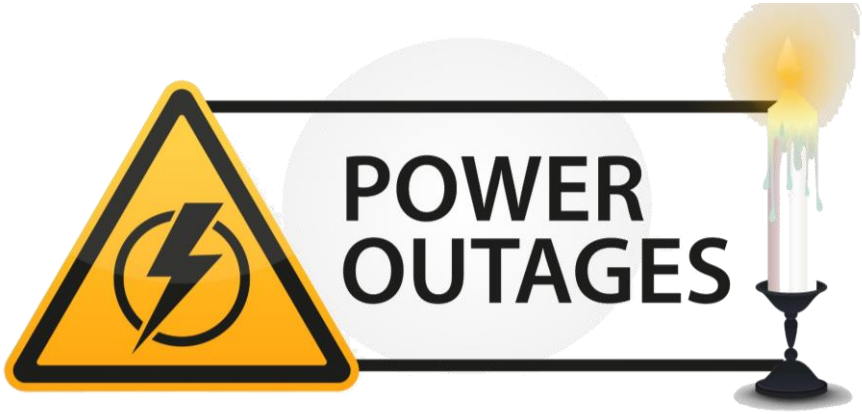
We live in an imperfect world, so mistakes are bound to happen. In the LDC world, not all customer problems are mistakes, some are externally driven. None-the-less customers expect professionalism when interacting with "their" LDC.

Bill Payers' Problems and Problem Resolution

As previously written over multiple years, we call blackouts (outages) and billing problems, the "Killer B's", the two issues which are most likely to cause grief to utility customers.

At one time, if the power went off for a few minutes, it was considered annoying and inconvenient. However, with the onset of computers and smart appliances in homes and businesses, a power outage is now unbearable. Customers have little tolerance for an interruption in their flow of electricity.

LDCs have certainly been putting more energy into disseminating information to customers about outages. Many have installed an "outage map" on their website. However, our UP database shows only 13% of customers who accessed their LDC's website did so to get information about an outage or look at the outage map!



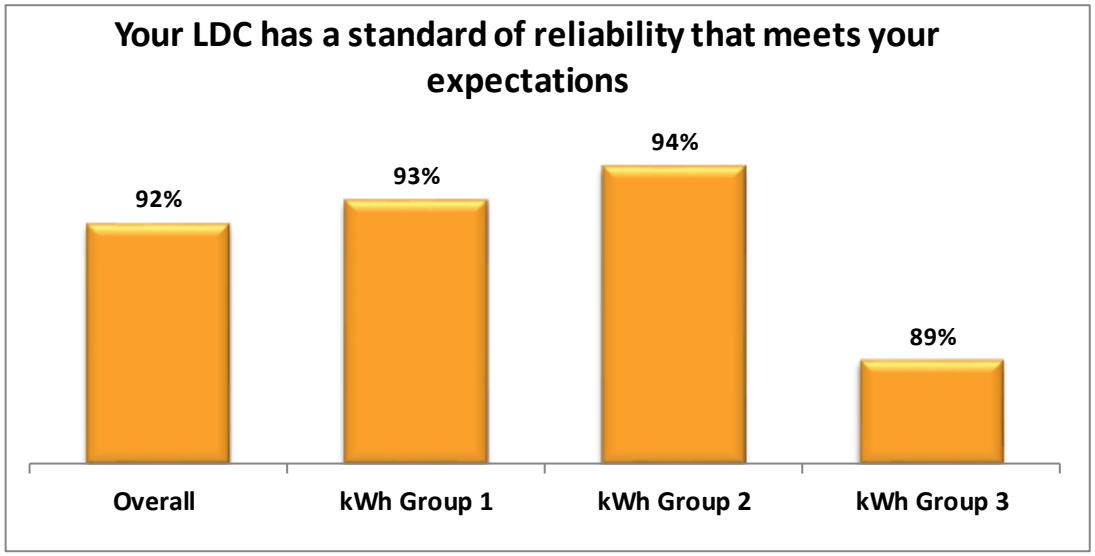
37% of Waterloo North Hydro **respondents claimed they experienced an outage problem in the past 12 months.**

Like it or not, there will be times when the power goes off – and for reasons beyond the control of the LDC.

Percentage of Respondents indicating that they had a Blackout or Outage problem in the last 12 months			
	Waterloo North Hydro	National	Ontario
2018	37%	39%	44%
2017	-	37%	38%
2016	38%	46%	46%
2015	-	53%	51%
2014	46%	47%	49%

Base: total respondents / (-) not a participant of the survey year

92% of Waterloo North Hydro respondents agree ('strongly + somewhat') the utility's standard of reliability is consistent with their expectations.



Base: total respondents

For nearly every business, the simple act of collecting payments from customers is quite complex. Organizations want to make it easy and convenient for customers to pay, so they offer multiple choices of payment types and channels. However, making it easy for the customer often makes it more complex—and costly—for the business and is certainly not without its problems or flaws.

Percentage of Respondents indicating that they had a Billing problem in the last 12 months			
	Waterloo North Hydro	National	Ontario
2018	5%	9%	9%
2017	-	12%	15%
2016	20%	15%	25%
2015	-	9%	15%
2014	9%	16%	25%

Base: total respondents / (-) not a participant of the survey year



The impact of poor billing on a utility's business is considerable, in terms of costs incurred handling customer queries and complaints. The quality of billing remains a driving force behind managing customer satisfaction and can help utilities reduce costs associated with customer service. Through reducing the total number of calls to a utility by providing accurate bills which are easily understood, a utility stems the flow of billing-related complaints into its call-centre. However, customers have a different definition than their utility as to what constitutes a billing problem.

Types of Billing Problems	
	Waterloo North Hydro
The amount owed was too high	50%
Complaint about rates or charges	25%
The bill arrived late	5%
Wrong information on the bill	5%
Did not receive bill	5%

Base: total respondents with billing problems



20% of Waterloo North Hydro respondents with an outage problem did contact the utility;

25% of Waterloo North Hydro respondents with a billing problem did contact the utility.

First Contact Resolution (FCR) rates are an important metric for improving call center performance. The first step in improving "FCR" is to survey your front-line customer touch-points and understand what kind of assistance and information customers are seeking in these situations. Once you clearly understand what kinds of interactions are taking place at each of your initial customer touch-points, you can then take steps to improve those interactions.

Percentage of Respondents who contacted their utility and had their problem solved in the last 12 months	
	Waterloo North Hydro
Yes	86%
No	9%

Base: total respondents with a problem who contacted their utility



Interestingly when customers do have a problem and contact their LDC, and get the problem solved their satisfaction ratings are very similar to the overall level of satisfaction that exists if not slightly higher, however, failing to deal or resolve a customer's problem causes satisfaction levels to drop.

SATISFACTION SCORES – Electricity customers' satisfaction			
Waterloo North Hydro	**Overall**	**Problems Solved**	**Problems Not Solved**
Top 2 Boxes: 'very + fairly satisfied'	96%	96%	80%

Base: total respondents with a problem who contacted their utility

We believe a major challenge for most LDCs is about increasing their knowledge about their customers and how they prefer communications to take place. Most CRM systems seem to be inadequate for providing this information about preferences.

Use of Technology

Technology is moving fast, and rapid developments in innovation are playing an essential part in customer service expectations. Today, customers have a low tolerance for slow answers and anything less than outstanding service. Their expectations far exceed anything they would have wanted a decade ago, and businesses must keep up.



Respondents were asked whether they used the following forms of technology:



Use of technology			
Waterloo North Hydro	**Yes**	**No**	**Don't know**
Access the internet for information	83%	17%	0%
Have a social media account	54%	44%	1%
Use online banking services	71%	25%	3%
Shop online	64%	34%	2%

Base: total respondents



Shifting activity to the online world, certainly for many of the basic problems and issues makes sense. While this certainly can help with efficiency, we must be mindful of the reality that CSRs will actually be fielding more calls that are more complex which may require CSRs (and others in the LDC) to develop a more important array of competencies and skills. However, the march towards more online activity and problem resolution should continue at a very quick pace.



Social Media

Internet forums, user communities, and social-networking sites are the new ways people are talking to each other and getting some of the answers they need. Twitter is fast becoming the go-to medium for customer support. Have a question – tweet it – and wait sometimes less than an hour for a quick fix, recommended remedy, or information on where to go next. Twitter and Facebook are increasingly being used as tools to not only disseminate information, organizations of all types can use the channels to push out news and pull prospects into their websites.



Social media is evolving, and it gives companies the opportunity to proactively identify customer issues which will help the utility address problems quickly thereby minimizing the impact on the broader customer base.

Which social media accounts do you have …	
	Waterloo North Hydro
Facebook	58%
Twitter	24%
YouTube	34%
LinkedIn	38%

Base: total respondents who claimed to have social media accounts



Do you follow Waterloo North Hydro in …			
	Yes	No	Don't know
Facebook	5%	95%	0%
Twitter	29%	70%	1%
YouTube	3%	97%	0%
LinkedIn	4%	95%	1%

Base: total respondents who claimed to have social media accounts



Do you follow Waterloo North Hydro in … RESPONSE=YES			
	Income: <$30K	Income: $30K < $75K	Income: $75K+
Facebook	7%	5%	6%
Twitter	17%	18%	30%
YouTube	11%	4%	2%
LinkedIn	11%	0%	5%

Base: total respondents who claimed to have social media accounts

Do you follow Waterloo North Hydro in … RESPONSE=YES			
	Age: 18-34	Age: 35-54	Age: 55+
Facebook	10%	3%	2%
Twitter	25%	31%	16%
YouTube	8%	0%	2%
LinkedIn	8%	2%	3%

Base: total respondents who claimed to have social media accounts

Communication Channels

Utilities need to know the response they are seeking from customers when planning their communications and outreach. Sending inserts with monthly bills which provide information to a customer is passive and not very effective. Although your customer audience is captive, a poorly targeted message is often ignored. Posting information on a website—unless a customer is actively searching for it—will likely not be found. Email blasts, and social media campaigns will reach customers, but may not lead to action. Such messages are typically read when in transit or multitasking, making them an afterthought. So, it often takes several pushes for these messages to resonate before action is taken. Successful marketing and messaging is simple, consistent, and continually reinforced.

Primary Source of Information

Primary Source for getting information on …					
Waterloo North Hydro	**Corporate website**	**Twitter**	**Facebook**	**Bill Inserts**	**eBlasts**
A power outage	39%	6%	3%	5%	3%
An issue with your bill	35%	0%	1%	10%	3%
General corporate news	35%	2%	3%	16%	3%
Electricity safety information	42%	1%	2%	19%	3%
Energy conservation tips	38%	2%	3%	24%	3%
Changes in electricity rates	34%	1%	2%	31%	4%

Base: total respondents

Communication to notify about a Billing Issue

Billing issues have long been a major cause of customer enquiry and complaint. Not only are bills a key part of an LD's revenue management processes, but they're also an essential element and touchpoint in their relationship with their customers. For many customers, it is one of the very few touchpoints they have with their LDC. Yet because of its nature, the bill is usually viewed by customers as a wholly negative communication. Therefore, when problems do occur and the LDC must initiate contact with their customer it would be beneficial to the process if customers were contacted via channels they most prefer.

Waterloo North Hydro customers' preferred or primary method for Waterloo North Hydro to contact them about billing issues are as follows:

Preferred method of communication to receive notice of a billing issue		
	Ontario LDCs	**Waterloo North Hydro**
Telephone	56%	59%
Voice Mail	2%	2%
Text	7%	4%
Email	34%	34%
Don't know	1%	1%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility

Effective communication is essential in order to provide good customer service, improve efficiency and reduce costs. LDCs must maximize the effectiveness of their communications and improve customer interactions consistently across a number of media channels and customer touch points.

Communication during Unplanned Outages

In times of emergency, be they extreme weather events or major equipment failures that cause blackouts and unplanned outages, customer communication can help customers understand what to expect next and when disrupted electricity service might be restored. Early and effective communication helps increase confidence in and credibility of the electricity service provider.

Respondents were asked which communication channel they most preferred Waterloo North Hydro to use during an unplanned outage.

Method of communication Customers prefer their LDC uses during an UNPLANNED OUTAGE						
Recorded Telephone Message	**Email Notice**	**Posted on the Website**	**Social Media**	**Local Radio**	**Local TV**	**Text Message**
						
36%	25%	5%	3%	8%	3%	19%

Base: total respondents

Preferred Communication Platforms

Which communication platform or platforms would you prefer Waterloo North Hydro use …	
Social media	16%
Newspaper	14%
Radio	16%
Bill inserts	27%
Website	27%
Email / eBlasts	48%
Other	8%

Base: total respondents

Which of the following methods would you most like to see Waterloo North Hydro contact you by…	
Live chat	2%
Phone call	45%
Email	41%
Text/SMS Message	9%
In-person visit	2%

Base: total respondents

Providing communication platforms that are effective and meet customers' needs is key to improving the customer experience. To do this, Waterloo North Hydro must understand how customers communicate with you, and how they would like Waterloo North Hydro to communicate with them in future. Knowing this will allow Waterloo North Hydro to: allocate resources where they are most needed; tailor services to meet customers' needs; and, identify where improvements can be made.



However, while most customers appear to have capacity and willingness to use digital channels, there are also customers who do not for a variety of reasons, such as a lack of ability or resources, or due to a preference for other channels. Waterloo North Hydro will need to consider how these customers can be supported and encouraged to use digital services in the future.

Information and Communication

LDCs across the province are increasingly seeing the need to invest in aging infrastructure, new technologies, regulatory requirements, and a skilled workforce. They are addressing these needs to uphold their public service duty, all the while keeping in mind the need to communicate with their customers. Part of communication is the requirement of providing information and/or education to the public in order to raise the level of understanding surrounding an issue or topic that may be of practical concern to residents.



Consumer information is meant to attune consumers to certain problems [i.e. outage problems, etc.], create awareness and educate [i.e. electricity safety, etc.] or even guide (influence) their behaviour [i.e. energy conservation, etc.]. Individuals and stakeholders are then able to properly assess and evaluate the impacts of various policies and initiatives proposed by the LDC.

Customers were asked about their level of satisfaction with the information provided by Waterloo North Hydro on the following:

Satisfaction with information provided		
Top 2 Boxes: 'very + fairly satisfied'	**Ontario LDCs**	**Waterloo North Hydro**
The amount of information available to you about energy conservation	82%	82%
The quality of information available when outages occur	73%	78%
The electricity safety education provided to the public	74%	75%
The timeliness and relevance of information for things such as planned outages, construction activity, tree trimming.	78%	77%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility

While providing information is important, one has to ensure that it is neither overwhelming the audience to the point of turning them off, or not providing enough information causing recipients to feel you have not adequately looked after them.

Amount of Information received from Waterloo North Hydro is …			
	LESS than you would like	**About the RIGHT amount**	**MORE than you need**
Safety	7%	81%	5%
Energy Efficiency	12%	77%	7%
Billing and Account Questions	4%	86%	4%
Outages	13%	75%	4%
Construction projects and planning	15%	69%	7%

Base: total respondents

Communication Score		
	Ontario LDCs	Waterloo North Hydro
Communication Score	79%	80%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility



Based on customer responses, Waterloo North Hydro has rated 80% for a Communication Score.

Future Communication Efforts

Respondents were asked on which topics Waterloo North Hydro should focus their future communication efforts.

Future Communication Efforts should focus on …	
Safety	15%
Energy Efficiency	30%
Billing and Account Questions	10%
Outages	10%
Construction projects and planning	8%

Base: total respondents

Respondents were asked: ***"Is there a topic other than the ones we've talked about that you would like Waterloo North Hydro to provide more information about?"*** Base: total respondents



14%
wanted **additional information.**



85%
Required **no further information.**



ADDITIONAL TOPICS mentioned:

- Prices/costs/fees
- Communication with customers
- Rebates
- Payment options
- My usage/my neighbour's consumption
- Potential mergers
- SMART meters
- Outage map

Convenience of Services Score

Rising customer expectations and demands means customers expect to be able to contact you 24 hours a day, seven days a week using various communication avenues i.e. telephone, your website and/or even social media. Customers expect flexible and more personalized services. Gauging customers' satisfaction levels with access to various services allows Waterloo North Hydro to use this customer intelligence to inform and shape your service delivery so that you can better understand what your customers need and so that you can respond better.



Access to services		
Top 2 Boxes: 'very + somewhat satisfied'	**Ontario LDCs**	**Waterloo North Hydro**
The availability of call-centre staff Monday to Friday from 8:30 am to 4:30 pm	76%	75%
The 24/7 availability of system operators to respond to outages	77%	80%
The online self-serve options for managing your account	63%	67%
The online self-serve options for request services	56%	61%
The 24/7 availability of outage map on the website	n/a	66%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility

When customers have a high level of satisfaction with access to services, it is much easier for LDCs to forge a new kind of relationship with its customers which, in turn, helps all parties successfully deal with the issues and opportunities of the new energy world.

Digital exclusion – some people may not have access to the internet at home, and that may mean that they would not have access to information and/or services online. Waterloo North Hydro needs to continue to recognize this and ensure that customers may access services via alternate formats where necessary and feasible.

Convenience of Services Score		
	Ontario LDCs	**Waterloo North Hydro**
Convenience of Services Score	79%	81%

Base: An aggregate of respondents from 2018 participating LDCs / total respondents from the local utility

Providing customers with clear, easy to access services and information which is easy to understand has a significant impact on the customer experience.



Based on customer responses, Waterloo North Hydro has achieved a score of 81% for Convenience of Service while Ontario LDCs rated 79%.

Customer Experience Performance rating (CEPr)

The CEPr score is an effectiveness rating and is affected by many dimensions of service. Every touch point with customers on the phone, website or in-person influences what customers think and feel about the organization. While an excellent transaction today creates a positive experience today, the perception created is future transactions will be excellent too. Of course, a negative transaction creates the perception future transactions will be negative.

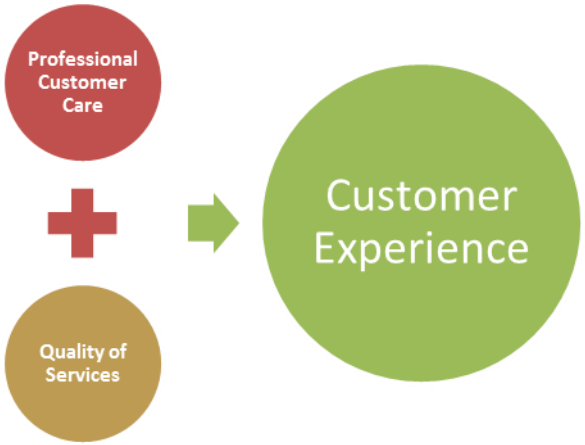
When the customer experience is strong, the opportunity to build loyalty is great. When the experience is a negative one, customers often conclude the organization doesn't care. When a customer believes the organization doesn't care, outrage and anger are a very real possibility.

Understanding your customer's expectations for service is the first step in providing an amazing customer experience. It is essential customer care call centers develop a comprehensive understanding of what

At the heart of the CEPr are 4 central questions:



1. *Are interactions with the organization professional and productive?*
2. *Is the organization 'easy to deal with'?*
3. *Does the organization effectively meet your needs?*
4. *Does the organization provide high quality services?*



customers expect from them, whether or not their needs are being met and how they can improve their service to meet their expectations.

Some of the factors which contribute to the overall customer experience:

- Delivering accessible and consistent customer service (multi-channel)
- Understanding customer expectations
- Maintaining timely resolution timelines
- Providing effective communication(s) according to customer needs
- Demonstrating responsiveness
- Speeding up problem resolution
- Conducting problem analysis to prevent recurring issues
- Easy to do business with
- Seeking customer feedback and following through on recommendations



Customer Experience Performance rating (CEPr)			
	Waterloo North Hydro	National	Ontario
CEPr: all respondents	89%	84%	83%

Base: total respondents

The CEPr for Waterloo North Hydro is 89%. This rating would suggest that a very large majority of customers have a belief they will have a good to excellent experience dealing with Waterloo North Hydro professionals.

Customer Centric Engagement Index (CCEI)

Customer engagement and customer satisfaction are very different measures. We believe generating high scores in customer engagement is more difficult than customer satisfaction. For example, a customer can be highly satisfied when the LDC reliability delivers electricity, bills the customer properly and quickly deals with outages. Essentially when the LDC does what it promises to do, then satisfaction follows.

Customer engagement is about connecting with customers in ways to demonstrate the LDC has heard the customer, understands the customer's needs, wants, desires and issues. When the LDC does demonstrate hearing and understanding, the result is higher levels of emotional connection, i.e., feelings that the people at the LDC care, respect and value their customers or are prepared to go-out-of-their-way (if necessary) to help.

Customer engagement is often thought of as a series of activities involving the customer such as conducting a survey, holding town hall type meetings, focus groups, etc. One could call these types of activities as the behaviour side of engagement. However, there is an emotional side to engagement.

UtilityPULSE has identified the six key dimensions of what defines customer engagement. They are: empowered, valued, connected,



inspired, future-oriented and performance oriented. Customer-centric engagement is a measure of "goodwill" towards the utility. The UP database does show Secure customers believe they are more highly engaged with their LDC than customers who are At Risk.

This survey also provides you with an emotional look at engagement. The UtilityPULSE CCEI is a gauge of the amount of goodwill which has been generated. High numbers in CCEI suggest there is a high level of goodwill amongst your customers – this is important for two reasons. First, when something goes awry for the utility, goodwill helps the utility to be resilient. Second, goodwill encourages active participation in requests to participate in engagement activities or program offerings from the utility.

The CCEI is a metric designed to get a more in-depth look at the attachment a customer has with your LDC and its brand. High levels of customer engagement (emotional) correlate strongly to high levels of Secure and Favourable customer numbers.



Engagement is how customers think, feel and act towards the organization. As such, ensuring customers respond in a positive way requires they are rationally satisfied with the services provided AND emotionally connected to your LDC and its brand. The more frequently

and consistently an organization's products and services can connect with a customer, especially on an emotional level, the stronger and deeper the customer becomes engaged with the organization.

Utility Customer Centric Engagement Index (CCEI)			
	Waterloo North Hydro	National	Ontario
CCEI	86%	81%	80%

Base: total respondents

Customers who are less engaged, as measured by the CCEI are more likely to let costs and/or price impact their perceptions of their LDC. Customers who are highly engaged are more inclined to look past costs and money issues and use a rational approach to make values-based decisions. Highly engaged customers have a stronger emotional connection to your utility. It's this emotional connection which will drive commitment, loyalty, and advocacy.

Using the measures of Satisfaction and Engagement the LDCs relationship with its customers would fall into one of four quadrants: Q1- low satisfaction/low engagement; Q2- high satisfaction/low engagement; Q3- low satisfaction/high engagement and Q4- high satisfaction/high engagement. Most LDCs would agree to have customers fall into the Q1 quadrant isn't good and having customers fall into Q4 is ideal.

When LDCs have candid conversations with customers and employees about their joint and different needs & perspectives the better, the LDC can be for creating an excellent place to do business with and to work.

UtilityPULSE Report Card®

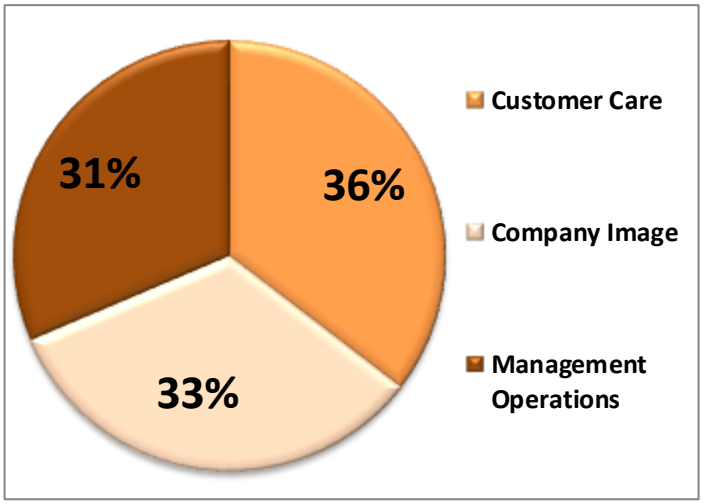
Simul's UtilityPULSE Report Card® is based on tens of thousands of customer interviews gathered over eighteen years. The purpose of the UtilityPULSE Report Card® is to provide electric utilities with a snapshot of performance – on the things customers deem to be important. Research has identified over 20 attributes, sorted into six topic categories (we call these drivers), which customers have used to describe their utility when they have been satisfied or very satisfied with their utility. These attributes form the nucleus, or base, from which "scores" are assigned. Customer satisfaction and loyalty also play a major role in the calculations.

There are two main dimensions of the UtilityPULSE Report Card® the first is customer psyche and the other is customer perceptions about how the utility executes its business.

The Psyche of Customers

Every utility has virtually the same responsibility – provide safe and reliable electricity – yet not all customers are the same. The following chart shows the weight or significance of each category to the customer when forming their overall impression of the utility. Three major themes, each with two major categories make up the UtilityPULSE Report Card®. In effect, the Report Card provides feedback about your customers' perception of the importance of each category and driver – as it relates to the benchmark.

UtilityPULSE Report Card® for Waterloo North Hydro



Base: total respondents

The UtilityPULSE Report Card® also provides customer perceptions about how your utility executes or performs its responsibilities. This is different, very different, from what a customer might say about a major concern or worry they have about electricity. As our survey has shown since its inception, the primary suggestion for improvement is “reduce prices”, which is also a major concern which your customers have about municipal taxes, gas for the vehicle, and other utilities.

Readers of this report should note that the categories and drivers are interdependent. Which means, for example, failure to provide high levels of power quality and reliability will have a negative impact on customer perceptions as it relates to customer service. Customer care, when it doesn’t meet customer expectations has a negative impact on Company Image, etc.

Defining the categories and major drivers:

Category: Customer Care

Drivers: Price and Value; Customer Service

Just because everyone likes good customer care, that in and by itself, is not a reason to provide it – though it may be important to do so. In highly competitive industries good customer service may be a differentiating factor. The case for electric utilities is simple, high levels of customer care result in less work (hence cost) of responding to customer inquiries and higher levels of acceptance of the utility's actions.

Price and Value:

Customers have to purchase electricity because life and lifestyle depend on it. This driver measures customer perceptions as to whether the total costs of electricity represent good value and whether the utility is seen as working in the best interests of its customers as it relates to keeping costs affordable.

Customer Service:

Customers do have needs, and every now and again have to interface with their utility. How the utility handles various customers' requests, and concerns are what this driver is all about. Promptly answering inquiries, providing sound information, keeping customers informed and doing so in a professional manner are the major components of this driver.

Category: Company Image

Drivers: Company Leadership; Corporate Stewardship

Utilities have an image even if they do not undertake any activities to try to build it. A company's image is both a simple and complex concept. It is simple because companies do create images which are easily described and recognized by their target customers. It is complex because it takes many discrete elements to create an image which includes, but is not limited to: advertising, marketing communications, publicity, service offering, and pricing.

An electric utility trying to manage its image has one more challenge to deal with, and that is the electric industry itself. There are so many players, residential customers (in particular) don't know who does what or who is responsible for what. So, when there are political or regulatory announcements, the local utility is often swept up into the collective reaction of the population.

Company Leadership

This driver is comprised of customer perceptions as it relates to industry leadership, keeping promises and being a respected company in the community.

Corporate Stewardship

Customers rely on electricity and want to know their utility is both a trusted and credible organization which is well managed, accountable, socially responsible and has its financial house in order.

Category: Management Operations

Drivers: Operational Effectiveness; Power Quality and Reliability

Electrical power is the primary product which utilities provide their customers and, they have very high expectations the power will be there when they need it. Customers have little tolerance for outages. The reality is, every utility must get this part right…no excuses. It is the utility's core business. This category and its drivers are clearly the most important for fulfilling the rational needs of a utility's customers.

Operational Effectiveness

This driver measures customers' perceptions as they relate to ensuring their utility runs smoothly. Attributes such as accurate billing and meter reading, completing service work in a professional and timely manner and maintaining equipment in good repair are deemed as important to customers.

Power Quality and Reliability

Power outages are a fact of life – and, customers know it. They expect their utility to provide consistent, reliable electricity, handle outages and restore power quickly and make using electricity safely an important priority.

Waterloo North Hydro's UtilityPULSE Report Card®

Performance

	CATEGORY	Waterloo North Hydro	National	Ontario
1	**Customer Care**	**A**	**B+**	**B+**
	Price and Value	B+	B	B
	Customer Service	A	A	B+
2	**Company Image**	**A**	**B+**	**B+**
	Company Leadership	A	B+	B+
	Corporate Stewardship	A	A	B+
3	**Management Operations**	**A+**	**A**	**A**
	Operational Effectiveness	A+	A	A
	Power Quality and Reliability	A+	A	A
	OVERALL	**A**	**A**	**B+**

Base: total respondents

Ontario LDCs get a “C” rating for ‘cost of electricity is reasonable when compared to other utilities such as gas, cable, and telephone’ C+ rating for ‘spends money prudently’.

As the UtilityPULSE Report Card® shows, the total customer experience with an electric utility is defined as more than “keeping the lights on”. Customers deal with your utility every day for a variety of reasons, most likely because they need someone to help them solve a problem, answer a question or take their order for service. All your employees, from customer service representatives to linemen, leave a lasting impression on the customers they interact with. In effect, there are many moments of truth. Moments of truth are every customer touch point a utility has with their customers. Therefore, managing these moments of truth creates higher levels of Secure customers while reducing the number of At Risk customers which exist.

It's the small things done consistently that matter: Things like greeting every customer, whether on the phone or in person, in a friendly and helpful manner. Things like listening to the customer's needs, providing solutions to their problems and showing appreciation to the customer for their business.

Utilities now recognize customer communications as a valuable aspect of their business. The better a utility communicates with customers in a manner which speaks to them; the more satisfied they are with their overall service. “Sending out information” is not the same as having a “conversation” with a customer. We believe it is increasingly important to channel your communications to the various customer segments which exist.

Obviously, employees – in every area – play a critical role in customer service success. Consequently, how they feel about their job responsibilities and role in the company will be communicated indirectly through the level of service which they provide customers with whom they interact. The reality is engaged employees are the key to excellent customer care.

Our survey work with employees shows there are many elements of an organizational culture to support the people model needed to achieve high levels of engagement.

Our research has identified 6 main drivers which promote and support people giving their best:

People Model



- **Empowered**
- **Valued**
- **Connected**
- **Inspired**
- **Growing**
- **Performance oriented**

There are 12 key processes from “attracting employees” to “saying goodbye to employees” are part of your people model to get the best performance from every employee.

We believe taking the time to understand the difference between employee satisfaction and organizational culture is worthwhile from a resourcing perspective and a people development perspective. Every organization has a culture – we believe it is a leadership imperative to install and maintain a culture which ensures you attain the achievements and successes of your utility’s many investments in people, technology and equipment. It is true, organization culture affects everyone, and everyone affects organization culture.

The Loyalty Factor



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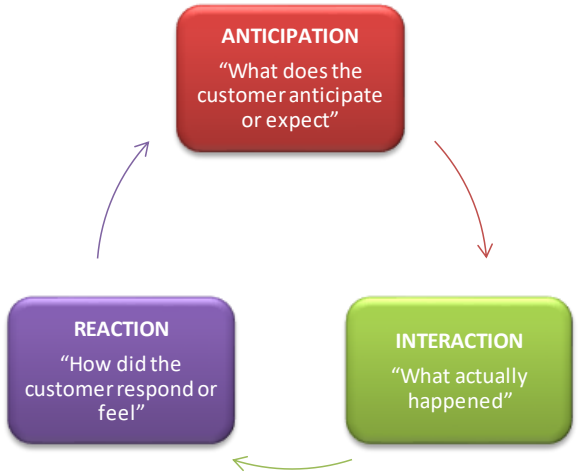
If a customer is satisfied, it doesn't necessarily mean he or she is loyal. Satisfaction is about fulfilling promises/expectations; loyalty goes way beyond that by creating exceptional experiences and long-lasting relationships. There is a reason why marketing campaigns strive to build brand loyalty, not brand satisfaction. Measuring customer loyalty in an industry where many customers don't have a choice of providers doesn't make sense. Or does it?

The answer depends on how you define "customer loyalty."

Private industry often equates customer loyalty with basic customer retention. If a customer continues to do business with a company, the customer is, by definition, considered to be loyal. If this definition were applied to many companies in the utility industry, all customers would automatically be considered loyal. As such, measuring customer loyalty would appear to be unnecessary.

Natural monopolies (like LDCs) are not really different in what they should measure except that trying to determine which customers are "loyal" or "at risk" is not about their future behaviour but more about their "attitudinal" loyalty (are they advocates?).

Customer Service, when done well, promotes satisfaction which builds the foundation towards loyalty. Whether a customer is loyal and/or satisfied will be determined by three realities: ANTICIPATION – what your customer anticipates or expects; INTERACTION – what actually happened with/to the customer; and REACTION – how did the customer respond and how did it ultimately make the customer feel.



Perhaps a better or more relevant way for utilities to approach the definition of customer loyalty is to further expand how they think about loyalty. Consider the following definition: Customer loyalty is an emotional disposition on the part of the customer which affects the way(s) in which the customer (consistently) interacts, responds or reacts towards the company – its products & services and its brand.

So, what does it mean to respond favourably to a company? At a basic level, this can mean choosing to remain a customer. As previously mentioned, however, this is essentially a non-issue for many utility companies. It then becomes necessary to think beyond just customer retention. One needs to consider other ways in which customers can respond favourably toward a company.

Some Tips to build loyalty:

- ✓ **Solve problems quickly**
- ✓ **Treat customers right**
- ✓ **Listen to complaints**
- ✓ **Be personal; create a great experience**
- ✓ **Friendly customer service**
- ✓ **Accessible information or help**
- ✓ **Good reputation**
- ✓ **Demonstrate you care**

Other favourable responses or behaviours can be classified into one of three categories that reflect the concept of customer loyalty:

- Participation
- Compliance or Influence
- Advocacy

Specific examples of potential participatory behaviour in the electric utility industry include:

- Signing up for programs which help the customer reduce or manage their energy consumption
- Using the utility as a consultant when selecting energy products and services from a third party
- Participating in pilot programs or research studies.

Specific examples of potential compliance or influence behaviours utility customers might exhibit include:

- Seeking the utility's advice or expertise on an energy-related issue
- Voluntarily cutting back on electricity usage if the utility advised the customer to do so
- Accepting the utility's energy advice or referrals to energy contractors or equipment
- Being influenced by the utility's opinion regarding energy- management advice, equipment, or technologies
- Providing personal information which enables the utility to better serve the customer
- Paying bills online.

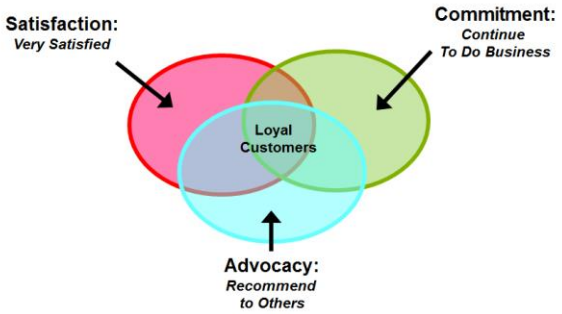
Creating customer advocates can be especially important for a company in a regulated industry. In the absence of customer advocates, or worse, in a situation where customers speak unfavourably about a company or actively work to support issues that are counter to those the company supports, companies can suffer a variety of negative consequences like increased business costs, lawsuits, fines, and construction delays. For an electric utility, specific examples of potential advocacy behaviour include:

- Supporting the utility's positions or actions on energy-related public issues, including the environment
- Supporting the utility's position on the location and construction of facilities
- Providing testimonials about positive experiences with the utility.

In sum, loyal behaviour in the utility industry may not be as evident as it is in a more competitive environment. Measuring customer loyalty in a generally non-competitive industry requires one to think about loyalty in non-traditional ways. Customer loyalty is an intangible asset which has positive consequences or outcomes associated with it no matter what the industry. Properly measuring loyalty among utility customers requires thoughtful probing to thoroughly identify the range of participation, compliance, and advocacy behaviours that will ultimately benefit the company in meaningful ways and foster happier and more loyal customers.

Loyalty is driven primarily by a company's interaction with its customers and how well it delivers on their wants and needs.

Customer Loyalty Model



Loyalty is based on likelihood to:

- ***Satisfaction: overall satisfaction***
- ***Commitment: continue as a customer***
- ***Advocacy: willingness to recommend***

The UtilityPULSE Customer Loyalty Performance Score segments customers into four groups: **Secure** – the most loyal - **Still Favorable**, **Indifferent**, and **At risk**.

Secure customers are "very satisfied" overall with their local electricity utility. They have a very high emotional connection with their utility and definitely would recommend their local utility.

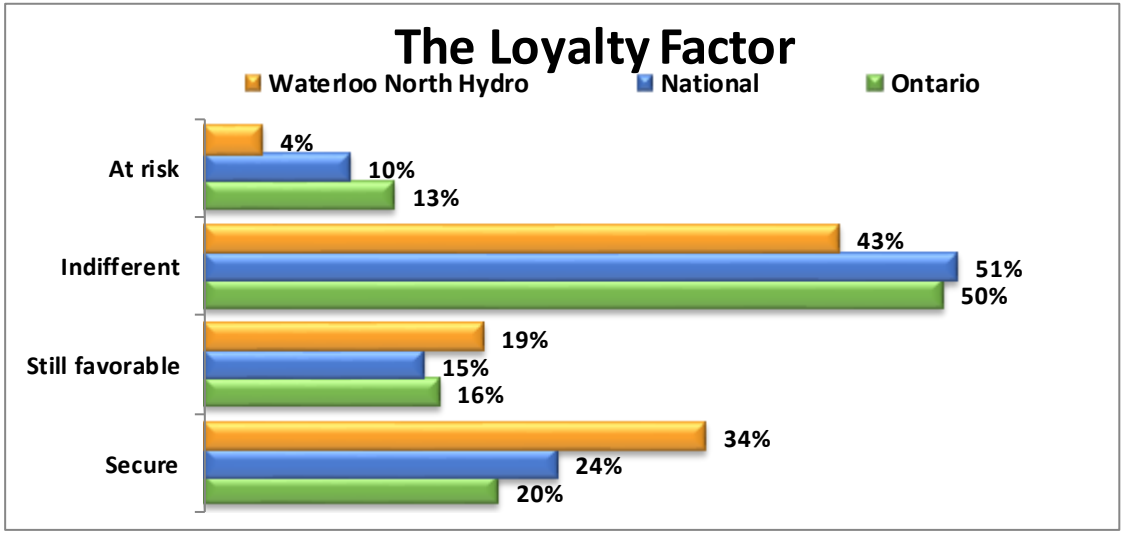
Still favorable customers are "very satisfied" overall, "definitely" or "probably" would recommend their local utility and not switch if they could.

Indifferent customers are less satisfied overall than secure and still-favorable customers and less inclined to recommend their local utility or say they would not switch.

At risk customers, who are "very dissatisfied" with their electric utility, "definitely" would switch and "definitely" would not recommend it.

Customer Loyalty Groups				
	Secure	**Favorable**	**Indifferent**	**At Risk**
Waterloo North Hydro				
2018	34%	19%	43%	4%
2017	-	-	-	-
2016	25%	16%	53%	6%
2015	-	-	-	-
2014	24%	12%	61%	2%

Base: total respondents / (-) not a participant of the survey year

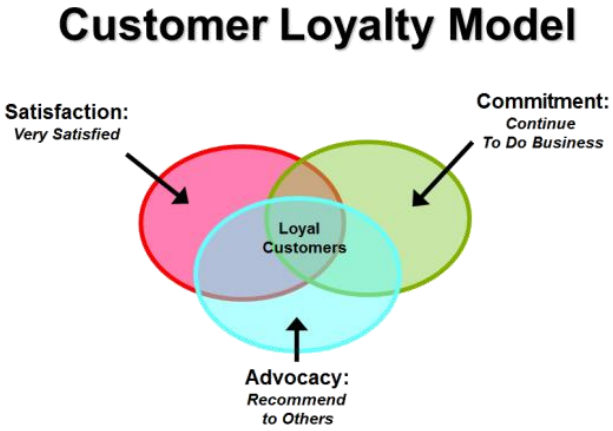


Base: total respondents

Customer Loyalty Groups				
	Secure	**Favorable**	**Indifferent**	**At Risk**
Ontario				
2018	20%	16%	50%	13%
2017	19%	13%	52%	17%
2016	17%	13%	54%	16%
2015	17%	11%	61%	11%
2014	17%	10%	57%	17%
National				
2018	24%	15%	51%	10%
2017	21%	16%	50%	13%
2016	23%	12%	54%	11%
2015	18%	11%	61%	10%
2014	20%	11%	56%	13%

Base: total respondents

Customer commitment



Customer loyalty is a term which can be used to embrace a range of customer attitudes and behaviours. One of the metrics used to gauge loyalty is the measure of **retention,** or intention to buy again; this loyalty attitude is termed **commitment.** For LDCs commitment is not about behaviour it is about attitude, i.e., do they want to remain your customer.

Customer commitment is a very important driver of customer loyalty in the electricity service industry. In a similar way to trust, commitment is considered an important ingredient in successful relationships. In simpler terms, commitment refers to the motivation to continue to do business with and maintain a relationship with a business partner, i.e. the local utility.

For electric utilities, this measurement is about identifying the number of customers who feel they “want to” vs. “have to” do business with you. Potential benefits of commitment may include word of mouth communications - an important aspect of attitudinal loyalty. Committed customers have been known to demonstrate a number of beneficial behaviours, for example, committed customers tend to:

- Come to you. One of the key benefits of establishing a good level of customer loyalty is customers will come to you when they need a product or service

- Validate information received from 3rd parties with information and expertise that you have
- Try new products/initiatives
- Perhaps they will even trust you when recommendations are made
- Be more price tolerant
- More receptivity of utility viewpoints on various issues
- More tolerance of errors or issues which inevitably take a swipe at the utility
- Stronger levels of perception regarding how the utility is managed.

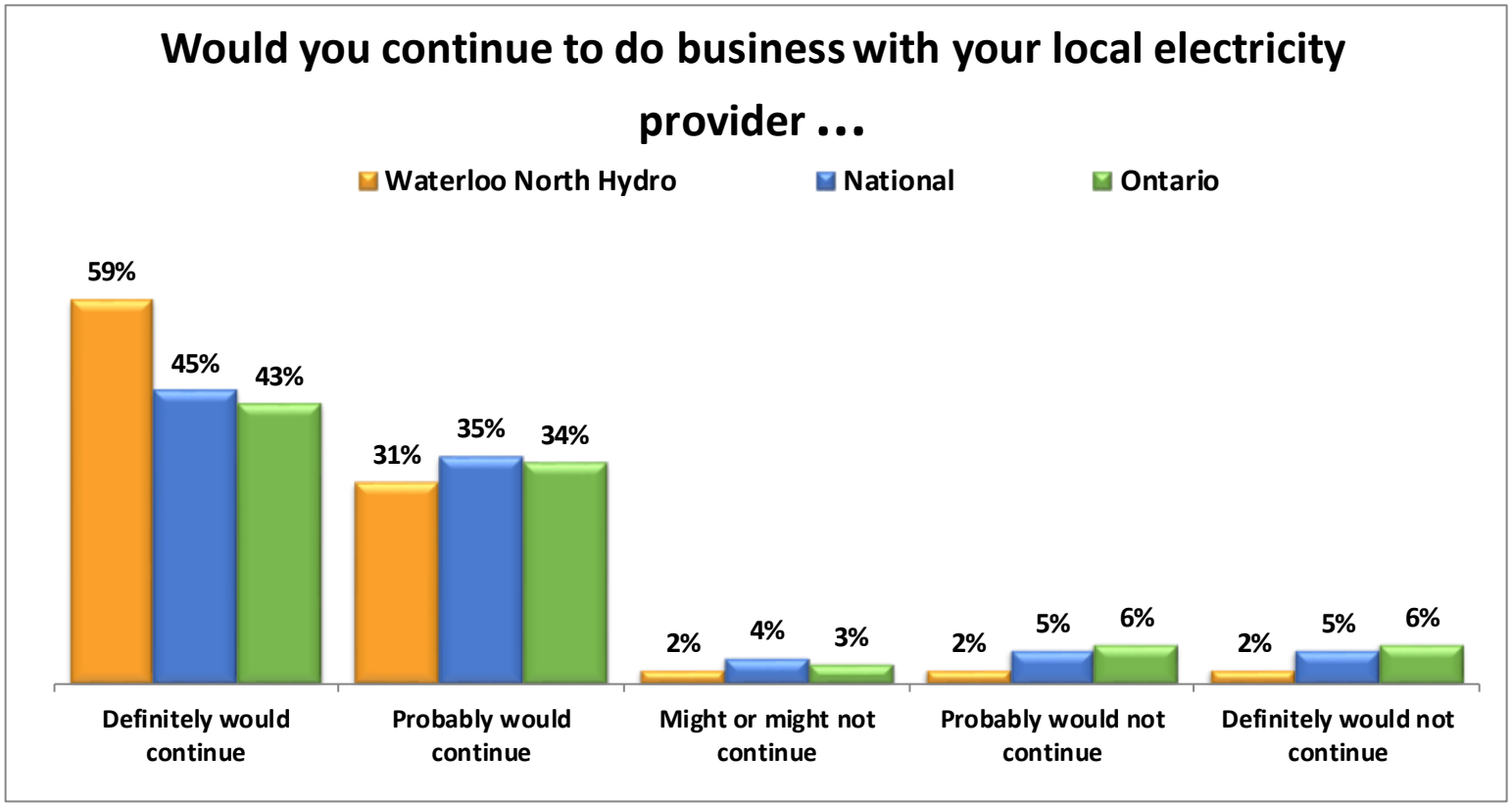
Though customers cannot physically leave you, they can emotionally leave you, and when they do, it becomes an extreme challenge to garner their participation or support for utility initiatives.

Electricity customers' loyalty – … Is a company that you would like to continue to do business with			
	Waterloo North Hydro	**National**	**Ontario**
Top 2 Boxes: 'Definitely + Probably' would continue	90%	80%	78%
Definitely would continue	59%	45%	43%
Probably would continue	31%	35%	34%
Might or might not continue	2%	4%	3%
Probably would not continue	2%	5%	6%
Definitely would not continue	2%	5%	6%

Base: total respondents

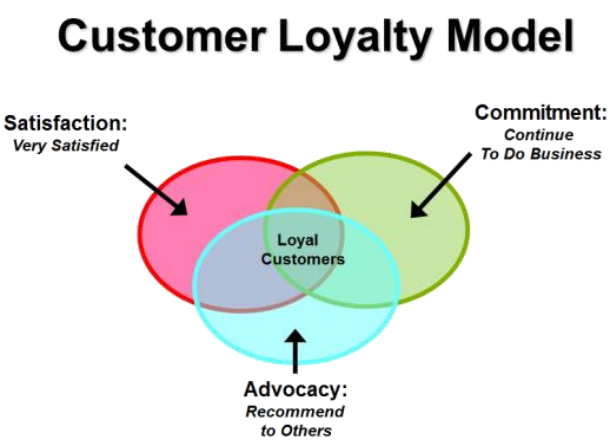
Electricity customers' loyalty – … Is a company that you would like to continue to do business with					
Waterloo North Hydro	**2018**	**2017**	**2016**	**2015**	**2014**
Top 2 boxes: 'Definitely + Probably' would continue	90%	-	84%	-	86%

Base: total respondents / (-) not a participant of the survey year



Base: total respondents

Word of mouth

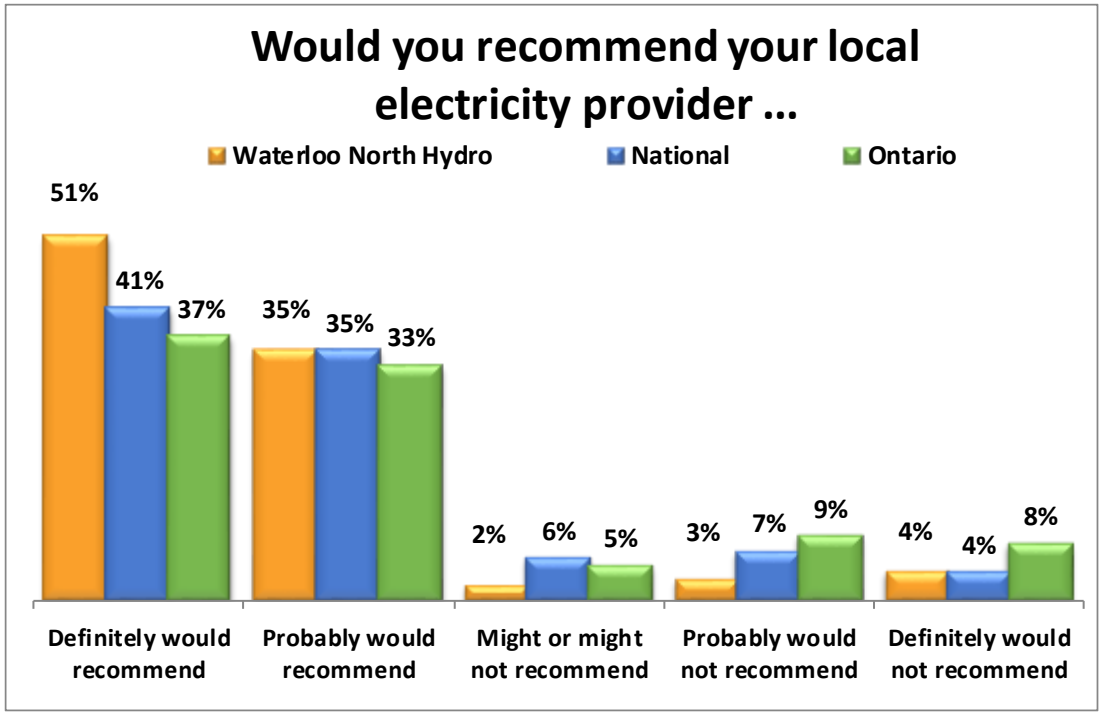


Advocacy is one of the metrics measured in determining customer loyalty. Essentially, companies believe a loyal customer is one who is spreading the value of the business to others, leading new people to the business and helping the company grow. Customer referrals, endorsements and spreading the word are extremely important forms of customer behaviour. For LDCs this is about generating positive referants about the LDC as a relevant and valuable enterprise.



When customers are loyal to a company, product or service, they not only are more likely to purchase from the company again, but they are more likely to recommend it to others – to openly share their positive feelings and experiences with others. In today's world, thanks to the Internet, they can tell and influence millions of people. The same holds true, if not more, when customers are disloyal. Disgruntled customers could share their negative experiences with an ever-widening audience, jeopardizing a company's reputation and resulting in fewer engaged customers and/or customers who are Favourable or Secure. Secure customers, typically are advocates and they are deeply connected and brand-involved.

Would you tell me if you agree or disagree with the following statement? Waterloo North Hydro is a company that you would recommend to a friend or colleague …



Base: total respondents

Word of mouth communication is a very powerful form of communication and influence. When customers are speaking to other customers (or their peers) it is more credible, goes through less perceptual filters and can enhance the view of services or products better than marketing communication.

There are two forms of word of mouth which utilities need to understand. The first is Experience-based word of mouth which is the most common and most powerful form. It results from a customer's direct experience with the utility or the re-statement of a direct experience from a trusted source.

The second is Relay-based word of mouth. This is when customers pass along important messages to others based on what they have learned through the more traditional forms of communications. For example, if the utility was communicating an offer for "free LED lights" chances are high the offer will be "relayed" to others through word of mouth.

For an electric utility, specific examples of potential positive advocacy behaviour include:

- *Recommending other customers specifically locate in the geographic area which is serviced by that utility*
- *Supporting the utility's positions or actions on energy-related public issues, including the environment*
- *Supporting the utility's position on the location and construction of facilities*
- *Providing testimonials about positive experiences with the utility*

Electricity customers' loyalty – … is a company that you would recommend to a friend or colleague			
	Waterloo North Hydro	National	Ontario
Top 2 boxes: 'Definitely + Probably' would recommend	87%	76%	70%
Definitely would recommend	51%	41%	37%
Probably would recommend	35%	35%	33%
Might or might not recommend	2%	6%	5%
Probably would not recommend	3%	7%	9%
Definitely would not recommend	4%	4%	8%

Base: total respondents

Electricity customers' loyalty – is a company that you would recommend to a friend or colleague					
Waterloo North Hydro	2018	2017	2016	2015	2014
Top 2 boxes: 'Definitely + Probably' would recommend	87%	-	76%	-	80%

Base: total respondents / (-) not a participant of the survey year

Our survey research as well as theory backs up the fact that if your customers are willing to endorse you and put their reputation on the line to recommend you, they also trust you and are satisfied with the service you are providing.

Corporate image

Although reputation is an intangible concept, a strong corporate image makes it easier to capture the attention of more customers – more often. Also, to be seen as an independent organization thereby making it easier to introduce new ideas. Employees appreciate a strong corporate image.

Attributes measured in the annual UtilityPULSE survey which are strongly linked to a utility's image include:

Marketing – Communications			
	Waterloo North Hydro	National	Ontario
Topics which require more pro-active communication			
Cost of electricity is reasonable when compared to other utilities	70%	66%	61%
Provides good value for money	79%	72%	71%
Operates a cost-effective electricity distribution system	78%	70%	71%
Provides information to help customers reduce their costs	80%	78%	78%
Adapts well to changes in customer expectations	79%	73%	72%
Topics that your utility scores very well on			
Delivers on its service commitments	90%	86%	86%
Electricity safety is a top priority	87%	87%	86%
Quickly handles outages and restores power	94%	87%	86%
Standard of reliability delivering electricity that meets expectations	92%	88%	88%
Provides consistent, reliable energy	94%	89%	90%

Base: total respondents with an opinion

Corporate Credibility & Trust

Credibility is a judgment, customers and others make about whether a person or an organization has the competencies and experience to do what they promise to do. Trust, is a feeling or belief, that a person or an organization they are dealing with is doing so in an honest, open manner with no hidden agendas. How customers and other stakeholders respond to your communications is affected by the person's perception. Without credibility and trust, everything you say to customers, employees, and others can be questioned.

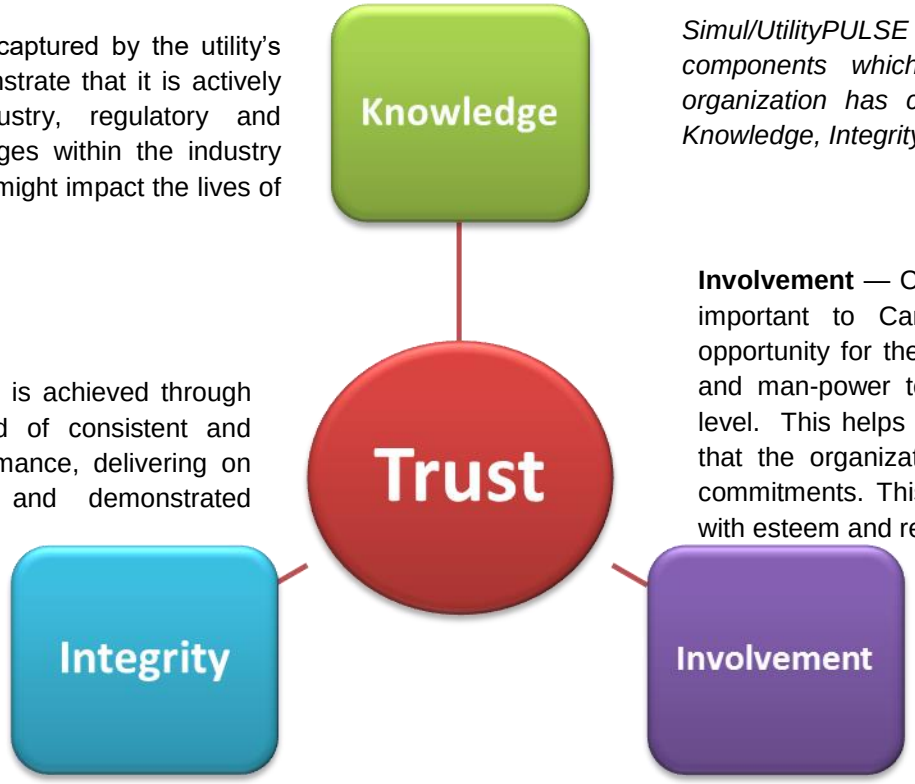
Of paramount importance to maintaining credibility & trust is effectively managing expectations—customers, employees and other stakeholders that matter to the business of the LDC. A key to this is open and honest communications. An important benefit of having a high degree of credibility & trust is, authentic collaboration can become a reality. Credibility & trust is a powerful currency for building relationships. Credibility & trust are outcomes based on what the LDC actually does, not what it might be doing.

Attributes strongly linked to Credibility & Trust			
	Waterloo North Hydro	**National**	**Ontario**
Overall the utility provides excellent quality services	89%	85%	86%
Keeps its promises to customers and the community	85%	79%	80%
Customer-focused and treats customers as if they're valued	83%	80%	79%
Is a trusted and trustworthy company	89%	83%	82%

Base: total respondents with an opinion

Knowledge is captured by the utility's ability to demonstrate that it is actively aware of industry, regulatory and economic changes within the industry and how these might impact the lives of customers.

Simul/UtilityPULSE research shows the under-pinning components which lead customers to believe an organization has credibility and can be trusted are: Knowledge, Integrity, Involvement and Trust.



Involvement — Corporate Involvement is increasingly important to Canadian communities as it is an opportunity for their local utility to use their resources and man-power to benefit people at the community level. This helps to build credibility as customers see that the organization is acting and delivering on its commitments. This helps customers regard the utility with esteem and respect.

Trust — Trust is achieved through a track record of consistent and reliable performance, delivering on commitments and demonstrated accountability.

Integrity is established by demonstrating adherence to a code of conduct. It requires consistently acting in accordance with the values and goals that have been communicated to customers.

Credibility and Trust Index

Waterloo North Hydro 87%

Ontario 81%

National 82%

How can service to customers be improved?

The electric utility industry is in a state of continuous transformation. External factors - including shifts in governmental policies, a global thrust to conserve energy, advances in new technologies and power generation are driving massive changes throughout the industry. LDCs of today and the future can also expect a much more intense level of customer involvement. UtilityPULSE research shows customers want to be heard.

Despite all the talk today centered on quality, new processes and systems, continuous improvement, and costs, unless all of this is aimed at obtaining customer satisfaction it will not be worth much over the longer term.

Qualitative questions typically do not provide the statistical richness which is associated with a quantitative question. However, they do provide words, phrases, insights into the thinking patterns and/or feelings of customers. This means qualitative questions have an interpretive richness that assists in deriving meaning from the survey. The broader range of suggestions we are getting when conducting the survey is a sign the customer base is becoming more and more segmented. Not all customers are the same.

The struggle for electric utilities is finding the right balance between cost-effective, technology-enabled approaches to customer services and person-to-person contact.

Customers want their utility to focus on what matters most; offer products and services which “make a difference in their life”, “gives them peace of mind” and “delivered by trusted and credible people”.

And we are interested in knowing what you think are the one or two most important things Waterloo North Hydro could do to improve service to their customers?

One or two most important things ‘your local utility’ could do to improve service	
	Waterloo North Hydro
Better prices/lower rates	46%
Be more efficient	7%
Information & incentives on energy conservation	7%
Improve/simplify/clarify billing	6%
Better communication with customers	5%
Improve reliability of power	3%
Restore power faster	2%
Eliminate SMART meters	1%
Better information when outages occur	1%

Base: total respondents with suggestions

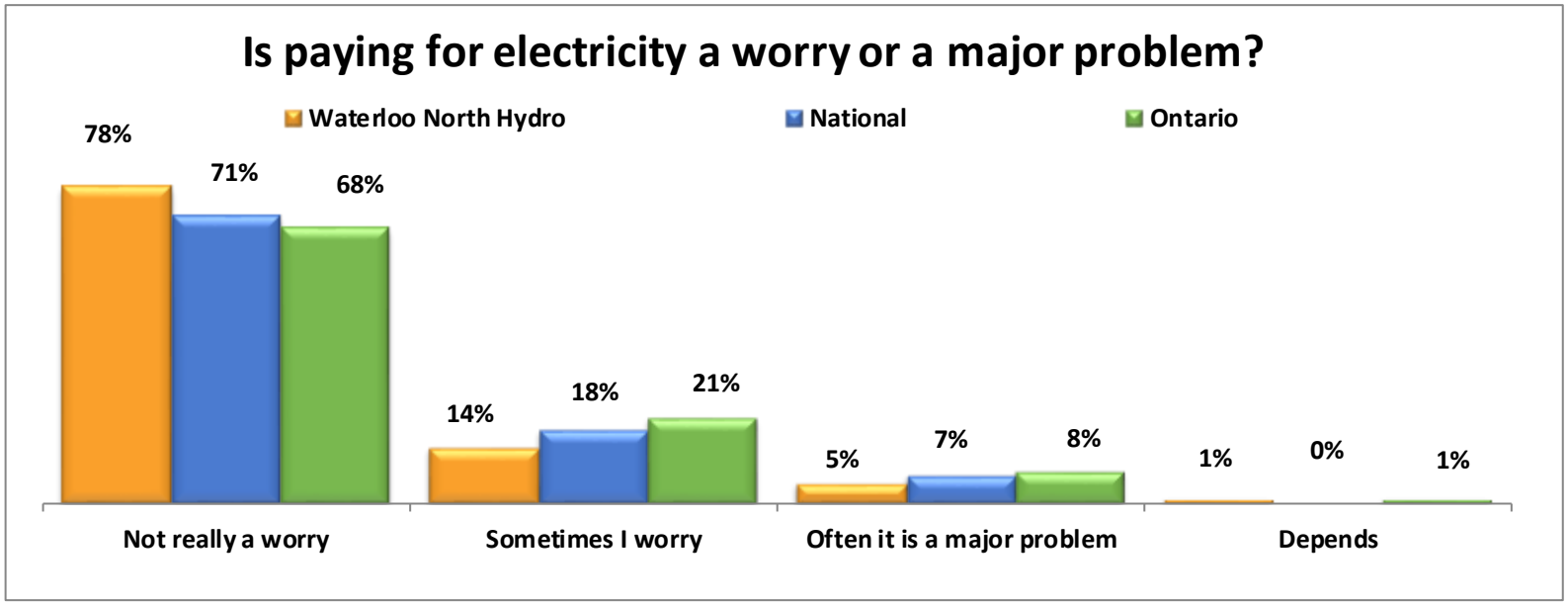
What do customers think about electricity costs?

At the height of the 'anger' stage for many customers, the UtilityPULSE database showed 31% of survey respondents said they sometimes worried about paying their bill. Customers felt they were paying more but not getting more, especially disconcerting when wages and inflation were hovering around the 2% mark. Five years earlier that number was 21%. The 2017 25% reduction in costs, coupled with a promise to further reduce the cost and a better economy has helped to move the number back to 21% in Ontario. This is a huge change.

Next, I am going to read a number of statements people might use about paying for their electricity. Which one comes closest to your own feelings, even if none is exactly right? Paying for electricity is not really a worry, Sometimes I worry about finding the money to pay for electricity, or Paying for electricity is often a major problem?

Is paying for electricity a worry or a major problem?				
	Not a worry	**Sometimes**	**Often**	**Depends**
Waterloo North Hydro	78%	14%	5%	1%
National	71%	18%	7%	0%
Ontario	68%	21%	8%	1%

Base: total respondents



Base: total respondents

Is paying for electricity a worry or a major problem?				
	Not a worry	Sometimes	Often	Depends
Waterloo North Hydro				
<$30,000	56%	26%	12%	0%
$30<$75,000	75%	16%	7%	1%
$75,000+	91%	7%	2%	1%

Base: total respondents

Is paying for electricity a worry or a major problem?				
	Not a worry	Sometimes	Often	Depends
Ontario				
2018	68%	21%	8%	1%
2017	61%	26%	10%	1%
2016	49%	31%	16%	3%
2015	59%	25%	10%	2%
2014	59%	26%	11%	2%
National				
2018	71%	18%	7%	0%
2017	67%	19%	11%	1%
2016	58%	29%	10%	2%
2015	67%	22%	8%	2%
2014	69%	20%	7%	3%

Base: Ontario and National Benchmarks

What do small commercial customers think?

Based on data in the UtilityPULSE database, small commercial customers have relatively similar views about their utility. The tables associated with this report will contain your specific information as it relates to residential and commercial customers. A word of caution, smaller data samples create greater swings or spreads in the data, hence mitigating the effect of a small data sample by using the UP database.





Small Commercial Customer (General Service < 50kW Demand)

A small commercial customer is defined by the OEB as a non-residential customer in a less than 50 kW demand rate class. These customers are similar to the residential customer in that their bill does not have a demand component to it and their charges are based upon KWH of consumption. Most of these customers would occupy small storefront locations or offices

An area of concern is about the LDC's ability to "target" its communications to the type of business. Beyond having a contact telephone number, company name and address there isn't much "knowledge" about the small commercial customer. In a time when "targeted" communication is important, knowing the type of category of

small commercial account would assist LDCs in delivering meaningful messages in an effective way. This could be particularly important in the area of energy conservation, i.e., pulling together messages and programs for specific types of businesses. After all, a small restaurant is different from a small accounting office.

Satisfaction: Pre & Post		
Satisfaction (Top 2 Boxes: 'very + somewhat satisfied')	**Residential**	**Commercial**
Initially	93%	93%
End of Interview	92%	93%

Base: total respondents from the 2018 UtilityPULSE Database



As it relates to the six attributes associated with customer service:

Very or fairly satisfied with…	**Residential**	**Commercial**
The time it took to contact someone	73%	78%
The time it took someone to deal with your problem	71%	73%
The helpfulness of the staff who dealt with your problem	75%	81%
The knowledge of the staff who dealt with your problem	74%	77%
The level of courtesy of the staff who dealt with your problem	82%	88%
The quality of information provided by the staff member	74%	75%

Base: total respondents from the 2018 UtilityPULSE Database

Killer B's: Outages & Bills problems		
	Residential	Commercial
Respondents with outage problems	42%	39%
Respondents with billing problems	9%	8%

Base: total respondents from the 2018 UtilityPULSE Database

Overall satisfaction with most recent experience		
	Residential	Commercial
Top 2 Boxes: 'very + somewhat satisfied'	77%	77%
Bottom 2 Boxes: 'somewhat + very dissatisfied'	19%	20%

Base: total respondents from the 2018 UtilityPULSE Database

Comparisons between Residential and Commercial		
Loyalty Groups	Residential	Commercial
Secure	30%	32%
Still Favourable	17%	18%
Indifferent	46%	43%
At risk	7%	7%

Base: total respondents from the 2018 UtilityPULSE Database

Loyalty Model Factors		
	Residential	Commercial
Very/somewhat satisfied	93%	93%
Definitely/probably would continue	86%	87%
Definitely/probably would recommend	79%	83%

Base: total respondents from the 2018 UtilityPULSE Database

Important attributes which describe operational effectiveness		
	Residential	Commercial
Provides consistent, reliable electricity	92%	91%
Delivers on its service commitments to customers	89%	88%
Accurate billing	89%	88%
Quickly handles outages and restores power	91%	91%
Makes electrical safety a top priority	90%	90%
Is efficient at managing the electricity distribution system	86%	87%
Is a company that is 'easy to do business with'	86%	87%
Operates a cost-effective electricity distribution system	74%	74%
Standard of reliability meets expectations	91%	90%

Base: total respondents from the 2018 UtilityPULSE Database with an opinion

Important attributes which shape perceptions about service quality and value		
	Residential	Commercial
Is pro-active in communicating changes and issues which may affect customers	81%	81%
Provides good value for money	74%	75%
Customer-focused and treats customers as if they're valued	84%	83%
Deals professionally with customers' problems	87%	87%
Spends money prudently	82%	81%
Quickly deals with issues that affect customers	86%	85%
Provides information and tools to help manage electricity consumption	83%	79%
Provides information to help customers reduce their electricity costs	79%	75%
The cost of electricity is reasonable when compared to other utilities	64%	60%

Base: total respondents from the 2018 UtilityPULSE Database with an opinion

Important attributes which shape perceptions about corporate image		
	Residential	Commercial
Is a respected company in the community	87%	87%
A leader in promoting energy conservation	79%	79%
Keeps its promises to customers and the community	85%	84%
Is a socially responsible company	84%	85%
Is a trusted and trustworthy company	87%	87%
Adapts well to changes in customer expectations	79%	80%
Overall the utility provides excellent quality services	89%	87%

Base: total respondents from the 2018 UtilityPULSE Database with an opinion

Importance of online access for the following features:		
Top 2 Boxes: 'very + somewhat important'	**Residential**	**Commercial**
Reporting or inquiring about an issue	48%	52%
Researching information about energy conservation	40%	45%
Having a web chat feature on the website	20%	28%
Automated alerts when electricity usage exceeds a prearranged threshold	21%	30%
Review and pay your bill online (through utility's website)	44%	48%
Power outage alerts	65%	72%
Tools and calculators to help you manage your electricity consumption	30%	37%
Comparison of your electricity consumption with your neighbours	18%	26%
Automated alert to predict your upcoming bill	33%	37%
Automated alert to remind you of your bill due date	33%	37%

Base: total respondents from the 2018 UtilityPULSE Database

Preferred method of communication to receive notice of a billing issue		
	Residential	**Commercial**
Telephone	57%	55%
Voice Mail	2%	2%
Text	8%	4%
Email	33%	39%
Don't know	1%	1%

Base: total respondents from the 2018 UtilityPULSE Database

Method of communication Customers prefer their LDC uses during an UNPLANNED OUTAGE		
	Residential	Commercial
Recorded telephone message	34%	31%
Email notice	19%	29%
Posted on utility's website	4%	6%
Social media	5%	5%
Local radio	5%	5%
Local TV	3%	1%
Text message	25%	19%
Alert on APP	2%	2%

Base: total respondents from the 2018 UtilityPULSE Database

Method of communication Customers prefer their LDC uses about general news		
	Residential	Commercial
Recorded telephone message	23%	16%
Email notice	38%	49%
Posted on utility's website	6%	8%
Social media	6%	7%
Local radio	5%	5%
Local TV	5%	4%
Text message	10%	7%
Alert on APP	1%	2%

Base: total respondents from the 2018 UtilityPULSE Database

Satisfaction with information provided		
Top 2 Boxes:'very + fairly satisfied'	**Residential**	**Commercial**
The amount of information available to you about energy conservation	82%	80%
The quality of information available when outages occur	73%	77%
The electricity safety education provided to the public	74%	76%
The timeliness and relevance of information for things such as planned outages, construction activity, tree trimming.	77%	80%

Base: total respondents from the 2018 UtilityPULSE Database

Access to services		
Top 2 Boxes: 'very + somewhat satisfied'	**Residential**	**Commercial**
The availability of call-centre staff Monday to Friday	58%	66%
The 24/7 availability of system operators to respond to respond to outages	78%	88%
The online self-serve options for managing your account	56%	72%
The online self-serve options for request services	48%	70%

Base: total respondents from the 2018 UtilityPULSE Database





Method

The findings in this report are based on telephone interviews conducted for Simul Corp. / UtilityPULSE by Logit Group between September 17 - October 17, 2018, with 403 respondents who pay or look after the electricity bills from a list of residential and small and medium-sized business customers supplied by Waterloo North Hydro.

The sample of phone numbers chosen was drawn randomly to ensure each business or residential phone number on the list had an equal chance of being included in the poll.

The sample was stratified so that 85% of the interviews were conducted with residential customers and 15% with commercial customers.

In sampling theory, in 19 cases out of 20 (95% of polls in other words), the results based on a random sample of 403 residential and commercial customers will differ by no more than ±4.90 percentage points where opinion is evenly split.

This means you can be 95% certain that the survey results do not vary by more than 4.90 percentage points in either direction from results that would have been obtained by interviewing all Waterloo North Hydro residential and small and medium-sized commercial customers if the ratio of residential to commercial customers is 85%:15%.

The margin of error for the sub-samples is larger. To see the error margin for subgroups, use the calculator at http://www.surveysystem.com/sscalc.htm.

Interviewers reached 2,662 households and businesses from the customer list supplied by Waterloo North Hydro. The 403 who completed the interview represent a 15% response rate.

The findings for the Simul/UtilityPULSE National Benchmark of Electric Utility Customers are based on telephone interviews conducted with adults throughout the country who are responsible for paying electric utility bills. The ratio of 85% residential customers and 15% small and medium-sized business customers in the National study reflects the ratios used in the local community surveys. The margin of error in the National poll is ±2.95 percentage points at the 95% confidence level.

For the National study, the sample of phone numbers chosen was drawn by recognized probability sampling methods to ensure each region of the country was

represented in proportion to its population and by a method that gave all residential telephone numbers, both listed and unlisted, an equal chance of being included in the poll.

The data were weighted in each region of the country to match the regional shares of the population.

The margin of error refers only to sampling error; other non-random forms of error may be present. Even in true random samples, precision can be compromised by other factors, such as the wording of questions or the order in which questions were asked.

Random samples of any size have some degree of precision. A larger sample is not always better than a smaller sample. The important rule in sampling is not how many respondents are selected but how they are selected. A reliable sample selects poll respondents randomly or in a manner which ensures that everyone in the population being surveyed has an equal chance of being selected.

How can a sample of only several hundred truly reflect the opinions of thousands or millions of electricity customers within a few percentage points?

Measures of sample reliability are derived from the science of statistics. At the root of statistical reliability is probability, the odds of obtaining a particular outcome by chance alone. For example, the chances of having a coin come up heads in a single toss are 50%. A head is one of only two possible outcomes.

The chance of getting two heads in two coin tosses is less because two heads are only one of four possible outcomes: a head/head, head/tail, tail/head and tail/tail.

But as the number of coin tosses increases, it becomes increasingly more likely to get outcomes that are either close to or exactly half heads and half tails because there are more ways to get such outcomes. Sample survey reliability works the same way but on a much larger scale.

As in coin tosses, the most likely sample outcome is the true percentage of whatever we are measuring across the total customer base or population surveyed. Next most likely are outcomes very close to this true percentage. A statement of the potential margin of error or sample precision reflects this.

Some pages in the computer tables also show the standard deviation (S.D.) and the standard error of the estimate (S.E.) for the findings. The standard deviation embraces the range where 68% (or approximately two-thirds) of the respondents would fall if the distribution of answers were a normal bell-shaped curve. The spread of responses is a way of showing how much the result deviates from the "standard mean" or

average. In the Waterloo North Hydro data on corporate image, Simul converted the answers to a point scale with 4 meaning agree strongly, 3 meaning agree somewhat and so on (see in the computer tables).

For example, the mean score is 3.74 for providing consistent, reliable electricity. The average is 3.20 for providing information to help customers reduce their energy costs.

For reliable electricity, the standard deviation is 0.49. For providing information to help customers reduce their energy costs, the S.D. is 0.86. These findings mean there is a wider range of opinion – meaning less consensus – about whether help to reduce energy costs than about whether Waterloo North Hydro energy supplies are reliable.

Beneath the S.D. in the tables is the standard error of the estimate. The S.E. is a measure of confidence or reliability, roughly equivalent to the error margin cited for sample sizes. The S.E. measures how far off the sample's results are from the standard deviation. The smaller the S.E., the greater the reliability of the data.

In other words, a low S.E. indicates the answers given by respondents in a certain group (such as residential bill payers or women) do not differ much from the probable spread of the answers "predicted" in sampling and probability theory.

In certain instances, all of the sub-datasets from the entire UtilityPULSE database for 2018 were concatenated in order to use the average of all the control samples for comparison. The cumulated population base for these questions was in excess of 9,000.

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Good things happen when workplaces work. You'll receive both strategic and pragmatic guidance about how to improve Customer satisfaction & Employee engagement with leaders who lead and a front-line which is inspired. We provide training, consulting, surveys, diagnostic tools, and keynotes. The electric utility industry is a market segment we specialize in. Both large and small utilities have received actionable insights. For 20 years we have been talking to 1000's of utility customers in Ontario and across Canada and we have expertise which is beneficial to every utility.

Culture, Leadership & Performance – Organizational Development	**Focus Groups, Surveys, Polls, Diagnostics**	**Customer Service Excellence**
Leadership development	Diagnostics ie. Change Readiness, Leadership Effectiveness, Managerial Competencies	Service Excellence Leadership
Strategic Planning	Surveys & Polls	Telephone Skills
Teambuilding	Customer Satisfaction and Loyalty Benchmarking Surveys	Customer Care
Organizational Culture Transformation	Organization Culture Surveys	Dealing with Difficult Customers

Benefit from our expertise in Customer Satisfaction, Leadership development, Strategy development or review, and Front-line & Top-line driven-change. We're experts in helping you assess and then transform your organization's culture to one where achieving goals while creating higher levels of customer satisfaction is important. Anyone can present data, or design programs – we believe having an understanding of the industry before doing so is crucial. Call us when creating an organization where more employees satisfy more customers more often, is important.

Your personal contact is:

Sid Ridgley, CSP

Phone: (905) 895-7900 x 29 E-mail: sridgley@simulcorp.com

Waterloo North Hydro

ATTACHMENT 1-8

PUBLIC SAFETY SURVEY

Waterloo North Hydro Inc.



Public Awareness of Electrical Safety
December 2019

UtilityPULSE
Public Awareness of Electrical Safety Report

This is privileged and confidential material and no part may be used other than the intended purpose of providing a score for the Ontario Energy Board Scorecard.

Results are based on a telephone survey (Random Digit Dialing) among 401 Members of the General Public,18 years of age or older, residing within the LDC's geographic service territory. The data has been statistically weighted according to Canadian census figures (2016) for age, gender and region.

Scores in this report follow Appendix A: Scorecard Methodology and Implementation Guide last published by the Ontario Energy Board November 25, 2015.

The questions used in the survey follow Appendix B: Biannual Standardized Scorecard Public Awareness of Electrical Safety Telephone Questionnaire last published by the Ontario Energy Board November 25, 2015.

All comments and questions should be addressed to:

UtilityPULSE
Toll free: 1-888-291-7892 or Local: 905-895-7900
Project lead: Sid Ridgley
Email: sidridgley@utilitypulse.com
December, 2019



UtilityPULSE
Public Awareness of Electrical Safety Report
Executive Summary

Waterloo North Hydro's Public Safety Awareness Index Score is 82%.

This is the third execution of the Public Awareness Electrical Safety survey; the first execution occurred in 2016. This survey compiles data to measure the level of awareness of key electrical safety precautions among the public within the electricity distributor's service territory. Results are based on a telephone survey (Random Digit Dialing) among 401 Members of the General Public,18 years of age or older, within the LDC's geographic service territory. The data has been statistically weighted according to Canadian census figures (2016) for age, gender and region.

The six core measurement questions correspond to the six most frequent incidents involving utility equipment in Ontario over the last decade. When looking at the distribution of responses for the six core measurement questions here are some of the key observations and recommendations going forward:

Question B5: Likelihood to *"call before you dig" [38% scored 1.00 pts]*
38% would 'definitely' and 22% were 'very likely' to call to locate electrical or other underground lines. While these figures indicate that many of your service territory's population would 'call before they dig', the remainder did not see this as a 'must do'. Even of those respondents who did reply they would definitely or very likely make the call, it is not clear if they would call because they were exerting due diligence for their property and household project OR if they were knowledgeable in the fact that this is the law that is in place.

Any education put forth on this core measurement must emphasize that **it is the law that one must 'call before you dig'.**



UtilityPULSE
Public Awareness of Electrical Safety Report
Executive Summary (continued)

Question B6: Impact of touching a power line *[92% scored 1.00 pts]*
92% knew that is 'very dangerous' and 6% believed it is 'somewhat dangerous' to touch an overhead power line with their body or any object.

Any education put forth on this core measurement must continue to emphasize & re-emphasize the perils associated with touching a power line. The key message that needs to continue to be driven to the public on this measurement is clear and simple: **It is very dangerous to touch an overhead power line with your body or any object.**

Question B7: Proximity to overhead power line *[24% scored 1.00 pts]*
This is one of two questions that contained a concept of measurement of distance from a power line constituting safe proximity. 24% indicated that they believed that there needed to be a distance of 3 metres to less than 6 metres and 45% indicated a distance of 6 metres or more to safely come close to an overhead power line with their body or an object. While this indicates there is knowledge that there needs to be a "certain" proximity maintained from an overhead power line, the exact measurement is not quite readily known. It is also indicative that while most people believed a "certain" distance was required, it is not clear how many chose the higher distance because of a prevailing thought that 'the further away the safer you are'.

While being further away i.e. 6 metres or more is not technically incorrect, the point of this question is to educate the public that there is a reasonable distance that needs to be maintained. Any education put forth on this core measurement must clearly emphasize that a person can be as close as 3 metres to safely come close to an overhead power line while undertaking outdoor activities. This message whether in print or graphically depicted has to be clear and identifiable as not to confuse with the second question concerning distance from a 'downed' power line (QB9).

One key to improving awareness is to help the public at large to **learn & remember the required minimum distance is 3 metres to an <u>overhead</u> power line.**



UtilityPULSE
Public Awareness of Electrical Safety Report
Executive Summary (continued)

Question B8: Danger of tampering with electrical equipment *[83% scored 1.00 pts]*
83% knew that is 'very dangerous' to tamper with electrical equipment, while 13% believed it was 'somewhat dangerous'.

Any education put forth on this core measurement must continue to emphasize & re-emphasize the perils associated with touching or tampering with electrical equipment. **Any electrical equipment is a no play zone for children and/or pets and in general all persons are not touch or tamper with the electrical equipment.**

Question B9: Proximity to downed power line *[77% scored 1.00 pts]*
This is the second question containing a concept of measurement of distance; in this instance it is safe proximity from a downed power line. 77% indicated that a distance of 10 metres or more needed to be maintained from a downed power line. As in QB7, while this indicates there is knowledge that there needs to be a "certain" proximity maintained from a downed power line, it is not clear how many chose the higher distance because of a prevailing thought that 'the further away the safer you are'. In this instance however, choosing the furthest distance is the correct answer.

The point of this question is to educate the public that there is a reasonable distance that needs to be maintained from a downed power line and this distance is at least 10 metres. This message whether emphasized in print or graphically depicted has to be clear and identifiable as not to confuse with the question concerning distance of 3 metres from an 'overhead' power line (QB7).

One key to improving awareness is to help the public at large to **learn & remember the minimum distance from a <u>downed</u> power line is 10 metres.**



UtilityPULSE
Public Awareness of Electrical Safety Report
Executive Summary (continued)

Question B10: Actions taken in vehicle in contact with wires *[92% scored 1.00 pts]*
92% responded the safer action in this case would be to 'stay in the vehicle until power was disconnected from the line'.

Any education put forth on this core measurement must continue to emphasize & re-emphasize the harm associated with stepping out of a vehicle that is in contact with a downed power line. While some people instinctually feel that getting out and seeking help would be the proper thing to do, **the public needs to be educated that should their vehicle come in contact with power lines, staying in the vehicle is their best and safest option until the power is disconnected.**

Additional Questions for Grid Smart City Clients:

Question GSC1: Primary source of electrical safety information
21% cited the primary source of their electrical safety information came from the **local utility website**
29% cited **online searches**
16% cited the **ESA**
6% cited a **relative or friend**
2% cited **social media**
22% cited **other** and
4% **preferred not to say or simply did not know**.

It would seem overall the internet is the overwhelming source of electrical safety information whether it was from online searches or the utility's website as 50% of all respondents listed one or the other. 46% of respondents cited all other sources combined.



UtilityPULSE
Public Awareness of Electrical Safety Report
Executive Summary (continued)

Additional Questions for Grid Smart City Clients:

Question GSC2: Probing for households with children aged 6 to 13

27% responded that their household was comprised of school aged children.

Question GSC3: Conversations with children about the dangers of powerlines and playing near electrical equipment

Over half, **44%** claimed they did have a conversation with their children discussing the dangers of powerlines and playing near electrical equipment. While it is encouraging that parents and families recognize the need to discuss electrical safety with their children, more has to be done to ensure that more parents and families are motivated to have this discussion to prevent potential injury and even fatalities.

Conclusion:

This survey and previous years' surveys of the public in your service territory about electrical safety show many respondents do have good knowledge or have received some information pertaining to the 6 core measurement questions. Waterloo North Hydro's Public Safety Awareness Index Score is 82%.

The OEB has indicated that the performance target for public awareness of electrical safety will be established once three years of data is gathered; two years of data of have been gathered as of this time. In the meantime, your LDC will be expected to demonstrate the impact of your public education efforts through biannual surveying of adults residing in your service territory.

As you continue to develop safety awareness campaigns, we recommend that you look through this report along with your data report to see where, among the population, awareness levels are lower and where outreach can be targeted. Focus on the messages which are simple and memorable which help the public ***learn and remember***. We also recommend that you share your results with your employees, especially those who may be in contact with outside workers, as they too can help spread the safety message.

Sid Ridgley

UtilityPULSE



Waterloo North Hydro
Public Safety Awareness Index Score

This **index score** is calculated using the following formulas:

Step 1: Add each individual respondent's key measurement questions using the provided response values.

B5
\+ B6
\+ B7
\+ B8
\+ B9
\+ B10
= **Individual respondent's cumulative score**

Step 2:
Individual respondent's cumulative score / # of sections
= Respondent Standardized Score

Step 3:
Summation of all "**Respondent Standardized Scores**" **/** n-size (i.e. total sample size)
= Raw Index Score

Step 4:
Raw Index Score × 100 = **Index Score** (bound between 0-100%)

Responses will be indexed to create a single comparable Public Safety Awareness Score

In some cases, a respondent will have no intention of undertaking a project that requires digging. In this case, the index is based on only the 5 relevant sections of scorecard. This question (B5) will be removed from the calculation.



Waterloo North Hydro Public Safety Awareness Index Score

82%



B5. Likelihood to *"call before you dig"*

If you were to undertake a household project that required digging – such as planting a tree or building a deck – how likely are you to call to locate electrical or other underground lines?

Response	Score	% of respondents
Definitely	1.00 pts	**38%**
Very likely	0.75 pts	**22%**
Somewhat likely	0.50 pts	**24%**
Not very likely	0.00 pts	**9%**
Not at all likely	0.00 pts	**5%**
I would not undertake a project that required digging	omitted[1]	**1%**
Don't know	0.00 pts	**1%**

[1]Note: In some cases, a respondent will have no intention of undertaking a project that requires digging. In this case, the index is based on only the five relevant sections of the scorecard. This question will be removed from the calculation of the Individual Respondent's cumulative score.



CORRECT ✓ **84%**

INCORRECT ✗ **16%**

Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know

ONTARIO ONECALL

*Planting a tree, building a deck or a fence? Contact **ON1Call** first to get a locate so you can dig safely.*

1-800-400-2255

Percentage may not add up to 100% due to rounding

UtilityPULSE

B5. Likelihood to *"call before you dig"*

If you were to undertake a household project that required digging – such as planting a tree or building a deck – how likely are you to call to locate electrical or other underground lines?

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Definitely	35%	41%	16%	15%	46%	47%	43%	58%
Very likely	25%	20%	18%	15%	19%	29%	35%	17%
Somewhat likely	21%	27%	58%	36%	19%	13%	13%	8%
Not very likely	10%	8%	9%	27%	4%	5%	4%	4%
Not at all likely	8%	3%	0%	7%	11%	4%	2%	6%
I would not undertake a project that required digging[1]	1%	2%	0%	0%	0%	2%	2%	4%
Don't know	1%	1%	0%	0%	0%	0%	3%	3%

[1]Note: In some cases, a respondent will have no intention of undertaking a project that requires digging. In this case, the index is based on only the five relevant sections of the scorecard. This question will be removed from the calculation of the Individual Respondent's cumulative score.



ONTARIO ONECALL

*Planting a tree, building a deck or a fence? Contact **ON1Call** first to get a locate so you can dig safely.*

1-800-400-2255

Percentage may not add up to 100% due to rounding

UtilityPULSE

B6. Impact of touching a power line

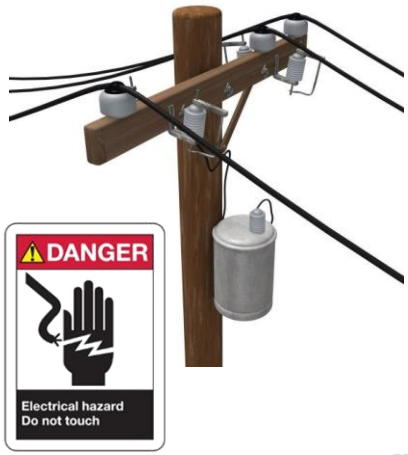
How dangerous do you believe it is to touch – with your body or any object – an overhead power line?

Response	Score	% of respondents
Very dangerous	1.00 pts	**92%**
Somewhat dangerous	0.50 pts	**6%**
Not very dangerous	0.00 pts	**0%**
Not at all dangerous	0.00 pts	**0%**
Don't know	0.00 pts	**1%**



CORRECT ✓ **99%**

INCORRECT ✗ **1%**



Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know

Percentage may not add up to 100% due to rounding

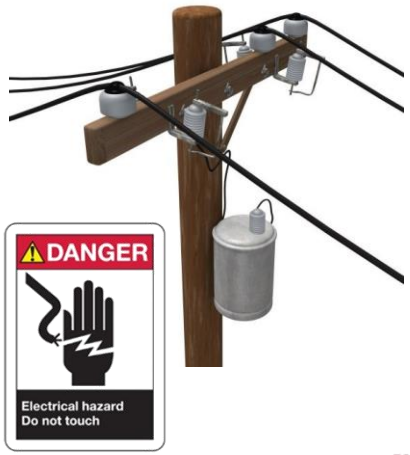
UtilityPULSE

B6. Impact of touching a power line

How dangerous do you believe it is to touch – with your body or any object – an overhead power line?

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Very dangerous	91%	94%	82%	88%	89%	100%	98%	95%
Somewhat dangerous	7%	6%	18%	12%	7%	0%	1%	2%
Not very dangerous	0%	0%	0%	0%	0%	0%	0%	0%
Not at all dangerous	0%	0%	0%	0%	0%	0%	1%	1%
Don't know	2%	0%	0%	0%	4%	0%	0%	1%





Percentage may not add up to 100% due to rounding

B7. Proximity to overhead power line

When undertaking outdoor activities – such as, standing on a ladder, cleaning windows or eaves, climbing or trimming trees – how close do you believe you can safely come to an overhead power line with your body or an object? Would you say …

Response	Score	% of respondents
You can safely touch an overhead power line	0.00 pts	**0%**
Less than 1 metre (i.e. less than 3 feet)	0.00 pts	**6%**
1 to less than 3 metres (i.e. 3 to less than 10 feet)	0.00 pts	**21%**
3 metres to less than 6 metres (i.e. 10 feet to less than 20 feet)	1.00 pts	**24%**
You should maintain a distance of 6 metres or more (i.e. 20 feet or more)	0.75 pts	**45%**
Don't know	0.00 pts	**5%**



CORRECT ✓ **69%**

INCORRECT ✗ **31%**

Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know



Percentage may not add up to 100% due to rounding

UtilityPULSE

B7. Proximity to overhead power line

When undertaking outdoor activities – such as, standing on a ladder, cleaning windows or eaves, climbing or trimming trees – how close do you believe you can safely come to an overhead power line with your body or an object? Would you say …

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
You can safely touch an overhead power line	0%	0%	0%	0%	0%	0%	0%	1%
Less than 1 metre (i.e. less than 3 feet)	1%	11%	16%	12%	6%	0%	2%	2%
1 to less than 3 metres (i.e. 3 to less than 10 feet)	17%	24%	25%	32%	23%	24%	10%	10%
3 metres to less than 6 metres (i.e. 10 feet to less than 20 feet)	31%	17%	33%	22%	18%	25%	26%	19%
You should maintain a distance of 6 metres or more (i.e. 20 feet or more)	48%	42%	27%	34%	49%	47%	60%	53%
Don't know	4%	5%	0%	0%	4%	4%	2%	16%





Percentage may not add up to 100% due to rounding

B8. Danger of tampering with electrical equipment

Some electrical utility equipment is located on the ground, such as locked steel cabinets that contain transformers.

How dangerous do you believe it is to try to open, remove contents, or touch the equipment inside? Would you say …

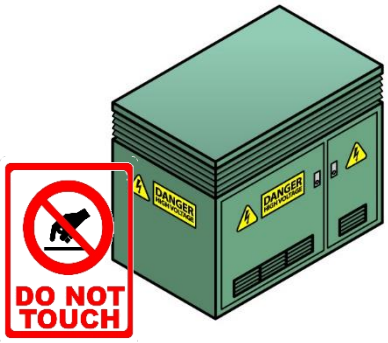
Response	Score	% of respondents
Very dangerous	1.00 pts	**83%**
Somewhat dangerous	0.50 pts	**13%**
Not very dangerous	0.00 pts	**2%**
Not dangerous at all	0.00 pts	**0%**
Don't know	0.00 pts	**1%**



CORRECT ✓ **97%**

INCORRECT ✗ **3%**

Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know



Percentage may not add up to 100% due to rounding

UtilityPULSE

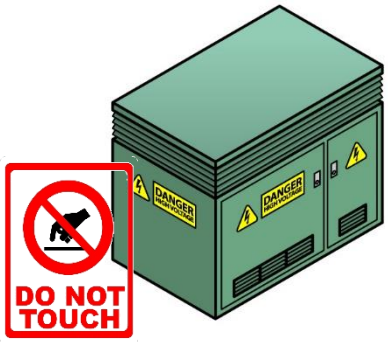
B8. Danger of tampering with electrical equipment

Some electrical utility equipment is located on the ground, such as locked steel cabinets that contain transformers.

How dangerous do you believe it is to try to open, remove contents, or touch the equipment inside? Would you say …

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Very dangerous	87%	80%	82%	69%	81%	90%	89%	91%
Somewhat dangerous	8%	18%	9%	32%	12%	9%	9%	8%
Not very dangerous	3%	1%	9%	0%	3%	0%	1%	1%
Not dangerous at all	0%	0%	0%	0%	0%	0%	1%	0%
Don't know	2%	1%	0%	0%	4%	2%	0%	1%





Percentage may not add up to 100% due to rounding

UtilityPULSE

B9. Proximity to downed power line

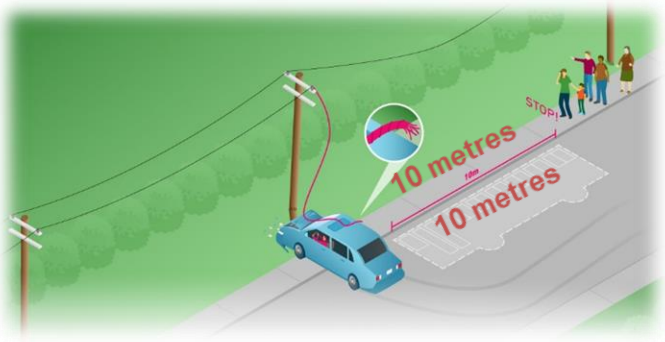
How close do you believe you can safely come to a downed overhead power line, such as a downed line caused by a storm or accident? Would you say …

Response	Score	% of respondents
You can safely touch a downed overhead power line	0.00 pts	0%
Less than 1 metre (i.e. less than 3 feet)	0.00 pts	1%
1 to less than 5 metres (i.e. 3 to less than 16 feet)	0.00 pts	6%
5 metres to less than 10 metres (i.e. 16 feet to less than 33 feet)	0.00 pts	15%
You should maintain a distance of 10 metres or more (i.e. 33 feet or more)	1.00 pts	77%
Don't know	0.00 pts	3%



CORRECT ✓ 77%

INCORRECT ✗ 23%



Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know

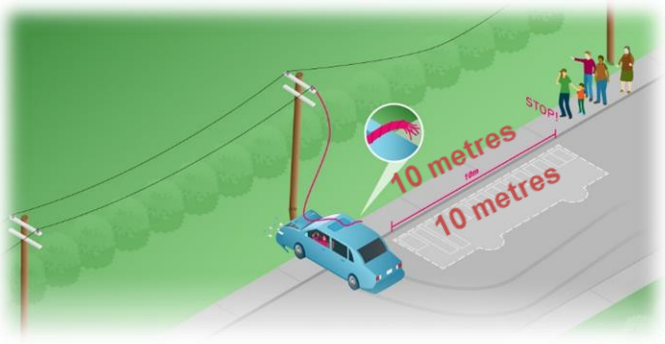
Percentage may not add up to 100% due to rounding

B9. Proximity to downed power line

How close do you believe you can safely come to a downed overhead power line, such as a downed line caused by a storm or accident? Would you say …

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
You can safely touch a downed overhead power line	0%	0%	0%	0%	0%	0%	0%	1%
Less than 1 metre (i.e. less than 3 feet)	0%	1%	0%	0%	0%	2%	1%	1%
1 to less than 5 metres (i.e. 3 to less than 16 feet)	4%	7%	0%	12%	4%	6%	3%	7%
5 metres to less than 10 metres (i.e. 16 feet to less than 33 feet)	12%	17%	16%	7%	18%	22%	10%	14%
You should maintain a distance of 10 metres or more (i.e. 33 feet or more)	82%	72%	84%	81%	75%	69%	85%	69%
Don't know	1%	4%	0%	0%	3%	2%	2%	9%





Percentage may not add up to 100% due to rounding

B10. Actions taken in vehicle in contact with wires

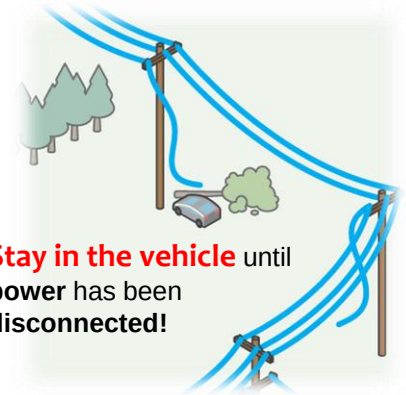
If you were in a vehicle – such as a car, bus, or truck – and an overhead power line came down on top of it, which of the following options do you believe is generally safer?

Response	Score	% of respondents
Get out quickly and seek help	0.00 pts	**6%**
Stay in the vehicle until power has been disconnected from the line	1.00 pts	**92%**
Don't know	0.00 pts	**2%**



CORRECT ✓ **92%**

INCORRECT ✗ **8%**



Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know

Percentage may not add up to 100% due to rounding

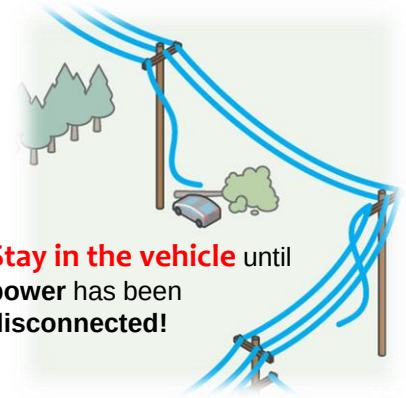
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B10. Actions taken in vehicle in contact with wires

If you were in a vehicle – such as a car, bus, or truck – and an overhead power line came down on top of it, which of the following options do you believe is generally safer?

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Get out quickly and seek help	6%	6%	9%	0%	10%	5%	7%	6%
Stay in the vehicle until power has been disconnected from the line	92%	93%	91%	100%	90%	89%	92%	92%
Don't know	2%	1%	0%	0%	0%	6%	1%	3%





Percentage may not add up to 100% due to rounding

Waterloo North Hydro
Public Awareness of Electrical Safety Report
Demographics

In what age category do you fall into?

Response	% of respondents Based on Census data
18 to 24	15%
25 to 34	18%
35 to 44	17%
45 to 54	18%
55 to 64	15%
65 or older	17%



Gender

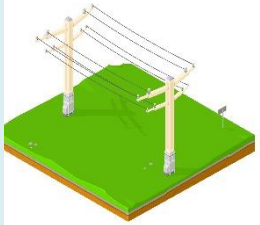
Response	% of respondents Based on Census data
Male	50%
Female	50%





Percentage may not add up to 100% due to rounding

Waterloo North Hydro
Public Awareness of Electrical Safety Report
Demographics



Does your job regularly cause you to come close to energized power lines?

Response	% of respondents
Yes	5%
No	95%
Don't know	0%

Proceed to the following question only If Respondent answers 'Yes' …



Do you work in any of the following fields?



Response	% of respondents
Transportation	0%
General labour	32%
Construction or outdoor trades	36%
Electrician	9%
Other	7%
Don't know/Prefer not to say	16%



Percentage may not add up to 100% due to rounding

Waterloo North Hydro
Public Awareness of Electrical Safety Report
Demographics

How would you describe your primary residence? Would you say…

Response	% of respondents
A fully-detached home	60%
A semi-detached home	6%
A townhome or row house	6%
An apartment or condo building less than 5 storeys	4%
An apartment or condo building 5 storeys or higher	5%
A farm	19%
Other	1%



Does your primary residence receive electricity through overhead wires or underground cables?

Response	% of respondents
Overhead wires	37%
Underground cables	61%
Don't know	3%





Percentage may not add up to 100% due to rounding

Waterloo North Hydro

GSC1. Could you tell me what would be your primary source for finding information about electrical safety?

Response	Overall	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Local utility website	21%	18%	24%	16%	0%	9%	33%	35%	31%
Electrical Safety Authority	16%	18%	13%	18%	19%	13%	10%	18%	16%
Online search	29%	27%	32%	31%	30%	34%	36%	25%	20%
Social media	2%	3%	1%	9%	0%	0%	0%	2%	1%
Relative or friend	6%	6%	7%	0%	7%	13%	7%	4%	6%
Other	22%	27%	18%	27%	32%	27%	12%	14%	22%
Don't Know, Refused, Prefer not to say	4%	3%	6%	0%	12%	4%	2%	3%	4%

[1]*Note: Unweighted data*



This slide is for Grid Smart City Clients only

Percentage may not add up to 100% due to rounding

Waterloo North Hydro

GSC2. Do you have any children, living with you, who are 6 to 13 years old?

Response	% of respondents
Yes	27%
No	72%
Did not answer	0%



[1]*Note: Unweighted data*

GSC3. Have you had a conversation within the last year with your child or children about the dangers of powerlines and playing near electrical equipment?

Response	% of respondents
Yes	44%
No	55%
Did not answer	2%



[1]*Note: Unweighted data*



This slide is for Grid Smart City Clients only

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UtilityPULSE is uniquely positioned to help your utility get feedback from Customers, through its Annual Electric Utility Customer Satisfaction Survey or customized research designed for you. In addition, we understand what it takes to create an organization where employees are engaged and enthusiastic about customers and the work that they do. Knowing what is going on with your customers and employees is one thing, doing something about it is another. We get paid for, and earn our clients' loyalty by, delivering objective insights with actionable recommendations; accomplished when every step of the process is completed with professionalism and pride. Our mission is to help you and your leadership team move from knowing to doing while improving performance and creating value to your customers, employees, stakeholders and the public at large.

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Waterloo North Hydro

ATTACHMENT 1-9

CUSTOMER ENGAGEMENT REPORT

BRICKWORKS

COMMUNICATIONS



Customer Satisfaction Survey Report

March 2019

Brickworks Communications Inc.
1377 Cormorant Road, Unit 207 ● Ancaster ● Ontario ● L9G 4V5

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Brickworks Communications Inc.
1377 Cormorant Road, Unit 207 ● Ancaster ● Ontario ● L9G 4V5

Methodology & Logistics

Background & Overview:

Brickworks Communications was commissioned by Waterloo North Hydro to conduct a satisfaction survey of its customers. This report contains an executive summary of the results, while separate Excel reports include the results by individual question.

Survey Method:

All surveys were completed online using Computer Assisted Web Interviewing (CAWI). This was a self-selection survey where respondents connected with the link to the survey site to complete their interview.

Waterloo North Hydro promoted the survey and issues with an e-blast to its customer base advising them of the project. As an incentive, participants completing the survey and filling out personal information were eligible for a prize draw.

Study Sample:

In total, N=4355 customers fully completed online questionnaires. In addition, there were N=471 partially completed surveys where respondents filled out at least one question.

Logistics:

Surveys were completed online from the days of February 5th through February 22nd, 2019.

Confidence:

It is not customary to assign online samples a margin of error to self-selection samples. However, a probability sample of N=4355 has a margin of error or is considered accurate ± 1.5%, 19 times out of 20.

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Respondent Profile

Q1. Please identify your customer type.

96%	Residential (N=4184)
3%	Small business (N=136)
1%	Large business (N=35)

Q2. What type of home do you live in?

Detached single family	64%	(N=2674)
Attached single family	18%	(N=762)
Multiple unit	18%	(N=748)

Q3. What is your employment status?

Employment

Working	N=2657	64%
Retired	N=1065	25%
Student	N=272	7%
At home	N=149	4%
Unemployed	N=14	<1%
Disability	N=25	1%



Q5. In which community is your WNH customer account located?

Waterloo	79%	(N=3427)
Woolwich – Urban	13%	(N=585)
Wellesley – Urban	4%	(N=184)
Woolwich – Rural	2%	(N=101)
Wellesley – Rural	1%	(N=58)

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Keeping the Lights On

The first series of three questions asked respondents about outages. They were displayed descriptive preambles or scenarios before each indicator and were asked about the importance of each.

"WNH strives to keep the lights on at all times. However, there are occasions (due to storms, vehicle accidents, and equipment failure) when we experience a power outage. On average, power is out about 9.5 minutes per month per customer."

Q6. How important is minimizing power outages to you?

Not important	11%
Important, & willing to pay more to keep the lights on (less than $1 extra per month on bill)	29%
Important but at no additional cost	58%
Don't know	2%

87% Total important

A* Smart Grid senses problems *on the power grid and reroutes power automatically, preventing some outages and reducing the length of those that occur by not having to send out a hydro crew to inspect and fix the problem. It can also provide detailed information on outages, such as when your power is anticipated to be back on.

Q7. How important is this to you?

Not important	8%
It is important, and I am willing to pay more for it (less than $1 extra per month on my bill)	31%
It is important but at no additional cost	58%
Don't know	3%

89% Total important

"Poles, wires and transformers typically last 40 to 50 years. In order to ensure an uninterrupted supply of electricity to you, we need to maintain and replace these assets when their useful life has expired. If assets are not replaced on a timely basis, outages can occur due to equipment failure."

Q8. How important is this to you?

Not important	3%
Very important, & willing to pay more to replace them ($1 to $2 extra per month on my bill)	31%
It is important but at no additional cost	64%
Don't know	2%

95% Total important

A very high level of importance was placed for each area, especially for the replacement of assets at 95% – however, this question also saw a higher number that wanted it done at no extra cost (64%). The importance of the Smart Grid followed at 89% importance, then by the importance of minimizing outages. Most respondents (58%) in each instance want this done at no additional cost.

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Customer Preferences

Respondents were asked to rank in order five preference areas in terms of importance to them as customers. The ranking of one (1) was highest and five (5) the lowest, with the mean scores ranked from highest to lowest below.

Mean Score

Your needs and preferences are important to us in planning our investments over the next five years.

Q9. Please rank the following in order of importance.

2.2	**WNH provides electricity that is "Reliable" (fewer outages)**
2.4	**WNH provides electricity that is "Safe"**
3.2	**WNH provides electricity at low cost (at the expense of reliability and customer service)**
3.4	**WNH invests in innovative solutions such as smart grid, battery storage, solar, and smart home technologies**
3.7	**WNH provides excellent customer service**

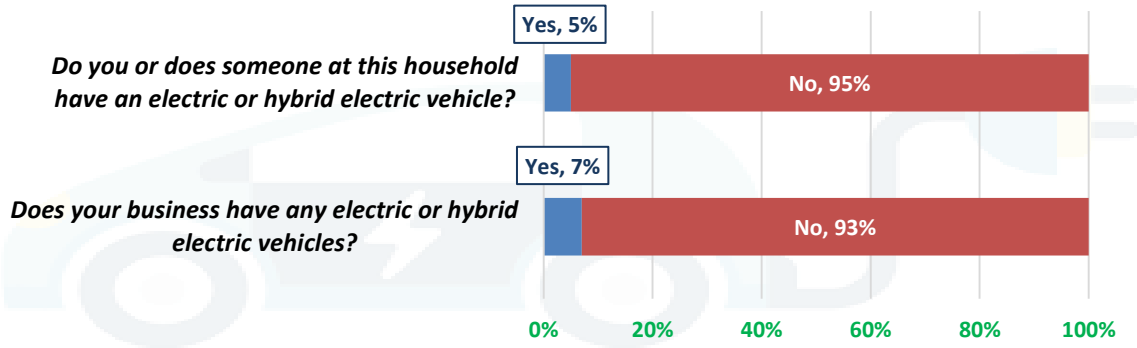
The highest importance with a mean score of *2.2* was for providing reliable electricity, closely followed by safe electricity at *2.4*. A mid-point ranking of *3.2* was accorded to providing electricity at a low cost – this at the expense of customer service. Lower scored by customers was for investing in innovating solutions (*3.4*), while the lowest ranked was for the area of providing excellent customer service (*3.7*).

Electric Vehicles

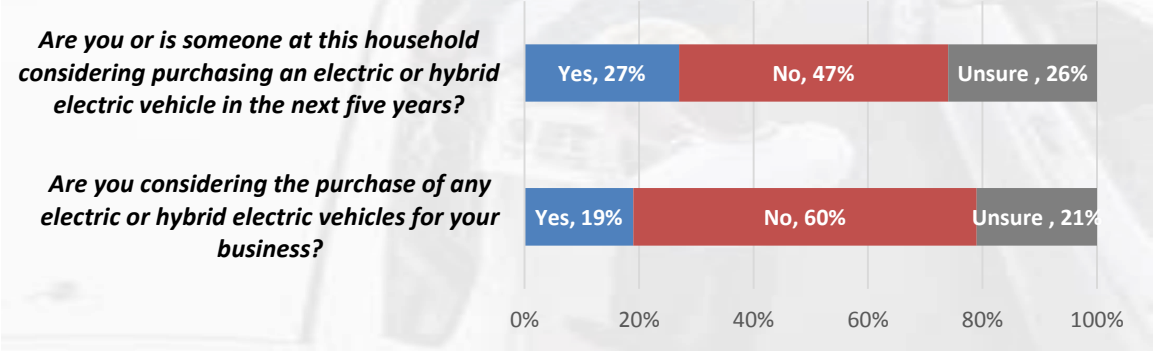
All respondents were first probed if they currently have an electric or hybrid vehicle and then about their intention to purchase one. The residential and business cohorts were asked the question separately with a slight modification in the wording.

Q10. The next questions are about electric vehicles.

CURRENT ELECTRIC VEHICLES AT RESIDENCE OR BUSINESS



CONSIDERING PURCHASE OF ELECTRIC VEHICLES



Current ownership remains low but there is significant interest, or at least consideration, especially among the residential cohort, to purchase one over the next five years. A lesser number of residents (47%) answered “no” in relation to businesses (60%), while more than a quarter (26%) of non-businesses were unsure (21% of businesses).

Rooftop Solar

Respondents were shown the following statement that described Rooftop Solar or Solar Photovoltaic (PV) systems and explained net metering. Businesses and residents were then asked separately if they have rooftop solar systems (Q12) and if they did not, a follow-up question was asked about their future intent to install a system (Q13).

*"Rooftop Solar or Solar Photovoltaic (PV) systems can be installed on your rooftop to generate electricity for the [**RESIDENTIAL** – home] [**BUSINESS** – business]. When the PV system produces more electricity than you use, the excess flows back into the electric system grid, and your electricity meter credits your bill for the electricity you have added to the grid. This is called "net metering." A rooftop solar PV system could significantly reduce your electricity bill, depending on the amount of power your system generates."*

Q12. Do you have a rooftop solar system on your <u>home</u>?



The 97% that do not have rooftop solar were asked Q13

*Q13. Which of the following statements best reflects your intent about installing a solar system on your **<u>home</u>**?*

I will install one if the payback is 5 to 7 years	19%
I will install one if the payback is 8 to 10 years	5%
I will install one regardless of the payback	6%
I will not install one in the next five years	43%
Don't know	28%

Q12. Do you have a rooftop solar system on your <u>business</u>?



The 99% that do not have rooftop solar were asked Q13

*Q13. Which of the following statements best reflects your intent about installing a solar system on your **<u>business</u>**?*

I will install one if the payback is 5 to 7 years	4%
I will install one if the payback is 8 to 10 years	1%
I will install one regardless of the payback	2%
I will not install one in the next five years	93%

A very low number of residents (3%) and only 1% of businesses currently have rooftop solar systems.

Most businesses or 93% are not considering installing a system, while interest is higher among residents. Only 43% of residents said they will not install a system and almost three in ten were unsure. Twenty-four percent will consider this option based on the payback (5-7 or 8-10 years) and 6% will do so regardless of the financial aspect.

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Community Solar

Next, an explanation of community solar was provided, after which respondents were asked about their investment interest.

"The primary purpose of community solar is to allow members of a community the opportunity to share the benefits of solar power even if they cannot or prefer not to install solar panels on their property. Participants benefit from the electricity generated by the community solar farm, which could cost less than the price they would ordinarily pay to their utility."

Q14. Would you be interested in purchasing a share in a community or "shared" solar installation?



Investment interest is at four in ten, while less than a quarter said outright that they would not purchase a share. A high level or 37% are unsure or do not know.

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On-Site Power Storage

The following description of on-site power storage was provided and then both the residential and business cohorts were asked about demand.

*"On-site power storage enables you to store electricity at your [**RES** – home / **BUS** – business] using batteries. The battery can be a wall unit, or you could use the battery in an electric vehicle. This technology can provide backup power in the case of a power outage."*

Q15. Would you consider installing battery storage in the next five years?

RESIDENTIAL		
	Will consider installing one in the next five years	36%
	Will not consider installing one in the next five years	28%
	Don't know	36%

BUSINESS		
	Will consider installing one in the next five years	40%
	Will not consider installing one in the next five years	19%
	Don't know	41%

The appeal for on-site storage was slightly higher among businesses, while more residential customers were indifferent to the energy solution saying they will not consider it over the next five years.

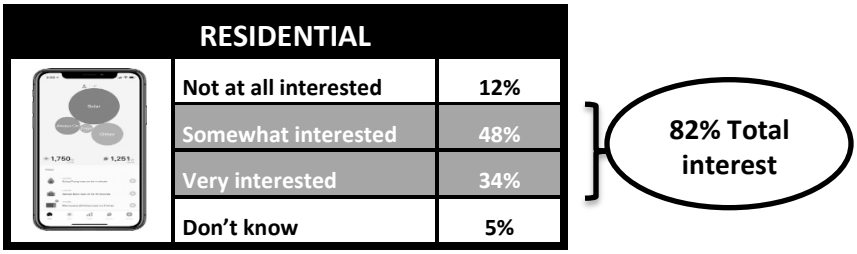
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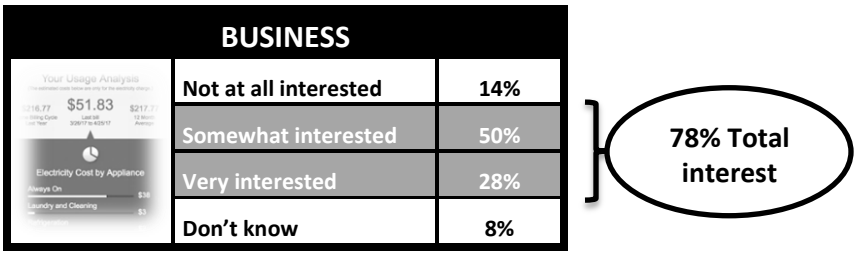
Electricity Usage Tracking & Alerts

Electricity Usage Tracking was explained and then both business and residential cohorts were asked about their interest.

*"Electricity Usage Tracking and Alerts provides real-time information and tips on reducing your usage to help you manage your electric bill and reduce costs where possible. You will receive updates on your [**RES** – home's / **BUS** – businesses] current electric usage and estimated bill amounts via email, phone, or text message. You could choose to receive these alerts on a daily or weekly basis or check your usage at any time on WNH's website (customer portal)."*

Q16. If you were offered an electricity usage tracking and alert, how interested would you be in signing up for it?





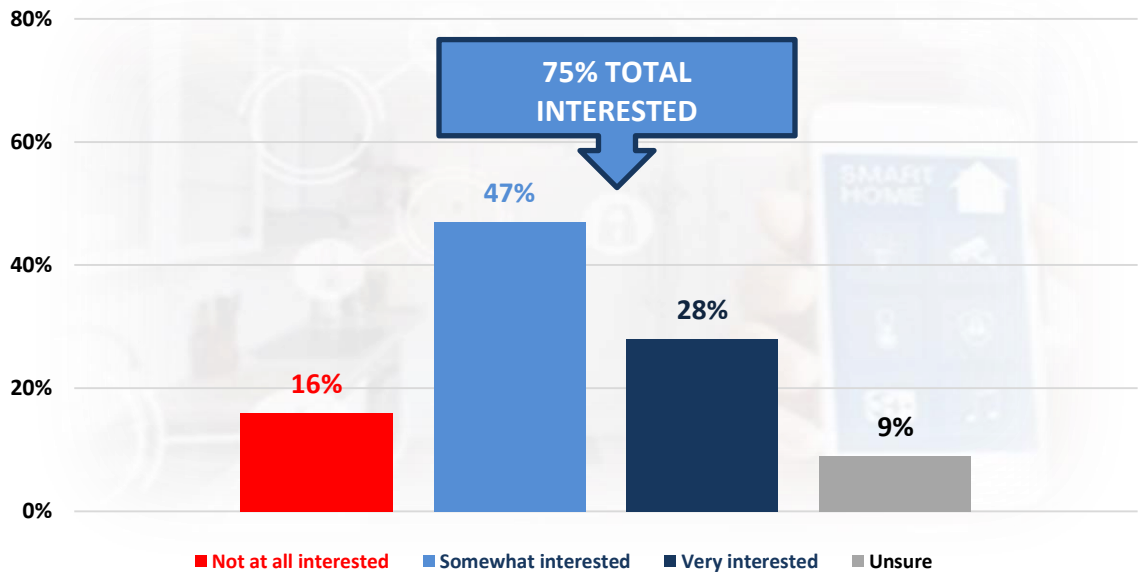
Total interest was strong among both businesses and residents.

Smart Home

The final service description was about Smart Homes. All customers were then asked about their interest.

"A Smart Home connects to the electricity grid via a smart meter and provides better and more frequent information regarding your electricity usage. It offers better control over how and when you use your home's appliances, heating and cooling system, lighting, and other devices, which is especially useful as electricity costs vary throughout the day. It also serves as an energy resource, as it helps WNH better manage the supply and demand for electricity in our community."

Q17. How interested are you in making your home a Smart Home?



Three-quarters of online survey respondents answered that they were somewhat (47%) or very interested (28%) in Smart Home technology.

Waterloo North Hydro Inc.

Customer Engagement Survey Report



BRICKWORKS
COMMUNICATIONS

Dec 2019 / Jan 2020

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Background & Overview

Waterloo North Hydro commissioned Brickworks Communications to conduct an engagement survey of its customers. The purpose of this survey process was to obtain customer input regarding Waterloo North Hydro's business plans for the period 2021 to 2025, and to gather information from them about service and cost. Feedback from this survey process will be used to help shape capital and operating plans, which will be presented to the Ontario Energy Board (OEB) when Waterloo North Hydro (WNH) files its rate application for 2021.

There were two main approaches used in this process including an open online survey forum that resulted in N=2393 completes and a random telephone survey of N=600 customers. Customers were assured that all responses to this survey would be confidential, and as such only overall or aggregate results are reported. No financial incentives were provided for the telephone poll, while customers who completed the online survey were offered the option of being entered into a draw to win six VISA gift cards worth $250 each.

In addition, there was an open house held by WNH on November 28, 2019, where small business customers were allowed to complete surveys using a written paper survey form. In total N=32 completed surveys using a questionnaire that was modified from the online version and included different indicators.

Reporting Notes

This report contains an executive summary of the results from both the telephone and online components, while a separate Excel report includes the results by individual question for each. Results are presented in the order that they were asked in each survey. In addition, the descriptive preambles along with graphic displays are also shown in relation to each question. Methodologically, the background information contained is considered to be associated with the questions that follow and is are presented as such.

Results from the M=32 small business surveys are included in an Excel report and findings are referenced in the Summary & Highlights section of this report. Given the small sample size, we represent findings by count or N rather than in percentages.

Methodology & Logistics – Online Survey

Survey Method

All surveys were completed online using Computer Assisted Web Interviewing (CAWI). This was a self-selection survey where respondents connected with the link to the survey site to complete their interview. Waterloo North Hydro promoted the survey with e-blasts to its customer base advising them of the project.

Study Sample

In total, N=2393 customers fully completed online questionnaires.

Logistics

Surveys were completed online from the days of November 14th and November 29th, 2019.

Confidence

It is not customary to assign online self-selection samples a margin of error. However, a probability sample of N=2393 has a margin of error or is considered accurate ± 2.0%, 19 times out of 20.

Methodology & Logistics – Telephone Survey

Study Sample

Waterloo North Hydro provided Brickworks with a database of their residential and business customers to be surveyed. A total of N=550 residential customers and N=50 business customers were randomly selected from the database and surveyed by telephone using person to person live telephone interviewing.

Respondents were screened to ensure that they were 18 years of age or older, a WNH customer and were one of the persons either at the business or residence that was a decision maker as it relates to reviewing utility bills and making payments.

Survey Method

The survey was conducted using computer-assisted techniques of telephone interviewing (CATI) and random number selection. A total of 20% of all interviews were monitored and the Brickworks management supervised 100%.

Logistics

Interviews were completed between the days of November 14th to November 24th, 2019. Initial calls for the residential component were made between the hours of 5 p.m. and 9 p.m. Subsequent call backs of no-answers and busy numbers were made on a (staggered) daily rotating basis up to 5 times (from 10 a.m. to 9 p.m.) until contact was made. In addition, telephone interview appointments were attempted with those respondents unable to complete the survey at the time of contact. At least one attempt was made to contact respondents on a weekend. Calls to business customers were first made from 8:30 a.m. to 5:30 p.m. during weekdays. There was at least one follow up call after 5:30 p.m. and one on a weekend. In addition, telephone appointments were accepted and made as per the respondent's time preference.

Confidence

The margin of error for the N=600-respondent survey is $\pm$ 4.0%, 19/20 times.

Telephone Survey Results

Introductory Preamble

Customers were first read the following introductory statement prior to the commencement of the questionnaire.

"Ontario's electricity system is owned and operated by public, private, and municipal corporations across the province. It's made up of three major components: generation, transmission, and distribution. WNH is a distribution company that carries the electricity from the transformer stations to your homes.

WNH manages its spending in two ways– an operating budget and a capital budget.

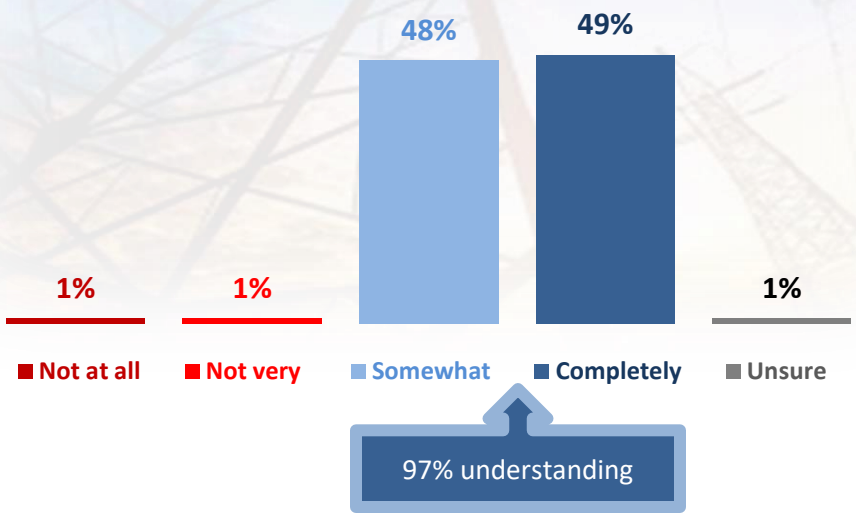
- *WNH's operating budget covers recurring expenses, such as the maintenance of distribution system infrastructure, equipment, vehicles, buildings, properties and tools, as well as insurance and corporate income taxes.*
- *WNH's capital budget covers items that have benefits over many years. This includes distribution system equipment such as poles, wires, cables, transformers, computers and information systems, vehicles, and facilities.*

Managing the distribution system requires considerable investments in replacing aging equipment, connecting new customers, maintenance, and day-to-day operations. WNH's portion of the average [residential bill is 29%] [small business bill is 23%] of the total bill. This portion is used to maintain and rebuild the system and includes a regulated rate of return that is used to reinvest in the system. WNH does not mark up the cost of electricity. What customers pay to WNH is paid directly to the Independent Electricity System's Operator (IESO)."

Understanding Role of WNH

All N=600 customers were then asked the first indicator of the questionnaire about their awareness of the role that WNH plays in the electricity system.

Q1. "How well do you feel you understand the role that Waterloo North Hydro plays in the electricity system, including where revenue comes from and what portion of your bill relates to WNH? Would you say you understand completely, somewhat, not very well,



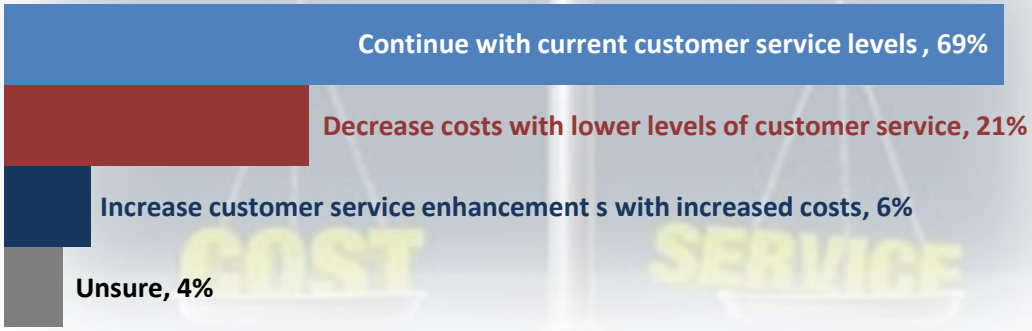
Most or 97% claimed to understand, with a split between those that completely (49%) or somewhat (48%) understood.

Cost Versus Service

Customers were read the following statement about cost and service, after which they were asked which of three possible options they preferred.

"In a previous customer engagement survey from earlier this year, some WNH customers said they want service enhancements like electricity usage tracking and alerts. Those enhancements are not currently in the WNH plan and will increase costs slightly. Other customers have placed a lower priority on customer service and higher priority on low cost alternatives."

Q2. "Which of the following do you prefer?"
READ / ROTATE LIST

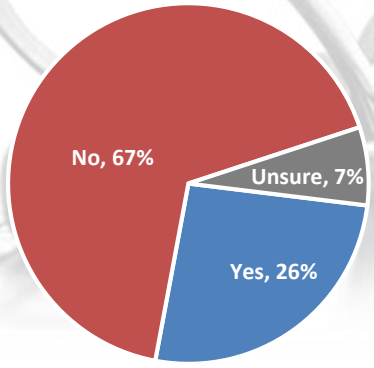


Almost seven in ten or 69% of customers prefer a continuation of current service levels, while only 21% want to see decreased costs with lower levels of service. A low 6% said they prefer increased customer service with increased costs and 4% were unsure.

The following statement about service levels was next read to respondents. They were then asked if they would be willing to see a decrease in service level to reduce cost increases.

"Currently, WNH customer service levels exceed regulated provincial standards, with 92.72% of calls being answered within 30 seconds by WNH. The OEB has set this service requirement level at 65%."

Q3. "Would you be willing to see a decrease in these service levels in order to reduce cost increases by $0.15 per month or $1.80 per year?"



Two-thirds of customers surveyed said that they are not willing to see a decrease in service levels in order to reduce monthly costs. Only slightly more than a quarter or 26% are willing to decrease service levels to decrease costs and 7% did not know or were unsure.

Renewables

The next question asked about preferences for renewables and new technologies in relation to traditional infrastructure.

"In the February survey, customers also said they are looking to WNH to provide environmental alternatives and focus on connecting or investing in renewable energy solutions or new technologies. However, the costs for these types of upgrades are higher than traditional infrastructure."

Q4. Which of the following do you prefer?	
Invest more money in renewable energy at an additional cost (e.g. include solar and electric vehicle stations)	26%
Invest more money in new technologies at an additional cost (e.g. include online customer service tools or grid)	6%
Both investing in renewables & new technologies at an additional cost	33%
Continue investing in traditional infrastructure	26%
Unsure	10%

Only 26% want WNH to continue investing in traditional infrastructure, while most customers (65% total) want more money invested in renewables (26%), new technologies (6%) or both renewables and new technologies (33%) at additional costs. Ten percent did not know or were unsure.

Overhead & Underground Wires

A question on overhead versus underground wires was asked after the following statement was read.

"Underground lines cost approximately 5-10 times more than overhead lines. WNH installs underground lines in certain situations where the requesting party (example - developers) would directly pay for the cost difference."

Q5. Would you support WNH installing more underground lines than they do today if it meant an increase in customer rates?	
Yes, I am willing to pay more for WNH to increase the amount of underground distribution	26%
No, I am NOT willing to pay more for WNH to increase the amount of underground distribution	56%
Unsure	19%

A majority of 56% are not willing to pay more to increase the amount of underground distribution, while 26% are willing, but almost two in ten or 19% are undecided.

Improvements & Upgrades

Respondents were asked to rate their level of interest in ten improvement or upgrade areas, also being advised there would be a cost associated for each. The table below ranks the areas from highest to lowest – the total merged responses of somewhat and very.

Q6. "Thinking about the next five years, please rate your interest in the following improvements or upgrades, keeping in mind that there will be a cost impact to you as a customer associated with them."

	Unsure	Not at all important	Not very important	Somewhat important	Very important	TOTAL COMBINED IMPORTANT
Educating customers and the public about electrical safety	1%	8%	11%	42%	38%	80%
Educating customers and the public about energy conservation	1%	9%	11%	43%	36%	79%
An automated outage notification system (automatically sends messages)	1%	11%	14%	37%	37%	74%
Reporting issues or making inquiries through an interactive website	1%	9%	18%	47%	25%	72%
Comparing your electricity consumption with others in the area	1%	18%	26%	40%	15%	55%
Automated alerts when electricity usage exceeds a prearranged threshold	1%	21%	25%	38%	15%	53%
Having an online chat feature on the WNH website during business hours	1%	22%	33%	31%	13%	44%
Automated alerts to remind you of your bill due date	1%	30%	26%	25%	18%	43%
Automated alerts estimating what your upcoming bill might be	1%	32%	32%	27%	8%	35%
Extended office hours (current hours are Monday-Friday 8:30 am – 4:30 pm)	2%	45%	34%	13%	5%	18%

Total interest in terms of importance was highest for two areas of education, one about electrical safety (80%) and the other with respect to energy conservation (79%). The next highest level of interest was for an automated outage notification system at 74% and being able to report or make inquiries through an automated website at 72%.

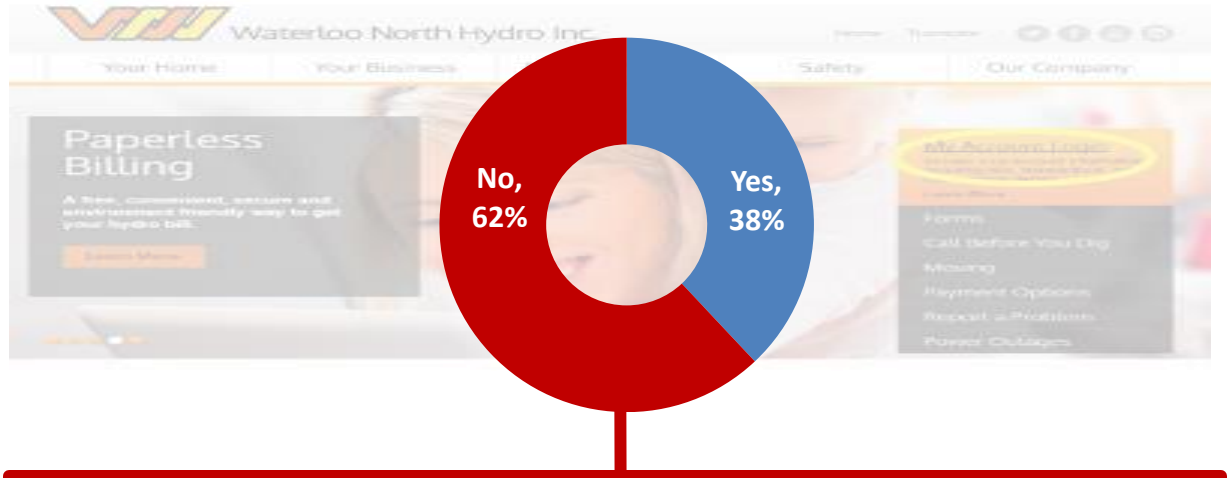
Roughly half expressed interest in being able to compare their consumption with others (55%) and for having automated usage alerts (53%), while it dropped to 44% for an online chat feature and 43% for automated bill reminders.

The lowest interest related to having automated bill estimates (35%) and especially for extended office hours (18%).

Electronic & Paper Bills

All N=600 customers were asked if they currently receive an E-bill from Waterloo North Hydro of which 38% said they do. The 62% (N=374) that do not were then asked a follow-up question about what is preventing them from signing up for an E-bill.

Q7. "Do you currently receive an E-bill from WNH?"



Q8. "The cost of receiving a paper bill is $1.05 per month per customer or $12.60 per year. What is preventing you from registering to receive an E-bill?"

I was not aware that the cost savings of e-billing help offset future cost increases	***31%***
It is more convenient to receive the bill by mail	***29%***
Receiving the bill by mail is a reminder to pay	***20%***
I am not comfortable with technology	***7%***
I am concerned about online security from receiving electronic bill	***5%***
Prefer paper copy	***3%***
Have not gotten to it yet	***2%***
Not aware option existed	***2%***
I do not have regular access to the internet	***1%***

The main mentions for preventing customers from receiving an E-bill related to not being aware of the cost savings (31%), closely followed by the perceived convenience of receiving a bill by mail (29%) and that a hard copy by mail serves as a reminder to pay.

Tree Trimming

Customers were described the actions taken by WNH related to tree trimming and were then read three options being asked to identify which one came closest to their opinion on the issue.

"Waterloo North Hydro must trim trees in proximity to overhead lines to avoid trees contacting lines for safety and reliability. Currently, WNH will trim frequently to be able to maintain safe clearances with minimal trimming to a tree."

Q9. "Which of the following statements best aligns with your view on tree trimming by WNH?"

READ OPTIONS

65% I support the current WNH process of more frequent tree trimming with appropriate clearance to balance reliability, aesthetic, and environmental concerns

24% I would like trees trimmed less frequently where possible with branches cut back more than today, regardless of aesthetic or environmental concerns, so that fewer power outages occur and there are shorter wait times to restore power after storms, and costs are reduced

4% I prefer trees trimmed with less clearance and more frequency than current practice because of aesthetic or environmental reasons, and will accept more power outages, longer wait times to restore power after storms and increase in costs for tree trimming and to respond to outages

7% Unsure

Most or 65% support the current process of more frequent tree trimming with enough clearance to balance reliability, aesthetic, and environmental concerns. Twenty-four percent want less frequent trimming, but more branches cut to ensure fewer outages or lower wait times to restore power, while only 4% want less trimming because of aesthetic or environmental reasons. Seven percent were unsure.

System Access & System Renewal

The following description about capital investments and investment categories was first read to respondents.

I'm going to read a bit more information for you before the next question. WNH is developing a new Distribution System Plan ("the Plan") which will guide capital Investments for the period 2021 – 2025. Capital investments cover items including distribution equipment such as poles, wires, and transformers, and support items such as information systems, vehicles, and facilities. The final investment portfolio will be comprised of prioritized investments paced to achieve an acceptable balance between meeting infrastructure needs and the impact on customer rates.

From 2015 to 2019, WNH invested approximately $22.4 million annually. WNH's current proposed Plan is similar and is focused on replacing assets in poor condition before they fail (causing reliability and safety issues). While keeping costs in line, this Plan incorporates new innovative technologies to improve reliability and customer service. It allows the distribution system to connect new load customers, as well as renewable energy generation, electric vehicles, and battery storage devices. WNH's Plan involves investing approximately $19.7 million annually between 2021 and 2025. This represents an annual reduction of $2.7 million in capital expenditures from previous years, while still maintaining investments in the infrastructure needs of WNH and its customers.

Capital investments fall into four investment categories as set out by the Ontario Energy Board. The background and drivers for the proposed capital investments over the years 2021 - 2025 are discussed in the following categories:

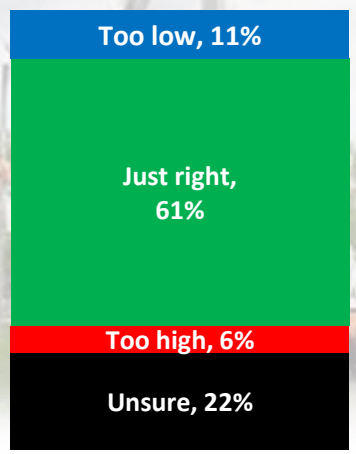
A. System Access
B. System Renewal
C. System Service
D. General Plant

System access investments are primarily additions and modifications to the distribution system driven by external requesting parties (customers, developers, and road authorities). WNH is mandated to respond to these requests with the appropriate investments. From 2015 to 2019, WNH invested approximately $9.5 annually in System Access projects. WNH forecasts investments from 2021 – 2025 will average approximately $6.1 million, a reduction of $3.3 million annually from previous years. These investments represent approximately 31% of annual capital investments.

System Renewal investments involve replacing existing assets based on age, condition, risk, and reliability metrics. From 2015 to 2019, WNH invested approximately $9.6 million annually in System Renewal projects. WNH forecasts investments from 2021 – 2025 will average approximately $9.2 million, a reduction of $0.46 million annually from previous years. These investments represent approximately 47% of annual capital investments.

Respondents were then asked about their perception of the level of future system renewal expenditures.

Q10. "In your opinion, is this proposed overall level of future system renewal expenditures too low, just right, or too high to meet the objectives of safety, reliability, and cost?



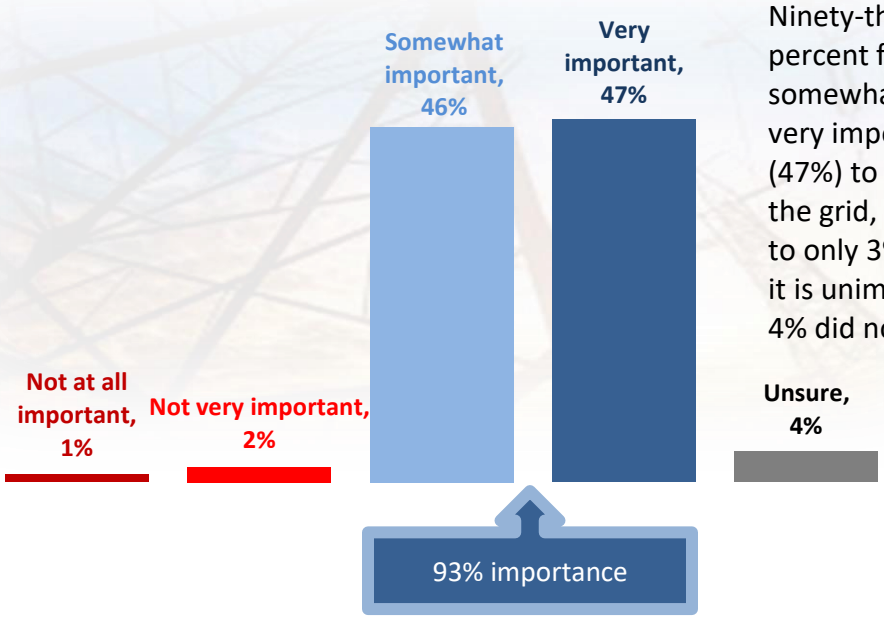
Slightly more than six in ten or 61% feel the level of expenditures is just right to meet the objectives of safety reliability and cost. Only 6% said it is too low, 11% too high, while 22% were unsure.

System Service

The next area covered system service projects and customers were asked how important they felt it was for WNH to modernize the grid.

"From 2015 to 2019, WNH invested approximately $0.9 million annually in System Service projects. This included constructing additional distribution lines, smart grid automation to improve reliability and distribution system loss reduction. WNH forecasts investments from 2021 – 2025 will average approximately $1.4 million, an increase of $0.51 million annually. These investments represent approximately 7% of annual capital investments."

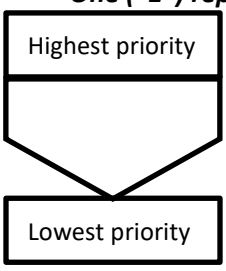
Q11. "How important do you feel it is for WNH to invest in modernizing the grid?



Ninety-three percent feel it is somewhat (46%) or very important (47%) to modernize the grid, compared to only 3% that feel it is unimportant – 4% did not know.

Customers ranked in order of preference from 1-highest to 5-lowest, five areas related to reliability. Below are the mean scores ranked in priority.

Q12. Please rank in order of priority preference the following five reliability outcomes. One ("1") represents your highest priority through to five ("5") being lowest priority.



2.63	Reducing the length of time to restore power during extreme weather events
2.71	Reducing the number of outages during extreme weather events
2.73	Reducing the overall number of outages
2.79	Reducing the overall length of outages
4.14	Improving the quality of power, as judged by momentary interruptions in power that can result in the flickering or dimming of lights

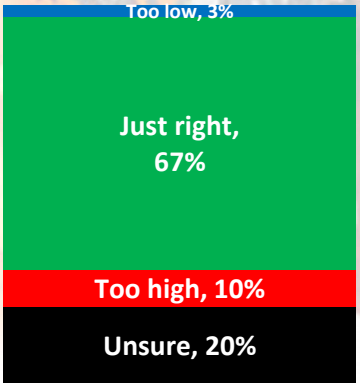
Highest scored was reducing the time to restore power during extreme weather (2.63), next by reducing outages during extreme weather (2.71), outages overall (2.73) and then their overall length (2.79). Lowest scored was improving the quality of power – judged by momentary interruptions (4.14).

General Plant

A descriptive of general plant capital investments was read and customers were asked their opinion about the level of future expenditures.

"Capital investments in the General Plant category are driven by the need to add, modify, or replace assets that support WNH's everyday business operations and administration. These investments improve employee safety, worker productivity, and operating efficiency. From 2015 to 2019, WNH invested approximately $2.4 million annually in General Plant projects. WNH forecasts investments from 2021 – 2025 will average approximately $2.9 million, an increase of $0.54 million annually. This increase is influenced by the replacement of an obsolete Enterprise Resource Planning (ERP) Software System. These investments represent approximately 15% of annual capital investments."

Q13. "In your opinion, is this proposed overall level of future general plant expenditures too low, just right, or too high to meet the objectives of safety, reliability, and cost?"



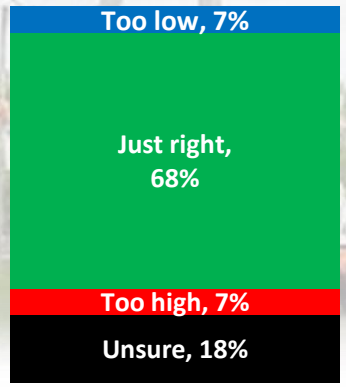
Two-thirds of customers feel the current level of expenditures is just right. Only 3% said too low, 10% too high, while two in ten were unsure.

Overall Future Capital Expenditures

Customers were then questioned about the overall level of capital expenditures.

Q14. *"Now that you have more information on the capital expenditures for WNH, in your opinion, is this proposed overall level of future capital expenditures too low, just right, or too high to meet the objectives of safety, reliability, and cost?"*

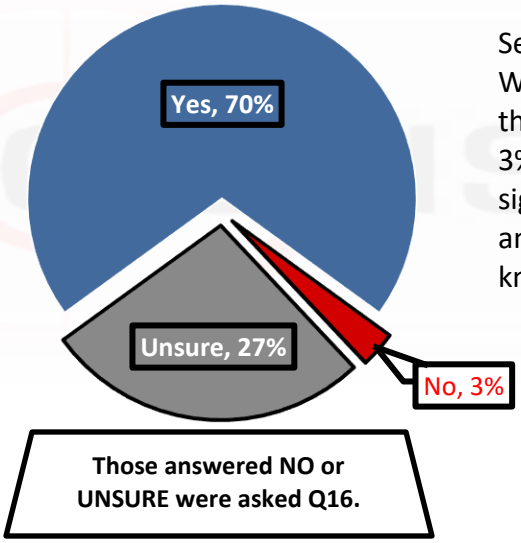
Results are consistent with 68% saying the overall level is just right, 7% too high, 7% too low, while 18% did not know or were unsure.



Right Focus

All N=600 customers were asked if they felt WNH has focused on the right areas for capital investment. If they answered no (3%, N=19%) or unsure (27%, N=160) they were probed about the areas that need addressing in a follow-up question.

Q15. "In your opinion, has WNH focused on the right areas for capital investments?"



Seven in ten feel WNH has focused on the right areas, only 3% do not. A significant 27% answered do not know.

Q16. "What areas of capital investment do you believe need to be addressed?"

Most customers were or 82% did not know, with those unsure in Q15 being most likely to have no comment (88%) in relation to those that said no (26%). Those with comments relayed areas from renewables, equipment / general upgrades, to lower costs and website improvements.

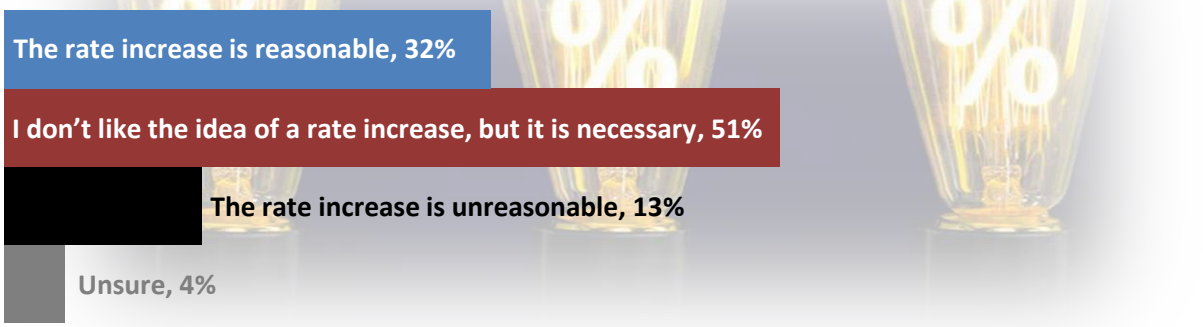
Don't know / unsure / no comment	N=147	82%
Renewable energy	N=7	4%
Equipment upgrades	N=4	2%
Lower prices / costs	N=3	2%
Web site upgrades	N=3	2%
General upgrades	N=3	2%
Outsourcing	N=2	1%
Eliminate carbon footprint	N=2	1%
Hire more staff	N=1	1%
Billing improvements	N=1	1%
Big business should be charged more	N=1	1%
Lower upper management salaries	N=1	1%
WNH should provide more education / information	N=1	1%
Need to be better prepared	N=1	1%
Underground upgrades	N=1	1%
Reliability	N=1	1%

Rate Increase

Rate increases were described to respondents with details provided for both residential and commercial customers. They were then asked about their opinion on the increases, being asked which of three statements best reflected their view.

"For residential customers / small business customers, WNH receives a standard increase annually that is less than inflation, but changes based on current cost levels every five years (2021). The last full cost application was in 2016. The preliminary monthly rate impact to the average residential customer distribution portion is $1.96 [small business customer $4.59] and the total bill increase is 1.5% in 2021 [small business 1.3%], holding other things constant (TOU Rates, Ontario Electricity Rebate). Please note that these are preliminary estimates and are subject to change as the rate application process continues."

Q17. "Which of the following best represents your point of view on this rate increase?
READ / ROTATE LIST

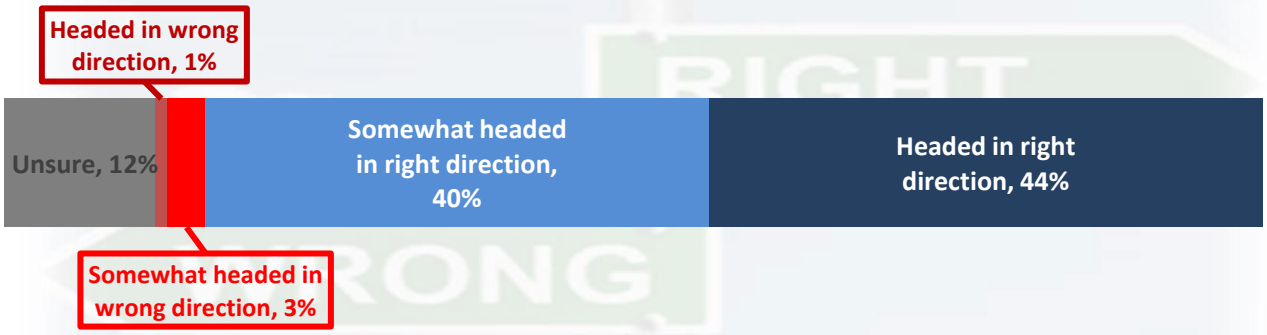


A slim 51% majority said they do not like the idea of a rate increase but feel it is necessary (54% business & 51% residential), while almost a third or 32% said it is reasonable (26% business & 32% residential). Only 13% claimed the increase is unreasonable (16% business & 13% residential), while 4% were unsure (4% business & 4% residential).

Planning for the Future

In the final two rating questions, customers were asked if WNH's investment plan is on the right track and then to rate the utility in planning for the future.

Q18. "In your opinion, is Waterloo North Hydro's investment plan headed in the right direction or the wrong direction?"



Eighty-four percent are of the opinion WNH's investment plan is headed (44%) or somewhat headed (40%) in the right direction, compared to only 4% that think it is somewhat (3%) or headed (1%) in the wrong direction. Twelve percent were unsure.

Q19. "Overall, how would you rate Waterloo North Hydro in planning for the future? Please respond using a scale of very poor, poor, good or very good."



Most customers or 88% rated WNH good (67%) or very good (21%) in planning for the future. A very low 3% held they are doing a poor (2%) or very poor job (1%), while 9% answered do not know.

Final Questions

Below are the coded responses from a final verbatim probe that asked for additional comments.

Q20. "Do you have any comments or feedback you would like to share?"

No/none	N=517
Good service / no problems / satisfied	N=24
Too expensive / costly / rates too high	N=18
Improvements to customer service	N=6
Underground infrastructure	N=6
Renewable energy	N=4
Promote Energy Saving equipment / vehicles	N=3
Need more details on bill	N=3
Salaries too high	N=3
Improvements needed to online / website	N=3
Too many breaks given to corporations	N=2
Quicker response to outages	N=1
Encourage paperless billing	N=1
Billing is not accurate / time of use	N=1
Cut down dead trees	N=1
Should be a private company	N=1
Dislike renewable energy	N=1
WNH should notify us of outages	N=1
Upgrade hardware	N=1
Dislike time of use	N=1
Expensive to switch from Hydro	N=1
Eliminate management	N=1

The last survey question asked customers about their community.

Q21. In which community is your WNH customer account located?		
Waterloo	N=483	81%
Woolwich-Urban (Breslau, Conestoga, Elmira, St. Jacobs)	N=78	13%
Woolwich-Rural	N=11	2%
Wellesley-Urban (Heidelberg, St. Clements, Wellesley)	N=20	3%
Wellesley-Rural	N=8	1%
Total	**600**	**100.0**

Online Survey Results

Question 1 verified that respondents were customers of Waterloo North Hydro. They were then presented with the following information after which they were asked two demographic questions.

The purpose of this Customer Engagement Survey is to obtain your input regarding our business plans for the period 2021 to 2025, and how these plans will affect you in terms of service and cost. Your feedback will be used to help shape our capital and operating plans, which will be presented to the Ontario Energy Board (OEB) when Waterloo North Hydro (WNH) files its rate application for 2021.

Each year, as our electricity distribution system ages and parts of it deteriorate, continued investments must be made to replace the most vulnerable parts of the system. WNH also serves a growing community and investments must be made to connect new customers.

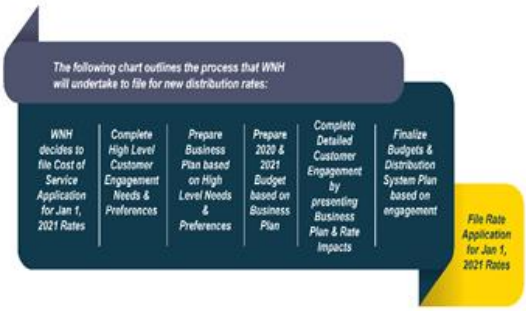
This plan looks at capital infrastructure investments, system maintenance, customer service, administration, and emergency power restoration efforts as a result of storms and other outages, all which comprise WNH's portion of the delivery line on your electricity bill.

In February 2019, WNH customers completed an online survey to gauge customer needs and preferences. WNH built a plan and budget based on the results of that survey as well as distribution system needs.

We are once again asking for your feedback to ensure we have your input right in our plan.

Customers who complete this survey will be entered in a draw to win one of six VISA gift cards worth $250 each. Winners will be drawn at random and will be notified by December 6th, 2019.





Section 1. Introductory Questions

Q2. Will you be completing this survey as a residential customer or a business customer?		
Residential	2326	97.2
Business	67	2.8
Total	**2393**	**100.0**

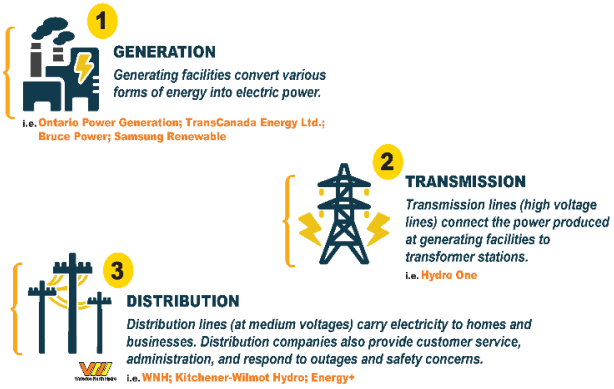
Q3. In which community is your WNH customer account located?		
Waterloo	N=1889	79%
Woolwich-Urban (Breslau, Conestoga, Elmira, St. Jacobs)	N=316	13%
Wellesley-Urban (Heidelberg, St. Clements, Wellesley)	N=110	5%
Woolwich-Rural	N=54	2%
Wellesley-Rural	N=24	1%
Total	**2393**	**100.0**

Section 2. Electricity Distribution System

Next, online participants were presented with the following overview of the electricity system, the role of WNH and reason for gathering their input – namely the business plan.

Ontario's electricity system is owned and operated by public, private, and municipal corporations across the province. It's made up of three components: **generation, transmission,** and **distribution**.

The purpose of this Customer Engagement Survey is to obtain your input regarding our business plans for the period 2021 to 2025, and how these plans will affect you in terms of service and cost. Your feedback will be used to help shape our capital and operating plans, which will be presented to the Ontario Energy Board (OEB) when Waterloo North Hydro (WNH) files its rate application for 2021.



WNH provides electricity to over 58,000 customers residing or owning a business in the City of Waterloo, the Township of Wellesley, and the Township of Woolwich, covering an area of 683 square kilometers. WNH is owned by the City of Waterloo, the Township of Wellesley, and the Township of Woolwich.



WHN's Service Area is 8% larger than Toronto Hydro's, but with 92% less customers. As in the past, WHN needs to look for efficient and resourcerful ways to continue providing a strong and reliable infrastructure covering a large service area with fewer customers to shoulder the costs.

What does it cost to run WNH's distribution system?

Like most businesses, WNH manages its spending in two budgets – an operating budget and a capital budget.

- WNH's operating budget covers recurring expenses, such as the maintenance of tools, equipment, assets, and the payroll for employees.

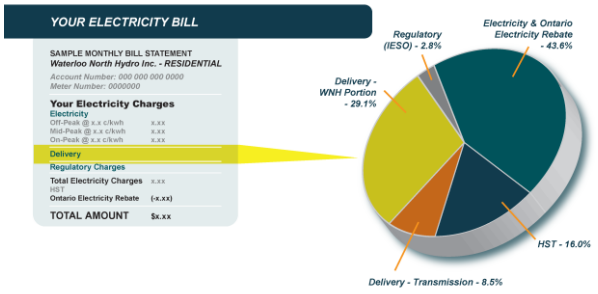
- WNH's capital budget covers items that, once purchased, have lasting benefits over many years. This includes much of the equipment that is part of the distribution system, including poles, wires, cables, transformers, computers and information systems, vehicles, and facilities.

Managing the distribution system requires millions of dollars in maintenance, system renewal, and '24/7, 365 days a year' operations.

The only source of revenue for WNH is from the delivery portion of monthly bills.

WNH's portion of the average residential bill is 29% of the total bill. WNH's portion of the average small business bill is 23% of the total. These portions are used to maintain and rebuild the system and include a regulated rate of return that is used to reinvest in the system.

WNH does not mark up the cost of electricity. What customers pay to us is paid directly to the IESO.



This section further explained the costs to run the distribution system and clarified issues raised in a previous online customer survey.

What does it cost to run WNH's distribution system? Feedback comments provided in the first online customer survey (this past February) revealed some misconceptions that require further clarification. Here, we'll clarify and better explain some of that information:

Fixed Delivery: WNH's delivery fee (for residential only) is mandated by the OEB to be fully fixed. This is because whether you use a lot of power or a little bit of power, the cost to service your home (set up a transformer, poles and wires to your home, and provide billing and customer service) does not change based on your usage.

Costs: Some customers noted that delivery cost should already include capital investment costs, ongoing maintenance, and repairs to the system. This is true; WNH's delivery cost does already include capital investments, maintenance and repairs. However, these costs increase each year due to quantity of assets in the field as well as inflation.

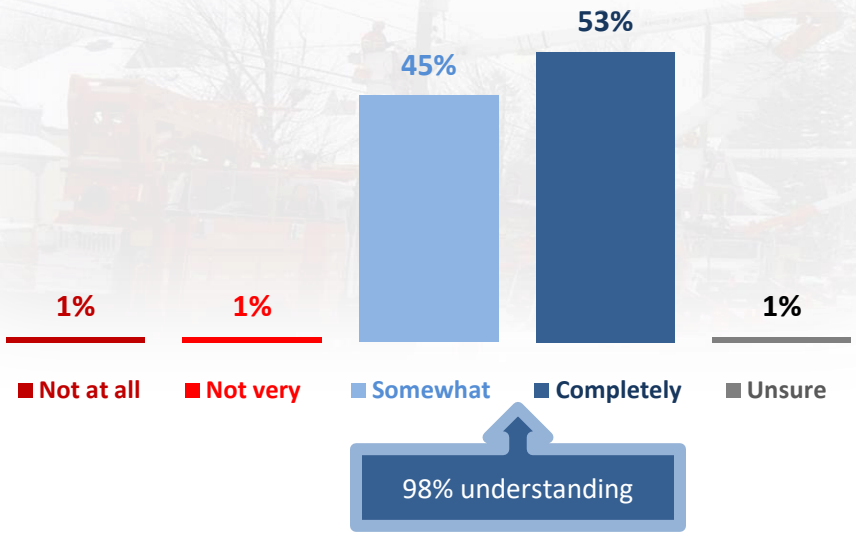
Time-of-use Pricing: Some customers wanted to see changes in Time-of-Use (TOU) pricing, or different pricing for students and/or seniors. This is a provincial price plan in which WNH has no control. WNH implements and supports all government mandates.

Billing: Some customers requested to revert back to bi-monthly billing, do not want smart meters, or do not like the deposit amount required. Again, these are provincially mandated billing and customer service rules. WNH works with customer when flexibility allows, but follows all of the OEB rules.

All N=600 customers were then asked the first indicator of the questionnaire about their awareness of the role that WNH plays in the electricity system.

Understanding Role of WNH

Q4. "Based on the information provided, how well do you feel you understand the role that Waterloo North Hydro plays in the electricity system, including where revenue comes from and what portion of your bill relates to WNH?"



Almost all or 98% have an understanding, with more than half or 53% that completely and 45% that somewhat understand. Only 2% do not understand and 1% were unsure.

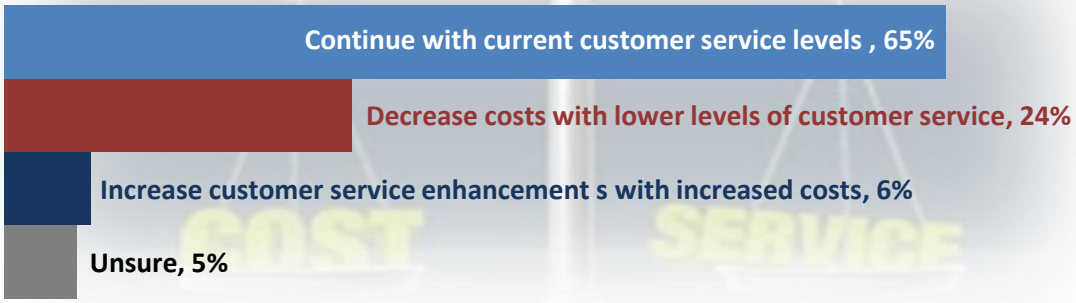
Cost Versus Service

The following was displayed to respondents outlining the opposing preferences as provided in the February 2019 online customer survey. They were then provided with three options related to cost and service and were asked which one they preferred.

Opposing Preferences from First Engagement

Based on our first engagement done in February 2019, there were results and priorities were opposing preferences. WNH would like to further dive into these to help guide our direction. Some customers have told us they want service enhancements like electricity usage tracking and alerts, which are not currently in the WNH plan and will increase costs slightly. Other customers have placed a lower priority on customer service and higher priority on low cost alternatives.

Q5. "Which of the following do you prefer?"
READ / ROTATE LIST

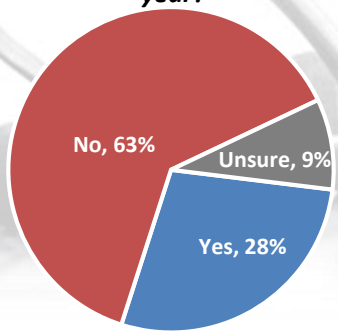


A 65% majority of online participants prefer a continuation of current service levels, while slightly less than a quarter or 24% want to see decreased costs with lower levels of service. A low 6% said they prefer increased customer service with increased costs and 5% were unsure.

Next, they were shown the following and were then asked if they would be willing to see a decrease in service level to reduce cost increases.

Currently WNH customer service levels exceed regulated provincial standards, e.g. 92.72% of calls are answered within 30 seconds by WNH. The OEB has set this service requirement levels at 65%.

Q6. "Would you be willing to see a decrease in these service levels in order to reduce cost increases by $0.15 per month or $1.80 per year?"



Sixty-three percent answered that they are not willing to see a decrease in service levels in order to reduce monthly costs. Almost three in ten or 28% are willing to decrease service levels to decrease costs and 9% did not know or were unsure.

Renewables

The next question asked about preferences for renewables and new technologies in relation to traditional infrastructure after the following preamble.

Customers said they are looking to WNH to provide environmental alternatives and focus on connecting or investing in renewable energy solutions or new technologies. However, the costs for these types of upgrades are higher than traditional infrastructure.

Q7. Which of the following do you prefer?	
Invest more money in renewable energy at an additional cost (e.g. include solar and electric vehicle stations)	25%
Invest more money in new technologies at an additional cost (e.g. include online customer service tools or grid	5%
Both investing in renewables & new technologies at an additional cost	31%
Continue investing in traditional infrastructure	28%
Unsure	11%

Among online participants there is a demand for investing in new technologies and renewables at additional costs – 64%. This includes 31% that want investment in both renewables and new technologies, 25% in renewables and 5% in new technologies. Only one-quarter want to continue investing in traditional infrastructure and 11% were unsure.

Overhead & Underground Wires

A question on overhead versus underground wires was asked after the following statement was presented.

Underground lines cost approximately 5-10 times more than overhead lines. WNH installs underground lines in certain situations where the requesting party (developers) directly pay for the cost difference. Would you support WNH installing more underground lines than they do today if it meant an increase in customer rates?

Q8. Would you support WNH installing more underground lines than they do today if it meant an increase in customer rates?	
Yes, I am willing to pay more for WNH to increase the amount of underground distribution	25%
No, I am NOT willing to pay more for WNH to increase the amount of underground distribution	59%
Unsure	16%

Almost six in ten (59%) are not willing to pay more to increase the amount of underground distribution, compared to one-quarter that are willing. Sixteen percent did not know.

Improvements & Upgrades

Online respondents were asked to rate their level of interest in ten improvement or upgrade areas, also being advised there would be a cost associated for each. The table below ranks the areas from highest to lowest – the total merged responses of somewhat and very.

Q6. "Thinking about the next five years, please rate your interest in the following improvements or upgrades, keeping in mind that there will be a cost impact to you as a customer associated with them.

	Unsure	Not at all important	Not important	Somewhat important	Very important	TOTAL COMBINED IMPORTANT
Educating customers and the public about energy conservation	1%	7%	10%	45%	37%	82%
Educating customers and the public about electrical safety	2%	7%	12%	40%	39%	79%
An automated outage notification system (automatically sends messages)	1%	10%	12%	39%	38%	77%
Reporting issues or making inquiries through an interactive website	1%	8%	16%	52%	23%	75%
Automated alerts when electricity usage exceeds a prearranged threshold	1%	20%	23%	37%	19%	56%
Comparing your electricity consumption with others in the area	1%	20%	24%	38%	16%	54%
Automated alerts to remind you of your bill due date	<1%	31%	24%	26%	19%	45%
Having an online chat feature on the WNH website during business hours	1%	26%	30%	32%	11%	43%
Automated alerts estimating what your upcoming bill might be	<1%	31%	33%	26%	10%	36%
Extended office hours (current hours are Monday-Friday 8:30 am – 4:30 pm)	1%	48%	34%	13%	4%	17%

Total interest was highest for two areas of education, one about electrical safety (80%) and the other with respect to energy conservation (79%). The next highest level of interest was for an automated outage notification system at 74% and being able to report or make inquiries through and automated website at 72%.

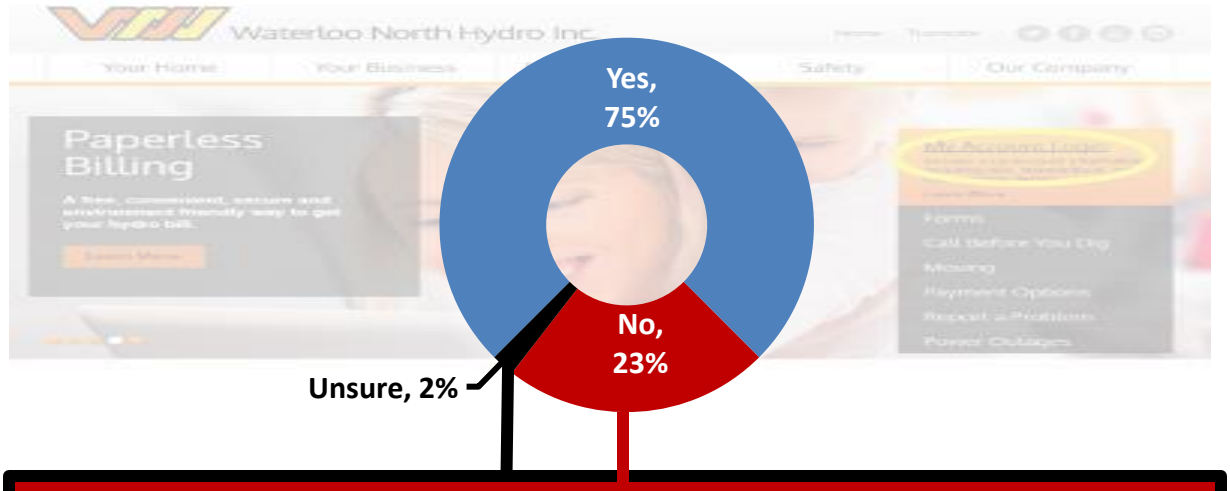
More than half expressed interest in being able to compare their consumption with others (55%) and for having automated usage alerts (53%), while it dropped to 44% for an online chat feature and 43% for automated bill reminders.

The lowest interested related to having automated bill estimates (35%) and especially for extended office hours (18%).

Electronic & Paper Bills

Online respondents were asked if they currently receive an E-bill from Waterloo North Hydro of which 75% said they do. The 23% (N=549) that do not and the 2% unsure (N=46) were then asked a follow-up question about what is preventing them from signing up for an E-bill.

Q10. "Do you currently receive an E-bill from WNH?"



Q11. "The cost of receiving a paper bill is $1.05 per month per customer or $12.60 per year. What is preventing you from registering to receive an E-bill?"

Receiving the bill by mail is a reminder to pay	***31%***
I was not aware that the cost savings of e-billing help offset future cost increases	***26%***
It is more convenient to receive the bill by mail	***20%***
I am concerned about online security from receiving electronic bill	***6%***
I am not comfortable with technology	***3%***
Prefer / need paper copy	***3%***
Haven't gotten to it yet	***2%***
I want to register for e-bill / email bill	***2%***
I do not have regular access to the internet	***2%***
Was not aware of option	***2%***
Offer a rebate to switch	***1%***
Had in past but there were problems	***1%***
Don't have WNH account / paid in condo fees	***1%***

The main mentions for preventing customers from receiving an E-bill related to a hard copy by mail serving as a reminder to pay (31%), closely followed by not being aware of the cost savings (26%) and the perceived convenience of receiving a bill by mail (20%).

Tree Trimming

Customers were displayed the actions taken by WNH related to tree trimming and were then read three options being asked to identify which one came closest to their opinion on the issue.

Waterloo North Hydro must trim trees in proximity to overhead lines to avoid trees contacting lines for safety and reliability. Currently, WNH will trim frequently to be able to maintain safe clearances with minimal trimming to a tree.

Q12. "Which of the following statements best aligns with your view on tree trimming by WNH?"

READ OPTIONS

63% I support the current WNH process of more frequent tree trimming with appropriate clearance to balance reliability, aesthetic, and environmental concerns

27% I would like trees trimmed less frequently where possible with branches cut back more than today, regardless of aesthetic or environmental concerns, so that fewer power outages occur and there are shorter wait times to restore power after storms, and costs are reduced

4% I prefer trees trimmed with less clearance and more frequency than current practice because of aesthetic or environmental reasons, and will accept more power outages, longer wait times to restore power after storms and increase in costs for tree trimming and to respond to outages

6% Unsure

Sixty-three percent support the current process of more frequent tree trimming with enough clearance to balance reliability, aesthetic, and environmental concerns. Twenty-seven percent want less frequent trimming, but more branches cut to ensure fewer outages or lower wait times to restore power, while only 4% want less trimming because of aesthetic or environmental reasons and 7% percent were unsure.

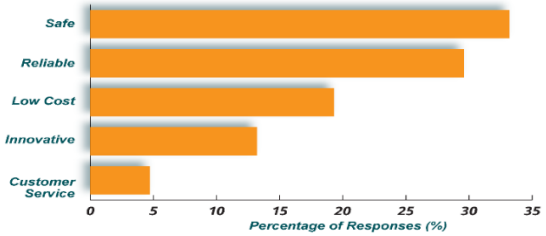
Section 3. Capital Investment Plan

Next, online participants were provided with background information about Waterloo North Hydro's Capital Investment Plan.

An Overview on Waterloo North Hydro's Distribution System Plan

WNH is developing a new Distribution System Plan ("the Plan") which will guide capital Investments for the period 2021 – 2025. Capital investments cover items that have lasting benefits over many years, including distribution equipment such as poles, wires, transformers, and support items such as information systems, vehicles, and facilities.

Corporate strategic imperatives, asset management objectives, and mandated investments form the high-level framework for the Plan. It is also shaped by customer feedback and preferences. The final investment portfolio will be comprised of prioritized investments paced to achieve an acceptable balance between meeting infrastructure needs and the impact on customer rates. During the initial customer engagement survey in February 2019, customers indicated their primary priorities as follows, with safety, reliability, and cost being most important.



With customers focused on price, but not at the risk of safety and reliability, WNH has developed a draft Plan that sets out to meet these criteria.

Section 4. Capital Investment Information

Further information and a breakdown about Waterloo North Hydro's planned capital investments were also provided before questioning.

Overall Capital Investment Plan

From 2015 to 2019, WNH invested approximately $22.4 million annually. WNH's current proposed Plan is similar to the previous plan and is focused on replacing assets in poor condition before they fail (causing reliability and safety issues).

While keeping costs in line, this Plan incorporates new innovative technologies to improve reliability and customer service. It allows the distribution system to connect new load customers as well as renewable energy generation, electric vehicles and battery storage devices. WNH's Plan involves investing approximately $19.7 million annually between 2021 and 2025. This represents an annual reduction of $2.7 million in capital expenditures from previous years while still maintaining investments in the infrastructure needs of WNH and its customers.

Capital investments fall into four investment categories as set out by the Ontario Energy Board. The background and drivers for the proposed capital investments over the years 2021 - 2025 are discussed in the following categories:

1. System Access
2. System Renewal
3. System Service
4. General Plant

2 SYSTEM RENEWAL

System Renewal investments involve replacing existing assets based on age, condition, risk, and reliability metrics. WNH has developed a comprehensive Asset Management System to capture and examine asset data, estimate replacement times, identify the consequences of failure, and forecast replacement plans and costs. These investments must be paced in combination with other capital needs to find the right balance between safety, system performance, risk, and cost. Not completing this work within determined timeframes will lead to increased safety concerns, increased risk of outages, expensive reactive maintenance and replacements. Areas of major investment (2021 – 2025):

- WNH's distribution system has more than 685 km of underground cable, 135 km of which is at or nearing end of life (35 to 50 years old) – the Plan involves replacing approximately 8.5 km of this cable annually
- WNH's distribution system has approximately 21,500 poles, 3,700 poles of which are in 'poor' or 'very poor' condition – the Plan involves replacing approximately 500 poles annually
- Replacement of small overhead primary conductors (which are more likely to break) will be replaced with large conductors, increasing safety and reliability
- Selected transformer station equipment, protection, and communication systems will be upgraded to improve reliability and cyber security

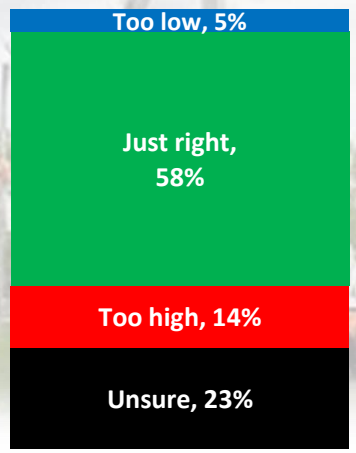


From 2014 to 2019, WNH invested approximately $9.6 million annually in System Renewal projects. WNH forecasts investments from 2021 – 2025 will average approximately $9.2 million, a reduction of 0.46 million annually from previous years. These investments represent approximately 47% of annual capital investments.

System Access & System Renewal

Respondents were then asked about their perception of the level of future system renewal expenditures.

Q13. "In your opinion, is this proposed overall level of future system renewal expenditures too low, just right, or too high to meet the objectives of safety, reliability, and cost?



Almost six in ten or 58% feel the level of expenditures is just right to meet the objectives of safety reliability and cost. Only 5% said it is too low, 14% too high, while 23% were unsure.

3 SYSTEM SERVICE

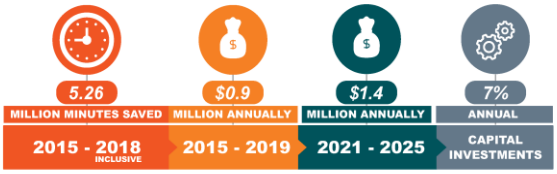
System Service investments are made to meet performance-based objectives such as safety, reliability, power quality, system efficiency, cyber security, and other mandated objectives. These investments allow better utilization of WNH's existing electricity assets. Investments in this area from 2015 – 2018 (inclusive) have saved WNH customers approximately 5.26 million minutes of interrupted power. Not completing this work will lead to reduction in system performance, supply constraints preventing the connection of load or generation customers, and more expensive reactive maintenance and capital replacements. Areas of major investment (2021 - 2025):

-- Constructing additional distribution lines to relieve load transfer constraints within the distribution system and between WNH transformer stations

-- Smart grid automation to reduce customer restoration times, improve operational visibility and control, and improve reliability

-- Distribution system loss reduction

From 2014 to 2019, WNH invested approximately $9.6 million annually in System Renewal projects. WNH forecasts investments from 2021 – 2025 will average approximately $9.2 million, a reduction of 0.46 million annually from previous years. These investments represent approximately 47% of annual capital investments.

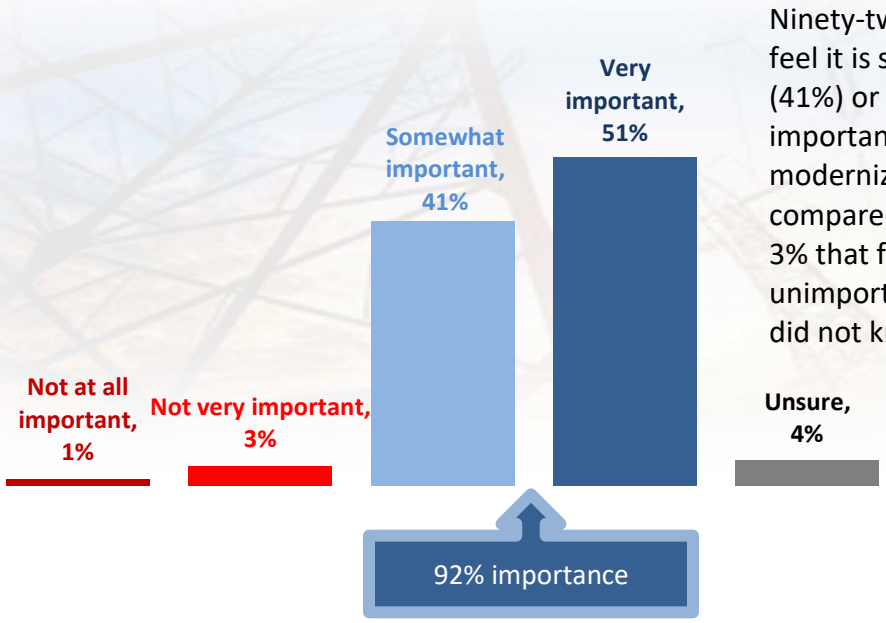


From 2015 to 2019, WNH invested approximately $0.9 million annually in System Service projects. WNH forecasts investments from 2021 – 2025 will average approximately $1.4 million, an increase of $0.51 million annually. These investments represent approximately 7% of annual capital investments.

System Service

At the end of the information section, respondents were asked how important they felt it was for WNH to modernize the grid.

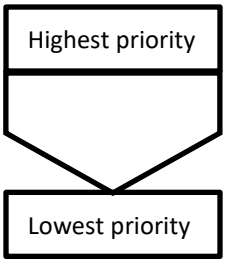
Q14. "How important do you feel it is for WNH to invest in modernizing the grid?



Ninety-two percent feel it is somewhat (41%) or very important (51%) to modernize the grid, compared to only 3% that feel it is unimportant – 4% did not know.

Customers ranked in order of preference from 1-highest to 5-lowest, five areas related to reliability. Below are the mean scores ranked in priority.

Q15. Please rank in order of priority preference the following five reliability outcomes. One ("1") represents your highest priority through to five ("5") being lowest priority.



2.61	Reducing the length of time to restore power during extreme weather events
2.75	Reducing the number of outages during extreme weather events
2.76	Reducing the overall number of outages
2.82	Reducing the overall length of outages
4.04	Improving the quality of power, as judged by momentary interruptions in power that can result in the flickering or dimming of lights

Highest scored was reducing the time to restore power during extreme weather (2.61), next by reducing outages during extreme weather (2.75), outages overall (2.76) and then their overall length (2.82). Lowest scored was improving the quality of power – judged by momentary interruptions (4.04).

4 GENERAL PLANT

Capital investments in the General Plant category are driven by the need to add, modify, or replace assets that support WNH's everyday business operations and administration. These investments improve employee safety, worker productivity, and operating efficiency. Areas of major investment (2021 - 2025):

Computer Software & Hardware
-- Replacement of Enterprise Resource Planning (ERP) Software
-- Enhancements to various corporate systems and hardware
Fleet Vehicles / Rolling Stock
-- Replace vehicles reaching end of life
Tools, Equipment & Furniture
-- Replace 30-year-old Forklift Truck
-- Replace various tools and test equipment
Facilities & Other
-- Replace aging building equipment
-- Retirement of eight municipal stations
-- Obtain Land rights/easements to facilitate construction of lines

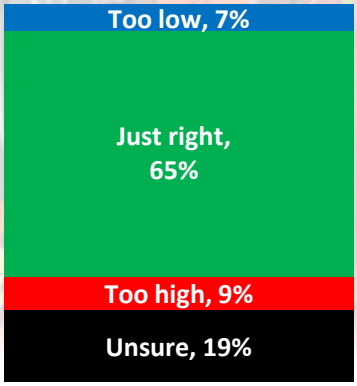


From 2015 to 2019, WNH invested approximately $2.4 million annually in General Plant projects. WNH forecasts investments from 2021 – 2025 will average approximately $2.9 million, an increase of $0.54 million annually. This increase is influenced by the replacement of an obsolete Enterprise Resource Planning (ERP) software system. These investments represent approximately 15% of annual capital investments.

General Plant

Online participants were then queried about their opinion on the general level of future plant expenditures.

Q16. "In your opinion, is this proposed overall level of future general plant expenditures too low, just right, or too high to meet the objectives of safety, reliability, and cost?"

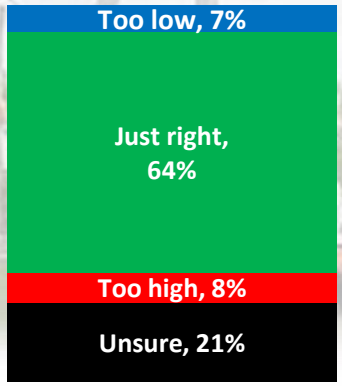


There are 65% that are of the opinion the level of general plant expenditures is just right, while 7% feel it is too low. Nine percent stated it is too high, while 19% were unsure.

Overall Future Capital Expenditures

Customers were then questioned about the overall level of future capital expenditures.

Q17. "In your opinion, is this proposed overall level of future capital expenditures too low, just right, or too high to meet the objectives of safety, reliability, and cost?"

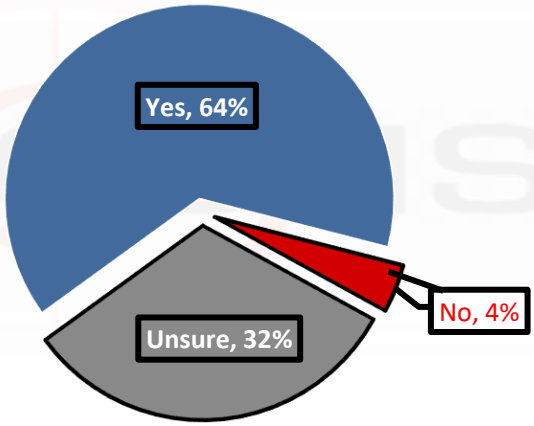


With respect to future capital expenditures, 64% said the proposed spending is just right, 7% that it is too low, 8% too high and 21% were unsure.

Right Focus

All online participants were asked if they felt WNH has focused on the right areas for capital investment. If they answered no (4%, N=92) or unsure (32%, N=766) they were probed in a follow-up question (Q19) about the areas that need addressing.

Q18. "In your opinion, has WNH focused on the right areas for capital investments?"



Sixty-four percent feel WNH has focused on the right areas, while only 4% do not. However, more than three in ten or 32% answered do not know.

Those answered NO (4%, N=92) or UNSURE (32%, N=766) in Q18 were asked Q19.

Q19. "What areas of capital investment do you believe need to be addressed?"

Most online respondents or 86% did not know or were unsure of what needs to be addressed. Those with opinions tended to name more renewable energy or environmental upgrades, lower prices and comments related to general upgrades or improvements.

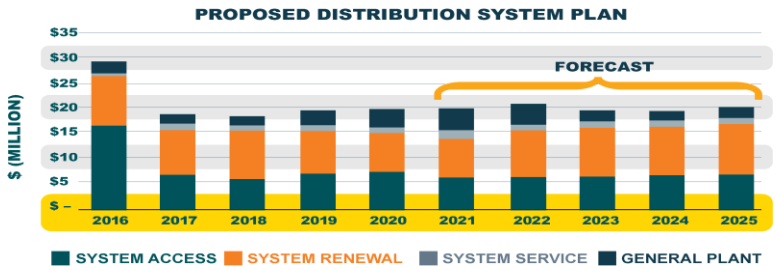
Unsure	N=739	86%
Renewable energy	N=36	4%
Lower prices / costs	N=18	2%
Reliability (less outages, etc.)	N=12	1%
Infrastructure	N=7	1%
Environmental improvements	N=7	1%
Move / more lines underground	N=5	1%
Lower upper management salaries	N=4	<1%
Upgrade technology	N=4	<1%
Equipment upgrades	N=3	<1%
Upgrade ERP system	N=3	<1%
Quit selling hydro to the U.S.	N=3	<1%
General upgrades	N=2	<1%
Underground upgrades	N=2	<1%
Upgrade lines / poles	N=2	<1%
Less smart technology	N=2	<1%
Less using contractors / outsourcing	N=2	<1%
Sustainable growth	N=2	<1%
Wind turbine energy	N=1	<1%
Outsourcing	N=1	<1%
Billing improvements	N=1	<1%
The building	N=1	<1%
Merge with other utilities	N=1	<1%

Section 5. Capital Investments & Monthly Bill

The following was displayed after which customers were asked which of three statements best reflected their view on rate increases.

PACING INVESTMENTS

The overall amount WNH invests in capital projects remains similar over the 2021 – 2025 period, but what changes is where these investments are made. WNH carefully plans and paces spending to ensure it stays consistent and the impact to customer rates is minimal. The chart below outlines WNH's spending in past years, plus proposed spending for the upcoming 5-year period (2021 – 2025).

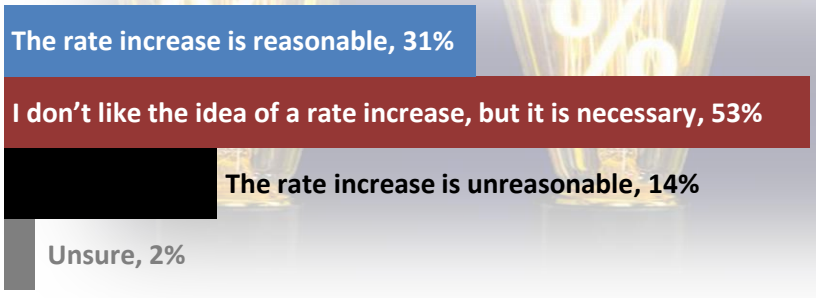


The Impact on Your Bill

WNH believes that the Plan achieves a balance between the needs and priorities of our customers and our infrastructure, maintains system performance, and allows the community to grow while keeping bill impacts manageable over the long-term. WNH receives a formulaic increase annually that is less than inflation but resets based on current cost levels every five years (2021). The last full cost application was in 2016. The preliminary monthly rate impact to the average residential customer distribution portion is $1.96 and the total bill increase is 1.5% in 2021, holding other things constant (TOU Rates, Ontario Electricity Rebate). The preliminary monthly rate impact to the average small business customer distribution portion is $4.59 and the total bill increase is 1.3% in 2021, holding other things constant (TOU Rates, Ontario Electricity Rebate).Please note that these are preliminary estimates and are subject to change as the rate application process continues. Rate impacts are estimated for an average residential household that consumes 700 kWh per month.

Rate Increase

Q20. "Which of the following best represents your point of view on this rate increase?
READ / ROTATE LIST

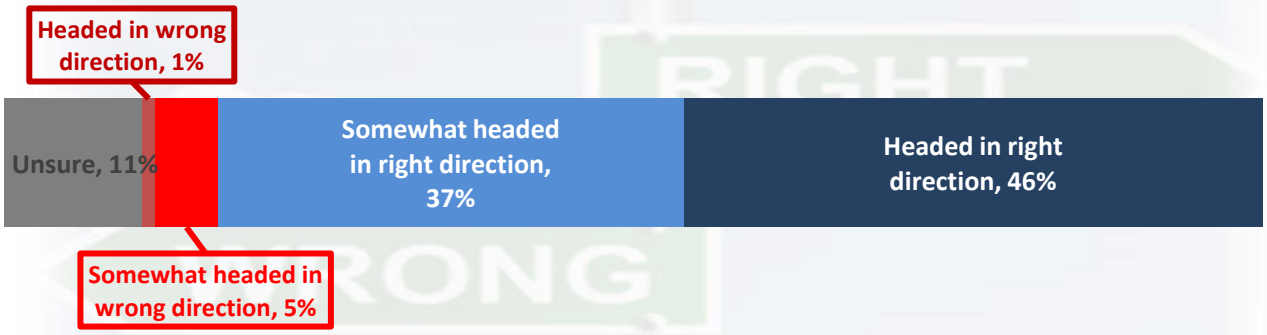


A total of 53% said they do not like the idea of a rate increase but feel it is necessary, while 31% said it is reasonable. There were 14% that claimed the increase is unreasonable, while 2% were unsure.

Planning for the Future

In the final two scaled questions customers were asked if WNH's investment plan is on the right track and they then rated the utility in planning for the future.

Q21. "In your opinion, is Waterloo North Hydro's investment plan headed in the right direction or the wrong direction?"



Eighty-three percent of online participants held the view that WNH's investment plan is headed (46%) or somewhat headed (37%) in the right direction, compared to 6% that think it is somewhat (5%) or headed (1%) in the wrong direction. Eleven percent did not know.

Q22. "Overall, how would you rate Waterloo North Hydro in planning for the future? Please respond using a scale of very poor, poor, good or very good."



Nine in ten customers responding to the online survey (90%) rated WNH good (66%) or very good (24%) in planning for the future. There were only 4% that said they are doing a poor (3%) or very poor job (1%), while 6% did not know.

Summary & Highlights

Results from both the online and telephone survey components reveal similar opinions with respect to most indicators. This despite the extensive background information contained in the online survey in relation to the abridged text read in the telephone survey.

For instance, findings from both surveys reveal a high level of understanding (somewhat & completely) of the role that Waterloo North Hydro plays in the electricity system, including where revenue comes from and what portion of their bill relates to WNH – including 98% of online and 97% of telephone respondents. However, more online participants said they were completely aware (53%) than telephone respondents (49%), while more phone customers said somewhat aware (48%) in relation to those online (45%). Among the N=32 small businesses that completed paper questionnaires, N=18 said they were completely aware and N=14 somewhat aware.

In a question only asked to the N=32 small businesses, N=18 answered they somewhat and N=14 very well understand the cost drivers that Waterloo North Hydro is responding to.

Customers were presented with choosing among three options, including (a) service enhancements that they were told would increase costs, (b) having a lower priority on service while favoring lower cost alternatives and (c) continuing with current levels of customer service. Overall, the WNH client base prefers a continuation of current customer service levels, including 69% of telephone and a slightly lower 65% of online respondents. Next most named by 21% of telephone and 24% of online participants was decreasing costs with lower levels of customer service, while only 6% from both surveys want increased service (4% of phone & 6% of online participants were unsure).

As WNH currently exceeds regulated provincial standards as in area of answering calls within 30 seconds, most customers do not want to see service levels decreased in order to save 15¢ per month or $1.80 per year. This includes two-thirds of telephone and 63% of online survey respondents. Only slightly more than a quarter or 26% of phone and 28% of online survey participants are willing to decrease service levels to lower costs – 7% and 9% respectively did not know or were unsure.

There is demand among customers for WNH to provide environmental alternatives and to focus on connecting or investing in renewable energy solutions or new technologies (at additional costs). Only 26% of telephone survey respondents want WNH to continue investing in traditional infrastructure, while a 65% majority from the phone poll want more money invested in renewables (26%), new technologies (6%) or both renewables and new technologies (33%) at additional costs. Ten percent did not know or were unsure. Among online participants there is a similar demand for investing in new technologies and renewables at additional costs – 64%. This includes 31% that want investment in both renewables and new technologies, 25% in renewables and 5% in new technologies. Only one-quarter want to continue investing in traditional infrastructure and 11% were unsure.

Among the N=32 businesses, N=18 want both investments in renewables and new technologies, N=6 more money in renewables and N=5 investments in new technologies, while only N=2 said to continue investing in traditional infrastructure and N=1 was unsure.

Despite the aforementioned demand for renewables and new technologies, a majority of customers are not willing to pay more for WNH to install more underground lines than they do today, if it means an increase in customer rates. Fifty-six percent of telephone respondents said they are not willing to pay more to increase the amount of underground distribution, while 26% are willing, but almost two in ten or 19% are undecided. Opposition was stronger among online participants as almost six in ten (59%) answered they would not be willing to pay more to increase underground lines, compared to one-quarter that are willing – 16% did not know.

Customers in both the online and telephone surveys rated their interest in ten improvements or upgrades, being told that there would be a cost impact associated with them.

Education rated highest, with more online participants favoring conservation and those by telephone safety. Automated outage notifications also rated highly, followed by an interactive website – with stronger results from the online component. Of mid-level importance was comparing consumption and automated alerts for usage, while results were lower for an online chat feature and alerts for bill due dates. Low importance was attached to automated alerts estimating bills and very low for extended office hours.

		
Educating customers and the public about electrical safety	**80%**	**79%**
Educating customers and the public about energy conservation	**79%**	**82%**
An automated outage notification system (automatically sends messages)	**74%**	**77%**
Reporting issues or making inquiries through an interactive website	**72%**	**75%**
Comparing your electricity consumption with others in the area	**55%**	**54%**
Automated alerts when electricity usage exceeds a prearranged threshold	**53%**	**56%**
Having an online chat feature on the WNH website during business hours	**44%**	**43%**
Automated alerts to remind you of your bill due date	**43%**	**45%**
Automated alerts estimating what your upcoming bill might be	**35%**	**36%**
Extended office hours (current hours are Monday-Friday 8:30 am – 4:30 pm)	**18%**	**17%**

More customers responding to the online poll (75%) claimed to receive an E-bill than those to the telephone survey (38%). N=15 of the N=32 businesses get an E-bill. After being told of the cost associated with traditional paper billing, they were asked what is preventing them from registering to receive an E-bill. The main mentions from telephone respondents related to not being aware of the cost savings (31%), closely followed by the perceived convenience of receiving a bill by mail (29%) and that a hard copy by mail serves as a reminder to pay (20%). Among online participants, most named was not being aware of the cost savings (31%), closely followed by the perceived convenience of receiving a bill by mail (26%) and that a hard copy by mail serves as a reminder to pay (20%). Among

businesses, most named by N=5 was not being aware of the cost savings, followed by N=3 that responded convenience and N=3 that it is a reminder to pay.

On the issue of tree trimming, customers support the status quo. Most (65% telephone & 63% online) back the current process of more frequent tree trimming with enough clearance to balance reliability, aesthetic, and environmental concerns. Twenty-four percent of telephone and 27% of online respondents want less frequent trimming, but more branches cut to ensure fewer outages or lower wait times to restore power, while only 4% (both surveys) want less trimming because of aesthetic or environmental reasons.

System Renewal

Slightly more than six in ten or 61% of telephone survey respondents feel the level of system renewal expenditures is just right to meet the objectives of safety reliability and cost. Only 6% said it is too low, 11% too high, while 22% were unsure.

Among online participants, almost six in ten or 58% feel the level of expenditures is just right to meet the objectives of safety, reliability and cost. Only 5% said it is too low, 14% too high, while 23% were unsure.

N=27 of the small businesses said the level is appropriate, N=3 too low and N=2 were unsure.

System Service

Among telephone respondents, 93% feel it is somewhat (46%) or very important (47%) to modernize the grid, compared to only 3% that feel it is unimportant – 4% did not know.

While a similar 92% of online participants said it is important to modernize, more answered very important (51%) compared to the telephone survey, while 41% answered somewhat important and 4% were unsure.

With respect to small businesses, N=23 answered very important and N=9 somewhat important.

When asked to rank in order of priority preference five reliability outcomes, the highest scored (mean) was reducing the time to restore power during extreme weather (2.63 – telephone & 2.61 online), next by reducing outages during extreme weather (2.71 – telephone & 2.75 – online), outages overall (2.73 – telephone & 2.76 online) and then their overall length (2.79 – telephone & 2.82 online). Lowest scored was improving the quality of power, judged by momentary interruptions (4.14 – telephone & 4.04 – online). Among the N=32 small businesses, reducing the overall number of outages ranked first (2.55), followed by the length of outages (2.69), the length of time to restore power during extreme weather (3.03), and the number of outages during extreme weather (3.28). Also scored lowest was improving the quality of power, judged by momentary interruptions (3.34).

General Plant

Two-thirds of customers responding to the phone survey feel the current level of expenditures is just right. Only 3% said too low, 10% too high, while two in ten were unsure. Sixty-five percent of online participants are of the opinion the level of general plant expenditures is just right, while 7% feel it is too low. Nine percent stated it is too high, while 19% were unsure. N=26 businesses claimed it was appropriate, N=3 too low and N=3 did not know.

With respect to future capital expenditures, results show that 68% of telephone and 64% of online participants feel the overall level is just right, 7% phone (8% online) said it is too high, 7% too low (same for both), while 18% of phone and 21% of online respondents were unsure.

Capital Investments

Seven in ten telephone respondents feel WNH has focused on the right areas for capital investments, only 3% do not. A significant 27% answered do not know. The number dips among online respondent's as 64% feel WNH has focused on the right areas, while only 3% do not. However, more than three in ten or 32% answered do not know. N=28 of the N=32 businesses stated WNH is focused on the right areas, while N=4 were unsure.

When those that do not feel WNH is focused on the right areas or did not know were asked in a follow-up about what they think needs to be addressed, most were unsure (82% - phone & 86% online). Among those providing answers, most mentions related to renewables or environmental upgrades, equipment / general upgrades and lower prices.

After being read or presented with a background to rate increases, customers were then asked which of three statements best reflected their view on the topic. There is a sense that while rate increases are disliked they are necessary – 51% from the telephone and 53% from the online survey hold this view. A core segment feel they are reasonable (32% telephone & 31% online), while few consider them unreasonable (13% telephone & 14% online) and the undecideds are low (4% telephone & 2% online). The same pattern held for businesses as N=20 answered that while they don't like the idea, they are necessary, N=10 think them reasonable, only N=1 said it is unreasonable and N=1 was unsure.

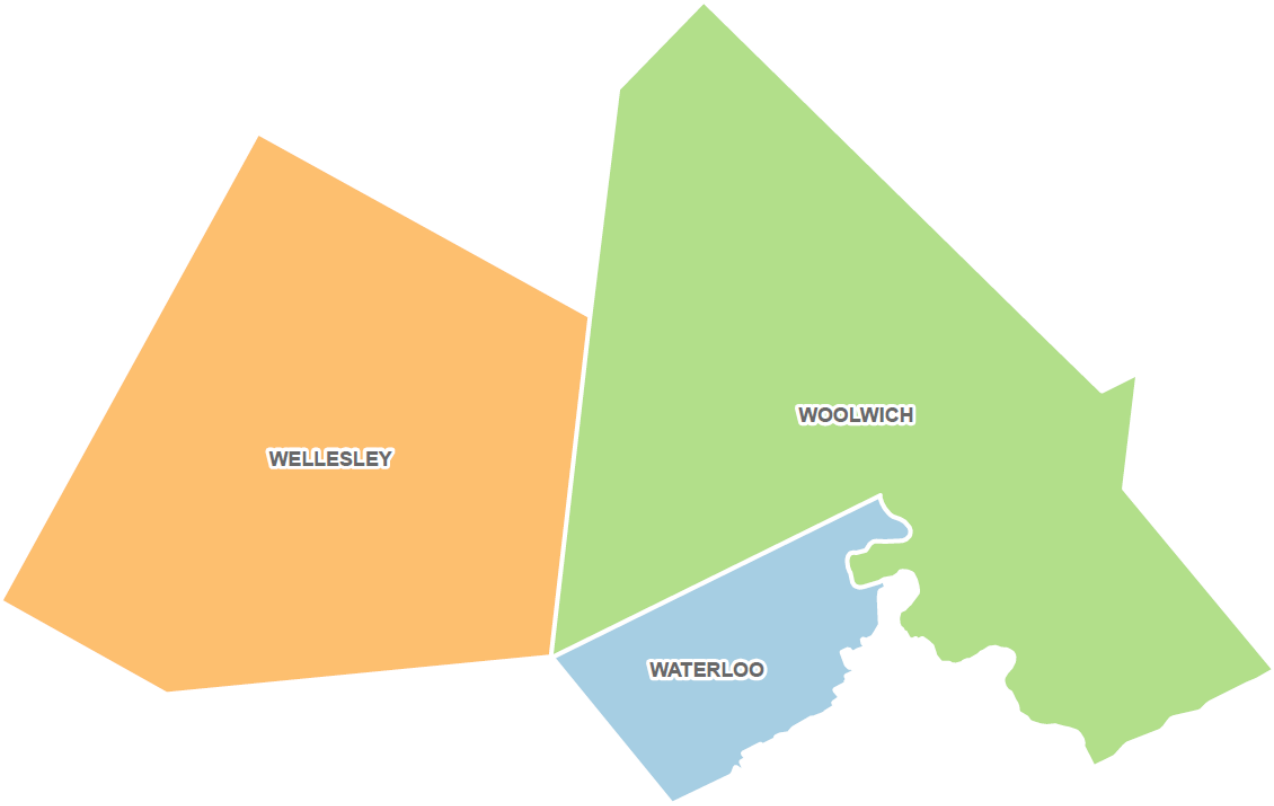
Overall, there appears buy-in with the direction being taken by WNH as a strong majority including 84% of telephone and 83% of online participants, feel WNH's investment plan is headed in the right direction. Results are even stronger on the perception among customers of how WNH is preparing for the future. Most of those responding by telephone or 88% said the utility is doing a good job in planning for the future as did 90% of online participants and all N=32 businesses.



ATTACHMENT 1-10

WNH BUSINESS PLAN

Waterloo North Hydro



2020 – 2025 Business Plan

To serve the customers of Waterloo North Hydro

For customer prosperity and growth

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1.0 Executive Summary

As part of its annual budgeting process, Waterloo North Hydro normally develops an annual Capital and Operating Budget with a Five-Year Long Range Forecast. However, with a Cost of Service rate filing for new distribution rates to be effective in 2021 there is a need to develop a business plan that addresses the needs of the utility for 2020 and 2021 in detail as well as 2022 through to 2025. In order to accomplish this, the utility employs the following process:

a) Conduct a survey to gather high level insights, information and feedback from customers.
b) Use customer feedback and input along with current industry trends and an environmental scan to update the Strategic Plan with the Board of Directors and develop key objectives for the next five years.
c) Prepare and present to the Board of Directors a Five-Year Business Plan.
d) Prepare the Capital and Operating Budgets that would outline the financial resources (along with rate impacts to customers) required to achieve the objectives outlined in the Business Plan.
e) Conduct a second level engagement with customers regarding the Business Plan and rate impacts.
f) Amend the Capital and Operating Budgets based on customer feedback and obtain Board approval.

Items (a) and (b) have been completed and item (c) the Business plan is being presented for Board approval.

2.0 Overview of Waterloo North Hydro Inc.

2.1 Core Business

The core business of Waterloo North Hydro Inc. (WNH) is electricity distribution over an area of 683 square kilometers. As at December 31, 2019, WNH distributed electricity to approximately 58,000 residential and commercial customers. WNH owns and operates a local distribution network consisting of approximately 21,500 poles, 7,800 transformers, 1,100 km of overhead lines, and 575 km of underground feeder lines. The network also includes three transformer stations connected to Hydro One transmission circuits and 6 distribution substations. At its local transformer stations WNH transforms electrical power it purchases from the Independent Electricity System Operator to primary distribution voltages and distributes such power to WNH customers through the distribution network. WNH is also supplied by 7 sub-transmission or distribution feeders from neighbouring utilities; 3 from Hydro One's Elmira T.S., one from Hydro One's Fergus T.S., one from Kitchener Wilmot Hydro and one from EnergyPlus.

2.2 Transformer Stations

WNH has four Transformer Stations (TS) on three sites at the locations below. WNH receives supply from Hydro One transmission lines at 115,000 volts (115 kV) or at 230,000 volts (230 kV). Hydro One owns, operates and maintains the transmission lines and right-of-way in the WNH service area.

1. Eby Rush TS (ERTS) – 115kV primary voltage transformed to 13.8 kV (13,800 volts) to supply 8 existing feeders or distribution circuits around the city. Supplies customers in the City of Waterloo.

2. Howard Scheifele TS (HSTS) A&B stations – This is a double station at 230kV primary voltage. WNH has 22 existing feeders at 13.8kV, 2 existing feeders at 27.6kV (27,600 volts), and capacity for 2 future feeders at 13.8kV. These circuits mostly supply customers in the City of Waterloo and some supply to the Townships.

3. MTS #3 – 230kV primary voltage, transformed to 6 existing feeders at 27.6kV, 2 future feeders at 27.6kV, and 2 existing feeders at 13.8kV. These circuits mostly supply customers in the Townships area and some back-up to the City of Waterloo circuits from the other stations.

Eby Rush is the oldest station; however, the station underwent a significant rebuild and replacement of equipment in 1996, and replacement of transformers in 2012/13. WNH rebuilt most of Scheifele A in 2008 except for the original transformers which are from 1969. The transformers were refurbished in 2008, and should continue to operate for a number of years.

Scheifele B has been undergoing a staged rebuild as components reach end of life. The major work is expected to be completed in 2020, except for the original transformers which went into service in 1985. With regular maintenance they are expected to remain in service for a number of years.

MTS #3 is the newest station, commissioned into service in 2001. WNH is taking an approach similar to Scheifele B and incrementally upgrading component systems and equipment as they approach end of life.

WNH is in an excellent position for transformer station supply for a number of years. Our current estimate to need a new TS in service is beyond the 5-year timeframe as our total system effective peak demand load growth rate has decreased from historical levels of approximately 3% per year, to approximately 0.5% per year. However, as parts of our service area grow at different rates, work will be needed to rebalance load between stations.

2.3 Municipal Stations (MS) and Distribution Stations (DS)

Our original distribution systems were constructed and operated at 4.16 kV (4,160 volts, also called 4 kV) in the City of Waterloo and Elmira, and at 8.32 kV (8,320 volts, also called 8kV) in the remainder of the Townships. Many years ago, 13.8 kV and 27.6 kV were only for sub-transmission purposes as distribution transformers at these voltages were not yet feasible to use. Many utilities also used a 44 kV (44,000 volts) sub-transmission voltage as well. WNH had 17 localized municipal substations (MS) that transformed the 13.8 kV and 27.6 kV to 4 kV which was feasible to use as a distribution voltage in the urban areas. In the townships, 9 distribution substations (DS) transformed 27.6 kV and 44 kV to the feasible 8 kV distribution voltage. Over time, the industry developed smaller distribution transformers feasible to use at 13.8 and 27.6 kV, and WNH implemented those voltages as our standard distribution circuits. As distribution lines are upgraded due to failing asset condition, the older systems are converted to 13.8 kV or 27.6 kV circuits as they have a higher capacity and can provide good supply voltage over longer distances. We expect that with the pace of our rebuilding program, the 4 kV circuits will be eliminated by the end of 2021 and the 8 kV circuits and associated DSs over the next few years.

By the end of 2019, there will be nine MS & DS stations out of service. WNH will likely retain one vacant property in St. Clements because of its strategic location for potential radio communication coverage in our service territory, and one in Elmira as it presently hosts radio communication sites for our smart metering and GPS systems. One property in Elmira has been prepared for disposal leaving six stations that will require decommissioning, demolition and environmental remediation before disposal. One additional DS in Wellesley is scheduled to come out of service by 2021.

2.4 Distribution Circuits

WNH has about 600 kms of 27.6 kV circuits, 580 kms of 13.8 kV circuits, and 440 km of 8 kV ccts, with about 11 km of 4 kV and 44 kV circuits; 1,100 kms are overhead and 575 kms are underground circuits. The 4 kV circuits will be replaced or retired by the end of 2019. We maintain a database of age and condition of our assets. Every year we replace those assets that are reaching end of useful life before they become a liability to fail.

2.5 System Operations

The WNH transformer stations and distribution system is monitored and operated by our Control Room 24/7/365. The Control Room is equipped with a SCADA (supervisory control and data acquisition) system from Survalent. This software provides the System Operators real time status

and remote control of transformer station equipment, feeder breakers and switches on the distribution system.

WNH has used the Survalent SCADA platform over a twenty-year period. In 2015, WNH purchased Survalent SmartVU platform (Smart Visual Utility). This SCADA software imports GIS (Geographical Information System) data directly into the geometry for SmartVU such as the topology and connectivity of our circuits including primary and secondary line sections, transformers, generators and smart meters. The integration is efficient and avoids errors in data transfer.

WNH also enabled the SmartVU OMS (outage management system) module. OMS allows System Operators to have visual indication of the feeder and outage area when the power is off. It provides a real time customer count for the number of customers out of power. Additionally, WNH made immediate use of the AMI (Advanced Metering Infrastructure) interface to receive 'Power Off' alarms from WNH suite of smart meters. We are also the first utility to be able to query beyond the 'Power On' indicators to be able to see real time voltage and current at customer locations. This helps to diagnose issues before we roll a truck to respond to customer power outages.

The advent of OMS was a game-changer for System Operators, more importantly WNH customers. The OMS system pushes portrayal of power outages to the WNH web site, viewed on the Public Outage map page, where we report restoration times and causes of outages. The media has adopted a self-serve approach to gathering news updates from the WNH public outage map, which relieves calls to the WNH phone system, and to the Control Room. This allows WNH staff to dedicate their time to diagnosing the problems and restoring power.

By the end of 2019, WNH has installed 97 smart switches on our system to allow better monitoring of the distribution system and remote control of the switches from the Control Room. These switches are used by the System Operators to quickly isolate faulted areas such as might be caused by a vehicle accident hitting our poles, and then restore service to the unaffected areas before they dispatch a crew for necessary repairs to a smaller area of customers.

In 2018, WNH installed FLISR software (Fault Location, Isolation, and Service Restoration) on six of the 40 feeders at 13.8kV and 27.6 kV. The basic idea of FLISR is to quickly identify the location of a fault and then isolate the faulted area as tightly as possible to reduce the impact of the power outage associated with the fault (in terms of both the duration and the numbers of customers affected). FLISR makes use of system

intelligence, remote control devices, and communications networks to achieve this goal in a more optimal way than would otherwise be achievable by the System Operator. FLISR can operate in an automated mode, which we refer to as a "self-healing" grid capability.

The 97 smart grid devices deployed by WNH, along with remotely operable devices and fault indicators have enabled a decrease in restoration time of power outages. WNH will complete it's self healing grid strategy in 2 to 3 years by adding about 30 more smart grid devices with FLISR enabled across all the 13.8 kV and 27.6 kV feeders.

WNH continuously monitors distribution system performance and continues to invest in self healing grid capabilities in a manner that improves reliability to as many customers as possible.

WNH measures the customer outage minutes saved each year to illustrate how the investment correlates to improved customer experience by reducing the duration of customer outages.

2.6 Fleet

WNH owns and operates a fleet of 54 vehicles including ten aerial devices or bucket trucks that range from single buckets at 46' working height to the largest double bucket at maximum 80' working height. We also have five boom trucks for lifting poles and heavy materials. These large trucks range in price from $350,000 to $650,000, however, they last for about 12 years and allow linepersons, in all kinds of weather, to confidently handle live wires energized at up to 27,600 volts. We also have 10 heavy-duty small trucks and 29 passenger vehicles.

2.7 Information Technology Hardware and Software Systems

WNH requires robust systems for our 24/7 operation. We have a small team that operates and maintains a variety of systems in house. We also have several hardware and software environments hosted by third parties.

We have five main physical host servers at the WNH building containing more than 30 virtual servers. The life cycle on the main host servers is approximately five years. Each year WNH replaces one server and moves the replaced production server to the Disaster Recovery (D/R) site located at one of our TS buildings. In turn, each year WNH decommissions the oldest server at the D/R site. We keep the D/R site servers current to production servers in the event we are unable to use the Country Squire Road offices and must resume production from the TS building for business continuity.

All production hardware is on 24/7 Vendor support, and hardware at the D/R site is on similar support with a few exceptions. We also have active 24/7/365 Cyber Security Monitoring and Detection Response Services.

We have similar strategies for desktop PC's and Laptops. The life cycle for desktop PC's (towers) is 5 years and life cycle for laptops is 3 years, depending on usage. We deploy replaced units to elsewhere in the company for PCs/laptops with low and non-production usage.

WNH employs many software systems in an integrated manner across the company. Below are a few of the major software packages:

1. ERP (Enterprise Resource Planning) – software for all financials, work orders, purchase orders and material management systems (first implemented in 2005).

2. CIS (Customer Information System) – new made in Ontario software for tracking all customer information, metering data management and repository (MDMR), billing data, payment information and more. (first implemented in 2017). Receives data from AMI, provides data to ERP, GIS, AMI, OMS and Synergi.

3. GIS (Graphical Information System) – ESRI software used as record keeping tool for the location and characteristics of our assets. Some asset condition assessment data. Receives data from CIS, provides data to Synergi and OMS.

4. AMI (Advanced Metering Infrastructure) – meters and communications systems consisting of several tower located communications repeaters, hosted hardware and high speed fibre connections to download data from all smart meters every day. Provides data to CIS and OMS.

5. OMS (Outage Management System) – Survalent integrated software module, part of SCADA system. Provides visual indication of the feeder and outage area when power is off, plus a real time customer count for the number of customers out of power. Gets data from AMI, CIS, and GIS.

6. EDRMS (Electronic Document Records Management System) – record keeping software for all corporate records such as policies, legal documents, employee records, incident investigations, project info, drawings, contracts, and more.

7. Synergi – Electrical engineering analysis tool for predicting voltages and currents on our system under different operating conditions. Used in

determining protection settings, circuit configurations, and impact of various types of connections to our system (large loads, generation, storage, etc.). Gets data from GIS and MDMR.

8. AutoCAD – Drafting platform for preparation of construction drawings. Supplies data to other systems.

9. SpidaCalc – Engineering structural analysis tool for poles and their support systems (guying, braces, etc.). Imports data from other systems.

10. Cognos – Business Intelligence Reporting platform for mining data out of ERP, CIS/MDM, budget software, MDMR (transformer loading), transformer database, records management, Pillar (Control Room record keeping tool).

WNH implemented other software packages in 2019 to improve data handling and improve efficiency of data analysis.

1. Asset Management – Metsco ENGIN software is a capital planning tool that integrates insights from asset registry information, condition assessments, inspections, and testing to develop asset health indices and help develop asset replacement strategies. The software is also an investment prioritization and optimization tool that allows multiple scenarios to be run under various constraint criteria, to come up with an optimized capital program portfolio.

2. AUD – Automated Utility Design software combines design and standards documentation with rules-driven workflows and analysis for utility distribution design. Integrates AutoCAD drafting platform with ERP work order and material management, as well as GIS and engineering analysis platforms.

2.8 Administration Offices and Service Centre

WNH has only one location for our staff to work from, located at 526 Country Squire Road. Put into service in December 2011, the LEED Silver building houses all our needs for Administration, Customer Service, Engineering, IT Services, Operations, fleet and warehouse. Using geothermal systems for cooling, heating and hot water heating, we continue to upgrade lighting, HVAC and other systems for improved energy efficiency.

3.0 Initial Customer Engagement

In advance of the 2021 cost of service application, WNH collaborated with Brickworks Communications to conduct a survey to gather high level insights, information and feedback from its customers prior to completing its Business Plan. WNH promoted the survey with an e-blast to its customer base. The result was 4,355 customers completed the online survey from February 5th - 22nd, 2019 with 96% being residential, 3% - GS<50 kW and 1% - GS>50kW.

From the results, both quantitative and qualitative, the business plan was developed based on key themes. It also indicated areas where customers needed to be more informed.

3.1 Key Themes

The survey results identified that the number one customer priority is to have “Reliable” electricity, followed by “Safe” electricity.

Priority	Customer Preferences - Next 5 Years
1	WNH provides electricity that is "Reliable" (fewer outages)
2	WNH provides electricity that is "Safe"
3	WNH provides electricity at low cost (at the expense of reliability and customer service)
4	WNH invests in innovative solutions such as smart grid, battery storage, solar and smart home technologies
5	WNH provides excellent customer service

3.2 Quantitative Results

Survey Questions

How Important is minimizing power outages to you?	%
Not Important	11
Important & willing to pay more to keep the lights on (<$1 extra per month on bill)	29
Important but at no additional cost	58
Don't know	2

Smart grid reroutes power automatically reducing the costs by not having to send out hydro crew - how important is this to you?	%
Not Important	8
Important & willing to pay more to keep the lights on (<$1 extra per month on bill)	31
Important but at no additional cost	58
Don't know	3

Outages due to equipment failure therefore require maintenance and replacement of assets to reduce outages - how important is this to you?	%
Not Important	3
Important & willing to pay more to keep the lights on (<$1 extra per month on bill)	31
Important but at no additional cost	64
Don't know	2

Electricity Usage Tracking & Alerts - Interest in signing up for this	Residential %	Business %
Not at all interested	12	14
Somewhat interested	48	50
Very interested	34	28
Don't know	5	8

Customer Future Preference on Smart Grid/DERs	Residential % Yes	Business % Yes
Electric Vehicles - Currently Own	5	7
Considering purchase of Electric Vehicle over the next 5 years	27	19
Rooftop Solar - Currently have one	3	1
Rooftop Solar - For potential customers intent on installation	30	7
Community Solar - Interest in purchasing a share in a community or "shared" installation	40	
On-Site Power Storage - Consider installing battery storage in the next 5 years	36	40
Smart Home - Interest in making your home a Smart Home?	75	-

3.3 Qualitative Results

Customers were asked to provide additional comments regarding any other areas of interest to them. There were 1,134 comments received in total. These comments were then summarized and grouped under common themes and highlighted in the following table:

Topics	%
Cost is too high, don't want increases	19.2
Positive feedback - happy with WNH	11.5
Looking to improve environmental impact, focus on renewables	10.1
Interest in their own generation or alternatives (while reducing cost)	7.5
Delivery should be based on usage, not flat fee	6.5
Not happy with TOU pricing / consider changing / adding different rate for overnight EV charging	6.1
Delivery fee should already include upgrades, maintenance costs, should not require increases	4.3
Would like adjustments to billing practices (easier registration, quicker billing period etc.	4.3
Prefer underground	4.0
Feel that they are unable to change consumption or price - rentals, businesses, seniors	3.6
Would like discounts for certain groups of customers - students, seniors, rentals	3.4
Reduce power outages, do not like momentary outages, remove more trees to limit outages	3.2
Would like more updated communication channels - move away from telephone, better use of website or online tools	3.1
Want WNH App - check usage, pay bills, compare to neighbours	3.1
Miscellaneous improvement suggestions - remove smart meters, more outage protection around poles/transformers from animal contact and vehicles	2.8
Keep utility local, some would like regional amalgamation consideration	2.0
Concerned for privacy of information	1.9
Concerned about Hydro mismanagement, governance, wages	1.5
Issues or questions on survey itself	1.1
Had negative experience with WNH	0.7

4.0 Strategic Planning 2019

Using valuable input and insights from the Initial Customer Engagement Survey and relevant information and studies with respect to the future of electricity distribution, the Board of Waterloo North Hydro Inc. held a strategic planning session in March, 2019. The purpose of the session was to develop the major elements of a strategic plan for the next five years. The Board reviewed and updated the vision, mission and purpose statements as well as the strategic imperatives. The Board also conducted a current state analysis by identifying internal strengths and weaknesses and external opportunities and threats and then defined a desired future state.

Based on this exercise, the following statements were reaffirmed and/or updated.

4.1 Purpose, Mission and Vision

Purpose – Why we exist (the anchor of why were we created)

- Delivering electricity efficiently to our customers

Mission – What business are we in (may change over time but still anchored to purpose)

- To be of service to our customers by delivering electricity to homes and businesses in our communities – reliably, safely, 24/7

Vision – What we want to be like in the future

- Our vision is to be the flexible, sustainable distribution platform for connecting consumers and producers of electricity, and be the trusted energy advisor of choice for our customers. We have earned this reputation by:

1. Improving **customer relations and loyalty**: customers come to us first. They have easy access for changes, questions etc.
2. Becoming a **leading edge energy provider** and we are known as a leader in Ontario in getting to Utility 2.0 and implementing ADMS
3. Successfully **offering and charging for new services:** providing a range of behind-the-meter services, generation and smart home services, supplying energy to our customers regardless of source
4. Having a **high performing and engaged leadership and workforce**: we have the right capabilities that enable us to be agile and responsive
5. Sustaining and **growing the dividend**

4.2 Strategic Imperatives

The following factors are critical to the success of Waterloo North Hydro Inc., and guide our business plans:

Supply & Reliability

We must ensure an adequate and reliable supply of electricity to meet our customers' needs

Health, Safety and Environment

We must continue to make safety, the prevention of losses, and healthy living a way of life in our utility. We must also operate our business with minimal impact on the environment

Customer Service

We must continue to find ways to make it easier for our customers to do business with us and to offer excellent customer service

Employee Relations & Development

We must continue to attract and develop talented employees

Productivity & Cost Reduction

We must continue to operate our business efficiently and foster a culture of excellence and continuous improvement

Organizational Effectiveness

We must continue to find ways to leverage technology and adopt best business practices to improve organizational effectiveness

Financial Performance

We must operate our business in a fiscally responsible manner in order to sustain financial viability and maximize returns to our shareholders

Shareholder & Community Relations

We must create value for our shareholders and the community in which we serve

System Aesthetics

We will continue to find ways where it is feasible to design and construct our system to improve landscape aesthetics

4.3 Current State Assessment

The Board and management developed a current state SWOT assessment.

Current State Assessment	
Strengths	**Opportunities**
1. Location - growing high tech community	1. Management team succession / refresh
2. Nimble - we are big enough and small enough to respond to trends, changing without being bogged down	2. Have an emerging technologies team doing research, environmental scan and investment - use GSC?
3. Operational excellence - how the business is run	3. Revenue generation - traditional utility services in non-regulated space
	4. Energy platform that connects suppliers and customers
Weakness	**Threats**
1. Our customers do not see WNH as their energy advisor for their CDM and DER needs	1. Speed of market changes
2. Lack of bench strength in key areas: sales data scientists	2. Many new and different non-regulated competitors and biggest customers could be stolen
3. Not enough non-regulated activities	3. Regulatory environment…Government policy and changes
4. Too small to gain maximum efficiency and exploit opportunities…don't have excess capacity to do the R&D	4. Lack of available capital from shareholders for riskier propositions

4.4 Priorities in next two years

The Board and Management developed the key priorities for WNH to accomplish in 2020 and 2021.

1. Expand and align skill sets for the future
2. Explore ways to increase available capital
3. Deepen and strengthen relationships with our customers
4. Research and develop new product and service offerings

4.5 Initiatives (by Priority)

Objective	Initiatives in 2019 - 2020
Expand and align skill sets	1. Develop Succession plan for leadership & board to respond to competitive environment
	2. Develop a hiring strategy and timetable
	3. Create a sub-committee with mandate to do 1 & 2
	4. Update business plan to inform choices for management succession and hiring new skill sets
	5. Agree on new organizational structure, roles
	6. Explore what other entities are doing with regards to change, customer relationship building, new product development and emulate
Increase available capital	1. Determine regulatory implications for our organization structure
	2. Explore opportunity for private investment
	3. Borrowing capacity, how much is appropriate and on what terms (debt/equity structure)
	4. Frank discussion with shareholders re: appetite for investment/reduced dividends
	5. Explore mergers to increase revenue/dividends
Strengthen customer relationships	1. Mine current data for efficiencies, quick wins
	2. Pursue data analytics for new opportunities (internal or strategic partnerships) to understand our customers' needs; gaps; asset management; leverage to pursue opportunities for revenues
	3. Market research to understand exactly what customers are looking for
	4. Develop strategy to retain/grow top 25 commercial customers
Develop new product and service offerings	1. Create a team to research and develop new product and service offerings - maybe through GRE, GSC
	2. Strategic alliance (joint venture, strategic partnership, mergers, GRE) on IT/OT to provide new customer services

	3. Market research to understand most appealing product & service offerings
	4. Investigate lessons learned from other LDC's (Oakville, etc.)

5.0 Five Year Business Plan

5.1 Capital Investment Plan Overview

Waterloo North Hydro's (WNH) Capital Investment Plan is developed with a minimum five-year outlook and is reviewed and adjusted annually. Currently, work is underway on a major update to the plan for the period 2020 to 2025 in support of WNH's 2021 Distribution Rate Application to the Ontario Energy Board.

Corporate strategic imperatives, asset management objectives and mandated investments form the high-level framework for WNH's Capital Investment Plan.

The plan is also shaped by valuable input regarding customer preferences obtained from the initial customer engagement survey undertaken in February, 2019. Customers indicated that their primary priorities were Reliability (fewer outages) and Safety. It is clear that customers are still focused on price but not at the risk of safety and reliability. They are also concerned with innovation and managing their usage but may not want the tools if the cost is too high.

The final investment portfolio is comprised of prioritized investments paced to achieve an acceptable balance between meeting WNH's infrastructure needs, customer preferences, financial and resource constraints, and the impact on customer rates.

WNH's Capital Investments falls into four categories as set out by the Ontario Energy Board. The background and drivers for the proposed capital investments over the budget years 2020 and 2021, and the forecast period 2022 - 2025 are discussed in the following sections under the OEB investment categories:

1. System Access;
2. System Renewal;
3. System Service;
4. General Plant.

5.2 System Access

System Access investments are primarily additions and modifications (including asset relocation) to the distribution system driven by external requesting parties

(customer or road authority). WNH is obligated to provide a customer (including a generator customer) or group of customers with access to electricity services via the distribution system. These obligations are mandated through OEB regulations, other regulatory/government agencies and WNH's distribution license.

Generally, there is little to no flexibility in the timeframe within which these types of investments must be made; however, when there is, the execution of the work is paced to balance these types of investments with other high priorities. WNH prioritizes these mandated investments to always form part of WNH's Capital Investment Plans. Completing this work within the prescribed timeframes is a condition of WNH's Distribution License.

Areas of investment include;

1. Distribution system expansions for new customer connections or property development (subdivisions & new distribution lines)
2. Relocation of distribution lines to accommodate road authorities
3. Servicing new residential, commercial and industrial customer connections.
4. Servicing distributed energy resources such as solar, battery, biogas, wind
5. Modifications to existing customer connections
6. Metering customer loads
7. Other mandated service obligations

Investment plans for System Access are developed through;

1. Analysis of historical trends in customer and load growth
2. Consultations with regional utilities, transmitter and IESO on future energy demand
3. Consultations with municipal planning and economic development staff, developers, builders, major customers
4. Current and future municipal development trends

Areas of major investment (2020, 2021);

1. New residential subdivisions - servicing of approximately 200 lots / yr.
2. New underground distribution lines
3. New commercial and industrial services
4. Relocation of distribution lines due to Municipal road relocations

5. Connection of Distributed Energy Resources (DERs) – 7 projects, 8.5 MW combined total
6. New and replacement metering
7. Capacity upgrade to the University of Waterloo

2022 – 2025

Externally driven activities in the areas of major investment 1-6 are largely influenced by local economic development. Project lead-times made available to WNH are seldom more than two years. Unless a major economic decline develops, WNH expects activity and investment requirements to remain relatively consistent throughout the forecast period.

5.3 System Renewal

System Renewal investments involve the replacement of existing assets based on their age, condition, performance metrics and risk. WNH has developed a comprehensive Asset Management System to capture and analyze asset data, estimated time to replacement, consequences of failure, and develop forecast replacement plans and costs.

These investments have varying degrees of flexibility in the staging of their execution allowing WNH to pace these investments in combination with other capital needs to find the right balance between reliability, safety, system performance, risk and cost.

Not completing this work within the determined timeframes will lead to performance and safety degradation, increased customer complaints and more expensive reactive maintenance and capital replacement.

Areas of investment include;

1. Rebuilding of overhead lines and underground lines
2. Refurbishment of distribution and transmission grid connected transformer stations transformers, switchgear circuit breakers, protection & control systems, SCADA, Outage Management System, batteries, cables
3. Transformers, switchgear circuit breakers, protection & control systems, SCADA, Outage Management System, batteries, cables
4. Individual asset end-of-life replacements, poles, transformers, switches, insulators
5. SCADA system upgrades and enhancements

6. Wholesale metering

Investment plans for System Renewal are developed through;

1. Asset condition assessments
   (a) testing
   (b) regular OEB inspections
   (c) maintenance inspections and repair reports
   (d) performance metrics
2. Asset end-of-life analysis
3. Risk assessments

Areas of major investment (2020, 2021);

1. Underground distribution rebuild, North Lake & Westvale, Waterloo
2. Overhead distribution line rebuilds, Waterloo, Woolwich & Wellesley
3. Removal of small overhead wire #4 / #6 in service territory
4. Replace OH poles due to poor testing results
5. Replace OH line porcelain insulators and reinsulate
6. Decommission distribution DS26 (Wellesley) and repurpose transformer to DS27 (Wallenstein) to replace transformer built in 1947
7. Repurpose DS32 (Breslau decommissioned in 2019) Electronic Vacuum Reclosers to DS31 (Bloomingdale) to retire end-of-life recloser and enhance functionality and monitoring
8. HSTS Bus Duct Refurbishment – life extension project
9. Install infrared inspection windows on grid connected station switchgear
10. MTS #3 upgrade T2 bulk protection relays
11. Implementation of upgrades to mitigate high transmission fault levels at HSTS 'A'

12. Installation of On-Line gas analyzers at HSTS 'A', ERTS
13. Upgrade communications systems to improve reliability and cyber security
14. Replace end of life wholesale meters at transmission grid connected transformer stations

2022 – 2025

System Renewal activities are largely influenced by WNH's asset condition assessments and asset management plan. The 2020 – 2021 project list is indicative of the type of projects to be expected over the 2022 – 2025 time frame. Given the sheer volume and diversity of assets in service, projects are numerous and constantly being evaluated as new condition assessments and performance data is obtained. Lead-times are generally longer for System Renewal activities, allowing for greater flexibility in the pacing of replacement expenditures.

Financial forecasts are developed and investment areas are prioritized / reprioritized on an annual basis so that the assets at highest risk are addressed. Individual projects are developed in detail for the upcoming budget year. WNH expects activity and investment requirements to remain relatively consistent throughout the forecast period.

5.4 System Service

System Service investments are made to meet performance based objectives such as safety, reliability, power quality, system efficiency and other performance or operational objectives. These investments allow better utilization of the existing capacity of electricity assets, increased penetration of distributed generation, increased reliability, resiliency and flexibility of the power system, and improved cyber security.

Not completing this work will lead to supply constraints preventing the connection of load or generation customers; degradation in system performance and customer satisfaction; and more expensive reactive maintenance and capital replacement.

Areas of investment include;

1. Constructing additional distribution lines to relieve load transfer constraints within the distribution system and between stations
2. Smart grid automation to reduce customer restoration times, improve operational visibility and control, and improve reliability
3. Distribution loss reduction

Investment plans for System Service are developed through;

1. System supply and capacity studies
2. Load flow analysis
3. Voltage profile studies
4. Arc flash studies
5. Asset end-of-life analysis
6. Risk assessments

Areas of major investment (2020, 2021);

1. Distribution Automation to reduce customer outage minutes and increase load transfer capability:

   (a) retrofit Vista switchgear units (27 switching points)

   (b) deployment of new reclosers (10)

   (c) upgrade distribution line switched capacitors to SCADA control

   (d) upgrade HMSTS A&B Transformer condition on-line monitoring

   (e) upgrade RTUs for SCADA Repeaters

   (f) construct dark fiber ring for system control communications – ION TPSS 6 to ERTS, and ERTS to Office

2. Upgrade load transfer capabilities of 27.6kV supply to Wellesley
3. HSA Fault Limiting Strategy
4. Installation of Guarding at strategic locations to reduce animal contact outages

2022 – 2025

System Service activities are largely influenced by historical and forecast system performance metrics. The 2020 – 2021 project list is indicative of the type of projects to be expected over the 2022 – 2025 time-frame. System performance is continually being monitored and analyzed as load and DER customers increase. Projects flow out of the analyses. Lead-times are generally longer for System Service activities, allowing for greater flexibility in the pacing of replacement expenditures.

Financial forecasts are developed and investment areas are prioritized / reprioritized on an annual basis so that performance measures at highest risk of

degradation are addressed. Individual projects are developed in detail for the upcoming budget year. WNH expects activity and investment requirements to remain relatively consistent throughout the forecast period.

5.5 General Plant

Capital investments in the General Plant category are driven by the need to add, modify or replace assets that support the utility's everyday business operations and administration, improve employee safety, worker productivity and operating efficiency. These assets are not considered part of the distribution system.

Areas of investment include;

1. Software and hardware systems
2. Fleet / rolling stock
3. Tools, equipment & furniture
4. Facilities – non distribution system physical plant such as the administration building and service centre
5. Other including Intangibles such as land rights and capital contributions to other utilities

Areas of major investment (2020, 2021);

Computer Software & Hardware

1. Replacement of Enterprise Resource Planning (ERP) Software. (budgeted for 2021 & 2022)
2. Smart Meter RNI 4.X Upgrade
3. GIS platform Upgrade to Utility Network
4. Settlement Software
5. Asset Management Software
6. CIS-MDM-ODS Enhancements
7. Cyber security investments.
8. Laptop and workstation replacements

Fleet / Rolling Stock

1. Large vehicle replacement
   (a) new 55' single bucket material handling aerial device to Replace R55
2. Medium sized vehicle replacement
   (a) new Stations Truck to Replace O51
3. Small vehicles replacement
   (a) Y124, Y125, G123, R191
   (b) replace Line Supervisor Trucks R 116 & R 128
4. Replace trailer T540

Tools, Equipment & Furniture

1. Forklift Replacement
2. Test equipment
   (a) protection relay test set
   (b) power Factor Test Set

Facilities

1. HVAC system replacements
   (a) BAS Controllers
   (b) heat Pump Compressors
2. Audio Visual equipment replacements
   (a) projector Replacement – North training room
3. Phone System additional module
4. Asphalt Repairs
5. Camera Upgrades – Run to Failure
6. Skylight Replacement
7. Replace Fuel Filling Station

Other

1. MS/DS (municipal substation / distribution substation) retirements, cleanup and disposal

   a) MS #1, 5, Waterloo

   b) MS #22, 23, 24, Elmira

   c) DS #26, Wellesley, #32 Breslau, #34 South Woolwich

2. Land rights (easements)

2022 – 2025

The 2020 – 2021 project list is indicative of the type of projects to be expected over the 2022 – 2025 time-frame. WNH performs condition/operational assessments on many of the assets in this category. Financial forecasts are developed and investment areas are prioritized/reprioritized on an annual basis. Individual projects are developed in detail for the upcoming budget year. Except for the completion of the ERP software system in 2022, WNH expects activity and investment requirements to remain relatively consistent throughout the forecast period. Replacement lead-times for some of the larger dollar items are generally longer, allowing for greater flexibility in the pacing of replacement investments.

6.0 Conclusions

This Business Plan sets out the initiatives and investments necessary to respond to the needs of our customers, the needs of our distribution system and plant, the vision developed with our Board, of what WNH should be in the future and the evolving business model to deliver that future state.

The input from directly engaging customers, guided and confirmed the areas of focus for future investments by WNH. The plan responds to the Strategic Imperatives approved by the Board of Directors and also responds to the OEB investment categories.

We believe the plan supports the transition to Utility 2.0 for WNH, while balancing the impact on customer rates.

We are seeking approval from the Board of Directors for the 2020-2025 Business Plan.

Waterloo North Hydro

ATTACHMENT 1-11

AUDITED FINANCIAL STATEMENTS 2019

Financial Statements of

Waterloo North Hydro Inc.

Year ended December 31, 2019

KPMG LLP
115 King Street South
2nd Floor
Waterloo ON N2J 5A3
Canada
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INDEPENDENT AUDITORS' REPORT

To the Shareholder of Waterloo North Hydro Inc.

Opinion

We have audited the financial statements of Waterloo North Hydro Inc. (the Entity), which comprise:

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

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

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

Basis for Opinion

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

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

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

KPMG LLP is a Canadian limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. KPMG Canada provides services to KPMG LLP.

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

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

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

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

Auditors' Responsibilities for the Audit of the Financial Statements

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

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

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

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

We also:

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

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

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

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

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

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

Waterloo, Canada
April 16, 2020

Waterloo North Hydro Inc.

STATEMENT OF FINANCIAL POSITION

As at December 31, 2019, with comparative information for 2018

	Note	December 31 2019 $	December 31 2018 $
ASSETS			
Current			
Cash		-	5,563,651
Accounts receivable	*4*	**12,752,608**	14,667,770
Unbilled revenue		**18,342,989**	16,842,546
Income tax receivable		**379,694**	-
Inventories		**3,721,642**	2,983,865
Prepaid expenses		**296,937**	640,759
Short-term loan to shareholder	*19*	-	100,000
Total current assets		**35,493,870**	40,798,591
Non-current assets			
Property, plant and equipment	*5*	**243,340,517**	234,955,955
Intangible assets	*6*	**3,972,640**	3,543,675
Total non-current assets		**247,313,157**	238,499,630
Total assets		**282,807,027**	279,298,221
Regulatory deferral account debit balances	*8*	**14,520,430**	12,340,302
Total asssets and regulatory deferral account debit balances		**297,327,457**	291,638,523

Waterloo North Hydro Inc.

STATEMENT OF FINANCIAL POSITION

As at December 31, 2019, with comparative information for 2018

	Note	December 31 2019 $	December 31 2018 $
LIABILITIES AND SHAREHOLDER'S EQUITY			
Current			
Accounts payable and accrued liabilities		**19,446,854**	20,560,901
Short-term bank debt	*9*	**396,819**	-
Current portion of long-term debt	*9*	**6,264,000**	5,964,000
Income tax payable		**-**	99,804
Current portion of customer deposits	*12*	**2,816,795**	2,861,592
Total current liabilities		**28,924,468**	29,486,297
Long-term			
Long-term debt	*9*	**72,478,147**	72,759,643
Note payable to shareholder	*10*	**33,513,211**	33,513,211
Derivative liability	*9*	**3,188,963**	1,695,094
Customer deposits	*12*	**4,026,940**	3,988,302
Deferred revenue		**25,862,609**	24,477,325
Post employment benefits	*11*	**4,008,911**	4,578,814
Deferred tax liability	*7*	**8,547,257**	6,825,030
Total long-term liabilities		**151,626,038**	147,837,419
Total liabilities		**180,550,506**	177,323,716
Shareholder's equity			
Share capital	*13*	**26,887,104**	26,887,104
Retained earnings		**75,575,289**	72,346,905
Total shareholder's equity		**102,462,393**	99,234,009
Total liabilities and shareholder's equity		**283,012,899**	276,557,725
Regulatory deferral account credit balances	*8*	**14,314,558**	15,080,798
Total equity, liabilities and regulatory deferral account credit balances		**297,327,457**	291,638,523

The accompanying notes are an integral part of these financial statements.

On behalf of the Board:

Michael Pley, Chair

Micheal Kelly, Vice Chair

Waterloo North Hydro Inc.

STATEMENT OF COMPREHENSIVE INCOME

Year ended December 31, 2019, with comparative information for 2018

	Note	**2019**	2018
		$	$
REVENUES			
Sales of electricity		**173,746,381**	168,153,027
Distribution services revenue		**35,895,518**	35,500,485
	14	**209,641,899**	203,653,512
Power purchased		**175,424,055**	169,449,010
Net operating revenue		**34,217,844**	34,204,502
Other revenues	*14*	**1,825,877**	2,064,076
		36,043,721	36,268,578
EXPENSES			
Distribution		**7,987,531**	8,244,749
Billing and collecting		**3,110,860**	3,272,050
General administration		**3,426,755**	3,153,965
Property taxes		**458,134**	444,419
Amortization	*5*	**9,952,224**	9,628,663
Total expenses		**24,935,504**	24,743,846
Income before undernoted items		**11,108,217**	11,524,732
Net interest expense	*15*	**(4,920,773)**	(4,853,586)
Unrealized gain (loss) from derivatives	*9*	**(1,493,869)**	429,267
Income from operations before PILs		**4,693,575**	7,100,413
PILs expense	*7*	**1,446,346**	2,145,113
Income from operations for the year before movement in regulatory deferral account balances		**3,247,229**	4,955,300
Other comprehensive income:			
Remeasurement of employee future benefits net of taxes		**428,531**	-
Total comprehensive income for the year before movement in regulatory deferral account balances		**3,675,760**	4,955,300
Net movement in regulatory deferral account balances, net of taxes	*8*	**3,328,624**	2,911,344
Net income and comprehensive income		**7,004,384**	7,866,644

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN EQUITY

Year ended December 31, 2019, with comparative information for 2018

	Note	Share Capital	Retained Earnings	Total
Balance at January 1, 2018		**26,887,104**	**68,655,261**	**95,542,365**
Net income and net movement in regulatory balances			7,866,644	7,866,644
Dividends paid	*13*		(4,175,000)	(4,175,000)
Balance at December 31, 2018		**26,887,104**	**72,346,905**	**99,234,009**
Net income and net movement in regulatory balances			**7,004,384**	**7,004,384**
Dividends paid	*13*		**(3,776,000)**	**(3,776,000)**
Balance at December 31, 2019		**26,887,104**	**75,575,289**	**102,462,393**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CASH FLOWS

Year ended December 31, 2019, with comparative information for 2018

	Note	2019 $	2018 $
OPERATING ACTIVITIES			
Net income		**7,004,384**	7,866,644
Add (deduct) charges to operations not requiring a current cash payment:			
Provision for PILs	*7*	**1,600,851**	2,145,113
PILs paid		**(358,122)**	(316,226)
Amortization		**10,687,801**	10,395,015
Loss (gain) on disposal of property, plant and equipment		**54,685**	(72,578)
Amortization of deferred revenue		**(725,656)**	(673,002)
Increase (decrease) in regulatory liabilities		**(2,946,368)**	(2,521,573)
Increase (decrease) in post employment benefits liability		**(569,903)**	54,066
Unrealized gain on derivatives	*9*	**1,493,869**	(429,267)
Net change in non-cash operating working capital		**(1,093,282)**	705,406
Cash provided by operating activities		**15,148,259**	17,153,598
INVESTING ACTIVITIES			
Additions to property, plant and equipment and intangibles	*5,6*	**(19,811,379)**	(18,221,985)
Proceeds on disposal of property, plant and equipment		**255,365**	430,720
Cash applied to investing activities		**(19,556,014)**	(17,791,265)
FINANCING ACTIVITIES			
Increase (decrease) in customer deposits		**(6,159)**	736,656
Increase in long-term debt	*9*	**6,000,000**	8,000,000
Long-term debt - repayment		**(5,981,496)**	(5,717,208)
Decrease in short-term debt	*19*	**-**	(1,000,000)
Decrease (increase) in short-term loan receivable		**100,000**	(100,000)
Capital contributions received		**2,110,940**	2,968,930
Dividends paid	*13*	**(3,776,000)**	(4,175,000)
Cash provided by financing activities		**(1,552,715)**	713,378
Net cash provided during year		**(5,960,470)**	75,711
Cash and cash equivalents, beginning of year		**5,563,651**	5,487,940
Cash and cash equivalents, end of year		**(396,819)**	5,563,651

The accompanying notes are an integral part of these financial statements.

NOTES TO FINANCIAL STATEMENTS

Year ended December 31, 2019

1. Reporting Entity

Waterloo North Hydro Inc. (the "Company") is a rate regulated, municipally owned hydro distribution company incorporated under the Business Corporations Act (Ontario) on May 1, 2000. The incorporation was required in accordance with the provincial government's Electricity Competition Act (Bill 35). The Company is located in the Township of Woolwich. The address of the Company's registered office is 526 Country Squire Rd, Waterloo, Ontario, N2J 4G8.

The Company delivers electricity and related energy services to residential and commercial customers in the City of Waterloo and the Townships of Wellesley and Woolwich. The Company is also engaged in the delivery of Conservation Demand Management ("CDM") activities and provides street lighting services.

The Company is wholly-owned by Waterloo North Hydro Holding Corporation whose shareholders are the City of Waterloo and the Townships of Wellesley and Woolwich.

The financial statements are for the Company as at and for the year ended December 31, 2019.

2. Basis of Presentation

(a) Statement of compliance

The Company's financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS").

The financial statements were approved by the Board of Directors on April 16, 2020.

(b) Basis of measurement

The financial statements have been prepared on the historical cost basis except for the following:

(i) Where held, financial instruments at fair value through profit or loss.

(ii) Contributed assets are initially measured at fair value.

The methods used to measure fair values are discussed further in note 20.

(c) Functional and presentation currency

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

2. Basis of Presentation (continued)

(d) Use of estimates and judgments

The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses and disclosure of contingent assets and liabilities. Actual results may differ from those estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the year in which the estimates are revised and in any future periods affected.

Information about judgments made in applying accounting policies that have the most significant effect on the amounts recognized in these financial statements is included in the following notes:

(i) Note 3(b) – Revenue Recognition – determination of the performance obligation for contributions from customers and the related amortization period
(ii) Note 3(d) - Capital assets (Property, plant and equipment)
(iii) Note 11 - Employee post-employment benefits
(iv) Note 16 - Commitments and contingencies

(e) Rate regulation

The Company is regulated by the Ontario Energy Board ("OEB"), under the authority granted by the *Ontario Energy Board Act, 1998*. Among other things, the OEB has the power and responsibility to approve or set rates for the transmission and distribution of electricity, providing continued rate protection for electricity consumers in Ontario, and ensuring that transmission and distribution companies fulfill obligations to connect and service customers. The OEB may also prescribe license requirements and conditions of service to local distribution companies ("LDCs"), such as the Company, which may include, among other things, record keeping, regulatory accounting principles, separation of accounts for distinct businesses, and filing and process requirements for rate setting purposes.

Rate setting:

Distribution revenue

For the distribution revenue included in electricity sales, the Company files a "Cost of Service" ("COS") rate application with the OEB every five years where rates are determined through a review of the forecasted annual amount of operating and capital expenses, debt and shareholder's equity required to support the Company's business. The Company estimates electricity usage and the costs to service each customer class to determine the appropriate rates to be charged to each customer class. The COS application is reviewed by the OEB and interveners. Rates are approved based upon this review including any required revisions.

2. Basis of Presentation (continued)

(e) Rate regulation (continued)

In the intervening years an Incentive Rate Mechanism application ("IRM") is filed. An IRM application results in a formulaic adjustment to distribution rates that were set under the last COS application. The previous year's rates are adjusted for the annual change in the Gross Domestic Product Implicit Price Inflator for Final Domestic Demand ("GDP IPI-FDD") net of a "stretch factor" determined by the relative efficiency of an electricity distributor.

As a licensed distributor, the Company is responsible for billing customers for electricity generated by third parties and the related costs of providing electricity service, such as transmission services and other services provided by third parties. The Company is required, pursuant to regulation, to remit such amounts to these third parties, irrespective of whether the Company ultimately collects these amounts from customers.

In 2018, the Company applied and received approval for IRM rates effective January 1, 2019. The distribution rates will be increased by 1.2%.

In 2019, the Company applied and received approval for IRM rates effective January 1, 2020. The distribution rates will be increased by 1.7%.

Electricity rates

The OEB sets electricity prices for low-volume consumers twice each year based on an estimate of how much it will cost to supply the province with electricity for the next year. All remaining consumers pay the market price for electricity. The Company is billed for the cost of the electricity that its customers use and passes this cost on to the customer at cost without a mark-up.

(f) Conservation and Demand Management Activities

The Independent Electricity System Operator ("IESO") supports Conservation and Demand Management (CDM) plans during their design and throughout their entire lifespan, including the sharing of best practices, offering of program delivery services, and the building of awareness in the marketplace through marketing and communication. The IESO provides centralized customer service, technical support, market research, program evaluation, measurement and training.

On March 26, 2014, the Minister of Energy of Ontario, under the guidance of sections 27.1 and 27.2 of the OEB Act, directed the OEB to amend the license of each licensed electricity distributor to require the electricity distributor, as a condition of its license, to make CDM programs available to customers in its licensed service area and to do so in relation to each customer segment in its service area, over the period beginning January 1, 2015 through December 31, 2020. The objective of the new CDM efforts is to reduce electricity consumption in the Province of Ontario by a total of 7 terawatt hours between January 1, 2015 and December 31, 2020, of which the Company's share is 82.38 GWh of energy savings. In 2019, through strong participation by local commercial customers in energy efficiency programs and lower costs spent, the Company was able to achieve a net cumulative energy savings of 87.49 GWh which is higher than 83% of the total 6 year budget being 68.65 GWh.

2. Basis of Presentation (continued)

(f) Conservation and Demand Management Activities (continued)

The Company has signed an energy conservation agreement with the IESO for the delivery of these CDM programs over the 2015-2020 period with funding of approximately $21.192 million, which includes participant incentives and the Company's program administration and delivery costs. The Company provided the IESO with its plan for achieving its CDM target, received approval and will continue to submit an updated CDM plan annually.

The Company elected full cost recovery funding for all programs under the current plan. The IESO will reimburse the Company for all adequately documented costs incurred, with an option to receive a portion of its funding in advance. Cost efficiency incentives may be awarded if electricity savings meet or exceed certain CDM plan targets for programs under the full cost recovery funding method, with a mid-term review performed by the IESO for the 2015-2017 period. In 2018 the IESO awarded a mid-term incentive of $536,753 subject to review in 2019. The Company recognized 50% ($268,377) in Other Revenues in 2018 and has recognized the remainder in 2019 ($268,376).

On March 21, 2019 the Minister of Energy, Northern Development and Mines directed the IESO to discontinue the current 2015-2020 Conservation First Framework (CFF) and implement a new interim framework, in support of the government's goal to reduce electricity costs for customers. The IESO will centrally deliver a reduced suite of energy-efficiency programs with a focus on business and industrial programs and continued programming for low-income consumers and Indigenous communities beginning April 1, 2019 until December 31, 2020. LDCs will wind down current activities with customers and no further payment of LDC performance incentives will be paid.

3. Significant Accounting Policies

The accounting policies set out below have been applied consistently in all years presented in these financial statements, except where otherwise described in Note 21 – Changes in Accounting Policies.

(a) Financial instruments

At initial recognition, the Company measures its financial assets at fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

Subsequent measurement of the financial asset depends on the classification determined on initial recognition. Financial assets are classified as either amortized cost, fair value through other comprehensive income or fair value through profit or loss, depending on its business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. Financial assets are not reclassified subsequent to their initial recognition, unless the Company changes its business model for managing financial assets.

Derivative assets are always classified as fair value through profit or loss on inception.

Financial liabilities are initially measured at fair value, net of transaction costs incurred. They are subsequently carried at amortized cost using the effective interest rate method; any difference between the proceeds (net of transaction costs) and the redemption value is recognized as an adjustment to interest expense over the period of the borrowings.

3. Significant Accounting Policies (continued)

(b) Revenue Recognition

Sale and distribution of electricity

The performance obligations for the sale and distribution of electricity are recognized over time using an output method to measure the satisfaction of the performance obligation. The value of the electricity services transferred to the customer is determined on the basis of cyclical meter readings plus estimated customer usage since the last meter reading date to the end of the year and represents the amount that the Company has the right to bill. Revenue includes the cost of electricity supplied, distribution, and any other regulatory charges. The related cost of power is recorded on the basis of power used.

For customer billings related to electricity generated by third parties and the related costs of providing electricity service, such as transmission services and other services provided by third parties, the Company has determined that it is acting as a principal for these electricity charges and, therefore, has presented electricity revenue on a gross basis.

Customer billings for debt retirement charges are recorded on a net basis as the Company is acting as an agent for this billing stream.

Capital contributions

Developers are required to contribute towards the capital cost of construction of distribution assets in order to provide ongoing service. The developer is not a customer and therefore the contributions are scoped out of IFRS 15 *Revenue from Contracts with Customers*. Cash contributions, received from developers are recorded as deferred revenue. When an asset other than cash is received as a capital contribution, the asset is initially recognized at its fair value, with a corresponding amount recognized as deferred revenue. The deferred revenue, which represents the Company's obligation to continue to provide the customers access to the supply of electricity, is amortized to income on a straight-line basis over the useful life of the related asset.

Certain customers are also required to contribute towards the capital cost of construction of distribution assets in order to provide ongoing service. These contributions fall within the scope of IFRS 15 *Revenue from Contracts with Customers*. The contributions are received to obtain a connection to the distribution system in order to receive ongoing access to electricity. The Company has concluded that the performance obligation is the supply of electricity over the life of the relationship with the customer which is satisfied over time as the customer receives and consumes the electricity. Revenue is recognized on a straight-line basis over the useful life of the related asset.

Other revenue

Revenue earned from the provision of services is recognized as the service is rendered.

Government grants and the related performance incentive payments under CDM programs are recognized as revenue in the year when there is reasonable assurance that the program conditions have been satisfied and the payment will be received.

3. Significant Accounting Policies (continued)

(c) Inventory

Inventories consist of repair parts, supplies and materials held for future capital expansion and are valued at lower of weighted average cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less estimated selling expenses.

(d) Property, Plant and Equipment

Cost in items of property, plant and equipment ("PP&E") used in rate–regulated activities includes expenditures that are directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials, direct labour, and any other costs directly attributable to bringing the asset to a working condition for its intended use. Major spare parts and standby equipment are recognized as items of PP&E.

Borrowing costs on qualifying assets are capitalized as part of the cost of the asset based upon the actual cost of debt incurred on the Company's borrowings. Qualifying assets are considered to be those that take in excess of 12 months to construct.

When parts of an item of PP&E have different useful lives, they are accounted for and depreciated as separate items (major components) of PP&E.

Gains and losses on the disposal of an item of PP&E are determined by comparing the proceeds from disposal, if any, with the carrying amount of the item of PP&E and are recognized net within other income in profit or loss.

The cost of replacing a part of an item of PP&E is recognized in the net book value of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. In this event, the replaced part of PP&E is written off, and the related gain or loss is included in profit or loss. The costs of the day-to-day servicing of PP&E are recognized in profit or loss as incurred.

Depreciation is calculated on the cost basis of the asset and is recognized in profit or loss on a straight-line basis over the estimated useful life of each part or component of an item of PP&E. Land and land rights are not depreciated. Construction-in-progress assets are not depreciated until the project is complete and in service.

The estimated useful lives are as follows:

Buildings	15-60 years
Transformer and substation equipment	15-50 years
Supervisory control and data acquisition equipment	15 years
Distribution system	15-50 years
Meters	15-25 years
General equipment	5-15 years

Depreciation methods, useful lives, and residual values are reviewed at each reporting date and adjusted prospectively if appropriate.

3. Significant Accounting Policies (continued)

(e) Intangible assets

(i) Computer Software

Computer software that is acquired or developed by the Company, including software that is not integral to the functionality of equipment purchased which has finite useful lives, is measured at cost less accumulated amortization.

(ii) Land Rights

Payments to obtain rights to access land ("land rights") are classified as intangible assets. These include payments made for easements, right of access and right of use over land for which the Company does not hold title and are not amortized.

(iii) Amortization

Amortization is recognized in profit or loss on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The estimated useful lives are:

Computer software	5-10 years
Land rights	no amortization period

Amortization methods and useful lives of all intangible assets are reviewed at each reporting date and adjusted prospectively if appropriate.

(f) Impairment

(i) Financial assets measured at amortized cost:

A loss allowance for expected credit losses on financial assets measured at amortized cost is recognized at the reporting date. The loss allowance is measured at an amount equal to the lifetime expected credit losses for the asset.

(ii) Non-financial assets:

The carrying amounts of the Company's non-financial assets, other than inventories and deferred tax assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated.

For the purpose of impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the "cash-generating unit"). The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

3. Significant Accounting Policies (continued)

(f) Impairment (continued)

(ii) Non-financial Assets (continued):

An impairment loss is recognized if the carrying amount of an asset or its cash-generating unit exceeds its estimated recoverable amount. Impairment losses are recognized in profit or loss.

Impairment recognized in prior periods is assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(g) Provisions

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability.

(h) Regulatory deferral accounts

Regulatory deferral account debit balances represent costs incurred in excess of amounts billed to the customer at OEB approved rates. These amounts have been accumulated and deferred in anticipation of their future recovery in electricity distribution rates. Regulatory deferral account credit balances represent amounts billed to the customer at OEB approved rates in excess of costs incurred by the Company.

Regulatory deferral account debit balances are recognized if it is probable that future billings in an amount at least equal to the capitalized cost will result from inclusion of that cost in allowable costs for rate-making purposes. The offsetting amount is recognized in profit and loss. The debit balance is reduced by the amount of customer billings as electricity is delivered to the customer and the customer is billed at rates approved by the OEB for the recovery of the capitalized costs.

Regulatory deferral account credit balances are recognized if it is probable that future billings in an amount at least equal to the credit balance will be reduced as a result of rate-making activities. The offsetting amount is recognized in profit and loss. The credit balance is reduced by the amounts returned to customers as electricity is delivered to the customer at rates approved by the OEB for the return of the regulatory account credit balance.

The probability of recovery or repayment of the regulatory account balances are assessed annually based upon the likelihood that the OEB will approve the change in rates to recover or repay the balance. Any resulting impairment loss is recognized in profit and loss in the year incurred.

Regulatory deferral accounts attract interest at OEB prescribed rates. From January 1, 2016 to September 30, 2017 the rate was 1.10%. On October 1, 2017 the rate was increased to 1.50%. On April 1, 2018 the rate was increased to 1.89%. On October 1, 2018 the rate was increased to 2.17%. Beginning of January 1, 2019, the rate was increased to 2.45% and then reduced on April 1, 2019 to 2.18%.

3. Significant Accounting Policies (continued)

(i) Employee post-employment benefits

(i) Pension Plan:

Waterloo North Hydro Inc. provides a pension plan for its employees through the Ontario Municipal Employees Retirement System ("OMERS"). OMERS is a multi-employer pension plan which operates as the Ontario Municipal Employees Retirement Fund (the "Fund") and provides pensions for employees of Ontario municipalities, local boards, public utilities and school boards. To the extent that the Fund finds itself in an under-funded position, additional contribution rates may be assessed to participating employers and members.

The Fund is a contributory defined benefit pension plan, which is financed by equal contributions from participating employers and employees and by the investment earnings of the Fund *(note 17).* The Company recognizes the expense related to this plan as contributions are made.

(ii) Post-employment Benefits:

Post-employment benefits provided by the Company include health, dental and life insurance benefits. These plans provide benefits for some of its retired employees. Post-employment benefit expense is recognized in the period in which the employees render the services.

Post-employment benefits are recorded on an accrual basis. The accrued benefit obligations and current service cost are calculated using the projected benefits method pro-rated on service and based on assumptions that reflect management's best estimate. The current service cost for a period is equal to the actuarial present value of benefits attributed to employees' services rendered in the period. Gains and losses are recognized in the current year. Actuarial gains and losses arising from defined benefit plans are recognized immediately in other comprehensive income and reported in retained earnings.

(j) Interest income and interest costs

Interest income is recognized as it accrues in profit or loss, using the effective interest method. Interest income comprises interest earned on cash and cash equivalents and on regulatory assets.

Interest costs comprise interest expense on borrowings, customer deposits and regulatory liabilities. Interest costs are recognized as an expense unless they are capitalized as part of the cost of qualifying assets.

3. Significant Accounting Policies (continued)

(k) Corporate Income taxes

The current tax-exempt status of the Company under the Income Tax Act (Canada) and the Corporations Tax Act (Ontario) reflects the fact that the Company is wholly owned by municipalities. This tax-exempt status might be lost in a number of circumstances, including if the shareholder (municipalities) ceases to own 90% or more of the shares or capital of the Company, or if a non-government entity has rights immediately or in the future, either absolutely or contingently, to acquire more than 10% of the shares of the Company.

Commencing October 1, 2001, the Company is required, under the Electricity Act, 1998, to make payments in lieu of corporate taxes to the Ontario Electricity Financial Corporation. These payments are calculated in accordance with the rules for computing income and other relevant amounts contained in the Income Tax Act (Canada) and the Corporations Tax Act (Ontario) as modified by the Electricity Act, 1998 and related regulations.

As a result of becoming subject to payments in lieu of corporate income taxes ("PILs"), the Company's taxation year was deemed to have ended immediately beforehand and a new taxation year was deemed to have commenced immediately thereafter. The Company was therefore deemed to have disposed of each of its assets at its then fair market value and to have reacquired such assets at that same amount for purposes of computing its future income subject to PILs. For purposes of certain provisions, the Company was deemed to be a new company and, as a result, tax credits or tax losses not previously utilized by the Company would not be available to it after the change in tax status. Essentially, the Company was taxed as though it had a "fresh start" at the time of its change in tax status.

Current tax is the tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method. Under this method, deferred income taxes reflect the net tax effects of temporary differences between the tax basis of assets and liabilities and their carrying amounts for accounting purposes, as well as for tax losses available to be carried forward to future years that are likely to be realized. Deferred tax assets and liabilities are measured using enacted or substantively enacted rates, at the reporting date, expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the year that includes the date of enactment or substantive enactment.

4. Accounts Receivable

	December 31 2019	December 31 2018
Trade receivables	**$ 11,943,020**	$ 13,349,675
Accrued receivables	**266,225**	372,886
Miscellaneous receivables	**652,483**	1,065,999
Allowance for bad debt	**(200,000)**	(200,000)
Other	**90,880**	79,210
	$ 12,752,608	$ 14,667,770

5. Property, Plant and Equipment

(a) Cost or deemed cost:

	Distribution Equipment	Land & Building	Other Fixed Assets	Construction in Progress	Total
Balance at January 1, 2019	**$ 192,738,013**	**$ 31,763,245**	**$ 50,705,940**	**$ 3,409,416**	**$ 278,616,614**
Additions	**15,613,291**	**61,217**	**3,675,880**	**(520,017)**	**18,830,371**
Disposal/retirements	**(240,634)**	**-**	**(297,763)**	**-**	**(538,397)**
Balance at December 31, 2019	**$ 208,110,670**	**$ 31,824,462**	**$ 54,084,057**	**$ 2,889,399**	**$ 296,908,588**

	Distribution Equipment	Land & Building	Other Fixed Assets	Construction in Progress	Total
Balance at January 1, 2018	$ 177,431,255	$ 31,622,946	$ 49,340,550	$ 4,482,574	$ 262,877,325
Additions	15,596,773	140,299	2,742,412	(1,073,158)	17,406,326
Disposal/retirements	(290,015)	-	(1,377,022)	-	(1,667,037)
Balance at December 31, 2018	**$ 192,738,013**	**$ 31,763,245**	**$ 50,705,940**	**$ 3,409,416**	**$ 278,616,614**

5. Property, Plant and Equipment (continued)

(b) Accumulated depreciation:

	Distribution Equipment	Land & Building	Other Fixed Assets	Total
Balance at January 1, 2019	**$ 21,723,339**	**$ 4,275,061**	**$ 17,662,259**	**$ 43,660,659**
Depreciation charge	**5,564,633**	**873,471**	**3,697,654**	**10,135,758**
Disposal/retirements	**-**	**-**	**(228,346)**	**(228,346)**
Balance at December 31, 2019	**$ 27,287,972**	**$ 5,148,532**	**$ 21,131,567**	**$ 53,568,071**

	Distribution Equipment	Land & Building	Other Fixed Assets	Total
Balance at January 1, 2018	$ 16,517,161	$ 3,403,010	$ 15,231,518	$ 35,151,689
Depreciation charge	5,206,178	872,051	3,739,636	9,817,865
Disposal/retirements	-	-	(1,308,895)	(1,308,895)
Balance at December 31, 2018	$ 21,723,339	$ 4,275,061	$ 17,662,259	$ 43,660,659

Carrying amounts

	Distribution Equipment	Land & Building	Other Fixed Assets	Construction in Progress	Total
At December 31, 2019	$ 180,822,698	$ 26,675,930	$ 32,952,490	$ 2,889,399	$ 243,340,517
At December 31, 2018	171,014,674	27,488,184	33,043,681	3,409,416	234,955,955

5. Property, Plant and Equipment (continued)

(c) Allocation of depreciation and amortization

The depreciation of property, plant and equipment and the amortization of intangible assets have been allocated to profit or loss as follows:

	Distribution Expenses	Amortization	Total
December 31, 2019:			
Depreciation of property, plant and equipment	**$ 735,577**	**$ 9,400,181**	**$ 10,135,758**
Amortization of intangible assets	**-**	**552,043**	**552,043**
	$ 735,577	**$ 9,952,224**	**$ 10,687,801**
December 31, 2018:			
Depreciation of property, plant and equipment	$ 766,352	$ 9,051,513	$ 9,817,865
Amortization of intangible assets	-	577,150	577,150
	$ 766,352	**$ 9,628,663**	**$ 10,395,015**

6. Intangible assets

(a) Cost or deemed cost:

	Computer Software	Land Rights	Work in Progress	Total
Balance at January 1, 2019	**$ 4,773,458**	**$ 1,059,625**	**$ 128,862**	**$ 5,961,945**
Additions	**235,998**	**64,686**	**680,324**	**981,008**
Balance at December 31, 2019	**$ 5,009,456**	**$ 1,124,311**	**$ 809,186**	**$ 6,942,953**

	Computer Software	Land Rights	Work in Progress	Total
Balance at January 1, 2018	$ 3,792,887	$ 982,250	$ 371,149	$ 5,146,286
Additions	980,571	77,375	(242,287)	815,659
Balance at December 31, 2018	**$ 4,773,458**	**$ 1,059,625**	**$ 128,862**	**$ 5,961,945**

6. Intangible Assets (continued)

(b) Accumulated amortization:

	Computer Software	Land Rights	Total
Balance at January 1, 2019	**$ 2,418,270**	**$ -**	**$ 2,418,270**
Amortization charge	**552,043**	**-**	**552,043**
Balance at December 31, 2019	**$ 2,970,313**	**$ -**	**$ 2,970,313**

	Computer Software	Land Rights	Total
Balance at January 1, 2018	$ 1,841,120	**$ -**	$ 1,841,120
Amortization charge	577,150	-	577,150
Balance at December 31, 2018	**$ 2,418,270**	**$ -**	**$ 2,418,270**

Carrying amounts

	Computer Software	Land Rights	Work in Progress	Total
At December 31, 2019	$ 2,039,143	$ 1,124,311	$ 809,186	$ 3,972,640
At December 31, 2018	2,355,188	1,059,625	128,862	3,543,675

7. Income Tax Expense

Tax expense:

	2019 $	2018 $
Current	**(121,376)**	432,242
Deferred	**1,963,597**	1,599,115
Deferred recovery on unrealized gain on derivatives	**(395,875)**	113,756
	1,446,346	2,145,113

Reconciliation of effective tax rate:

	2019 $	2018 $
Income from operations before income taxes	**4,693,575**	7,100,413
Statutory Canadian federal and provincial income tax rate	**26.50%**	26.50%
Expected taxes on income	**1,243,797**	1,881,609
Changes in income taxes resulting from:		
Permanent differences	**12,771**	6,253
Other temporary differences	**299,428**	370,875
Adjustment for prior periods	**(109,650)**	(113,624)
	202,549	263,504
Income tax expense	**1,446,346**	2,145,113

Permanent difference is due mainly to non deductible portion of meals and entertainment.

Significant components of the Company's deferred tax balances are a follows:

	December 31 2019 $	December 31 2018 $
Deferred tax assets (liabilities):		
Plant and equipment	**(17,426,549)**	(15,069,247)
Deferred revenue	**6,853,591**	6,486,491
Employee benefits	**1,156,338**	1,257,578
Loss on derivatives	**845,075**	449,200
Other	**24,288**	50,948
	$ (8,547,257)	$ (6,825,030)

8. Regulatory Deferral Account Balance

The following is a reconciliation of the carrying amount for each class of regulatory deferral account balances:

	2019 Opening $	Balances arising in the period	Recovery / reversal	2019 Ending $	Recovery / reversal period (years)
Regulatory deferral account debit balances					
Group 1	1,910,047	1,268,555	(1,392,663)	1,785,939	1 year
Group 2	521,312	269,622	(95,004)	695,930	1 year
Stranded meters	14,823	-	(14,823)	-	3 years
Other regulatory accounts	-	-	-	-	
Deferred tax liability	9,894,120	2,144,441	-	12,038,561	n/a
Total amount related to regulatory deferral account debit balances	**12,340,302**	**3,682,618**	**(1,502,490)**	**14,520,430**	

	2019 Opening $	Balances arising in the period	Recovery / reversal	2019 Ending $	Recovery / reversal period (years)
Regulatory deferral account credit balances					
Group 1	3,248,422	218,970	(2,421,830)	1,045,562	1 year
Group 2	670,336	804,102	-	1,474,438	1 year
Stranded meters	-	26,528	-	26,528	-
Other regulatory accounts	100,109	-	(24,795)	75,314	50 years
Other regulated accounts	11,061,931	630,785	-	11,692,716	-
Total amount related to regulatory deferral account credit balances	**15,080,798**	**1,680,385**	**(2,446,625)**	**14,314,558**	

8. Regulatory Deferral Account Balance (continued)

	2018 Opening $	Balances arising in the period	Recovery / reversal	2018 Ending $	Recovery / reversal period (years)
Regulatory deferral account debit balances					
Group 1	2,580,293	396,273	(1,066,519)	1,910,047	1 year
Group 2	515,661	100,743	(95,092)	521,312	1 year
Stranded meters	462,526	-	(447,703)	14,823	3 years
Other regulatory accounts	5,373	-	(5,373)	-	
Deferred tax liability	7,696,350	2,197,770	-	9,894,120	n/a
Total amount related to regulatory deferral account debit balances	**11,260,203**	**2,694,786**	**(1,614,687)**	**12,340,302**	

	2018 Opening $	Balances arising in the period	Recovery / reversal	2018 Ending $	Recovery / reversal period (years)
Regulatory deferral account credit balances					
Group 1	4,863,717	273,913	(1,889,208)	3,248,422	1 year
Group 2	632,600	37,736	-	670,336	1 year
Other regulatory accounts	119,762	3,855	(23,508)	100,109	50 years
Other regulated accounts	10,906,193	155,738	-	11,061,931	-
Total amount related to regulatory deferral account credit balances	**16,522,272**	**471,242**	**(1,912,716)**	**15,080,798**	

Net movement in regulatory deferred account balances net of taxes of $3,328,624 consists of the regulatory deferred tax expense of $2,144,441, the regulatory treatment on the Accelerated Investment Incentive tax program of ($493,491) and the difference between the Power Purchased and the Sale of Electricity of $1,677,674.

8. Regulatory Deferral Account Balance (continued)

The regulatory deferral account balances are recovered or settled through rates set by the OEB which are determined using estimates of future consumption of electricity by customers. Future consumption is impacted by various factors including the economy and weather. The Company has received approval from the OEB to establish its regulatory deferral account balances.

Settlement of the Group 1 deferral accounts, arising primarily from timing differences for the cost of power billing to customers, is done on an annual basis through application to the OEB. The 2019 IRM application was approved to disperse $1,786,823 of the Group 1 deferral accounts. At January 1, 2019 the approved account balances have been moved to the regulatory settlement account.

Settlement of the Group 2 deferral accounts, created by accounting policy changes, is done at the time of the COS application. The amount of the Group 2 accounts that was recovered totaled $26,528 for the settlement of stranded meters. This rate rider ended on December 31, 2018. The amount of Group 2 accounts accumulated in 2019 totaled $6,927 which will be approved for disposal at the next COS.

Other regulated accounts consist of timing difference on monies received and paid for CDM programs, Ontario Clean Energy Benefit and the IESO cost of power variance.

The OEB requires the Company to estimate its income taxes when it files a COS application to set its rates. As a result, the Company has recognized a regulatory deferral account for the amount of deferred taxes that will ultimately be recovered from/paid back to its customers. This balance will fluctuate as the Company's deferred tax balance fluctuates.

9. Short-Term & Long-Term Debt

The long-term bank debt is subject to a master bank agreement whereby each loan has a maturity date of June 30, 2021 in order to classify the balance owing as a long-term liability.

For both the short-term and long-term bank debt the Company has a general security agreement creating in favour of CIBC a first priority security interest covering all company assets.

9. Short-Term & Long-Term Debt (continued)

Short-term debt		**2019**	**2018**
		$	**$**
Line of Credit	Bank debt, bearing a variable interest rate of Prime Rate less 0.30% per annum. Amounts are repayable immediately in whole or in part, on demand. The operating credit limit is $15M.	396,819	-
		396,819	-

Long-term debt

Each loan has a 30 day banker's acceptance rate + 1% interest rate and is hedged by an interest rate swap at the rate per annum below.

Loan	**Swap rate**	**Monthly payments ($)**	**Term date**	**2019 $**	**2018 $**
Mortgage 2012	3.950%	88,667	April 1, 2037	**18,411,867**	19,472,139
Smart Meter 2013	2.980%	129,167	January 29, 2021	**1,805,313**	3,352,389
Term Loan 2013	4.434%	62,500	July 4, 2033	**10,170,487**	10,918,141
Term Loan 2014	4.035%	62,500	June 4, 2034	**10,855,642**	11,603,726
Term Loan 2015	3.430%	41,667	May 18, 2035	**7,694,304**	8,192,737
Term Loan 2016	2.505%	37,500	July 15, 2036	**7,450,261**	7,898,495
Term Loan 2017	3.565%	41,667	July 2, 2037	**8,901,776**	9,399,999
Term Loan 2018	3.854%	33,333	June 1, 2038	**7,487,475**	7,886,017
Term Loan 2019	3.271%	25,000	October 1, 2039	**5,965,022**	
				78,742,147	78,723,643
Less: Current Portion				**(6,264,000)**	(5,964,000)
				72,478,147	72,759,643

The aggregate amount of expected principal payments required is as follows:

2020	6,264,000
2021	4,972,333
2022	4,714,000
2023	4,714,000
2024	4,714,000
Thereafter	53,363,814
	78,742,147

9. Short-Term & Long-Term Debt (continued)

Interest rate swaps

The Company has entered into interest rate swap agreements with a high quality Canadian chartered bank for the purpose of eliminating the risk of fluctuating interest rates and removing the economic impact of interest rate volatility on the majority of its long-term debt. The CPA Handbook requires the Company to determine and record the fair value of its interest rate swap agreements on the Statement of Financial Position, with changes in fair values being recorded in the Statement of Comprehensive Income.

As a result, the Company has recorded a non-current derivative liability of $3,188,963 (2018 - $1,695,094) and a non-cash charge of ($1,493,869) (2018 - $429,267). A deferred tax recovery of ($395,875) (2018 – $113,756) was also recorded to reflect the deferred tax impact. There is no impact on current tax PILs payable. Over the term of the long-term debt, the non-cash charge and liability will reverse into income. The Company borrows funds using 30 day banker's acceptances at the bankers' acceptance floating rate. The swap instruments result in the Company receiving interest at the 30 day banker's acceptance floating rate and require the Company to pay the fixed rate in the swap instrument. The swaps have a put provision whereby on the five year anniversary of each swap, either party can unilaterally elect to terminate the contract requiring a cash payment upon settlement based on the fair value of the swap instrument on that date. The term of each individual swap instrument matches the amortization period of the corresponding bank loan.

By way of example, the disclosure on the 2012 loan which applies to all of the other loans is explained in detail as follows:

> Bank debt, available (at the company's option), at Prime less 0.3% or Banker's Acceptances (durations up to 6 months) plus 1%, payable in monthly payments of $88,667. Maturity date of the debt facility is June 30, 2021. The Company has entered into an interest rate swap to hedge the interest rate risk on the bank debt, wherein the company pays a fixed rate of 2.95% per annum and receives variable interest at the one month Banker's Acceptance rate, with net interest settlements paid monthly. The interest rate swap matures on April 1, 2037 and may be cancelled by either party on every 5 year anniversary. To the extent the Company continues to choose to borrow at the 1 month BA rate, the combined net effect of the borrowing and swap contract is a fixed cost of borrowing of 3.95% per annum until the maturity date of the debt facility.

10. Note Payable to Shareholder

	2019	2018
	$	$
Senior long-term note payable (a)	**17,266,271**	17,266,271
Junior long-term note payable (b)	**16,246,940**	16,246,940
	33,513,211	33,513,211

(a) The senior long-term note payable due to Waterloo North Hydro Holding Corporation, the Company's parent, bears interest at a rate of 6.0% per annum, has no set principal repayment terms and is due 270 days following demand by Waterloo North Hydro Holding Corporation. Interest is payable in equal quarterly installments, in arrears, March 30, June 30, September 30 and December 31 each year commencing July 1, 2009.

Waterloo North Hydro Holding Corporation has waived the right to demand repayment of any portion of the note during the next fiscal year.

(b) The junior long-term note payable due to Waterloo North Hydro Holding Corporation, bears interest at a rate of 1.125% per annum above the interest rate on debt which the Ontario Energy Board permits the Company to pay for rate making purposes in the establishment of distribution rates, has no set principal repayment terms and is due on demand. The 2016 OEB deemed rate was 4.54% which shall be effective until 2021, the next Cost of Service filing year for the Company.

Waterloo North Hydro Holding Corporation has waived the right to demand repayment of any portion of the note during the next fiscal year.

11. Employee Post-Employment Benefits

The Company pays certain medical and life insurance benefits on behalf of some of its retired employees. The Company recognizes these post-retirement costs in the period in which employees' services were rendered. The accrued benefit liability at December 31, 2019 of $4,008,911 is based on the actuarial valuation done at December 31, 2019 using a discount rate of 4.0%.

Changes in the present value of the defined benefit unfunded obligation and the accrued benefit liability:

	2019 $	2018 $
Accrued benefit obligation		
Balance, beginning of year	**4,578,814**	4,524,748
Current service cost	**121,291**	177,912
Interest cost	**179,819**	178,501
Benefits Paid	**(287,977)**	(302,347)
Actuarial gains recognized in other comprehensive income	**(583,036)**	-
Accrued benefit liability, end of year	**4,008,911**	4,578,814

Components of net benefit expense recognized are a follows:

	2019 $	2018 $
Current service cost	**121,291**	177,912
Interest cost	**179,819**	178,501
Net benefit expense recognized	**301,110**	356,413

The significant actuarial assumptions used in the valuation are as follows (weighted average):

	2019 %	2018 %
Discount rate	**4.0**	4.0
Future general salary and wage levels increase	**2.0**	2.0
Dental costs increase	**4.0**	4.0
Medical costs increase	**5.0 reducing to 4.0% after 6 years**	7.0 reducing to 5.0% after 6 years

The approximate effect on the accrued benefit obligation of the entire plan and the estimated net benefit expense of the entire plan if the health care trend rate assumption was increased or decreased by 1%, and all other assumptions were held constant, is as follows:

	2019 $	2018 $
1% increase in trend rate	**$51,700**	$154,300
1% decrease in trend rate	**(45,000)**	(137,300)

12. Customer Deposits

Customer deposits represent cash deposits from electricity distribution customers and retailers, as well as construction deposits.

Deposits from electricity distribution customers are refundable to customers who demonstrate an acceptable level of credit risk as determined by the Company in accordance with policies set out by the OEB or upon termination of their electricity distribution service.

Construction deposits represent cash prepayments for the estimated cost of capital projects recoverable from customers and developers. Upon completion of the capital project, these deposits are transferred to deferred revenue.

Customer deposits comprise:

	2019 $	2018 $
Current		
Customer deposits	**300,834**	634,567
Contruction deposits	**2,415,961**	2,027,025
Performance bond	**100,000**	200,000
	2,816,795	2,861,592
Long-term		
Customer deposits	**4,026,940**	3,988,302
	4,026,940	3,988,302

13. Share Capital

		2019 $	2018 $
Authorized			
Unlimited	Common shares		
Unlimited	Class A special shares		
Issued			
1,000	Common shares	**24,370,424**	24,370,424
251,668	Class A special shares - $10 Par value		
	Non-voting, non cumulative	**2,516,680**	2,516,680
		26,887,104	26,887,104

Dividends

The holder of the common shares is entitled to receive dividends as declared from time to time.

The Company paid aggregate dividends in the year on common shares of $3,776 per share (2018 - $4,175), which amounts to total dividends paid in the year of $3,776,000 (2018 - $4,175,000).

Calculation of Operating Income for Dividend Purposes:

	2019 $	2018 $
Net Income and Comprehensive Income	**7,004,384**	7,866,644
Less: unrealized gain/(loss) from derivatives net of tax	**(1,097,994)**	315,511
Net Operating Income	**8,102,378**	7,551,133

14. Revenue

The Company generates revenue primarily from the sale and distribution of electricity to its customers. Other sources of revenue include performance incentive payments under CDM programs.

	2019 $	2018 $
Revenue from contracts with customers	**209,641,899**	203,653,512
Other revenue		
CDM programs	**259,093**	268,377
Gain (loss) on disposal of assets	**(54,685)**	72,578
Late payment charges	**139,736**	139,850
Miscellaneous charges	**389,063**	523,952
Recognized deferred revenue	**725,656**	673,002
Rental income	**288,865**	281,708
Sale of scrap	**78,149**	104,609
Total other revenue	**1,825,877**	2,064,076
	211,467,776	205,717,588

In the following table, revenue from contracts with customers is disaggregated by type of customer.

	2019 $	2018 $
Residential	**61,472,897**	61,624,479
Commercial	**131,729,401**	128,252,070
Large users	**9,928,949**	8,046,587
Other	**6,510,652**	5,730,376
	209,641,899	203,653,512

15. Interest Income and Expense

	2019	2018
	$	$
Interest income on bank deposits	**(51,568)**	(80,901)
Interest income other	**(1,140)**	(1,146)
	(52,708)	(82,047)
Interest on debt with Waterloo North Hydro Holding Corporation:		
Senior long-term note payable	**1,035,977**	1,035,977
Junior long-term note payable	**920,387**	920,387
Interest expense on long term debt	**2,865,356**	2,857,506
Interest expense on short tem debt	**87,210**	32,265
Interest expense on deposits	**82,201**	63,641
Interest expense other	**3,250**	3,366
	4,994,381	4,913,142
Net interest cost	**4,941,673**	4,831,095
Regulatory Interest		
Interest expense	**60,115**	114,342
Interest income	**(81,015)**	(91,851)
Net regulatory interest income	**(20,900)**	22,491
Net interest cost recognized in profit or loss	**4,920,773**	4,853,586

16. Commitments and Contingencies

General

From time to time, the Company is involved in various litigation matters arising in the ordinary course of its business. The Company has no reason to believe that the disposition of any such current matter could reasonably be expected to have a materially adverse impact on the Company's financial position, results of operations or its ability to carry on any of its business activities.

General Liability Insurance

The Company is a member of the Municipal Electric Association Reciprocal Insurance Exchange ("MEARIE"). MEARIE is a pooling of public liability insurance risks of many of the LDCs in Ontario. All members of the pool are subjected to assessment for losses experienced by the pool for the years in which they were members, on a pro-rata basis based on the total of their respective service revenues. As at December 31, 2019, no assessments have been made.

To December 31, 2019, the Company has not been made aware of any additional assessments. Participation in MEARIE expires December 31, 2020. Notice to withdraw from MEARIE must be given six months prior to the commencement of the next underwriting term.

17. Pension Agreement

The Company provides a pension plan for its employees through OMERS. The plan is a multi-employer, contributory defined pension plan with equal contributions by the employer and its employees. In 2019, the Company made employer contributions of $1,137,784 to OMERS (2018 - $1,111,275). The Company's net benefit expense has been allocated as follows:

(a) $378,086 (2018 - $350,496) capitalized as part of labour in PP&E and

(b) $759,698 (2018 - $760,779) recorded as an expense against net income.

The Company estimates a contribution of $1,130,568 to OMERS during the next fiscal year.

18. Employee Benefits

	2019 $	2018 $
Salary, wages and benefits	**13,436,448**	14,149,159
CPP and EI remittances	**498,516**	475,709
Contributions to OMERS	**1,137,784**	1,111,275
	15,072,748	15,736,143

19. Related Party Transactions

(a) Parent and ultimate controlling party

The sole shareholder of the Company is Waterloo North Hydro Holding Corporation which in turn is owned by the City of Waterloo and the Townships of Wellesley and Woolwich.

(b) Entity with significant influence

The City of Waterloo and the Township of Woolwich control and exercise significant influence over the Company through their indirect ownership interest in the Company of 73.2% and 20.2% respectively.

(c) Key management personnel

The key management personnel of the Company have been defined as members of its Board of Directors and executive management team members, and are summarized below:

	2019 $	2018 $
Directors' fees	**89,709**	84,596
Executive compensation and benefits	**1,136,000**	1,339,145
	1,225,709	1,423,741

19. Related Party Transactions (continued)

(d) Transactions with entity with significant influence

In the ordinary course of business, the Company delivers electricity to the City of Waterloo and the Township of Woolwich. Electricity is billed to the City of Waterloo and the Township of Woolwich at prices and under terms approved by the OEB.

(e) Transactions with ultimate parent (the City and Townships)

In 2019 the Company had the following significant transactions with its ultimate parent, a government entity:

The Company delivers electricity to the City of Waterloo and the Townships of Wellesley and Woolwich and its related organizations throughout the year for their electricity needs. Electricity delivery charges are at prices and under terms approved by the OEB. The Company also provides the following services to the City of Waterloo and the Townships of Wellesley and Woolwich:

- streetlight maintenance services
- streetlight construction services

The Company conducted transactions with related parties during the year ended December 31, 2019. These transactions are in the normal course of operations and are measured at fair value.

	2019 $	2018 $
City of Waterloo		
Energy	**3,354,773**	3,331,347
Street light energy	**408,197**	388,020
Street light maintenance	**149,933**	137,180
Street light construction	**112,004**	89,985
Township of Wellesley		
Energy	**185,157**	185,675
Street light energy	**18,612**	17,441
Street light maintenance	**11,028**	12,159
Street light construction	**13,196**	22,832
Township of Woolwich		
Energy	**730,869**	689,644
Street light energy	**114,048**	107,075
Street light maintenance	**24,579**	33,858
Street light construction	**76,962**	365,403
Total for the year	**5,199,358**	5,380,619

19. Related Party Transactions (continued)

(e) Transactions with ultimate parent (the City and Townships) (continued)

The Company paid property taxes to the following:

	2019	2018
	$	$
Township of Woolwich	**357,829**	348,643
City of Waterloo	**94,088**	89,700
Township of Wellesley	**6,217**	6,076
Total for the year	**458,134**	444,419

In 2018 the parent Waterloo North Hydro Holding Corporation borrowed from the Company $100,000 at an interest rate of prime less 0.30% (3.65%). The loan was repaid in full on April 19, 2019.

20. Financial Instruments and Risk Management

Fair value disclosure

Cash and cash equivalents are measured at fair value. The carrying value of receivables, unbilled energy receivable, accounts payable and accrued charges approximate fair value due to the short maturity of these instruments. The carrying value of the customer deposits approximates fair value since the amounts are payable on demand.

The Company's activities provide for a variety of risks, particularly credit risk, market risk and liquidity risk.

The fair value of the long term debt approximates its carrying value due to the short maturity and/or the variable interest rates.

Financial risks

The Company understands the risks inherent in its business and defines them broadly as anything that could impact its ability to achieve its strategic objectives. The Company's exposure to a variety of risks such as credit risk, interest rate risk, and liquidity risk, as well as related mitigation strategies are discussed below.

(a) Credit risk

Financial assets carry credit risk that a counterparty will fail to discharge an obligation which could result in a financial loss. Financial assets held by the Company, such as accounts receivable, expose it to credit risk. The Company earns its revenue from a broad base of customers located in the City of Waterloo, the Townships of Wellesley and Woolwich. No single customer accounts for a balance in excess of 5.84% of total accounts receivable.

20. Financial Instruments and Risk Management (continued)

(a) Credit risk (continued)

The carrying amount of accounts receivable is reduced through the use of an allowance for impairment and the amount of the related impairment loss is recognized in net income. Subsequent recoveries of receivables previously provisioned are credited to net income. The balance of the allowance for expected credit losses at December 31, 2019 is $200,000 (2018 - $200,000).

The Company's credit risk associated with accounts receivable is primarily related to payments from distribution customers. At December 31, 2019, approximately $320,353 (2018 - $337,221) is considered 60 days past due. The Company has over 57,800 customers, the majority of whom are residential. Credit risk is managed through collection of security deposits from customers in accordance with directions provided by the OEB. As at December 31, 2019, the Company holds security deposits in the amount of $4,327,774 (2018 - $4,622,869).

(b) Market risk

Market risks primarily refer to the risk of loss resulting from changes in commodity prices, foreign exchange rates, and interest rates. The Company currently does not have any material commodity or foreign exchange risk. To mitigate interest rate risk the Company has secured fixed rate swap agreements for the majority of its debt. The company issues 30 day banker's acceptances at a floating rate but pays interest at a fixed rate guaranteed by the interest rate swap.

(c) Liquidity risk

The Company monitors its liquidity risk to ensure access to sufficient funds to meet operational and investing requirements. The Company's objective is to ensure that sufficient liquidity is on hand to meet obligations as they fall due while minimizing interest exposure. The Company has access to a $15M credit facility and monitors cash balances daily to ensure that a sufficient level of liquidity is on hand to meet financial commitments as they come due. As at December 31, 2019, $396,819 had been drawn under CIBC's $15M operating credit facility (2018 - $nil).

In 2019 the Company was assigned an Issuer Rate of A (low), Stable, from DBRS Limited. This is consistent with the 2018 rating. The Company's financial risk profile is reasonable with key metrics that are supportive of the "A" rating.

(d) Capital disclosures

The main objectives of the Company, when managing capital, are to ensure ongoing access to funding to maintain and improve the electricity distribution system, compliance with covenants related to its credit facilities, prudent management of its capital structure with regard for recoveries of financing charges permitted by the OEB on its regulated electricity distribution business, and to deliver the appropriate financial returns.

The Company's definition of capital includes shareholder's equity and long-term debt. As at December 31, 2019, shareholder's equity amounts to $102,462,393 (2018 - $99,234,009) and long-term debt including shareholder debt amounts to $112,255,358 (2018 - $112,236,854).

21. Changes in Accounting Policies

Effective January 1, 2019, the Corporation has adopted new IFRS standards and applied the new accounting policies in preparing the financial statements. Except for the changes below, the Corporation has consistently applied the accounting policies to all periods presented in these financial statements.

Leases (IFRS 16)

The Corporation has applied IFRS 16 Leases with a date of initial application of January 1, 2019. The Corporation applied IFRS 16 using the modified retrospective approach, under which the cumulative effect of initial application is recognized in retained earnings at January 1, 2019.

Previously, the Corporation determined, at contract inception, whether an arrangement is or contains a lease under IFRIC 4. Under IFRS 16, a contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.. On transition to IFRS 16, the Corporation elected to apply the practical expedient to grandfather the assessment of which contracts are leases. It applied IFRS 16 only to contracts that were previously identified as leases. Contracts that were not identified as leases under IAS 17 and IFRIC 4 were not reassessed for whether they contained a lease. Therefore, the definition of a lease under IFRS 16 was applied only to contracts entered into or changed on or after January 1, 2019.

As a lessee, the Corporation previously classified leases as operating or finance leases based on its assessment of whether the lease transferred significantly all of the risks and rewards incidental to ownership of the underlying asset to the Corporation. Under IFRS 16, the Corporation recognizes right-of-use assets and lease liabilities for most leases – i.e. these leases are on-balance sheet.

There were no transitional impacts to report as the Corporation has not entered into leasing arrangements and has determined that there are no arrangements that contain a lease.

Uncertainty over income tax treatments

The Corporation has adopted the IFAIC 23 that the IASB issued to clarify how to apply the recognition and measurement requirements in IAS12 Income Taxes effective January 1, 2019. The accounting policy change did not result in a significant impact to the financial statements. As a result, the Corporation was not required to make any adjustments to the financial statements.

22. Future Changes in Accounting Policy and Disclosures

Certain new standards, amendments and interpretations are effective for annual periods beginning after December 31, 2019, and as such, have not yet been applied in preparing these financial statements. The Corporation is currently assessing the impact of these standards on its results of operations, financial position and disclosures.

The following amended standards and interpretations are not expected to have a significant impact on the Corporation's consolidated financial statements.

i. Amendments to References to Conceptual Framework in IFRS Standards.

ii. Definition of a Business (Amendments to IFRS 3).

iii. Definition of Material (Amendments to IAS 1 and IAS 8).

iv. Sale or Contribution of Assets Between an Investor and its Associate or Joint Venture (Amendments to IFRS 10 and IAS 28).

23. Comparative Figures

Certain of the prior year comparative figures have been restated to conform to the current year's presentation.

24. Subsequent Event

Subsequent to December 31, 2019 the COVID-19 outbreak was declared a pandemic by the World Health Organization. This has resulted in governments worldwide, including the Canadian and Ontario governments, enacting emergency measures to combat the spread of the virus. These measures, which include the implementation of travel bans, self-imposed quarantine periods, closure of non-essential businesses and workplaces, and social distancing, have caused material disruption to businesses globally and in Ontario resulting in an economic slowdown. Specifically, the ban on residential and small business disconnections for non-payment of accounts until July 31, 2020 will adversely affect cash flow and may result in additional bad debt losses. Governments and central banks have reacted with significant monetary and fiscal interventions designed to stabilize economic conditions however the success of these interventions is not currently determinable. The current challenging economic climate may lead to adverse changes in cash flows, working capital levels and/or debt balances, which may also have a direct impact on the Company's operating results and financial position in the future. The situation is dynamic and the ultimate duration and magnitude of the impact on the economy and the financial effect our business is not known at this time.



ATTACHMENT 1-12

AUDITED FINANCIAL STATEMENTS 2018

Financial Statements of

Waterloo North Hydro Inc.

Year ended December 31, 2018

KPMG LLP
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Waterloo ON N2J 5A3
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INDEPENDENT AUDITORS' REPORT

To the Shareholder of Waterloo North Hydro Inc.

Opinion

We have audited the financial statements of Waterloo North Hydro Inc. (the Entity), which comprise:

- the statement of financial position as at December 31, 2018
- the statement of comprehensive income for the year then ended
- the statement of changes in equity for the year then ended
- the statement of cash flows for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies

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

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Entity as December 31, 2018, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS).

Basis for Opinion

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

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

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

KPMG LLP is a Canadian limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. KPMG Canada provides services to KPMG LLP.

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

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

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

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

Auditors' Responsibilities for the Audit of the Financial Statements

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

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

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

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

We also:

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

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

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

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

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

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

Waterloo, Canada

April 18, 2019

STATEMENT OF FINANCIAL POSITION

As at December 31, 2018, with comparative information for 2017

	Note	December 31 2018 $	December 31 2017 $
ASSETS			
Current			
Cash		**5,563,651**	5,487,940
Accounts receivable	*4*	**14,667,770**	16,035,963
Unbilled revenue		**16,842,546**	16,999,378
Income tax receivable		**-**	16,212
Inventories		**2,983,865**	2,589,537
Prepaid expenses		**640,759**	398,873
Short-term loan to shareholder	*19*	**100,000**	-
Total current assets		**40,798,591**	41,527,903
Non-current assets			
Property, plant and equipment	*5*	**235,221,574**	227,725,636
Intangible assets	*6*	**3,278,056**	3,305,166
Total non-current assets		**238,499,630**	231,030,802
Total assets		**279,298,221**	272,558,705
Regulatory deferral account debit balances	*8*	**12,340,302**	11,260,203
Total asssets and regulatory deferral account debit balances		**291,638,523**	283,818,908

Waterloo North Hydro Inc.

STATEMENT OF FINANCIAL POSITION

As at December 31, 2018, with comparative information for 2017

	Note	December 31 2018 $	December 31 2017 $
LIABILITIES AND SHAREHOLDER'S EQUITY			
Current			
Accounts payable and accrued liabilities		**20,560,901**	20,744,306
Current portion of long-term debt	*9*	**5,964,000**	5,564,000
Short term loan from shareholder	*19*	**-**	1,000,000
Income tax payable		**99,804**	-
Current portion of customer deposits	*12*	**2,861,592**	2,094,477
Total current liabilities		**29,486,297**	29,402,783
Long-term			
Long-term debt	*9*	**72,759,643**	70,876,851
Note payable to shareholder	*10*	**33,513,211**	33,513,211
Derivative liability	*9*	**1,695,094**	2,124,361
Customer deposits	*12*	**3,988,302**	4,018,761
Deferred revenue		**24,477,325**	22,181,397
Post employment benefits	*11*	**4,578,814**	4,524,748
Deferred tax liability	*7*	**6,825,030**	5,112,159
Total long-term liabilities		**147,837,419**	142,351,488
Total liabilities		**177,323,716**	171,754,271
Shareholder's equity			
Share capital	*13*	**26,887,104**	26,887,104
Retained earnings		**72,346,905**	68,655,261
Total shareholder's equity		**99,234,009**	95,542,365
Total liabilities and shareholder's equity		**276,557,725**	267,296,636
Regulatory deferral account credit balances	*8*	**15,080,798**	16,522,272
Total equity, liabilities and regulatory deferral account credit balances		**291,638,523**	283,818,908

The accompanying notes are an integral part of these financial statements.

On behalf of the Board:

Michael Pley, Chair

Micheal Kelly, Vice Chair

STATEMENT OF COMPREHENSIVE INCOME

Year ended December 31, 2018, with comparative information for 2017

	Note	**2018**	2017
		$	$
REVENUES			
Sales of electricity		**168,153,027**	171,774,284
Distribution services revenue		**35,500,485**	34,314,651
	14	**203,653,512**	206,088,935
Power purchased		**169,449,010**	170,065,801
Net operating revenue		**34,204,502**	36,023,134
Other revenues	*14*	**2,064,076**	1,600,380
		36,268,578	37,623,514
EXPENSES			
Distribution		**8,244,749**	7,813,755
Billing and collecting		**3,272,050**	2,984,555
General administration		**3,153,965**	2,891,494
Property taxes		**444,419**	448,350
Amortization	*5*	**9,628,663**	9,223,968
Total expenses		**24,743,846**	23,362,122
Income before undernoted items		**11,524,732**	14,261,392
Net interest expense	*15*	**(4,853,586)**	(4,699,937)
Unrealized gain from derivatives	*9*	**429,267**	2,485,079
Income from operations before PILs		**7,100,413**	12,046,534
PILs expense	*7*	**2,145,113**	2,683,262
Income from operations for the year before movement in regulatory deferral account balances		**4,955,300**	9,363,272
Net movement in regulatory deferral account balances, net of taxes	*8*	**2,911,344**	(158,211)
Net income and comprehensive income		**7,866,644**	9,205,061

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN EQUITY

Year ended December 31, 2018, with comparative information for 2017

	Note	Share Capital	Retained Earnings	Total
Balance at January 1, 2017		**26,887,104**	**63,625,200**	**90,512,304**
Net income and net movement in regulatory balances			9,205,061	9,205,061
Dividends paid	*13*		(4,175,000)	(4,175,000)
Balance at December 31, 2017		**26,887,104**	**68,655,261**	**95,542,365**
Net income and net movement in regulatory balances			**7,866,644**	**7,866,644**
Dividends paid	*13*		**(4,175,000)**	**(4,175,000)**
Balance at December 31, 2018		**26,887,104**	**72,346,905**	**99,234,009**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CASH FLOWS

Year ended December 31, 2018, with comparative information for 2017

	Note	2018 $	2017 $
OPERATING ACTIVITIES			
Net income		**7,866,644**	9,205,061
Add (deduct) charges to operations not requiring a current cash payment:			
Provision for PILs	*7*	**2,145,113**	2,683,262
PILs paid		**(316,226)**	(358,404)
Amortization		**10,395,015**	10,007,366
Loss (gain) on disposal of property, plant and equipment		**(72,578)**	5,083
Increase (decrease) in regulatory liabilities		**(2,521,573)**	(4,628,695)
Increase (decrease) in post employment benefits liability		**54,066**	61,335
Unrealized gain on derivatives	*9*	**(429,267)**	(2,485,079)
Net change in non-cash operating working capital		**705,406**	8,264,103
Cash provided by operating activities		**17,826,600**	22,754,032
INVESTING ACTIVITIES			
Additions to property, plant and equipment and intangibles	*5,6*	**(18,221,985)**	(18,985,437)
Proceeds on disposal of property, plant and equipment		**430,720**	742,944
Cash applied to investing activities		**(17,791,265)**	(18,242,493)
FINANCING ACTIVITIES			
Increase (decrease) in customer deposits		**736,656**	(2,364,225)
Increase in long-term debt	*9*	**8,000,000**	10,000,000
Long-term debt - repayment		**(5,717,208)**	(5,180,144)
Decrease in short-term debt	*19*	**(1,000,000)**	(1,287,237)
Increase in short-term loan receivable		**(100,000)**	-
Increase in deferred capital contributions		**2,295,928**	3,979,814
Dividends paid	*13*	**(4,175,000)**	(4,175,000)
Cash provided by financing activities		**40,376**	973,208
Net cash provided during year		**75,711**	5,484,747
Cash and cash equivalents, beginning of year		**5,487,940**	3,193
Cash and cash equivalents, end of year		**5,563,651**	5,487,940

The accompanying notes are an integral part of these financial statements.

NOTES TO FINANCIAL STATEMENTS

Year ended December 31, 2018

1. Reporting Entity

Waterloo North Hydro Inc. (the "Company") is a rate regulated, municipally owned hydro distribution company incorporated under the Business Corporations Act (Ontario) on May 1, 2000. The incorporation was required in accordance with the provincial government's Electricity Competition Act (Bill 35). The Company is located in the Township of Woolwich. The address of the Company's registered office is 526 Country Squire Rd, Waterloo, Ontario, N2J 4G8.

The Company delivers electricity and related energy services to residential and commercial customers in the City of Waterloo and the Townships of Wellesley and Woolwich. The Company is also engaged in the delivery of Conservation Demand Management ("CDM") activities and provides street lighting services.

The Company is wholly-owned by Waterloo North Hydro Holding Corporation whose shareholders are the City of Waterloo and the Townships of Wellesley and Woolwich.

The financial statements are for the Company as at and for the year ended December 31, 2018.

2. Basis of Presentation

(a) Statement of compliance

The Company's financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS").

The financial statements were approved by the Board of Directors on April 18, 2019.

(b) Basis of measurement

The financial statements have been prepared on the historical cost basis except for the following:

(i) Where held, financial instruments at fair value through profit or loss.

(ii) Contributed assets are initially measured at fair value.

The methods used to measure fair values are discussed further in note 21.

(c) Functional and presentation currency

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

2. Basis of Presentation (continued)

(d) Use of estimates and judgments

The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses and disclosure of contingent assets and liabilities. Actual results may differ from those estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the year in which the estimates are revised and in any future periods affected.

Information about judgments made in applying accounting policies that have the most significant effect on the amounts recognized in these financial statements is included in the following notes:

(i) Note 3(b) – Revenue Recognition – determination of the performance obligation for contributions from customers and the related amortization period
(ii) Note 3(c) - Capital assets (Property, plant and equipment)
(iii) Note 11 - Employee post-employment benefits
(iv) Note 16 - Commitments and contingencies

(e) Rate regulation

The Company is regulated by the Ontario Energy Board ("OEB"), under the authority granted by the *Ontario Energy Board Act, 1998*. Among other things, the OEB has the power and responsibility to approve or set rates for the transmission and distribution of electricity, providing continued rate protection for electricity consumers in Ontario, and ensuring that transmission and distribution companies fulfill obligations to connect and service customers. The OEB may also prescribe license requirements and conditions of service to local distribution companies ("LDCs"), such as the Company, which may include, among other things, record keeping, regulatory accounting principles, separation of accounts for distinct businesses, and filing and process requirements for rate setting purposes.

The Company was required to bill customers for the debt retirement charge set by the province. Effective January 1, 2016, all electricity users with a residential-rate class account were exempt from the Debt Retirement Charge (DRC). Some general service rate class accounts were eligible for a DRC exemption subject to certain criteria. The Company was able to file to recover uncollected debt retirement charges from Ontario Electricity Financial Company ("OEFC") once each year. The DRC ceased to be charged to any customer for usage consumed after March 31, 2018.

Rate setting:

Distribution revenue

For the distribution revenue included in electricity sales, the Company files a "Cost of Service" ("COS") rate application with the OEB every five years where rates are determined through a review of the forecasted annual amount of operating and capital expenses, debt and shareholder's equity required to support the Company's business. The Company estimates electricity usage and the costs to service each customer class to determine the appropriate rates to be charged to each customer class. The COS application is reviewed by the OEB and interveners. Rates are approved based upon this review including any required revisions.

2. Basis of Presentation (continued)

(e) Rate regulation (continued)

In the intervening years an Incentive Rate Mechanism application ("IRM") is filed. An IRM application results in a formulaic adjustment to distribution rates that were set under the last COS application. The previous year's rates are adjusted for the annual change in the Gross Domestic Product Implicit Price Inflator for Final Domestic Demand ("GDP IPI-FDD") net of a "stretch factor" determined by the relative efficiency of an electricity distributor.

As a licensed distributor, the Company is responsible for billing customers for electricity generated by third parties and the related costs of providing electricity service, such as transmission services and other services provided by third parties. The Company is required, pursuant to regulation, to remit such amounts to these third parties, irrespective of whether the Company ultimately collects these amounts from customers.

In 2017, the Company applied and received approval for IRM rates effective January 1, 2018. The distribution rates were increased by 0.9%.

In 2018, the Company applied and received approval for IRM rates effective January 1, 2019. The distribution rates will be increased by 1.2%.

Electricity rates

The OEB sets electricity prices for low-volume consumers twice each year based on an estimate of how much it will cost to supply the province with electricity for the next year. All remaining consumers pay the market price for electricity. The Company is billed for the cost of the electricity that its customers use and passes this cost on to the customer at cost without a mark-up.

(f) Conservation and Demand Management Activities

The Independent Electricity System Operator ("IESO") supports Conservation and Demand Management (CDM) plans during their design and throughout their entire lifespan, including the sharing of best practices, offering of program delivery services, and the building of awareness in the marketplace through marketing and communication. The IESO provides centralized customer service, technical support, market research, program evaluation, measurement and training.

On March 26, 2014, the Minister of Energy of Ontario, under the guidance of sections 27.1 and 27.2 of the OEB Act, directed the OEB to amend the license of each licensed electricity distributor to require the electricity distributor, as a condition of its license, to make CDM programs available to customers in its licensed service area and to do so in relation to each customer segment in its service area, over the period beginning January 1, 2015 through December 31, 2020. The objective of the new CDM efforts is to reduce electricity consumption in the Province of Ontario by a total of 7 terawatt hours between January 1, 2015 and December 31, 2020, of which the Company's share is 82.38 GWh of energy savings. In 2018, through strong participation by local commercial customers in energy efficiency programs and lower costs spent, the Company was able to achieve a net cumulative energy savings of 70.93 GWh which is higher than 67% of the total 6 year budget being 54.92 GWh.

2. Basis of Presentation (continued)

(f) Conservation and Demand Management Activities (continued)

The Company has signed an energy conservation agreement with the IESO for the delivery of these CDM programs over the 2015-2020 period with funding of approximately $21.192 million, which includes participant incentives and the Company's program administration and delivery costs. The Company provided the IESO with its plan for achieving its CDM target, received approval and will continue to submit an updated CDM plan annually.

The Company elected full cost recovery funding for all programs under the current plan. The IESO will reimburse the Company for all adequately documented costs incurred, with an option to receive a portion of its funding in advance. Cost efficiency incentives may be awarded if electricity savings meet or exceed certain CDM plan targets for programs under the full cost recovery funding method, with a mid-term review performed by the IESO for the 2015-2017 period. In 2018 the IESO awarded a mid-term incentive of $536,753 subject to review in 2019. The Company has recognized 50% ($268,377) in Other Revenues in 2018 and will recognize the remainder in 2019 upon successful completion of the audit.

Subsequent to year-end, on March 21, 2019 the Minister of Energy, Northern Development and Mines directed the IESO to discontinue the current 2015-2020 Conservation First Framework (CFF) and implement a new interim framework, in support of the government's goal to reduce electricity costs for customers. The IESO will centrally deliver a reduced suite of energy-efficiency programs with a focus on business and industrial programs and continued programming for low-income consumers and Indigenous communities beginning April 1, 2019 until December 31, 2020. LDCs will wind down current activities with customers and no further payment of LDC performance incentives will be paid.

3. Significant Accounting Policies

The accounting policies set out below have been applied consistently in all years presented in these financial statements.

(a) Financial instruments

At initial recognition, the Company measures its financial assets at fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

Subsequent measurement of the financial asset depends on the classification determined on initial recognition. Financial assets are classified as either amortized cost, fair value through other comprehensive income or fair value through profit or loss, depending on its business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. Financial assets are not reclassified subsequent to their initial recognition, unless the Company changes its business model for managing financial assets.

Derivative assets are always classified as fair value through profit or loss on inception.

Financial liabilities are initially measured at fair value, net of transaction costs incurred. They are subsequently carried at amortized cost using the effective interest rate method; any difference between the proceeds (net of transaction costs) and the redemption value is recognized as an adjustment to interest expense over the period of the borrowings.

3. Significant Accounting Policies (continued)

(b) Revenue Recognition

Sale and distribution of electricity

The performance obligations for the sale and distribution of electricity are recognized over time using an output method to measure the satisfaction of the performance obligation. The value of the electricity services transferred to the customer is determined on the basis of cyclical meter readings plus estimated customer usage since the last meter reading date to the end of the year and represents the amount that the Company has the right to bill. Revenue includes the cost of electricity supplied, distribution, and any other regulatory charges. The related cost of power is recorded on the basis of power used.

For customer billings related to electricity generated by third parties and the related costs of providing electricity service, such as transmission services and other services provided by third parties, the Company has determined that it is acting as a principal for these electricity charges and, therefore, has presented electricity revenue on a gross basis.

Customer billings for debt retirement charges are recorded on a net basis as the Company is acting as an agent for this billing stream.

Capital contributions

Developers are required to contribute towards the capital cost of construction of distribution assets in order to provide ongoing service. The developer is not a customer and therefore the contributions are scoped out of IFRS 15 *Revenue from Contracts with Customers*. Cash contributions, received from developers are recorded as deferred revenue. When an asset other than cash is received as a capital contribution, the asset is initially recognized at its fair value, with a corresponding amount recognized as deferred revenue. The deferred revenue, which represents the Company's obligation to continue to provide the customers access to the supply of electricity, is amortized to income on a straight-line basis over the useful life of the related asset.

Certain customers are also required to contribute towards the capital cost of construction of distribution assets in order to provide ongoing service. These contributions fall within the scope of IFRS 15 *Revenue from Contracts with Customers*. The contributions are received to obtain a connection to the distribution system in order to receive ongoing access to electricity. The Company has concluded that the performance obligation is the supply of electricity over the life of the relationship with the customer which is satisfied over time as the customer receives and consumes the electricity. Revenue is recognized on a straight-line basis over the useful life of the related asset.

Other revenue

Revenue earned from the provision of services is recognized as the service is rendered.

Government grants and the related performance incentive payments under CDM programs are recognized as revenue in the year when there is reasonable assurance that the program conditions have been satisfied and the payment will be received.

3. Significant Accounting Policies (continued)

(c) Inventory

Inventories consist of repair parts, supplies and materials held for future capital expansion and are valued at lower of weighted average cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less estimated selling expenses.

(d) Property, Plant and Equipment

Cost in items of property, plant and equipment ("PP&E") used in rate–regulated activities includes expenditures that are directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials, direct labour, and any other costs directly attributable to bringing the asset to a working condition for its intended use. Major spare parts and standby equipment are recognized as items of PP&E.

Borrowing costs on qualifying assets are capitalized as part of the cost of the asset based upon the actual cost of debt incurred on the Company's borrowings. Qualifying assets are considered to be those that take in excess of 12 months to construct.

When parts of an item of PP&E have different useful lives, they are accounted for and depreciated as separate items (major components) of PP&E.

Gains and losses on the disposal of an item of PP&E are determined by comparing the proceeds from disposal, if any, with the carrying amount of the item of PP&E and are recognized net within other income in profit or loss.

The cost of replacing a part of an item of PP&E is recognized in the net book value of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. In this event, the replaced part of PP&E is written off, and the related gain or loss is included in profit or loss. The costs of the day-to-day servicing of PP&E are recognized in profit or loss as incurred.

Depreciation is calculated on the cost basis of the asset and is recognized in profit or loss on a straight-line basis over the estimated useful life of each part or component of an item of PP&E. Land and land rights are not depreciated. Construction-in-progress assets are not depreciated until the project is complete and in service.

The estimated useful lives are as follows:

Buildings	15-60 years
Transformer and substation equipment	15-50 years
Supervisory control and data acquisition equipment	15 years
Distribution system	15-50 years
Meters	15-25 years
General equipment	5-15 years

Depreciation methods, useful lives, and residual values are reviewed at each reporting date and adjusted prospectively if appropriate.

3. Significant Accounting Policies (continued)

(e) Intangible assets

(i) Computer Software

Computer software that is acquired or developed by the Company, including software that is not integral to the functionality of equipment purchased which has finite useful lives, is measured at cost less accumulated amortization.

(ii) Land Rights

Payments to obtain rights to access land ("land rights") are classified as intangible assets. These include payments made for easements, right of access and right of use over land for which the Company does not hold title and are not amortized.

(iii) Amortization

Amortization is recognized in profit or loss on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The estimated useful lives are:

Computer software	5-10 years
Land rights	no amortization period

Amortization methods and useful lives of all intangible assets are reviewed at each reporting date and adjusted prospectively if appropriate.

(f) Impairment

(i) Financial assets measured at amortized cost:

A loss allowance for expected credit losses on financial assets measured at amortized cost is recognized at the reporting date. The loss allowance is measured at an amount equal to the lifetime expected credit losses for the asset.

(ii) Non-financial assets:

The carrying amounts of the Company's non-financial assets, other than inventories and deferred tax assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated.

For the purpose of impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the "cash-generating unit"). The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

3. Significant Accounting Policies (continued)

(f) Impairment (continued)

(ii) Non-financial Assets (continued):

An impairment loss is recognized if the carrying amount of an asset or its cash-generating unit exceeds its estimated recoverable amount. Impairment losses are recognized in profit or loss.

Impairment recognized in prior periods is assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(g) Provisions

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability.

(h) Regulatory deferral accounts

Regulatory deferral account debit balances represent costs incurred in excess of amounts billed to the customer at OEB approved rates. These amounts have been accumulated and deferred in anticipation of their future recovery in electricity distribution rates. Regulatory deferral account credit balances represent amounts billed to the customer at OEB approved rates in excess of costs incurred by the Company.

Regulatory deferral account debit balances are recognized if it is probable that future billings in an amount at least equal to the capitalized cost will result from inclusion of that cost in allowable costs for rate-making purposes. The offsetting amount is recognized in profit and loss. The debit balance is reduced by the amount of customer billings as electricity is delivered to the customer and the customer is billed at rates approved by the OEB for the recovery of the capitalized costs.

Regulatory deferral account credit balances are recognized if it is probable that future billings in an amount at least equal to the credit balance will be reduced as a result of rate-making activities. The offsetting amount is recognized in profit and loss. The credit balance is reduced by the amounts returned to customers as electricity is delivered to the customer at rates approved by the OEB for the return of the regulatory account credit balance.

The probability of recovery or repayment of the regulatory account balances are assessed annually based upon the likelihood that the OEB will approve the change in rates to recover or repay the balance. Any resulting impairment loss is recognized in profit and loss in the year incurred.

Regulatory deferral accounts attract interest at OEB prescribed rates. From January 1, 2016 to September 30, 2017 the rate was 1.10%. On October 1, 2017 the rate was increased to 1.50%. On April 1, 2018 the rate was increased to 1.89%. On October 1, 2018 the rate was increased to 2.17%.

3. Significant Accounting Policies (continued)

(i) Employee post-employment benefits

(i) Pension Plan:

Waterloo North Hydro Inc. provides a pension plan for its employees through the Ontario Municipal Employees Retirement System ("OMERS"). OMERS is a multi-employer pension plan which operates as the Ontario Municipal Employees Retirement Fund (the "Fund") and provides pensions for employees of Ontario municipalities, local boards, public utilities and school boards. To the extent that the Fund finds itself in an under-funded position, additional contribution rates may be assessed to participating employers and members.

The Fund is a contributory defined benefit pension plan, which is financed by equal contributions from participating employers and employees and by the investment earnings of the Fund *(note 17).* The Company recognizes the expense related to this plan as contributions are made.

(ii) Post-employment Benefits:

Post-employment benefits provided by the Company include health, dental and life insurance benefits. These plans provide benefits for some of its retired employees. Post-employment benefit expense is recognized in the period in which the employees render the services.

Post-employment benefits are recorded on an accrual basis. The accrued benefit obligations and current service cost are calculated using the projected benefits method pro-rated on service and based on assumptions that reflect management's best estimate. The current service cost for a period is equal to the actuarial present value of benefits attributed to employees' services rendered in the period. Gains and losses are recognized in the current year. Actuarial gains and losses arising from defined benefit plans are recognized immediately in other comprehensive income and reported in retained earnings.

(j) Interest income and interest costs

Interest income is recognized as it accrues in profit or loss, using the effective interest method. Interest income comprises interest earned on cash and cash equivalents and on regulatory assets.

Interest costs comprise interest expense on borrowings, customer deposits and regulatory liabilities. Interest costs are recognized as an expense unless they are capitalized as part of the cost of qualifying assets.

3. Significant Accounting Policies (continued)

(k) Corporate Income taxes

The current tax-exempt status of the Company under the Income Tax Act (Canada) and the Corporations Tax Act (Ontario) reflects the fact that the Company is wholly owned by municipalities. This tax-exempt status might be lost in a number of circumstances, including if the shareholder (municipalities) ceases to own 90% or more of the shares or capital of the Company, or if a non-government entity has rights immediately or in the future, either absolutely or contingently, to acquire more than 10% of the shares of the Company.

Commencing October 1, 2001, the Company is required, under the Electricity Act, 1998, to make payments in lieu of corporate taxes to the Ontario Electricity Financial Corporation. These payments are calculated in accordance with the rules for computing income and other relevant amounts contained in the Income Tax Act (Canada) and the Corporations Tax Act (Ontario) as modified by the Electricity Act, 1998 and related regulations.

As a result of becoming subject to payments in lieu of corporate income taxes ("PILs"), the Company's taxation year was deemed to have ended immediately beforehand and a new taxation year was deemed to have commenced immediately thereafter. The Company was therefore deemed to have disposed of each of its assets at its then fair market value and to have reacquired such assets at that same amount for purposes of computing its future income subject to PILs. For purposes of certain provisions, the Company was deemed to be a new company and, as a result, tax credits or tax losses not previously utilized by the Company would not be available to it after the change in tax status. Essentially, the Company was taxed as though it had a "fresh start" at the time of its change in tax status.

Current tax is the tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method. Under this method, deferred income taxes reflect the net tax effects of temporary differences between the tax basis of assets and liabilities and their carrying amounts for accounting purposes, as well as for tax losses available to be carried forward to future years that are likely to be realized. Deferred tax assets and liabilities are measured using enacted or substantively enacted rates, at the reporting date, expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the year that includes the date of enactment or substantive enactment.

4. Accounts Receivable

	December 31 2018	December 31 2017
Trade receivables	**$ 13,349,675**	$ 13,380,027
Accrued receivables	**372,886**	705,616
Miscellaneous receivables	**1,065,999**	2,067,709
Allowance for bad debt	**(200,000)**	(175,000)
Other	**79,210**	57,611
	$ 14,667,770	$ 16,035,963

5. Property, Plant and Equipment

(a) Cost or deemed cost:

	Distribution Equipment	Land & Building	Other Fixed Assets	Construction in Progress	Total
Balance at January 1, 2018	**$ 177,428,747**	**$ 31,799,066**	**$ 49,166,938**	**$ 4,482,574**	**$ 262,877,325**
Additions	**15,596,773**	**140,299**	**3,008,031**	**(1,073,158)**	**17,671,945**
Disposal/retirements	**(290,015)**	**-**	**(1,377,022)**	**-**	**(1,667,037)**
Balance at December 31, 2018	**$ 192,735,505**	**$ 31,939,365**	**$ 50,797,947**	**$ 3,409,416**	**$ 278,882,233**

	Distribution Equipment	Land & Building	Other Fixed Assets	Construction in Progress	Total
Balance at January 1, 2017	$ 161,812,297	$ 31,620,039	$ 47,128,824	$ 5,216,097	$ 245,777,257
Additions	16,011,184	491,168	2,122,816	(733,523)	17,891,645
Disposal/retirements	(394,734)	(312,141)	(84,702)	-	(791,577)
Balance at December 31, 2017	**$ 177,428,747**	**$ 31,799,066**	**$ 49,166,938**	**$ 4,482,574**	**$ 262,877,325**

5. Property, Plant and Equipment (continued)

(b) Accumulated depreciation:

	Distribution Equipment	Land & Building	Other Fixed Assets	Total
Balance at January 1, 2018	**$ 16,517,161**	**$ 3,403,010**	**$ 15,231,518**	**$ 35,151,689**
Depreciation charge	**5,206,178**	**872,051**	**3,739,636**	**9,817,865**
Disposal/retirements	**-**	**-**	**(1,308,895)**	**(1,308,895)**
Balance at December 31, 2018	**$ 21,723,339**	**$ 4,275,061**	**$ 17,662,259**	**$ 43,660,659**

	Distribution Equipment	Land & Building	Other Fixed Assets	Total
Balance at January 1, 2017	$ 11,656,316	$ 2,536,532	$ 11,489,856	$ 25,682,704
Depreciation charge	4,867,145	869,102	3,776,288	9,512,535
Disposal/retirements	(6,300)	(2,624)	(34,626)	(43,550)
Balance at December 31, 2017	$ 16,517,161	$ 3,403,010	$ 15,231,518	$ 35,151,689

Carrying amounts

	Distribution Equipment	Land & Building	Other Fixed Assets	Construction in Progress	Total
At December 31, 2018	$ 171,012,166	$ 27,664,304	$ 33,135,688	$ 3,409,416	$ 235,221,574
At December 31, 2017	160,911,586	28,396,056	33,935,420	4,482,574	227,725,636

5. Property, Plant and Equipment (continued)

(c) Allocation of depreciation and amortization

The depreciation of property, plant and equipment and the amortization of intangible assets have been allocated to profit or loss as follows:

	Distribution Expenses	Amortization	Total
December 31, 2018:			
Depreciation of property, plant and equipment	**$ 766,352**	**$ 9,051,513**	**$ 9,817,865**
Amortization of intangible assets	**-**	**577,150**	**577,150**
	$ 766,352	**$ 9,628,663**	**$ 10,395,015**
December 31, 2017:			
Depreciation of property, plant and equipment	$ 783,398	$ 8,729,137	$ 9,512,535
Amortization of intangible assets	-	494,831	494,831
	$ 783,398	**$ 9,223,968**	**$ 10,007,366**

6. Intangible assets

(a) Cost or deemed cost:

	Computer Software	Land Rights	Work in Progress	Total
Balance at January 1, 2018	**$ 3,792,887**	**$ 982,250**	**$ 371,149**	**$ 5,146,286**
Additions	**714,952**	**77,375**	**(242,287)**	**550,040**
Balance at December 31, 2018	**$ 4,507,839**	**$ 1,059,625**	**$ 128,862**	**$ 5,696,326**

	Computer Software	Land Rights	Work in Progress	Total
Balance at January 1, 2017	$ 2,032,289	$ 897,918	$ 1,122,287	$ 4,052,494
Additions	1,760,598	84,332	(751,138)	1,093,792
Balance at December 31, 2017	**$ 3,792,887**	**$ 982,250**	**$ 371,149**	**$ 5,146,286**

6. Intangible Assets (continued)

(b) Accumulated amortization:

	Computer Software	Land Rights	Total
Balance at January 1, 2018	**$ 1,841,120**	**$ -**	**$ 1,841,120**
Amortization charge	**577,150**		**577,150**
Balance at December 31, 2018	**$ 2,418,270**	**$ -**	**$ 2,418,270**

	Computer Software	Land Rights	Total
Balance at January 1, 2017	$ 1,346,289	$ -	$ 1,346,289
Amortization charge	494,831		494,831
Balance at December 31, 2017	**$ 1,841,120**	**$ -**	**$ 1,841,120**

Carrying amounts

	Computer Software	Land Rights	Work in Progress	Total
At December 31, 2018	$ 2,089,569	$ 1,059,625	$ 128,862	$ 3,278,056
At December 31, 2017	1,951,767	982,250	371,149	3,305,166

7. Income Tax Expense

Tax expense:

	2018 $	2017 $
Current	**432,242**	456,255
Deferred	**1,599,115**	1,568,461
Deferred recovery on unrealized gain on derivatives	**113,756**	658,546
	2,145,113	2,683,262

Reconciliation of effective tax rate:

	2018 $	2017 $
Income from operations before income taxes	**7,100,413**	12,046,534
Statutory Canadian federal and provincial income tax rate	**26.50%**	26.50%
Expected taxes on income	**1,881,609**	3,192,332
Changes in income taxes resulting from:		
Permanent differences	**6,253**	21,376
Other temporary differences	**370,875**	(455,668)
Adjustment for prior periods	**(113,624)**	(74,778)
	263,504	(509,070)
Income tax expense	**2,145,113**	2,683,262

Permanent difference is due mainly to non deductible portion of meals and entertainment.

Significant components of the Company's deferred tax balances are a follows:

	December 31 2018 $	December 31 2017 $
Deferred tax assets (liabilities):		
Plant and equipment	**(15,069,247)**	(12,811,800)
Deferred revenue	**6,486,491**	5,878,070
Employee benefits	**1,257,578**	1,238,591
Loss on derivatives	**449,200**	562,956
Other	**50,948**	20,024
	$ (6,825,030)	$ (5,112,159)

8. Regulatory Deferral Account Balance

The following is a reconciliation of the carrying amount for each class of regulatory deferral account balances:

	2018 Opening $	Balances arising in the period	Recovery / reversal	2018 Ending $	Recovery / reversal period (years)
Regulatory deferral account debit balances					
Group 1	2,580,293	396,273	(1,066,519)	1,910,047	1 year
Group 2	515,661	100,743	(95,092)	521,312	1 year
Stranded meters	462,526	-	(447,703)	14,823	3 years
Other regulatory accounts	5,373	-	(5,373)	-	
Deferred tax liability	7,696,350	2,197,770	-	9,894,120	n/a
Total amount related to regulatory deferral account debit balances	**11,260,203**	**2,694,786**	**(1,614,687)**	**12,340,302**	

	2018 Opening $	Balances arising in the period	Recovery / reversal	2018 Ending $	Recovery / reversal period (years)
Regulatory deferral account credit balances					
Group 1	4,863,717	273,913	(1,889,208)	3,248,422	1 year
Group 2	632,600	37,736	-	670,336	1 year
Other regulatory accounts	119,762	3,855	(23,508)	100,109	50 years
Other regulated accounts	10,906,193	155,738	-	11,061,931	-
Total amount related to regulatory deferral account credit balances	**16,522,272**	**471,242**	**(1,912,716)**	**15,080,798**	

8. Regulatory Deferral Account Balance (continued)

	2017 Opening $	Balances arising in the period	Recovery / reversal	2017 Ending $	Recovery / reversal period (years)
Regulatory deferral account debit balances					
Group 1	3,220,136	226,248	(866,091)	2,580,293	1 year
Group 2	496,787	109,747	(90,873)	515,661	1 year
Stranded meters	919,658	-	(457,132)	462,526	3 years
Other regulatory accounts	6,449	-	(1,076)	5,373	
Deferred tax liability	5,587,283	2,109,067	-	7,696,350	n/a
Total amount related to regulatory deferral account debit balances	**10,230,313**	**2,445,062**	**(1,415,172)**	**11,260,203**	

	2017 Opening $	Balances arising in the period	Recovery / reversal	2017 Ending $	Recovery / reversal period (years)
Regulatory deferral account credit balances					
Group 1	6,292,604	97,911	(1,526,798)	4,863,717	1 year
Group 2	705,962	85,313	(158,675)	632,600	1 year
Other regulatory accounts	146,153	-	(26,391)	119,762	50 years
Other regulated accounts	12,976,358	-	(2,070,165)	10,906,193	-
Total amount related to regulatory deferral account credit balances	**20,121,077**	**183,224**	**(3,782,029)**	**16,522,272**	

Net movement in regulatory deferred account balances net of taxes of $2,911,344 consists of the deferred tax expense of $1,501,605, the deferred recovery on unrealized gain on derivatives of $113,756 and the difference between the Power Purchased and the Sale of Electricity of $1,295,983.

8. Regulatory Deferral Account Balance (continued)

The regulatory deferral account balances are recovered or settled through rates set by the OEB which are determined using estimates of future consumption of electricity by customers. Future consumption is impacted by various factors including the economy and weather. The Company has received approval from the OEB to establish its regulatory deferral account balances.

Settlement of the Group 1 deferral accounts, arising primarily from timing differences for the cost of power billing to customers, is done on an annual basis through application to the OEB. The 2018 IRM application was approved to disperse $359,420 of the Group 1 deferral accounts. At January 1, 2018 the approved account balances have been moved to the regulatory settlement account.

Settlement of the Group 2 deferral accounts, created by accounting policy changes, is done at the time of the COS application. The amount of the Group 2 accounts that was recovered totaled $447,703 for the settlement of stranded meters. This rate rider ended on December 31, 2018. The amount of Group 2 accounts accumulated in 2018 totaled $62,916 which will be approved for disposal at the next COS.

Other regulated accounts consist of timing difference on monies received and paid for CDM programs, Ontario Clean Energy Benefit and the IESO cost of power variance.

The OEB requires the Company to estimate its income taxes when it files a COS application to set its rates. As a result, the Company has recognized a regulatory deferral account for the amount of deferred taxes that will ultimately be recovered from/paid back to its customers. This balance will fluctuate as the Company's deferred tax balance fluctuates.

9. Short-Term & Long-Term Debt

The long-term bank debt is subject to a master bank agreement whereby each loan has a maturity date of June 30, 2020 in order to classify the balance owing as a long-term liability.

For both the short-term and long-term bank debt the Company has a general security agreement creating in favour of CIBC a first priority security interest covering all company assets.

9. Short-Term & Long-Term Debt (continued)

Short-term debt		**2018**	**2017**
		$	**$**
Line of Credit	Bank debt, bearing a variable interest rate of Prime Rate less 0.30% per annum. Amounts are repayable immediately in whole or in part, on The operating credit limit is $15M.	-	-
Bank indebtedness		-	-
		-	-

Long-term debt

Each loan has a 30 day banker's acceptance rate + 1% interest rate and is hedged by an interest rate swap at the rate per annum below.

Loan	**Swap rate**	**Monthly payments ($)**	**Term date**	**2018** **$**	**2017** **$**
Mortgage 2012	3.950%	88,667	April 1, 2037	**19,472,139**	20,546,804
Smart Meter 2013	2.980%	129,167	January 29, 2021	**3,352,389**	4,902,639
Term Loan 2013	4.434%	62,500	July 4, 2033	**10,918,141**	11,673,943
Term Loan 2014	4.035%	62,500	June 4, 2034	**11,603,726**	12,361,016
Term Loan 2015	3.430%	41,667	May 18, 2035	**8,192,737**	8,698,318
Term Loan 2016	2.505%	37,500	July 15, 2036	**7,898,495**	8,352,967
Term Loan 2017	3.565%	41,667	July 2, 2037	**9,399,999**	9,905,164
Term Loan 2018	3.854%	33,333	June 1, 2038	**7,886,017**	-
				78,723,643	76,440,851
Less: Current Portion				**(5,964,000)**	(5,564,000)
				72,759,643	70,876,851

The aggregate amount of expected principal payments required is as follows:

2019	5,964,000
2020	5,964,000
2021	4,672,333
2022	4,414,000
2023	4,414,000
Thereafter	53,295,310
	78,723,643

9. Short-Term & Long-Term Debt (continued)

Interest rate swaps

The Company has entered into interest rate swap agreements with a high quality Canadian chartered bank for the purpose of eliminating the risk of fluctuating interest rates and removing the economic impact of interest rate volatility on the majority of its long-term debt. The CPA Handbook requires the Company to determine and record the fair value of its interest rate swap agreements on the Statement of Financial Position, with changes in fair values being recorded in the Statement of Comprehensive Income.

As a result, the Company has recorded a non-current derivative liability of $1,695,094 (2017 - $2,124,361) and a non-cash recovery of $429,267 (2017 - $2,485,079). A deferred tax expense of $113,756 (2017 – $658,546) was also recorded to reflect the deferred tax impact. There is no impact on current tax PILs payable. Over the term of the long-term debt, the non-cash charge and liability will reverse into income. The Company borrows funds using 30 day banker's acceptances at the bankers' acceptance floating rate. The swap instruments result in the Company receiving interest at the 30 day banker's acceptance floating rate and require the Company to pay the fixed rate in the swap instrument. The swaps have a put provision whereby on the five year anniversary of each swap, either party can unilaterally elect to terminate the contract requiring a cash payment upon settlement based on the fair value of the swap instrument on that date. The term of each individual swap instrument matches the amortization period of the corresponding bank loan.

By way of example, the disclosure on the 2012 loan which applies to all of the other loans is explained in detail as follows:

> Bank debt, available (at the company's option), at Prime less 0.3% or Banker's Acceptances (durations up to 6 months) plus 1%, payable in monthly payments of $88,667. Maturity date of the debt facility is June 30, 2020. The Company has entered into an interest rate swap to hedge the interest rate risk on the bank debt, wherein the company pays a fixed rate of 2.95% per annum and receives variable interest at the one month Banker's Acceptance rate, with net interest settlements paid monthly. The interest rate swap matures on April 1, 2037 and may be cancelled by either party on every 5 year anniversary. To the extent the Company continues to choose to borrow at the 1 month BA rate, the combined net effect of the borrowing and swap contract is a fixed cost of borrowing of 3.95% per annum until the maturity date of the debt facility.

10. Note Payable to Shareholder

	2018 $	2017 $
Senior long-term note payable (a)	**17,266,271**	17,266,271
Junior long-term note payable (b)	**16,246,940**	16,246,940
	33,513,211	33,513,211

(a) The senior long-term note payable due to Waterloo North Hydro Holding Corporation, the Company's parent, bears interest at a rate of 6.0% per annum, has no set principal repayment terms and is due 270 days following demand by Waterloo North Hydro Holding Corporation. Interest is payable in equal quarterly installments, in arrears, March 30, June 30, September 30 and December 31 each year commencing July 1, 2009.

Waterloo North Hydro Holding Corporation has waived the right to demand repayment of any portion of the note during the next fiscal year.

(b) The junior long-term note payable due to Waterloo North Hydro Holding Corporation, bears interest at a rate of 1.125% per annum above the interest rate on debt which the Ontario Energy Board permits the Company to pay for rate making purposes in the establishment of distribution rates, has no set principal repayment terms and is due on demand. The 2016 OEB deemed rate was 4.54% which shall be effective until 2021, the next Cost of Service filing year for the Company.

Waterloo North Hydro Holding Corporation has waived the right to demand repayment of any portion of the note during the next fiscal year.

11. Employee Post-Employment Benefits

The Company pays certain medical and life insurance benefits on behalf of some of its retired employees. The Company recognizes these post-retirement costs in the period in which employees' services were rendered. The accrued benefit liability at December 31, 2018 of $4,578,814 is based on an extrapolation of an actuarial valuation completed in 2016 using a discount rate of 4.0%.

Changes in the present value of the defined benefit unfunded obligation and the accrued benefit liability:

	2018 $	2017 $
Accrued benefit obligation		
Balance, beginning of year	**4,524,748**	4,463,413
Current service cost	**177,912**	171,070
Interest cost	**178,501**	176,238
Benefits Paid	**(302,347)**	(285,973)
Accrued benefit liability, end of year	**4,578,814**	4,524,748

Components of net benefit expense recognized are a follows:

	2018 $	2017 $
Current service cost	**177,912**	171,070
Interest cost	**178,501**	176,238
Net benefit expense recognized	**356,413**	347,308

The significant actuarial assumptions used in the valuation are as follows (weighted average):

	2018 %	2017 %
Discount rate	**4.0**	4.0
Future general salary and wage levels increase	**2.0**	2.0
Dental costs increase	**4.0**	4.0
Medical costs increase	**7.0 reducing to 5.0% after 6 years**	7.0 reducing to 5.0% after 6 years

The approximate effect on the accrued benefit obligation of the entire plan and the estimated net benefit expense of the entire plan if the health care trend rate assumption was increased or decreased by 1%, and all other assumptions were held constant, is as follows:

	2018 $	2017 $
1% increase in trend rate	**$154,300**	$152,500
1% decrease in trend rate	**(137,300)**	(135,700)

12. Customer Deposits

Customer deposits represent cash deposits from electricity distribution customers and retailers, as well as construction deposits.

Deposits from electricity distribution customers are refundable to customers who demonstrate an acceptable level of credit risk as determined by the Company in accordance with policies set out by the OEB or upon termination of their electricity distribution service.

Construction deposits represent cash prepayments for the estimated cost of capital projects recoverable from customers and developers. Upon completion of the capital project, these deposits are transferred to deferred revenue.

Customer deposits comprise:

	2018 $	2017 $
Current		
Customer deposits	**634,567**	449,598
Contruction deposits	**2,027,025**	1,494,879
Performance bond	**200,000**	150,000
	2,861,592	2,094,477
Long-term		
Customer deposits	**3,988,302**	4,018,761
	3,988,302	4,018,761

13. Share Capital

		2018 $	2017 $
Authorized			
Unlimited	Common shares		
Unlimited	Class A special shares		
Issued			
1,000	Common shares	**24,370,424**	24,370,424
251,668	Class A special shares - $10 Par value		
	Non-voting, non cumulative	**2,516,680**	2,516,680
		26,887,104	26,887,104

Dividends

The holder of the common shares is entitled to receive dividends as declared from time to time.

The Company paid aggregate dividends in the year on common shares of $4,175 per share (2017 - $4,175), which amounts to total dividends paid in the year of $4,175,000 (2017 - $4,175,000).

Calculation of Operating Income for Dividend Purposes:

	2018 $	2017 $
Net Income and Comprehensive Income	**7,866,644**	9,205,061
Less: unrealized gain from derivatives net of tax	**315,511**	1,826,533
Net Operating Income	**7,551,133**	7,378,528

14. Revenue

The Company generates revenue primarily from the sale and distribution of electricity to its customers. Other sources of revenue include performance incentive payments under CDM programs.

	2018 $	2017 $
Revenue from contracts with customers	**203,653,512**	206,088,935
Other revenue		
CDM programs	**268,377**	-
Gain (loss) on disposal of assets	**72,578**	(5,083)
Late payment charges	**139,850**	149,436
Miscellaneous charges	**523,952**	463,845
Recognized deferred revenue	**673,002**	598,687
Rental income	**281,708**	268,570
Sale of scrap	**104,609**	124,925
Total other revenue	**2,064,076**	1,600,380
	205,717,588	207,689,315

In the following table, revenue from contracts with customers is disaggregated by type of customer.

	2018 $	2017 $
Residential	**61,624,479**	63,987,364
Commercial	**128,252,070**	124,894,703
Large users	**8,046,587**	11,862,488
Other	**5,730,376**	5,344,380
	203,653,512	206,088,935

15. Interest Income and Expense

	2018	2017
	$	$
Interest income on bank deposits	**(80,901)**	(30,977)
Interest income other	**(1,146)**	-
	(82,047)	(30,977)
Interest on debt with Waterloo North Hydro Holding Corporation:		
Senior long-term note payable	**1,035,977**	1,035,977
Junior long-term note payable	**920,387**	920,387
Interest expense on long term debt	**2,857,506**	2,611,220
Interest expense on short tem debt	**32,265**	89,270
Interest expense on deposits	**63,641**	39,077
Interest expense other	**3,366**	88
	4,913,142	4,696,019
Net interest cost	**4,831,095**	4,665,042
Regulatory Interest		
Interest expense	**114,342**	55,735
Interest income	**(91,851)**	(20,840)
Net regulatory interest income	**22,491**	34,895
Net interest cost recognized in profit or loss	**4,853,586**	4,699,937

16. Commitments and Contingencies

General

From time to time, the Company is involved in various litigation matters arising in the ordinary course of its business. The Company has no reason to believe that the disposition of any such current matter could reasonably be expected to have a materially adverse impact on the Company's financial position, results of operations or its ability to carry on any of its business activities.

General Liability Insurance

The Company is a member of the Municipal Electric Association Reciprocal Insurance Exchange ("MEARIE"). MEARIE is a pooling of public liability insurance risks of many of the LDCs in Ontario. All members of the pool are subjected to assessment for losses experienced by the pool for the years in which they were members, on a pro-rata basis based on the total of their respective service revenues. As at December 31, 2018, no assessments have been made.

To December 31, 2018, the Company has not been made aware of any additional assessments. Participation in MEARIE expires December 31, 2019. Notice to withdraw from MEARIE must be given six months prior to the commencement of the next underwriting term.

17. Pension Agreement

The Company provides a pension plan for its employees through OMERS. The plan is a multi-employer, contributory defined pension plan with equal contributions by the employer and its employees. In 2017, the Company made employer contributions of $1,111,275 to OMERS (2017 - $1,132,390). The Company's net benefit expense has been allocated as follows:

(a) $350,496 (2017 - $385,126) capitalized as part of labour in PP&E and

(b) $760,779 (2017 - $747,264) recorded as an expense against net income.

The Company estimates a contribution of $1,128,943 to OMERS during the next fiscal year.

18. Employee Benefits

	2018 $	2017 $
Salary, wages and benefits	**14,149,159**	14,034,512
CPP and EI remittances	**475,709**	489,205
Contributions to OMERS	**1,111,275**	1,132,390
	15,736,143	15,656,107

19. Related Party Transactions

(a) Parent and ultimate controlling party

The sole shareholder of the Company is Waterloo North Hydro Holding Corporation which in turn is owned by the City of Waterloo and the Townships of Wellesley and Woolwich.

(b) Entity with significant influence

The City of Waterloo and the Township of Woolwich control and exercise significant influence over the Company through their indirect ownership interest in the Company of 73.2% and 20.2% respectively.

(c) Key management personnel

The key management personnel of the Company have been defined as members of its Board of Directors and executive management team members, and are summarized below:

	2018 $	2017 $
Directors' fees	**84,596**	91,129
Executive compensation and benefits	**1,339,145**	1,324,834
	1,423,741	1,415,963

19. Related Party Transactions (continued)

(d) Transactions with entity with significant influence

In the ordinary course of business, the Company delivers electricity to the City of Waterloo and the Township of Woolwich. Electricity is billed to the City of Waterloo and the Township of Woolwich at prices and under terms approved by the OEB.

(e) Transactions with ultimate parent (the City and Townships)

In 2018 the Company had the following significant transactions with its ultimate parent, a government entity:

The Company delivers electricity to the City of Waterloo and the Townships of Wellesley and Woolwich and its related organizations throughout the year for their electricity needs. Electricity delivery charges are at prices and under terms approved by the OEB. The Company also provides the following services to the City of Waterloo and the Townships of Wellesley and Woolwich:

- streetlight maintenance services
- streetlight construction services

The Company conducted transactions with related parties during the year ended December 31, 2018. These transactions are in the normal course of operations and are measured at fair value.

	2018 $	2017 $
City of Waterloo		
Energy	**3,331,347**	3,450,068
Street light energy	**388,020**	690,979
Street light maintenance	**137,180**	166,088
Street light construction	**89,985**	347,666
Township of Wellesley		
Energy	**185,675**	196,572
Street light energy	**17,441**	33,523
Street light maintenance	**12,159**	5,655
Street light construction	**22,832**	-
Township of Woolwich		
Energy	**689,644**	732,148
Street light energy	**107,075**	156,859
Street light maintenance	**33,858**	41,906
Street light construction	**365,403**	340,666
Total for the year	**5,380,619**	6,162,130

19. Related Party Transactions (continued)

(e) Transactions with ultimate parent (the City and Townships) (continued)

The Company paid property taxes to the following:

	2018 $	2017 $
Township of Woolwich	**348,643**	369,321
City of Waterloo	**89,700**	73,699
Township of Wellesley	**6,076**	5,330
Total for the year	**444,419**	448,350

In 2015 the Company borrowed, from its parent Waterloo North Hydro Holding Corporation, $1.0M at an interest rate of prime less 0.30% (ranging between 2.90% and 3.65%). This loan was paid in full in 2018 in installments of $500,000, $400,000 and $100,000 on February 28, 2018, July 16, 2018 and November 26, 2018 respectively.

In 2018 the parent Waterloo North Hydro Holding Corporation borrowed from the Company $100,000 at an interest rate of prime less 0.30% (3.65%).

20. Financial Instruments and Risk Management

Fair value disclosure

Cash and cash equivalents are measured at fair value. The carrying value of receivables, unbilled energy receivable, accounts payable and accrued charges approximate fair value due to the short maturity of these instruments. The carrying value of the customer deposits approximates fair value since the amounts are payable on demand.

The Company's activities provide for a variety of risks, particularly credit risk, market risk and liquidity risk.

The fair value of the long term debt approximates its carrying value due to the short maturity and/or the variable interest rates.

Financial risks

The Company understands the risks inherent in its business and defines them broadly as anything that could impact its ability to achieve its strategic objectives. The Company's exposure to a variety of risks such as credit risk, interest rate risk, and liquidity risk, as well as related mitigation strategies are discussed below.

(a) Credit risk

Financial assets carry credit risk that a counterparty will fail to discharge an obligation which could result in a financial loss. Financial assets held by the Company, such as accounts receivable, expose it to credit risk. The Company earns its revenue from a broad base of customers located in the City of Waterloo, the Townships of Wellesley and Woolwich. No single customer accounts for a balance in excess of 5.84% of total accounts receivable.

20. Financial Instruments and Risk Management (continued)

(a) Credit risk (continued)

The carrying amount of accounts receivable is reduced through the use of an allowance for impairment and the amount of the related impairment loss is recognized in net income. Subsequent recoveries of receivables previously provisioned are credited to net income. The balance of the allowance for impairment at December 31, 2018 is $200,000 (2017 - $175,000).

The Company's credit risk associated with accounts receivable is primarily related to payments from distribution customers. At December 31, 2018, approximately $337,221 (2017 - $346,405) is considered 60 days past due. The Company has over 57,400 customers, the majority of whom are residential. Credit risk is managed through collection of security deposits from customers in accordance with directions provided by the OEB. As at December 31, 2018, the Company holds security deposits in the amount of $4,622,869 (2017 - $4,468,359).

(b) Market risk

Market risks primarily refer to the risk of loss resulting from changes in commodity prices, foreign exchange rates, and interest rates. The Company currently does not have any material commodity or foreign exchange risk. To mitigate interest rate risk the Company has secured fixed rate swap agreements for the majority of its debt. The company issues 30 day banker's acceptances at a floating rate but pays interest at a fixed rate guaranteed by the interest rate swap.

(c) Liquidity risk

The Company monitors its liquidity risk to ensure access to sufficient funds to meet operational and investing requirements. The Company's objective is to ensure that sufficient liquidity is on hand to meet obligations as they fall due while minimizing interest exposure. The Company has access to a $15M credit facility and monitors cash balances daily to ensure that a sufficient level of liquidity is on hand to meet financial commitments as they come due. As at December 31, 2018, $nil had been drawn under CIBC's $15M operating credit facility (2017 - $nil).

In 2018 the Company was assigned an Issuer Rate of A (low), Stable, from DBRS Limited. This is consistent with the 2017 rating. The Company's financial risk profile is reasonable with key metrics that are supportive of the "A" rating.

(d) Capital disclosures

The main objectives of the Company, when managing capital, are to ensure ongoing access to funding to maintain and improve the electricity distribution system, compliance with covenants related to its credit facilities, prudent management of its capital structure with regard for recoveries of financing charges permitted by the OEB on its regulated electricity distribution business, and to deliver the appropriate financial returns.

The Company's definition of capital includes shareholder's equity and long-term debt. As at December 31, 2018, shareholder's equity amounts to $98,731,338 (2017 - $95,542,365) and long-term debt including shareholder debt amounts to $112,236,854 (2017 - $109,954,062).

21. Changes in Accounting Policies

IFRS 15 Revenue from Contracts with Customers and IFRS 9 Financial Instruments

The Company has initially applied IFRS 15 *Revenue from Contracts with Customers* from January 1, 2018 on a retrospective basis. The following practical expedients have been used in the initial application of these new standards:

For completed contracts, the Company did not restate contracts that:

(i) Began and ended within the same annual reporting period; or

(ii) Were completed at the beginning of January 1, 2017.

IFRS 15 contains a five step model that applies to contracts with customers that specifies that revenue is recognized when or as an entity transfers control of goods or services to a customer at the amount to which the entity expects to be entitled.

The Company has initially applied IFRS 9 *Financial Instruments* from January 1, 2018 on a retrospective basis. IFRS 9 includes revised guidance on the classification and measurement of financial instruments, including a new expected credit loss model for measuring impairment on financial assets, and new general hedge accounting requirements.

Despite the retrospective adoption, the accounting policy changes did not result in a significant impact to the financial statements. As a result, the Company was not required to make any adjustments to the comparative figures upon initial adoption.

The updated accounting policies have been discussed further in note 3.

22. Future Changes in Accounting Policy and Disclosures

The Company is evaluating the adoption of the following new and revised standards along with any subsequent amendments.

Leases

In January 2016, IASB issued IFRS 16 to establish principles for the recognition, measurement, presentation, and disclosure of leases, with the objective of ensuring that lessees and lessors provide relevant information that faithfully represents those transactions. IFRS 16 replaces IAS 17 and it is effective for annual periods beginning on or after January 1, 2019. The standard introduces a single lessee accounting model and requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. A lessee is required to recognize a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. This standard substantially carries forward the lessor accounting requirements of IAS 17, while requiring enhanced disclosures to be provided by the lessor. Other areas of the lease accounting model have been impacted, including the definition of a lease. Transitional provisions have been provided. The Company intends to adopt IFRS 16 in its financial statements for the annual period beginning January 1, 2019. The Company does not expect the standard to have a material impact on the financial statements.

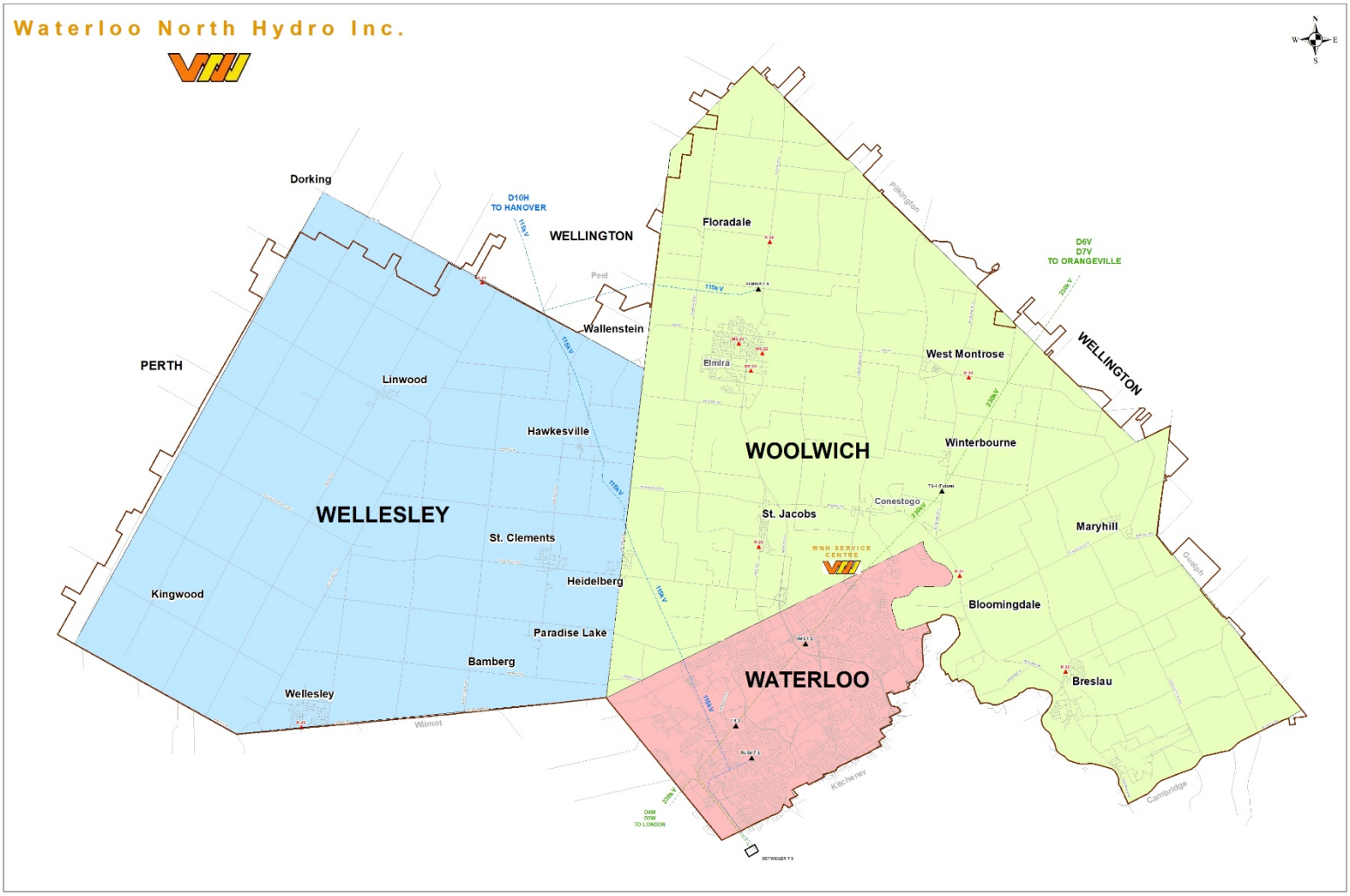
23. Comparative Figures

Certain of the prior year comparative figures have been restated to conform to the current year's presentation.

Waterloo North Hydro

ATTACHMENT 1-13

MAP OF DISTRIBUTION SERVICE TERRITORY

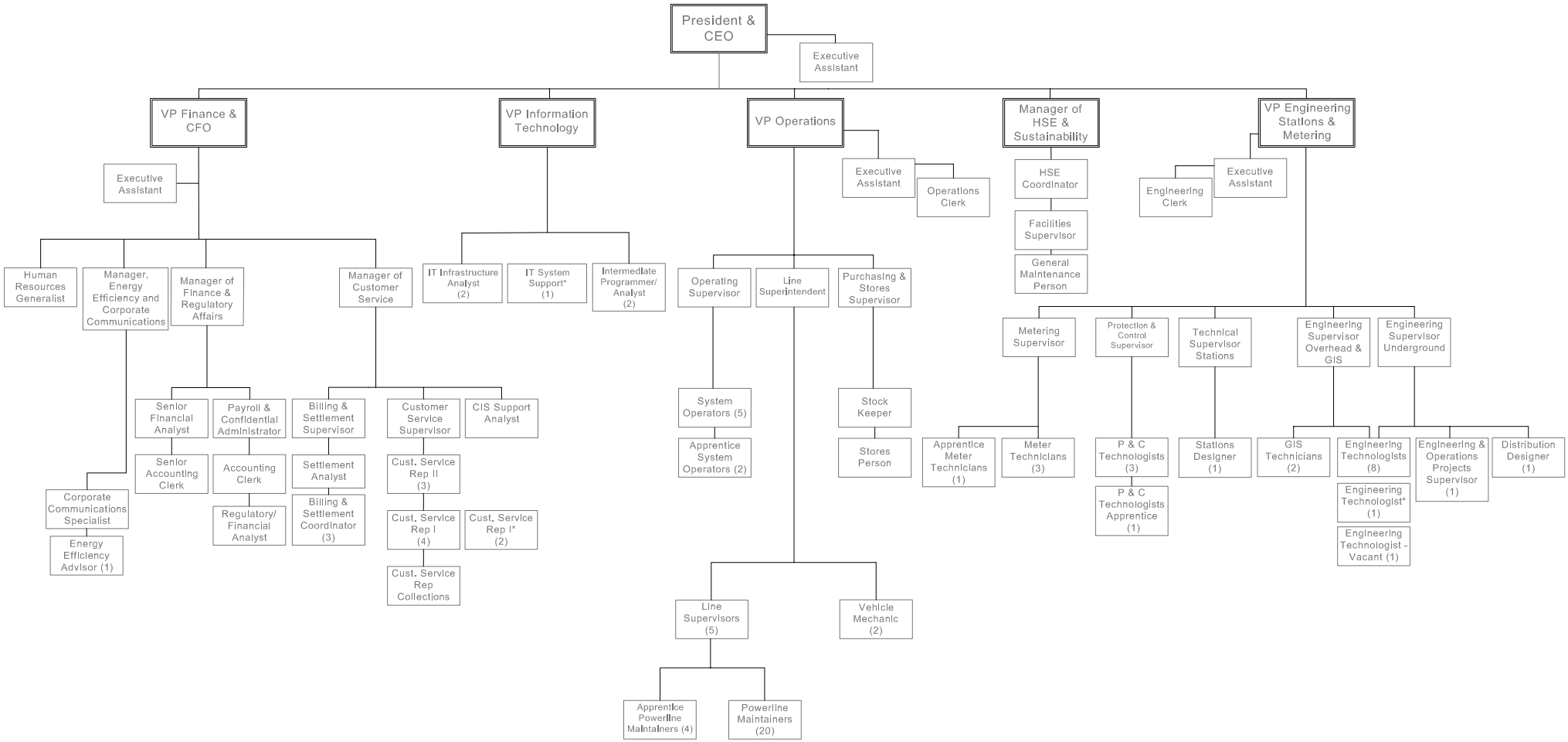

Waterloo North Hydro Inc.
N
W
E
S
Dorking
D10H
TO HANOVER
WELLINGTON
Floradale
Peel
Pilkington
D6V
D7V
TO ORANGEVILLE
Wallenstein
PERTH
Linwood
Elmira
West Montrose
WELLINGTON
Hawkesville
WOOLWICH
Winterbourne
WELLESLEY
St. Clements
St. Jacobs
Conestogo
Maryhill
WNH SERVICE CENTRE
Heidelberg
Kingwood
Bloomingdale
Guelph
Paradise Lake
Bamberg
WATERLOO
Breslau
Wellesley
Wilmot
Kitchener
Cambridge
D4W
D5W
TO LONDON

Waterloo North Hydro

ATTACHMENT 1-14

UTILITY ORGANIZATION CHART

WATERLOO NORTH HYDRO INC.
ORGANIZATION CHART



*Indicates Contract Employee

For Study Purposes Only - June, 2020

Waterloo North Hydro

ATTACHMENT 1-15

OEB ISSUED WNH SCORECARD

Scorecard - Waterloo North Hydro Inc.

9/29/2019

Performance Outcomes	Performance Categories	Measures		2014	2015	2016	2017	2018	Trend	Target: Industry	Target: Distributor
Customer Focus Services are provided in a manner that responds to identified customer preferences.	Service Quality	New Residential/Small Business Services Connected on Time		100.00%	100.00%	100.00%	100.00%	100.00%	flat	90.00%	
		Scheduled Appointments Met On Time		99.60%	100.00%	98.10%	96.40%	99.33%	down	90.00%	
		Telephone Calls Answered On Time		88.80%	88.10%	86.70%	72.77%	92.72%	down	65.00%	
	Customer Satisfaction	First Contact Resolution		99.93%	99.95%	99.92%	99.90%	99.87%			
		Billing Accuracy		99.96%	99.95%	99.73%	99.97%	99.97%	flat	98.00%	
		Customer Satisfaction Survey Results		96%	96%	92%	92%	96%			
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and distributors deliver on system reliability and quality objectives.	Safety	Level of Public Awareness			82.00%	82.00%	82.00%	82.00%			
		Level of Compliance with Ontario Regulation 22/04 [1]		C	C	C	C	C	flat		C
		Serious Electrical Incident Index	Number of General Public Incidents	0	1	1	1	6	up		1
			Rate per 10, 100, 1000 km of line	0.000	0.633	0.618	0.618	3.645	up		0.351
	System Reliability	Average Number of Hours that Power to a Customer is Interrupted [2]		0.47	0.69	0.71	0.76	0.92	up		0.62
		Average Number of Times that Power to a Customer is Interrupted [2]		0.91	1.42	1.15	1.50	1.32	up		1.16
	Asset Management	Distribution System Plan Implementation Progress		99.73%	119.44%	23.05%	41.81%	61.36%			
	Cost Control	Efficiency Assessment		3	3	4	3	3			
		Total Cost per Customer [3]		$760	$762	$809	$773	$819			
		Total Cost per Km of Line [3]		$26,299	$26,109	$28,094	$26,800	$28,499			
Public Policy Responsiveness Distributors deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	Conservation & Demand Management	Net Cumulative Energy Savings [4]			15.54%	29.69%	65.16%	80.00%			82.38 GWh
	Connection of Renewable Generation	Renewable Generation Connection Impact Assessments Completed On Time		100.00%	87.50%	80.00%	100.00%	100.00%			
		New Micro-embedded Generation Facilities Connected On Time		100.00%	100.00%	100.00%	100.00%	100.00%	flat	90.00%	
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	Financial Ratios	Liquidity: Current Ratio (Current Assets/Current Liabilities)		0.89	0.94	1.01	1.08	1.08			
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio		1.24	1.33	1.23	1.18	1.14			
		Profitability: Regulatory Return on Equity	Deemed (included in rates)	9.58%	9.58%	9.19%	9.19%	9.19%			
			Achieved	7.26%	6.65%	10.13%	8.37%	8.20%			

1. Compliance with Ontario Regulation 22/04 assessed: Compliant (C); Needs Improvement (NI); or Non-Compliant (NC).
2. The trend's arrow direction is based on the comparison of the current 5-year rolling average to the distributor-specific target on the right. An upward arrow indicates decreasing reliability while downward indicates improving reliability.
3. A benchmarking analysis determines the total cost figures from the distributor's reported information.
4. The CDM measure is based on the 2015-2020 Conservation First Framework. 2018 results are based on the IESO's unverified savings values contained in the March 2019 Participation and Cost Report.

Legend:

5-year trend: up, down, flat

Current year: target met, target not met

2018 Scorecard Management Discussion and Analysis ("2018 Scorecard MD&A")

The link below provides a document titled "Scorecard - Performance Measure Descriptions" that has the technical definition, plain language description and how the measure may be compared for each of the Scorecard's measures in the 2018 Scorecard MD&A:
http://www.ontarioenergyboard.ca/OEB/_Documents/scorecard/Scorecard_Performance_Measure_Descriptions.pdf

Scorecard MD&A - General Overview

Waterloo North Hydro Inc. (WNH) exceeded all performance targets in 2018 with the exception of: Average Number of Times that Power to a Customer is Interrupted, Average Number of Hours that Power to a Customer is Interrupted and the Serious Electrical Incident Index.

WNH discovered a material misstatement in the data used for capital additions in 2016 (see section on cost control) and made a request to the Ontario Energy Board (OEB) to correct this error. The error has been verified with OEB staff and corrected on the 2017 and 2018 Benchmarking Report, however the OEB will not reflect the correct information on the Scorecard for 2016 as a matter of policy.

Service Quality

- **New Residential/Small Business Services Connected on Time**

In 2018, WNH connected 100% of the 635 eligible low-voltage residential and small business customers (those utilizing connections under 750 volts) to its system within the five-day timeline prescribed by the OEB. This maintains the high level of service from the previous year and is above the OEB-mandated threshold of 90%. WNH expects to maintain this level of service in 2019.

- **Scheduled Appointments Met On Time**

WNH scheduled over 12,900 appointments with its customers in 2018 to complete work requested by customers, read meters, reconnect services, or perform necessary maintenance. The utility met 99.33% (2017 – 96.40%) of these appointments on

time, which significantly exceeds the industry target of 90%. WNH expects to continue this level of service in 2019.

- **Telephone Calls Answered On Time**

WNH's customer contact centre received well over 31,000 calls from its customers in 2018. The call centre agents answered 92.72% of these calls in 30 seconds or less, representing an improvement from 2017 (72.77%). This performance exceeds the industry target of 65.0% for timely call response. In early 2017, WNH successfully launched a new Customer Information System to implement monthly billing, respond to OEB regulatory and rate changes, and to provide quick access to information to respond to customers in a timely manner. The transition to the new system was the reason for the lower call response levels in 2017, however, in 2018 WNH staff felt much more comfortable with the new system and were able to return to the high level of service that WNH strives to achieve. WNH has performed significantly better than the industry target for the past five years and expects to continue this level of service in 2019.

Customer Satisfaction

- **First Contact Resolution**

First Contact Resolution is measured based on the number of calls escalated to a supervisor after a call centre agent first assisted the customer. In 2018, only 42 calls needed to be escalated to a supervisor after the first contact resulting in a 99.87% resolution on first contact (2017 – 99.90%). WNH expects this level of resolution to continue in 2019.

- **Billing Accuracy**

During 2018, WNH issued more than 699,000 bills and achieved a billing accuracy of 99.97% (2017 – 99.97%). This compares favourably to the industry target of 98%. WNH expects this level of accuracy to continue in 2019.

- **Customer Satisfaction Survey Results**

The OEB introduced the Customer Satisfaction Survey measure in 2013. Electricity distributors are required to measure and report customer satisfaction results at least every other year.

In 2018, WNH engaged an independent third party to conduct customer satisfaction surveys. The survey asks customers questions on a wide range of topics including: overall satisfaction with WNH, customer service, outages, cost, billing and corporate image, customer expectations and needs. This feedback is then incorporated into WNH's planning process and forms the basis of plans to improve customer satisfaction, meet the needs of customers and address areas of improvement. In 2018, WNH received a satisfaction score of 96% from its customers which is an improvement from the 2016 survey of 92%, WNH's results are above the provincial average of 89%. WNH believes that its customer feedback and the satisfaction score reflects the efforts that we continue to make in the community, listening to customer feedback and incorporating it into our business plans. WNH's next customer satisfaction survey is scheduled to occur in 2020.

Safety

- **Public Safety**

  - **Component A – Public Awareness of Electrical Safety**

In 2015, the OEB introduced the Level of Public Awareness which attempts to measure the level of awareness of key electrical safety precautions among the public in the electricity distributor's service territory. Utilities are required to carry out a survey as developed by the Electrical Safety Authority every two years. WNH was able to maintain a score of 82% in 2017, which was the same score received in the first survey conducted in 2015. While WNH is satisfied with these results, the utility will strive to improve upon this score through public education initiatives going forward. The next survey is scheduled to be completed in 2019.

  - **Component B – Compliance with Ontario Regulation 22/04**

This measure addresses the level of distributor compliance to Ontario Regulation 22/04, Electrical Distribution Safety. It includes an audit of compliance, declaration of compliance, reports evaluated (e.g., due diligence inspections, audits, public safety concerns, etc.), and outcome (e.g., compliant, needs improvement, non-compliant). The performance target for level of compliance with Ontario Regulation 22/04 is for the distributor to be fully compliant with Ontario Regulation 22/04.

WNH has been compliant with Ontario Regulation 22/04 since the measure was tracked in 2010 through to 2018.

- **Component C – Serious Electrical Incident Index**

The Serious Electrical Incident Index component of the public safety measure is intended to address the resultant impact in improving public electrical safety on the distribution networks over time. It measures the number of and rate of serious electrical incidents occurring on a distributor's assets and is normalized per 10, 100 or 1,000 km of line. Both the actual number and the rate per km of line are shown on the Scorecard.

The performance target for Serious Electrical Incident Index will be set based on a distributor's specific performance target using the distributor's historical data and prior performance.

The data reported on the 2018 scorecard are the results from the 2018 ESA audit of 2017 events. In 2017 there were six serious electrical incidents within Waterloo North Hydro's service territory resulting in rate of 3.645 (2017 ESA Audit – 0.618). This rate is above the established performance target of 0.351 incidents per 1,000 km. On March 23, 2017 the ESA provided new mandatory guidelines which lowered the threshold for serious incidents which in turn increased the amount of events that are reported on WNH's scorecard. WNH consistently sees a similar number of total incidents, however with the changes to the guidelines the serious incident number increased. WNH takes a diligent and highly cooperative approach to the ESA audits in order to be proactive and ensure the safest environment possible. Three of the six incidents were initiated as a result of items beyond the control of WNH (2 motor vehicle accidents and 1 damage to a customer owned pole line). The remaining three were a result of defective equipment. It is important to note that there were no personal injuries in any event noted. WNH reviews these incidents and makes appropriate adjustments to system renewal and maintenance activities as required.

System Reliability

- **Average Number of Hours that Power to a Customer is Interrupted**

During 2018, there were 786 total interruptions resulting in 106,624 customer interruptions with an average duration of 0.92 hours per customer. This average represents an increase from the 2017 duration period (0.76 hours per customer), and is outside the target of 0.62 hours per interruption.

WNH continues to view reliability of electricity service as a high priority for its customers and as such developed programs several years ago for the continuous improvement of reliability. The program includes a constant review of reliability within the 24/7 control room and a response plan for any areas of the distribution system experiencing a degradation in reliability. This, combined with WNH's commitment to review the worst performing feeders on an ongoing basis to improve reliability, will ensure customers continue to receive high value from their electricity service.

- **Average Number of Times that Power to a Customer is Interrupted**

WNH's Average Number of Times that Power to a Customer is Interrupted for 2018 was 1.32 times per customer. This rate is above WNH's target of 1.16 and has decreased from 2017 (1.50). WNH has adopted a proactive, balanced approach to distribution system planning and infrastructure investment and replacement programs to address immediate risks associated with end-of-life assets, to manage distribution system risks, to ensure the safe and reliable delivery of electricity, and to balance customer and utility affordability.

Asset Management

- **Distribution System Plan Implementation Progress**

Distribution System Plan (DSP) implementation progress is a performance measure instituted by the OEB in 2014. Consistent with other new measures, utilities were given an opportunity to define it in the manner that best fits their organization. The DSP outlines WNH's forecasted capital expenditures over the next five (5) years that are required to maintain and expand the electricity system to serve current and future customers. The "Distribution System Plan Implementation Progress" measure is intended to assess WNH's effectiveness at planning and implementing the DSP.

WNH filed an application with the OEB for a full review of its rates effective January 1, 2016 that included a DSP. The application and DSP were approved by the OEB in the Fall of 2015. In 2018, during the third year of the current five year DSP (2016-2020), WNH has reported 61.36% in its Distribution System Plan Implementation Progress as at December 31, 2018. This measure was calculated by comparing WNH's actual capital expenditures from 2016-2018 and compared to the total five-year capital expenditures as per the DSP.

Cost Control

- **Efficiency Assessment**

The total costs for Ontario's local electricity distribution companies are evaluated by the OEB to produce a single efficiency ranking. The electricity distributors are divided into five groups based on the magnitude of the difference between their respective actual and predicted costs. In 2018, WNH maintained its place in Group 3, where a Group 3 distributor is defined as having actual costs within +/- 10 percent of predicted costs. Group 3 is considered "average efficiency" – in other words, WNH's costs are within the average cost range for distributors in the Province of Ontario. WNH's forward looking goal is to maintain its efficiency ranking.

When the 2016 Scorecard was published, WNH had made a request to the OEB to correct a material misstatement in the data used for capital additions in 2016. The error has been verified with OEB staff and corrected on the 2017 and 2018 Benchmarking Report, however the OEB will not change this to reflect the correct information on the Scorecard as a matter of policy. The actual verified data places WNH in Group 3 for 2016, however, the Scorecard has the original incorrect information placing WNH in Group 4.

- **Total Cost per Customer**

Total cost per customer is calculated as the sum of WNH's capital and operating costs per customer. The cost performance result for 2018 is $819/customer which represents an increase of 6.0% from 2017 ($773). The total increase since 2014 (5 years) is 7.8% which is an average of 1.6% per year.

WNH's initial cost performance result for 2016 was $809/customer at the time the 2016 Scorecard was published. As noted above, WNH discovered a material misstatement in the data used for capital additions in 2016 and made a request to the OEB

to correct this error. WNH had submitted to the OEB revised data on capital additions that would have resulted in a Total Cost per Customer of $785/customer. The error has been verified with OEB staff and corrected on the 2017 Benchmarking Report, however the OEB will not change this to reflect the correct information on the 2017 Scorecard as a matter of policy.

WNH will continue to replace distribution assets proactively along a carefully managed timeframe in a manner that balances system risks and customer rate impacts as demonstrated in our 2016 rate application. WNH will continue to implement productivity and improvement initiatives to help offset some of the costs associated with future system improvement and enhancements.

- **Total Cost per Km of Line**

This measure uses the same total cost that is used in the Cost per Customer calculation above - the total cost is divided by the kilometers of line that WNH operates. WNH's 2018 rate is $28,499 per Km of line, a 6.3% increase from 2017 ($26,800). The total increase since 2014 (5 years) is 8.4% which is an average of 1.7% per year. WNH continues to seek innovative solutions to help ensure cost/km of line remains competitive and is affordable for our customers.

The Scorecard has the incorrect Total Cost per Km Line for 2016 ($28,094) as the OEB will not change the 2016 data on the Scorecard as a matter of policy. The 2016 rate should be $27,251 (verified and corrected).

Conservation & Demand Management

- **Net Cumulative Energy Savings**

On March 20, 2019, Ministerial Directives to the Ontario Energy Board (OEB) and the Independent Electricity System Operator (IESO) discontinued the 2015-2020 Conservation First Framework (CFF) and established a scaled down Interim Framework for the balance of 2019 and 2020, to be delivered centrally by the IESO.

As part of the Conservation First Framework, which was to run from 2015 to 2020, WNH was assigned a target of 82.38 GWh. WNH's 2018 interim unverified results, as reported by the IESO, shows a net cumulative energy savings, as of the end of 2018 of 65.9 GWh, which equates to 80.0% of the original six-year target.

Connection of Renewable Generation

- **Renewable Generation Connection Impact Assessments Completed on Time**

Electricity distributors are required to conduct Connection Impact Assessments (CIAs) within 60 days of receiving authorization from the Electrical Safety Authority. In 2018, WNH completed three CIAs within the prescribed time limit for a rate of 100.00% (2017 - 100%).

- **New Micro-embedded Generation Facilities Connected On Time**

In 2018, WNH connected 73 new micro-embedded generation facilities (microFIT and net-meter projects of less than 10 kW) 100% of the time within the prescribed time frame of five business days (2017 – 100%). The minimum acceptable performance level for this measure is 90% of the time. Our workflow to connect these projects is streamlined and transparent with our customers. WNH works closely with its customers and their contractors to resolve any connection issues to ensure the project is connected on time.

Financial Ratios

- **Liquidity: Current Ratio (Current Assets/Current Liabilities)**

As an indicator of financial health, a current ratio of 1.0 or greater is considered good as it indicates that the company can meet its short-term financial obligations.

WNH's current ratio stayed consistent at 1.08 from 2017 to 2018. WNH's current ratio in subsequent years is expected to be in line with the 2010 to 2018 results.

- **Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio**

The OEB uses a deemed capital structure of 60% debt, 40% equity for electricity distributors when establishing rates. This deemed capital mix is equal to a debt to equity ratio of 1.5 (60/40). A debt to equity ratio of more than 1.5 indicates that a distributor is more highly levered than the deemed capital structure. A high debt to equity ratio may indicate that an electricity distributor may have difficulty generating sufficient cash flows to make its debt payments. A debt to equity ratio of less than

1.5 indicates that the distributor is less levered than the deemed capital structure. WNH's 2018 ratio of 1.14 (2017 – 1.18) is well below the OEB threshold of 1.5.

- **Profitability: Regulatory Return on Equity – Deemed (included in rates)**

  WNH's current distribution rates were approved by the OEB and include an expected (deemed) regulatory return on equity of 9.19%. The OEB allows a distributor to earn within +/- 3% of the deemed return on equity. When a distributor performs outside of this range, the actual performance may trigger a regulatory review of the distributor's revenues and costs structure by the OEB.

- **Profitability: Regulatory Return on Equity – Achieved**

  WNH's return achieved in 2018 was 8.20%, which is well within the +/-3% range allowed by the OEB. The average return over the past 3 years was 8.38% which is also well within the return included in WNH's approved rates.

Note to Readers of 2018 Scorecard MD&A

The information provided by distributors on their future performance (or what can be construed as forward-looking information) may be subject to a number of risks, uncertainties and other factors that may cause actual events, conditions or results to differ materially from historical results or those contemplated by the distributor regarding their future performance. Some of the factors that could cause such differences include legislative or regulatory developments, financial market conditions, general economic conditions and the weather. For these reasons, the information on future performance is intended to be management's best judgement on the reporting date of the performance scorecard, and could be markedly different in the future.

Waterloo North Hydro

ATTACHMENT 1-16

RECONCILIATION OF WNH'S AUDITED FINANCIAL STATEMENTS TO THE ANNUAL RRR TRIAL BALANCE

WATERLOO NORTH HYDRO INC.

Reconciliation of Regulatory to Accounting (Financial Statements)

	Accounting 2015	Regulatory 2015	Difference 2015		Differences Explained
Assets					
Current Assets	43,560,073	40,499,609	(3,060,464)	(4,081,314)	Inventory (#1330) Recorded Separately for Regulatory, Current Assets for Accounting
				990,423	Credit Balances (#2208) Allocated to A/P for Regulatory, Current Assets for Accounting
				30,425	Deferred Customer Deposit in (#2220) for Regulatory, Current Assets for Accounting
				2	Difference - rounding
				(3,060,464)	
				-	
Inventory		4,081,314	4,081,314	*4,081,314*	Inventory (#1330) Recorded Separately for Regulatory, Current Assets for Accounting
Non-Current Assets			-	-	
Other Assets and Deferred Charges		2,523,045	2,523,045	*9,460,666*	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account debit balance for accounting
				(6,937,621)	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account credit balance for accounting
				2,523,045	
Other Capital Assets & Accumulated Amortization		337,632,201 (142,477,428)		-	
	203,800,597	195,154,773	(8,645,824)	330,977	Capitalized Interest Regulatory Adjustment
				(18,145)	Increase Depreciation Regulatory for transfer of asset to OH C/Devices (#1835) from Poles (#1830) for Regulatory/#2105 Acc Dep
				(8,781,862)	Capital Contributions included in deferred revenue (Long Term Liabilities) for accounting, and #1995 for Regulatory
				(194,473)	Capital Contributions amortization included in Revenue from Capital Contribution for accounting, and #1995 for Regulatory
				17,680	Wholesale Meters Recorded in Regulatory, Accounting Adjustment Outstanding
				(1)	Difference - rounding
				(8,645,824)	
				-	
Regulatory deferral account debit balance	12,576,529		(12,576,529)	(9,460,666)	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account debit balance for accounting
				(3,115,863)	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 3,115,863 in Regulatory deferral account debit balance, (813,456) in Long term liabilities, (825,702) In regulatory deferral account credit balance for accounting
				(12,576,529)	
				-	
Net Assets	259,937,199	242,258,741	(17,678,458)		
Liabilities & Equity					
Non-Current Liabilities	-	(7,399,356)	(7,399,356)	(4,322,688)	Long-Term Customer Deposit in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				(4,553,372)	Employee Future Benefits in Non-Current Liabilities for Regulatory, Long-Term for Accounting
					Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 3,115,863 in Regulatory deferral account debit balance, (813,456) in Long term
				1,476,704	liabilities, (825,702) In regulatory deferral account credit balance for accounting
				(7,399,356)	
				-	
Current Liabilities	(35,904,326)	(47,631,850)	(11,727,524)		
				48,310	Settlement Agreement OMERS Variance (#1508) Recorded in Regulatory, Not Recorded in Accounting
				(10,754,826)	Payables to regulatory bodies (IESO/Power accruals) Current payables for regulatory, regulatory deferral account credit balance for accounting
				(160)	1595 CDM Deferral/Variance Recorded in Regulatory, Not Recorded in Accounting
				(990,423)	Credit Balances (#2208) Allocated to A/P for Regulatory, Current Assets for Accounting
				(30,425)	Deferred Customer Deposit in (#2220) for Regulatory, Current Assets for Accounting
				(11,727,524)	
				-	
Long-Term Other Liabilities Deferred Credit, Long Term Debt	(120,369,715) -	(102,074,115)	120,369,715 (102,074,115)		
Net			18,295,600	4,322,688	Long-Term Customer Deposit in Non-Current Liabilities for Regulatory, Long-Term for Accounting
					Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 3,115,863 in Regulatory deferral account debit balance, (813,456) in Long term
				813,456	liabilities, (825,702) In regulatory deferral account credit balance for accounting
				8,781,862	Capital Contributions included in deferred revenue (Long Term Liabilities) for accounting, and #1995 for Regulatory
				(175,779)	Amortization on regulatory account in #2405 for regulatory, in regulatory deferral account credit balance for accounting
				4,553,372	Employee Future Benefits in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				1	Rounding
				18,295,600	
				-	
Regulatory deferral account credit balance	(18,693,928)		18,693,928	*6,937,621*	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account credit balance for accounting
				175,779	Amortization on regulatory account in #2405 for regulatory, in regulatory deferral account credit balance for accounting
					Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 3,115,863 in Regulatory deferral account debit balance, (813,456) in Long term
				825,702	liabilities, (825,702) In regulatory deferral account credit balance for accounting
				10,754,826	Payables to regulatory bodies (IESO/Power accruals) Current payables for regulatory, regulatory deferreal account credit balance for accounting
				18,693,928	
				-	
Shareholders' Equity	(84,969,230)	(85,153,420)	(184,190)	165,326	PILs #1562 Recorded in Regulatory (includes Carrying Charges to 2012), Not Recorded in Accounting
				(697,988)	1508 Pension Recorded in Regulatory (Carrying Charges to 2010), Not Recorded in Accounting
				(404,367)	1508 OEB Assessment Recorded in Regulatory (Carrying Charges to 2010), Not Recorded in Accounting
				976,512	Reg Assets Regulatory Only Collected in 2012 to Revenue for Accounting, to 1595 Regulatory
				(48,310)	Record # 1508 2011 OMERS Settlement Agreement Variance for Regulatory, not in Accounting
				(330,977)	Record Previous Years' Capitalized Interest
				(17,680)	Wholesale Meters Recorded in Regulatory (Amortization to 2012), Accounting Adjustment Outstanding
				173,293	Decrease in Net Income for Regulatory Adjustments (See Income Statement)
				1	Rounding
				(184,190)	
				0	
Net Liabilities & Equity	(259,937,199)	(242,258,741)	17,678,458		
	-	-	-		

WATERLOO NORTH HYDRO INC.

Reconciliation of Regulatory to Accounting (Financial Statements)

	Accounting 2015	Regulatory 2015	Difference 2015		Differences Explained
Revenues					
Sales of electricity	(170,389,955)	(166,622,941)	3,767,014	3,767,014	Sale of Electricity variance recorded in net movement in regulatory account balances for accounting, in sale of electricity for regulatory
				-	
Revenue from Services	(32,167,625)	(33,746,940)	(1,579,315)	(31,861)	RCVA Revenues (#4082) Grossed up for Regulatory, not for Accounting
				(1,508,129)	1576 Adjustment (#4305) in Services Revenue Accounting, Other Income/Deductions Regulatory
				126,001	Reg Assets Regulatory Only Collected in 2013 to Revenue for Accounting, to 1595 Regulatory
				(165,326)	PILs Accounting in Revenue, in Reg Assets 1595 for Regulatory
				(1,579,315)	
				-	
Other Power Supply Expenses	167,594,413	166,622,942	(971,471)	(971,471)	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
Other Operating Revenues	(1,219,305)	(784,235)	435,070	3,600	Rental Income Non-Distribution (#4375) for Regulatory, Other Operating Revenue for Accounting
				(93,845)	Gain/Loss (#4355/4360) to Other Income/Deductions for Regulatory, Other Operating Revenues for Accounting
				250	Billing Services in Other Income Deductions (#4375) Regulatory, Other Operating Revenues or Billing/Collecting for Acctg
				112,185	Other Income/Deduction (#4390/4375) for Regulatory, Other Operating Revenues for Accounting
				136,483	Collection Charge (#5330) Revenue for Accounting, Against Billing Costs for Regulatory
				155,149	Revenue from Capital Contributions for Accounting, 1995 for Regulatory
				17,290	15% Administration Charge Revenue Non-Development to General Admin Regulatory, Other Operating Revenues Accounting
				103,958	Roving Energy Manager included as Other Revenue for Accounting, In #4375 for Regulatory
				435,070	
Other Income / Deductions		3,451,172	3,451,172	93,845	Gain/Loss (#4355/4360) to Other Income/Deductions for Regulatory, Other Operating Revenues for Accounting
				(110,590)	Other Income/Deduction (#4390) for Regulatory, Other Operating Revenues for Accounting
				(1,595)	Non-Distribution Revenue (#4375) in Other Operating Revenues for Accounting
				(103,958)	Roving Energy Manager included as Other Revenue for Accounting, In #4375 for Regulatory
				(47,796)	Non-Distribution Revenue/Expenses (#4375/4380) in Other Income/Deductions for Regulatory, General Admin for Accounting
				1,508,129	1576 Adjustment (#4305) in Services Revenue Accounting, Other Income/Deductions Regulatory
				2,113,137	Unrealized loss from derivatives in Accounting net of taxes (1,553,156), in Other Income / Deductions (2,113,137) Taxes 559,981 for Regulatory
				3,451,172	
				-	
Investment Income		(126,129)	(126,129)	(126,129)	Regulatory recorded in #4405, Netted against Interest Expense for Accounting
Total Income	(36,182,472)	(31,206,131)	4,976,341		
Expenses					
Distribution	7,786,267	7,830,452	44,185	74,042	Non-Distribution Revenue (#4375) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(26,257)	Non-Distribution Expenses (#4380) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(3,600)	Rental Income Non-Distribution (#4375) for Regulatory, Other Operating Revenue for Accounting
				44,185	
				-	
Billing and collecting	2,642,762	2,537,900	(104,862)	(136,483)	Collection Charge Revenue (#5330) Netted Against Billing/Collecting for Regulatory, In Other Operating Revenues for Accounting
				31,861	RCVA Expenses (#5315) Grossed up for Regulatory, not for Accounting
				(240)	Non-Distribution Expense (#4380) for Regulatory, Billing/Collecting for Accounting
				(104,862)	
				-	
General administration	2,329,296	2,278,054	(51,242)		
				(17,290)	15% Administration Charge Revenue Non-Development to General Admin Regulatory, Other Operating Revenues Accounting
				(108,516)	Sponsorships in Administration in Accounting, in Community Relations in Regulatory
				111,208	Prudential Cost in General Administration # 5685 Regulatory, Interest in Accounting
				(36,644)	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
				(51,242)	
				-	
Property Taxes	470,404		(470,404)	*(470,404)*	Included separately for accounting, included in #6105 for regulatory (taxes)
Amortization	8,453,304	8,510,773	57,469	*18,145*	Increase Depreciation Regulatory for transfer of asset to OH C/Devices (#1835) from Poles (#1830) for Regulatory/#2105 Acc Dep
				39,324	Revenue from Capital Contributions for 2014 for Accounting, 1995 for Regulatory
				57,469	
				-	
Community relations	-	108,516	108,516	108,516	Sponsorships in Administration in Accounting, in Community Relations in Regulatory
Interest	4,831,177	4,846,098	14,921	126,129	Regulatory Interest Income recorded in #4405, Netted against Interest Expense for Accounting
				(111,208)	Prudential Cost in General Administration # 5685 Regulatory, Interest in Accounting
				14,921	
				-	
Taxes	1,292,625	(245,935)	(1,538,560)	*(559,981)*	Unrealized loss from derivatives in Accounting net of taxes (1,553,156), in Other Income / Deductions (2,113,137) Taxes 559,981 for Regulatory
				470,404	Included separately for accounting, included in #6105 for regulatory (taxes)
				(1,448,983)	Taxes on SOE / COP variance adjusted through net movement in regulatory deferral account balances, included in Taxes for Regulatory
				(1,538,560)	
				-	
Unrealized loss from derivatives (net of tax)	1,553,156		(1,553,156)	*(1,553,156)*	Unrealized loss from derivatives in Accounting net of taxes (1,553,156), in Other Income / Deductions (2,113,137) Taxes 559,981 for Regulatory
Other deductions	-	36,644	36,644	*36,644*	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
Net movement in regulatory deferral account balances net of taxes	1,346,559		(1,346,559)	*(3,767,014)*	Sale of Electricity variance recorded in net movement in regulatory account balances for accounting, in sale of electricity for regulatory
				971,471	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
				1,448,983	Taxes on SOE / COP variance adjusted through net movement in regulatory deferral account balances, included in Taxes for Regulatory
				1	Rounding
				(1,346,559)	
				-	
Total Expenses	30,705,550	25,902,502	(4,803,048)		
Increase in Net Income (Carried Forward to Balance Sheet)	(5,476,922)	(5,303,629)	173,293	-	
		(173,293)			

WATERLOO NORTH HYDRO INC.

Reconciliation of Regulatory to Accounting (Financial Statements)

	Accounting 2016	Regulatory 2016	Difference 2016		Differences Explained
Assets					
Current Assets	48,747,773	46,234,427	(2,513,346)	(3,237,595)	Inventory (#1330) Recorded Separately for Regulatory, Current Assets for Accounting
				801,930	Credit Balances (#2208) Allocated to A/P for Regulatory, Current Assets for Accounting
				36,380	Deferred Customer Deposit in (#2220) for Regulatory, Current Assets for Accounting
				(114,063)	Income tax receivable recorded in Current assets for accounting, in #2294 for regulatory
				2	Difference - rounding
				(2,513,346)	
				-	
Inventory		3,237,595	3,237,595	*3,237,595*	Inventory (#1330) Recorded Separately for Regulatory, Current Assets for Accounting
Non-Current Assets			-	-	
Other Assets and Deferred Charges		(2,355,538)	(2,355,538)	*4,643,030*	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account debit balance for accounting
				(6,998,566)	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account credit balance for accounting
				(2)	Difference - rounding
				(2,355,538)	
Other Capital Assets & Accumulated Amortization		356,112,684 (151,182,998)		-	
	222,800,758	204,929,686	(17,871,072)	330,977	Capitalized Interest Regulatory Adjustment
				(18,145)	Increase Depreciation Regulatory for transfer of asset to OH C/Devices (#1835) from Poles (#1830) for Regulatory/#2105 Acc Dep
				(18,201,583)	Capital Contributions included in deferred revenue (Long Term Liabilities) for accounting, and #1995 for Regulatory
				17,680	Wholesale Meters Recorded in Regulatory, Accounting Adjustment Outstanding
				(1)	Difference - rounding
				(17,871,072)	
				-	
Regulatory deferral account debit balance	10,230,313		(10,230,313)	(4,643,030)	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account debit balance for accounting
				(5,587,283)	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 5,587,283 in Regulatory deferral account debit balance, (2,885,152) in Long term liabilities, (1,480,739) In regulatory deferral account credit balance for accounting, (1,221,392) in non-current liabilities for regulatory.
				(10,230,313)	
				-	
Net Assets	281,778,844	252,046,170	(29,732,674)		
Liabilities & Equity					
Inter Company Payables	-	(1,000,100)	(1,000,100)	*(1,000,100)*	Recorded in 2242 for regulatory and included in current liabilities for accounting
Non-Current Liabilities	-	(7,585,798)	(7,585,798)	(4,381,082)	Long-Term Customer Deposit in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				(4,463,413)	Employee Future Benefits in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				37,304	Difference between accrual and cash basis for OPEBs - recorded in accounting, not recorded in regulatory per COS
				1,221,392	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 5,587,283 in Regulatory deferral account debit balance, (2,885,152) in Long term liabilities, (1,480,739) In regulatory deferral account credit balance for accounting, (1,221,392) in non-current liabilities for regulatory.
				1	rounding
				(7,585,798)	
				-	
Current Liabilities	(36,534,587)	(48,754,454)	(12,219,867)		
				(11,495,619)	Payables to regulatory bodies (IESO/Power accruals) Current payables for regulatory, regulatory deferral account credit balance for accounting
				(801,930)	Credit Balances (#2208) Allocated to A/P for Regulatory, Current Assets for Accounting
				114,063	Income tax receivable recorded in Current assets for accounting, in #2294 for regulatory
				(36,380)	Deferred Customer Deposit in (#2220) for Regulatory, Current Assets for Accounting
				(1)	Difference - rounding
				(12,219,867)	
				-	
Long-Term Other Liabilities Deferred Credit, Long Term Debt	(134,610,876) -	(104,825,799)	134,610,876 (104,825,799)		
Net			29,785,077	4,381,082	Long-Term Customer Deposit in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				2,885,152	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 5,587,283 in Regulatory deferral account debit balance, (2,885,152) in Long term liabilities, (1,480,739) In regulatory deferral account credit balance for accounting, (1,221,392) in non-current liabilities for regulatory.
				18,201,583	Capital Contributions included in deferred revenue (Long Term Liabilities) for accounting, and #1995 for Regulatory
				(146,153)	Amortization on regulatory account in #2405 for regulatory, in regulatory deferral account credit balance for accounting
				4,463,413	Employee Future Benefits in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				29,785,077	
				(0)	
Regulatory deferral account credit balance	(20,121,077)		20,121,077	*6,998,566*	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account credit balance for accounting
				146,153	Amortization on regulatory account in #2405 for regulatory, in regulatory deferral account credit balance for accounting
				1,480,739	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 5,587,283 in Regulatory deferral account debit balance, (2,885,152) in Long term liabilities, (1,480,739) In regulatory deferral account credit balance for accounting, (1,221,392) in non-current liabilities for regulatory.
				11,495,619	Payables to regulatory bodies (IESO/Power accruals) Current payables for regulatory, regulatory deferreal account credit balance for accounting
				20,121,077	
				(0)	
Shareholders' Equity	(90,512,304)	(90,880,119)	(367,815)	(330,977)	Record Previous Years' Capitalized Interest
				(17,680)	Wholesale Meters Recorded in Regulatory (Amortization to 2012), Accounting Adjustment Outstanding
				(19,158)	Decrease in Net Income for Regulatory Adjustments (See Income Statement)
				(367,815)	
				-	
Net Liabilities & Equity	(281,778,844)	(252,046,170)	29,732,674		
	-	-	-		

WATERLOO NORTH HYDRO INC.

Reconciliation of Regulatory to Accounting (Financial Statements)

	Accounting 2016	Regulatory 2016	Difference 2016		Differences Explained
Revenues					
Sales of electricity	(187,523,702)	(186,434,129)	1,089,573	1,089,573	Sale of Electricity variance recorded in net movement in regulatory account balances for accounting, in sale of electricity for regulatory
				-	
Revenue from Services	(34,066,607)	(34,094,908)	(28,301)	(28,301)	RCVA Revenues (#4082) Grossed up for Regulatory, not for Accounting
				(28,301)	
				-	
Other Power Supply Expenses	187,304,959	186,434,129	(870,830)	(870,830)	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
Other Operating Revenues	(1,702,183)	(903,172)	799,011	3,690	Rental Income Non-Distribution (#4375) for Regulatory, Other Operating Revenue for Accounting
				(44,178)	Gain/Loss (#4355/4360) to Other Income/Deductions for Regulatory, Other Operating Revenues for Accounting
				180	Billing Services in Other Income Deductions (#4375) Regulatory, Other Operating Revenues or Billing/Collecting for Acctg
				190,397	Other Income/Deduction (#4390/4375) for Regulatory, Other Operating Revenues for Accounting
				159,992	Collection Charge (#5330) Revenue for Accounting, Against Billing Costs for Regulatory
				482,437	Revenue from Capital Contributions for Accounting, 5705 for Regulatory
				6,493	Administration Charge Revenue Non-Development to General Admin Regulatory, Other Operating Revenues Accounting
				799,011	
				-	
Other Income / Deductions		(1,170,715)	(1,170,715)	44,178	Gain/Loss (#4355/4360) to Other Income/Deductions for Regulatory, Other Operating Revenues for Accounting
				(188,802)	Other Income/Deduction (#4390) for Regulatory, Other Operating Revenues for Accounting
				(1,595)	Non-Distribution Revenue (#4375) in Other Operating Revenues for Accounting
				(99,472)	Non-Distribution Revenue (#4375) in Other Income/Deductions for Regulatory, General Admin for Accounting
				38,005	Non-Distribution Expenses (#4380) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(963,028)	Unrealized loss from derivatives in Accounting net of taxes 707,826, in Other Income / Deductions -963,028 Taxes 255,202 for Regulatory
				(1)	Rounding
				(1,170,715)	
				-	
Investment Income		(71,229)	(71,229)	(71,229)	Regulatory Interest Income recorded in #4405, Netted against Interest Expense for Accounting
				-	
Total Income	(35,987,533)	(36,240,024)	(252,491)		
Expenses					
Distribution	7,560,041	7,546,787	(13,254)	99,472	Non-Distribution Revenue (#4375) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(38,005)	Non-Distribution Expenses (#4380) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(3,690)	Rental Income Non-Distribution (#4375) for Regulatory, Other Operating Revenue for Accounting
				(37,304)	Difference between accrual and cash basis for OPEBs - recorded in accounting, not recorded in regulatory per COS
				(33,725)	Future tax on Gain / loss on actuary - Distribution expense for accounting, in tax for regulatory
				(2)	Rounding
				(13,254)	
				-	
Billing and collecting	3,031,623	2,899,752	(131,871)	(159,992)	Collection Charge Revenue (#5330) Netted Against Billing/Collecting for Regulatory, In Other Operating Revenues for Accounting
				28,301	RCVA Expenses (#5315) Grossed up for Regulatory, not for Accounting
				(180)	Non-Distribution Expense (#4380) for Regulatory, Billing/Collecting for Accounting
				(131,871)	
				-	
General administration	2,381,751	2,228,331	(153,420)		
				(6,493)	Administration Charge Revenue Non-Development to General Admin Regulatory, Other Operating Revenues Accounting
				(104,931)	Sponsorships in Administration in Accounting, in Community Relations in Regulatory
				(42,000)	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
				4	Rounding
				(153,420)	
				-	
Property Taxes	471,270		(471,270)	*(471,270)*	Included separately for accounting, included in #6105 for regulatory (taxes)
Amortization	8,735,923	8,271,633	(464,290)	*18,145*	Increase Depreciation Regulatory for transfer of asset to OH C/Devices (#1835) from Poles (#1830) for Regulatory/#2105 Acc Dep
				(482,437)	Revenue from Capital Contributions for Accounting, 5705 for Regulatory
				2	Rounding
				(464,290)	
				-	
Community relations	-	104,931	104,931	104,931	Sponsorships in Administration in Accounting, in Community Relations in Regulatory
Interest	4,780,023	4,851,251	71,228	71,229	Regulatory Interest Income recorded in #4405, Netted against Interest Expense for Accounting
				(1)	Rounding
				71,228	
				-	
Taxes other than Income Taxes (6105)	-	471,270	471,270	471,270	Included separately for accounting (property taxes), included in #6105 for regulatory (taxes)
				-	
Taxes (6110)	-	288,927	288,927	*255,202*	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
				33,725	Future tax on Gain / loss on actuary - Distribution expense for accounting, in tax for regulatory
				288,927	
				-	
Future Taxes (6115)	2,334,219	551,449	(1,782,770)	(1,782,770)	Taxes on SOE / COP variance adjusted through net movement in regulatory deferral account balances, included in Taxes for Regulatory
				-	The accounting balance of $2,334,219 is a mix of current tax and future tax
Unrealized loss from derivatives (net of tax)	(707,826)	-	707,826	*707,826*	Unrealized loss from derivatives in Accounting net of taxes 707,826, in Other Income / Deductions -963,028 Taxes 255,202 for Regulatory
Other deductions	-	42,000	42,000	*42,000*	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
Net movement in regulatory deferral account balances net of taxes	(1,564,027)		1,564,027	*(1,089,573)*	Sale of Electricity variance recorded in net movement in regulatory account balances for accounting, in sale of electricity for regulatory
				870,830	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
				1,782,770	Taxes on SOE / COP variance adjusted through net movement in regulatory deferral account balances, included in Taxes for Regulatory
				1,564,027	
				-	
Total Expenses	27,022,997	27,256,331	233,334		
Increase in Net Income (Carried Forward to Balance Sheet)	(8,964,536)	(8,983,694)	(19,157)	-	$1 rounding
		19,158			

WATERLOO NORTH HYDRO INC.

Reconciliation of Regulatory to Accounting (Financial Statements)

	Accounting 2017	Regulatory 2017	Difference 2017		Differences Explained
Assets					
Current Assets	41,527,903	40,114,882	(1,413,021)	(2,589,537)	Inventory (#1330) Recorded Separately for Regulatory, Current Assets for Accounting
				1,207,447	Credit Balances (#2208) Allocated to A/P for Regulatory, Current Assets for Accounting
				(14,719)	Deferred Customer Deposit in (#2220) for Regulatory, Current Assets for Accounting
				(16,212)	Income tax receivable recorded in Current assets for accounting, in #2294 for regulatory
				-	
				(1,413,021)	
				-	
Inventory		2,589,537	2,589,537	*2,589,537*	Inventory (#1330) Recorded Separately for Regulatory, Current Assets for Accounting
Non-Current Assets			-	-	
Other Assets and Deferred Charges		(1,932,464)	(1,932,464)	*3,563,853*	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account debit balance for accounting
				(5,496,317)	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account credit balance for accounting
				-	Difference - rounding
				(1,932,464)	
Other Capital Assets & Accumulated Amortization		369,554,444 (160,374,527)		-	
	231,030,802	209,179,917	(21,850,885)	330,977	Capitalized Interest Regulatory Adjustment
				(18,145)	Increase Depreciation Regulatory for transfer of asset to OH C/Devices (#1835) from Poles (#1830) for Regulatory/#2105 Acc Dep
				(22,181,397)	Capital Contributions included in deferred revenue (Long Term Liabilities) for accounting, and #1995 for Regulatory
				17,680	Wholesale Meters Recorded in Regulatory, Accounting Adjustment Outstanding
				-	Difference - rounding
				(21,850,885)	
				-	
Regulatory deferral account debit balance	11,260,203		(11,260,203)	(3,563,853)	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account debit balance for accounting
				(7,696,350)	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 7,696,350 in Regulatory deferral account debit balance, (5,112,159) in Long term liabilities, (2,039,533) In regulatory deferral account credit balance for accounting, (544,658) in non-current liabilities for regulatory.
				(11,260,203)	
				-	
Net Assets	283,818,908	249,951,872	(33,867,036)		
Liabilities & Equity					
Inter Company Payables	-	(1,002,563)	(1,002,563)	*(1,002,563)*	Recorded in 2242 for regulatory and included in current liabilities for accounting
Non-Current Liabilities	-	(7,937,516)	(7,937,516)	(4,018,761)	Long-Term Customer Deposit in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				(4,524,748)	Employee Future Benefits in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				61,335	Difference between accrual and cash basis for OPEBs - recorded in accounting, not recorded in regulatory per COS
				544,658	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 7,696,350 in Regulatory deferral account debit balance, (5,112,159) in Long term liabilities, (2,039,533) In regulatory deferral account credit balance for accounting, (544,658) in non-current liabilities for regulatory.
					rounding
				(7,937,516)	
				-	
Current Liabilities	(29,402,783)	(39,445,961)	(10,043,178)		
				(8,866,660)	Payables to regulatory bodies (IESO/Power accruals) Current payables for regulatory, regulatory deferral account credit balance for accounting
				(1,207,447)	Credit Balances (#2208) Allocated to A/P for Regulatory, Current Assets for Accounting
				16,212	Income tax receivable recorded in Current assets for accounting, in #2294 for regulatory
				14,719	Deferred Customer Deposit in (#2220) for Regulatory, Current Assets for Accounting
				(2)	Difference - rounding
				(10,043,178)	
				-	
Long-Term Other Liabilities Deferred Credit, Long Term Debt	(142,351,488) -	(106,634,185)	142,351,488 (106,634,185)		
Net			35,717,303	4,018,761	Long-Term Customer Deposit in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				5,112,159	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 7,696,350 in Regulatory deferral account debit balance, (5,112,159) in Long term liabilities, (2,039,533) In regulatory deferral account credit balance for accounting, (544,658) in non-current liabilities for regulatory.
				22,181,397	Capital Contributions included in deferred revenue (Long Term Liabilities) for accounting, and #1995 for Regulatory
				(119,762)	Amortization on regulatory account in #2405 for regulatory, in regulatory deferral account credit balance for accounting
				4,524,748	Employee Future Benefits in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				35,717,303	
				-	
Regulatory deferral account credit balance	(16,522,272)		16,522,272	*5,496,317*	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account credit balance for accounting
				119,762	Amortization on regulatory account in #2405 for regulatory, in regulatory deferral account credit balance for accounting
				2,039,533	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 7,696,350 in Regulatory deferral account debit balance, (5,112,159) in Long term liabilities, (2,039,533) In regulatory deferral account credit balance for accounting, (544,658) in non-current liabilities for regulatory.
				8,866,660	Payables to regulatory bodies (IESO/Power accruals) Current payables for regulatory, regulatory deferreal account credit balance for accounting
				16,522,272	
				-	
Shareholders' Equity	(95,542,365)	(95,934,210)	(391,845)	(330,977)	Record Previous Years' Capitalized Interest
				(17,680)	Wholesale Meters Recorded in Regulatory (Amortization to 2012), Accounting Adjustment Outstanding
				(43,189)	Decrease in Net Income for Regulatory Adjustments (See Income Statement)
				1	$1 Rounding
				(391,845)	
				-	
Net Liabilities & Equity	(283,818,908)	(249,951,872)	33,867,036		
	-	-	-		

WATERLOO NORTH HYDRO INC.

Reconciliation of Regulatory to Accounting (Financial Statements)

	Accounting 2017	Regulatory 2017	Difference 2017		Differences Explained
Revenues					
Sales of electricity	(171,774,284)	(169,230,868)	2,543,416	2,543,416	Sale of Electricity variance recorded in net movement in regulatory account balances for accounting, in sale of electricity for regulatory
				2,543,416	
				-	
Revenue from Services	(34,314,651)	(34,338,391)	(23,740)	(23,740)	RCVA Revenues (#4082) Grossed up for Regulatory, not for Accounting
				(23,740)	
				-	
Other Power Supply Expenses	170,065,801	169,230,868	(834,933)	(834,933)	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
Other Operating Revenues	(1,600,380)	(773,836)	826,544	4,140	Rental Income Non-Distribution (#4375) for Regulatory, Other Operating Revenue for Accounting
				(5,083)	Gain/Loss (#4355/4360) to Other Income/Deductions for Regulatory, Other Operating Revenues for Accounting
				170	Billing Services in Other Income Deductions (#4375) Regulatory, Other Operating Revenues or Billing/Collecting for Accts
				126,520	Other Income/Deduction (#4390/4375) for Regulatory, Other Operating Revenues for Accounting
				102,109	Collection Charge (#5330) Revenue for Accounting, Against Billing Costs for Regulatory
				598,687	Revenue from Capital Contributions for Accounting, 5705 for Regulatory
				1	Rounding
				826,544	
				-	
Other Income / Deductions		(2,668,594)	(2,668,594)	5,083	Gain/Loss (#4355/4360) to Other Income/Deductions for Regulatory, Other Operating Revenues for Accounting
				(124,925)	Other Income/Deduction (#4390) for Regulatory, Other Operating Revenues for Accounting
				(1,595)	Non-Distribution Revenue (#4375) in Other Operating Revenues for Accounting
				(88,596)	Non-Distribution Revenue (#4375) in Other Income/Deductions for Regulatory, General Admin for Accounting
				26,520	Non-Distribution Expenses (#4380) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(2,485,079)	Unrealized loss from derivatives in Accounting net of taxes 1,826,533, in Other Income / Deductions -2,485,079 Taxes 658,546 for Regulatory
				(2)	Rounding
				(2,668,594)	
				-	
Investment Income		(51,816)	(51,816)	(51,816)	Regulatory Interest Income recorded in #4405, Netted against Interest Expense for Accounting
				-	
Total Income	(37,623,514)	(37,832,637)	(209,123)		
Expenses					
Distribution	7,813,755	7,807,856	(5,899)	88,596	Non-Distribution Revenue (#4375) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(26,520)	Non-Distribution Expenses (#4380) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(4,140)	Rental Income Non-Distribution (#4375) for Regulatory, Other Operating Revenue for Accounting
				(61,335)	Difference between accrual and cash basis for OPEBs - recorded in accounting, not recorded in regulatory per COS
				(2,500)	Health and Safety charge included in distribution for accounting, general admin for regulatory
					Rounding
				(5,899)	
				-	
Billing and collecting	2,984,555	2,906,018	(78,537)	(102,109)	Collection Charge Revenue (#5330) Netted Against Billing/Collecting for Regulatory, In Other Operating Revenues for Accounting
				23,740	RCVA Expenses (#5315) Grossed up for Regulatory, not for Accounting
				(170)	Non-Distribution Expense (#4380) for Regulatory, Billing/Collecting for Accounting
				2	Rounding
				(78,537)	
				-	
General administration	2,891,494	2,721,669	(169,825)		
				(130,326)	Sponsorships in Administration in Accounting, in Community Relations in Regulatory
				(42,000)	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
				2,500	Health and Safety charge included in distribution for accounting, general admin for regulatory
				1	Rounding
				(169,825)	
				-	
Property Taxes	448,350		(448,350)	*(448,350)*	Included separately for accounting, included in #6105 for regulatory (taxes)
Amortization	9,223,968	8,643,425	(580,543)	*18,145*	Increase Depreciation Regulatory for transfer of asset to OH C/Devices (#1835) from Poles (#1830) for Regulatory/#2105 Acc Dep
				(598,687)	Revenue from Capital Contributions for Accounting, 5705 for Regulatory
				(1)	Rounding
				(580,543)	
				-	
Community relations	-	130,326	130,326	130,326	Sponsorships in Administration in Accounting, in Community Relations in Regulatory
Interest	4,699,937	4,751,753	51,816	51,816	Regulatory Interest Income recorded in #4405, Netted against Interest Expense for Accounting
				51,816	
				-	
Taxes other than Income Taxes (6105)	-	448,350	448,350	448,350	Included separately for accounting (property taxes), included in #6105 for regulatory (taxes)
		-			
Taxes (6110)	-	456,255	456,255	*456,255*	Current taxes - included in total on financial statements
				(456,255)	
Future Taxes (6115)	2,024,716	676,735	(1,347,981)	(1,550,272)	Taxes on SOE / COP variance adjusted through net movement in regulatory deferral account balances, included in Taxes for Regulatory
				202,291	difference between 658,546 and 456,255 - remaining future taxes not derivative
				-	The accounting balance of $2,024,716 is a mix of current tax and future tax.
Unrealized loss from derivatives (net of tax)	(1,826,533)	-	1,826,533	*1,826,533*	Unrealized loss from derivatives in Accounting net of taxes 1,826,533, in Other Income / Deductions -2,485,079 Taxes 658,546 for Regulatory
Other deductions	-	42,000	42,000	*42,000*	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
Net movement in regulatory deferral account balances net of taxes	158,211		(158,211)	*(2,543,416)*	Sale of Electricity variance recorded in net movement in regulatory account balances for accounting, in sale of electricity for regulatory
				834,933	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
				1,550,272	Taxes on SOE / COP variance adjusted through net movement in regulatory deferral account balances, included in Taxes for Regulatory
				(158,211)	
				-	
Total Expenses	28,418,453	28,584,387	165,934		
Increase in Net Income (Carried Forward to Balance Sheet)	(9,205,061)	(9,248,251)	(43,189)		$1 rounding
		43,190			

202,291

WATERLOO NORTH HYDRO INC.

Reconciliation of Regulatory to Accounting (Financial Statements)

	Accounting 2018	Regulatory 2018	Difference 2018		Differences Explained
Assets					
Current Assets	40,798,591	38,650,553	(2,148,038)	(2,983,865)	Inventory (#1330) Recorded Separately for Regulatory, Current Assets for Accounting
				702,577	Credit Balances (#2208) Allocated to A/P for Regulatory, Current Assets for Accounting
				(7,548)	Deferred Customer Deposit in (#2220) for Regulatory, Current Assets for Accounting
				140,797	Payroll payable in debit balance at yearend included in current liabilities for accounting, in #1190 for Regulatory
				1	Difference rounding
				(2,148,038)	
				-	
Inventory		2,983,865	2,983,865	*2,983,865*	Inventory (#1330) Recorded Separately for Regulatory, Current Assets for Accounting
Other Assets and Deferred Charges		(1,476,431)	(1,476,431)	*2,446,182*	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account debit balance for accounting
				(3,922,613)	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account credit balance for accounting
				(1,476,431)	
Other Capital Assets & Accumulated Amortization		383,813,462 (169,460,646)		-	
	238,499,630	214,352,816	(24,146,814)	330,977	Capitalized Interest Regulatory Adjustment
				(18,145)	Increase Depreciation Regulatory for transfer of asset to OH C/Devices (#1835) from Poles (#1830) for Regulatory/#2105 Acc Dep
				(24,477,325)	Capital Contributions included in deferred revenue (Long Term Liabilities) for accounting, and #1995 for Regulatory
				17,680	Wholesale Meters Recorded in Regulatory, Accounting Adjustment Outstanding
				(1)	Difference - rounding
				(24,146,814)	
				-	
Regulatory deferral account debit balance	12,340,302		(12,340,302)	(2,446,182)	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account debit balance for accounting
				(9,894,120)	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 9,894,120 in Regulatory deferral account debit balance, (6,825,030) in Long term liabilities, (2,621,942) In regulatory deferral account credit balance for accounting, (447,148) in non-current liabilities for regulatory.
				(12,340,302)	
				-	
Net Assets	291,638,523	254,510,803	(37,127,720)		
Liabilities & Equity					
Inter Company Payables	-	(100)	(100)	*(100)*	Recorded in 2240 for regulatory and included in current liabilities for accounting
Non-Current Liabilities	-	(8,065,902)	(8,065,902)	(3,988,302)	Long-Term Customer Deposit in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				(4,524,748)	Employee Future Benefits in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				447,148	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 9,894,120 in Regulatory deferral account debit balance, (6,825,030) in Long term liabilities, (2,621,942) In regulatory deferral account credit balance for accounting, (447,148) in non-current liabilities for regulatory.
				(8,065,902)	
				-	
Current Liabilities	(29,486,297)	(38,492,236)	(9,005,939)		
				(8,438,489)	Payables to regulatory bodies (IESO/Power accruals) Current payables for regulatory, regulatory deferral account credit balance for accounting
				(702,577)	Credit Balances (#2208) Allocated to A/P for Regulatory, Current Assets for Accounting
				7,548	Deferred Customer Deposit in (#2220) for Regulatory, Current Assets for Accounting
				(140,797)	Payroll payable in debit balance at yearend included in current liabilities for accounting, in #1190 for Regulatory
				268,377	portion of CDM incentive payment received included as deferred revenue for accounting, recorded in #4375 for regulatory
				(1)	Difference - rounding
				(9,005,939)	
				-	
Long-Term Other Liabilities Deferred Credit, Long Term Debt	(147,837,419) -	(108,064,202)	147,837,419 (108,064,202)		
Net			39,773,217	3,988,302	Long-Term Customer Deposit in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				6,825,030	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 9,894,120 in Regulatory deferral account debit balance, (6,825,030) in Long term liabilities, (2,621,942) In regulatory deferral account credit balance for accounting, (447,148) in non-current liabilities for regulatory.
				24,477,325	Capital Contributions included in deferred revenue (Long Term Liabilities) for accounting, and #1995 for Regulatory
				(96,254)	Amortization on regulatory account in #2405 for regulatory, in regulatory deferral account credit balance for accounting
				4,524,748	Employee Future Benefits in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				54,066	Difference between accrual and cash basis for OPEBs - recorded in accounting, not recorded in regulatory per COS
				39,773,217	
				-	
Regulatory deferral account credit balance	(15,080,798)		15,080,798	*3,922,613*	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account credit balance for accounting
				96,254	Amortization on regulatory account in #2405 for regulatory, in regulatory deferral account credit balance for accounting
				2,621,942	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 9,894,120 in Regulatory deferral account debit balance, (6,825,030) in Long term liabilities, (2,621,942) In regulatory deferral account credit balance for accounting, (447,148) in non-current liabilities for regulatory.
				8,438,489	Payables to regulatory bodies (IESO/Power accruals) Current payables for regulatory, regulatory deferreal account credit balance for accounting
				1,502	Trivial accounting adjustment for financial statement presentation purposes, in revenue from services for regulatory
				(2)	Rounding
				15,080,798	
				-	
Shareholders' Equity	(99,234,009)	(99,888,463)	(654,454)	(330,977)	Record Previous Years' Capitalized Interest
				(17,680)	Wholesale Meters Recorded in Regulatory (Amortization to 2012), Accounting Adjustment Outstanding
				(305,799)	Decrease in Net Income for Regulatory Adjustments (See Income Statement)
				2	Rounding
				(654,454)	
				-	
Net Liabilities & Equity	(291,638,523)	(254,510,803)	37,127,720		
	-	-	-		

WATERLOO NORTH HYDRO INC.

Reconciliation of Regulatory to Accounting (Financial Statements)

	Accounting 2018	Regulatory 2018	Difference 2018		Differences Explained
Revenues					
Sales of electricity	(168,153,027)	(168,077,848)	75,179	75,179	Sale of Electricity variance recorded in net movement in regulatory account balances for accounting, in sale of electricity for regulatory
				-	
Revenue from Services	(35,500,485)	(35,528,445)	(27,960)	(26,457)	RCVA Revenues (#4082) Grossed up for Regulatory, not for Accounting
				(1,502)	Trivial accounting adjustment for financial statement presentation purposes, in revenue from services for regulatory
				(1)	Rounding
				(27,960)	
				-	
Other Power Supply Expenses	169,449,010	168,077,848	(1,371,162)	(1,371,162)	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
				-	
Other Operating Revenues	(2,064,076)	(821,311)	1,242,765	4,140	Rental Income Non-Distribution (#4375) for Regulatory, Other Operating Revenue for Accounting
				72,578	Gain/Loss (#4355/4360) to Other Income/Deductions for Regulatory, Other Operating Revenues for Accounting
				240	Billing Services in Other Income Deductions (#4375) Regulatory, Other Operating Revenues or Billing/Collecting for Acctg
				111,204	Other Income/Deduction (#4390/4375) for Regulatory, Other Operating Revenues for Accounting
				113,223	Collection Charge (#5330) Revenue for Accounting, Against Billing Costs for Regulatory
				673,002	Revenue from Capital Contributions for Accounting, 5705 for Regulatory
				268,377	CDM incentive payment recognized as revenue included as other operating revenues for accounting, recorded in #4375 for regulatory
				1	Rounding
				1,242,765	
				-	
Other Income / Deductions		(1,208,420)	(1,208,420)	(72,578)	Gain/Loss (#4355/4360) to Other Income/Deductions for Regulatory, Other Operating Revenues for Accounting
				(104,609)	Other Income/Deduction (#4390) for Regulatory, Other Operating Revenues for Accounting
				(6,595)	Non-Distribution Revenue (#4375) in Other Operating Revenues for Accounting
				(88,211)	Non-Distribution Revenue (#4375) in Other Income/Deductions for Regulatory, General Admin for Accounting
				29,594	Non-Distribution Expenses (#4380) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(429,267)	Unrealized loss from derivatives in Accounting net of taxes 429,267, in Other Income / Deductions -429267
				(268,377)	CDM incentive payment recognized as revenue included as other operating revenues for accounting, recorded in #4375 for regulatory
				(268,377)	portion of CDM incentive payment received included as deferred revenue for accounting, recorded in #4375 for regulatory
				(1,208,420)	
				-	
Investment Income		(173,898)	(173,898)	(173,898)	Regulatory Interest Income recorded in #4405, Netted against Interest Expense for Accounting
				-	
Total Income	(36,268,578)	(37,732,074)	(1,463,496)		
Expenses					
Distribution	8,244,749	7,706,240	(538,509)	88,211	Non-Distribution Revenue (#4375) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(29,594)	Non-Distribution Expenses (#4380) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(4,140)	Rental Income Non-Distribution (#4375) for Regulatory, Other Operating Revenue for Accounting
				(54,066)	Difference between accrual and cash basis for OPEBs - recorded in accounting, not recorded in regulatory per COS
				(431,964)	To reallocate OMERS pension expense from labour burdens (accounting) to Pension expense #5645 for regulatory
				(105,530)	To reallocate OPEB expense from labour burdens (accounting) to OPEB expense #5646 for regulatory
				(1,425)	Sponsorship charge included in distribution for accounting, general admin for regulatory
				(1)	Rounding
				(538,509)	
				-	
Billing and collecting	3,272,050	3,032,768	(239,282)	(113,223)	Collection Charge Revenue (#5330) Netted Against Billing/Collecting for Regulatory, In Other Operating Revenues for Accounting
				26,457	RCVA Expenses (#5315) Grossed up for Regulatory, not for Accounting
				(240)	Non-Distribution Expense (#4380) for Regulatory, Billing/Collecting for Accounting
				(118,475)	To reallocate OMERS pension expense from labour burdens (accounting) to Pension expense #5645 for regulatory
				(33,802)	To reallocate OPEB expense from labour burdens (accounting) to OPEB expense #5646 for regulatory
				1	Rounding
				(239,282)	
				-	
General administration	3,153,965	3,574,971	421,006		
				(195,871)	Sponsorships in Administration in Accounting, in Community Relations in Regulatory
				(42,000)	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
				(32,318)	Result of HST audit corrections - charged to extraordinary items for regulatory and general administration for accounting.
				(183,157)	To reallocate OMERS pension expense from labour burdens (accounting) to Pension expense #5645 for regulatory
				(46,439)	To reallocate OPEB expense from labour burdens (accounting) to OPEB expense #5646 for regulatory
				733,596	To record OMERS pension expense in regulatory #5645
				185,771	To record OPEBs expense in regulatory #5646
				1,425	Sponsorship charge included in distribution for accounting, general admin for regulatory
				(1)	Rounding
				421,006	
				-	
Property Taxes	444,419		(444,419)	(444,419)	Property taxes included separately for accounting, included in taxes total for regulatory
Amortization	9,628,663	8,973,807	(654,856)	*18,145*	Increase Depreciation Regulatory for transfer of asset to OH C/Devices (#1835) from Poles (#1830) for Regulatory/#2105 Acc Dep
				(673,002)	Revenue from Capital Contributions for Accounting, 5705 for Regulatory
				1	Rounding
				(654,856)	
				-	
Community relations	-	195,871	195,871	195,871	Sponsorships in Administration in Accounting, in Community Relations in Regulatory
				-	
Interest	4,853,586	5,027,485	173,899	173,898	Regulatory Interest Income recorded in #4405, Netted against Interest Expense for Accounting
				1	Rounding
				173,899	
				-	
Taxes:	2,145,113	974,171	(1,170,942)	(1,501,605)	Taxes on SOE / COP variance adjusted through net movement in regulatory deferral account balances, included in Taxes for Regulatory
				444,419	Property taxes included separately for accounting, included in taxes total for regulatory
				(113,756)	Deferred recovery on unrealized gain on derivatives in taxes for regulatory, in net movement for regulatory balances for accounting
				(1,170,942)	
				-	
Unrealized loss from derivatives (net of tax)	(429,267)	-	429,267	*429,267*	Unrealized loss from derivatives in Accounting net of taxes 429,267, in Other Income / Deductions -429267
				-	
Other deductions	-	42,000	42,000	*42,000*	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
				-	
Extraordinary Items	-	32,318	32,318	*32,318*	Result of HST audit corrections - charged to extraordinary items for regulatory and general administration for accounting.
				-	
Net movement in regulatory deferral account balances net of taxes	(2,911,344)		2,911,344	*(75,179)*	Sale of Electricity variance recorded in net movement in regulatory account balances for accounting, in sale of electricity for regulatory
				1,371,162	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
				1,501,605	Taxes on SOE / COP variance adjusted through net movement in regulatory deferral account balances, included in Taxes for Regulatory
				113,756	Deferred recovery on unrealized gain on derivatives in taxes for regulatory, in net movement for regulatory balances for accounting
				2,911,344	
				-	
Total Expenses	28,401,934	29,559,631	1,157,697		
			(1,157,697)		
Increase in Net Income (Carried Forward to Balance Sheet)	(7,866,644)	(8,172,443)	(305,799)		
		305,799			

WATERLOO NORTH HYDRO INC.

Reconciliation of Regulatory to Accounting (Financial Statements)

	Accounting 2019	Regulatory 2019	Difference 2019		Differences Explained
Assets					
Current Assets	35,493,870	32,567,333	(2,926,537)	(3,721,642)	Inventory (#1305 & #1330) Recorded Separately for Regulatory, Current Assets for Accounting
				1,177,913	Credit Balances (#2208) Allocated to A/P for Regulatory, Current Assets for Accounting
				(3,115)	Deferred Customer Deposit in (#2220) for Regulatory, Current Assets for Accounting
				(379,694)	Income tax receivable included in current assets for accounting, in #2294 for Regulatory
				1	Difference rounding
				(2,926,537)	
				-	
Inventory		3,721,642	3,721,642	*3,721,642*	Inventory (#1305 & #1330) Recorded Separately for Regulatory, Current Assets for Accounting
Other Assets and Deferred Charges		(64,656)	(64,656)	*2,481,869*	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account debit balance for accounting
				(2,546,528)	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account credit balance for accounting
				3	Difference rounding
				(64,656)	
Other Capital Assets & Accumulated Amortization		427,292,482 (179,648,815)		-	
	247,313,157	247,643,667	330,510	330,977	Capitalized Interest Regulatory Adjustment
				(18,145)	Increase Depreciation Regulatory for transfer of asset to OH C/Devices (#1835) from Poles (#1830) for Regulatory/#2105 Acc Dep
				17,680	Wholesale Meters Recorded in Regulatory, Accounting Adjustment Outstanding
				(2)	Difference - rounding
				330,510	
				-	
Regulatory deferral account debit balance	14,520,430		(14,520,430)	(2,481,869)	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account debit balance for accounting
				(12,038,561)	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 12,038,561 in Regulatory deferral account debit balance, (8,547,257) in Long term liabilities, (2,621,942) In regulatory deferral account credit balance for accounting, (869,362) in non-current liabilities for regulatory.
				(14,520,430)	
				-	
Net Assets	297,327,457	283,867,986	(13,459,471)		
Liabilities & Equity					
Inter Company Payables	-	-	-		
Non-Current Liabilities	-	(7,147,640)	(7,147,640)	(4,026,940)	Long-Term Customer Deposit in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				(3,990,062)	Employee Future Benefits in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				869,362	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 12,038,561 in Regulatory deferral account debit balance, (8,547,257) in Long term liabilities, (2,621,942) In regulatory deferral account credit balance for accounting, (869,362) in non-current liabilities for regulatory.
				(7,147,640)	
				-	
Current Liabilities	(28,924,468)	(39,047,958)	(10,123,490)		
				(9,069,292)	Payables to regulatory bodies (IESO/Power accruals) Current payables for regulatory, regulatory deferral account credit balance for accounting
				(1,177,913)	Credit Balances (#2208) Allocated to A/P for Regulatory, Current Assets for Accounting
				3,115	Deferred Customer Deposit in (#2220) for Regulatory, Current Assets for Accounting
				379,694	Income tax receivable included in current assets for accounting, in #2294 for Regulatory
				(1)	Difference - rounding
				(259,093)	CDM incentive payment recorded at 50% as other operating revenues for accounting in 2018 & 2019, recorded 100% in 2018 for regulatory
				(10,123,490)	
				-	
Long-Term Other Liabilities Deferred Credit, Long Term Debt	(151,626,038) -	 (135,118,244)	151,626,038 (135,118,244)		
Net			16,507,794	4,026,940	Long-Term Customer Deposit in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				8,547,257	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 12,038,561 in Regulatory deferral account debit balance, (8,547,257) in Long term liabilities, (2,621,942) In regulatory deferral account credit balance for accounting, (869,362) in non-current liabilities for regulatory.
					Capital Contributions included in deferred revenue (Long Term Liabilities) for accounting, and #1995 for Regulatory
				(75,314)	Amortization on regulatory account in #2405 for regulatory, in regulatory deferral account credit balance for accounting
				3,990,062	Employee Future Benefits in Non-Current Liabilities for Regulatory, Long-Term for Accounting
				18,850	Difference between accrual and cash basis for OPEBs - recorded in accounting, not recorded in regulatory per COS
				(1)	Difference - rounding
				16,507,794	
				-	
Regulatory deferral account credit balance	(14,314,558)		14,314,558	*2,546,528*	Regulatory Assets & Liabilities Included in Other Assets & Deferred Charges for Regulatory, Regulatory deferral account credit balance for accounting
				75,314	Amortization on regulatory account in #2405 for regulatory, in regulatory deferral account credit balance for accounting
				2,621,942	Future Income Tax - Non Current (# 2350) in Non-Current for Regulatory, 12,038,561 in Regulatory deferral account debit balance, (8,547,257) in Long term liabilities, (2,621,942) In regulatory deferral account credit balance for accounting, (869,362) in non-current liabilities for regulatory.
				9,069,292	Payables to regulatory bodies (IESO/Power accruals) Current payables for regulatory, regulatory deferreal account credit balance for accounting
				1,484	Trivial accounting adjustment for financial statement presentation purposes, in revenue from services for regulatory
				(2)	Rounding
				14,314,558	
				-	
Shareholders' Equity	(102,462,393)	(102,554,144)	(91,751)	(330,977)	Record Previous Years' Capitalized Interest
				(17,680)	Wholesale Meters Recorded in Regulatory (Amortization to 2012), Accounting Adjustment Outstanding
				258,405	Decrease in Net Income for Regulatory Adjustments (See Income Statement)
				(1,502)	Trivial accounting adjustment for financial statement presentation purposes, in revenue from services for regulatory
				3	Rounding
				(91,751)	
				-	
Net Liabilities & Equity	(297,327,457)	(283,867,986)	13,459,471		
	-	-	-		

WATERLOO NORTH HYDRO INC.

Reconciliation of Regulatory to Accounting (Financial Statements)

	Accounting 2019	Regulatory 2019	Difference 2019		Differences Explained
Revenues					
Sales of electricity	(173,746,381)	(173,595,406)	150,975	150,975	Sale of Electricity variance recorded in net movement in regulatory account balances for accounting, in sale of electricity for regulatory
				-	
Revenue from Services	(35,895,518)	(35,430,678)	464,840	(28,651)	RCVA Revenues (#4082) Grossed up for Regulatory, not for Accounting
				493,491	Accelerated CCA Bill C97 Impact (#4080) in regulatory, net movement in regulatory deferral account balances for accounting
				464,840	
				-	
Other Power Supply Expenses	175,424,055	173,595,406	(1,828,649)	(1,828,649)	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
				-	
Other Operating Revenues	(1,825,877)	(1,475,567)	350,310	4,140	Rental Income Non-Distribution (#4375) for Regulatory, Other Operating Revenue for Accounting
				(54,685)	Gain/Loss (#4355/4360) to Other Income/Deductions for Regulatory, Other Operating Revenues for Accounting
				60	Billing Services in Other Income Deductions (#4375) Regulatory, Other Operating Revenues or Billing/Collecting for Acctg
				79,749	Other Income/Deduction (#4390/4375) for Regulatory, Other Operating Revenues for Accounting
				61,953	Collection Charge (#5330) Revenue for Accounting, Against Billing Costs for Regulatory
				259,093	CDM incentive payment recorded at 50% as other operating revenues for accounting in 2018 & 2019, recorded 100% in 2018 for regulatory
				350,310	
				-	
Other Income / Deductions		1,436,014	1,436,014	54,685	Gain/Loss (#4355/4360) to Other Income/Deductions for Regulatory, Other Operating Revenues for Accounting
				(78,149)	Other Income/Deduction (#4390) for Regulatory, Other Operating Revenues for Accounting
				(1,600)	Non-Distribution Revenue (#4375) in Other Operating Revenues for Accounting
				(54,145)	Non-Distribution Revenue (#4375) in Other Income/Deductions for Regulatory, General Admin for Accounting
				21,593	Non-Distribution Expenses (#4380) in Other Income/Deductions for Regulatory, General Admin for Accounting
				1,493,869	Unrealized gain from derivatives in Accounting net of taxes -1,493,869, in Other Income / Deductions 1,493,869
				(239)	To reallocate OPEB expense from labour burdens (accounting) to OPEB expense #5646 for regulatory
				1,436,014	
				-	
Investment Income		(133,723)	(133,723)	(133,723)	Regulatory Interest Income recorded in #4405, Netted against Interest Expense for Accounting
				-	
Total Income	(36,043,721)	(35,603,954)	439,767		
Expenses					
Distribution	7,987,531	7,766,704	(220,827)	54,145	Non-Distribution Revenue (#4375) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(21,593)	Non-Distribution Expenses (#4380) in Other Income/Deductions for Regulatory, General Admin for Accounting
				(4,140)	Rental Income Non-Distribution (#4375) for Regulatory, Other Operating Revenue for Accounting
				(18,850)	Difference between accrual and cash basis for OPEBs - recorded in accounting, not recorded in regulatory per COS
				(99,707)	To reallocate OPEB expense from labour burdens (accounting) to OPEB expense #5646 for regulatory
				(129,432)	Software maintenance included in distribution for accounting, general admin for regulatory
				(1,250)	Sponsorship charge included in distribution for accounting, general admin for regulatory
				(220,827)	
				-	
Billing and collecting	3,110,860	2,966,160	(144,700)	(61,953)	Collection Charge Revenue (#5330) Netted Against Billing/Collecting for Regulatory, In Other Operating Revenues for Accounting
				28,651	RCVA Expenses (#5315) Grossed up for Regulatory, not for Accounting
				(60)	Non-Distribution Expense (#4380) for Regulatory, Billing/Collecting for Accounting
				(33,640)	To reallocate OPEB expense from labour burdens (accounting) to OPEB expense #5646 for regulatory
				(3,140)	Bank service charge included in billing and collecting for accounting, general admin for regulatory
				(74,557)	Software maintenance included in billing and collecting for accounting, general admin for regulatory
				(1)	Rounding
				(144,700)	
				-	
General administration	3,426,755	3,482,548	55,793		
				(244,189)	Sponsorships in Administration in Accounting, in Community Relations in Regulatory
				(42,000)	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
				(35,780)	To reallocate OPEB expense from labour burdens (accounting) to OPEB expense #5646 for regulatory
				171,224	To record OPEBs expense in regulatory #5646
				596,738	Software maintenance included in distribution, billing and collecting and general admin for accounting, general admin for regulatory
				(392,749)	Software maintenance included in general admin for accounting, general admin for regulatory
				1,300	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
				1,250	Sponsorship charge included in distribution for accounting, general admin for regulatory
				(1)	Rounding
				55,793	
				-	
Property Taxes	458,134		(458,134)	(458,134)	Property taxes included separately for accounting, included in taxes total for regulatory
Amortization	9,952,224	9,970,370	18,146	*18,145*	Increase Depreciation Regulatory for transfer of asset to OH C/Devices (#1835) from Poles (#1830) for Regulatory/#2105 Acc Dep
				1	Rounding
				18,146	
				-	
Community relations	-	244,189	244,189	244,189	Sponsorships in Administration in Accounting, in Community Relations in Regulatory
				-	
Interest	4,920,773	5,054,496	133,723	133,723	Regulatory Interest Income recorded in #4405, Netted against Interest Expense for Accounting
				133,723	
				-	
Taxes:	1,446,346	(239,961)	(1,686,307)	(2,540,316)	Taxes on SOE / COP variance adjusted through net movement in regulatory deferral account balances, included in Taxes for Regulatory
				458,134	Property taxes included separately for accounting, included in taxes total for regulatory
				395,875	Deferred recovery on unrealized loss on derivatives in taxes for regulatory, in net movement for regulatory balances for accounting
				(1,686,307)	
				-	
Unrealized loss from derivatives (net of tax)	1,493,869	-	(1,493,869)	*(1,493,869)*	Unrealized gain from derivatives in Accounting net of taxes -1,493,869, in Other Income / Deductions 1,493,869
				-	
Other deductions	-	42,000	42,000	*42,000*	Donations (#6205) in Other Deductions for Regulatory, General Admin for Accounting
				-	
Net movement in regulatory deferral account balances net of taxes	(3,328,624)		3,328,624	*(150,975)*	Sale of Electricity variance recorded in net movement in regulatory account balances for accounting, in sale of electricity for regulatory
				1,828,649	Cost of Power variance recorded in net movement in regulatory account balances for accounting, in Cost of Power for regulatory
				2,540,316	Taxes on SOE / COP variance adjusted through net movement in regulatory deferral account balances, included in Taxes for Regulatory
				(395,875)	Deferred recovery on unrealized gain on derivatives in taxes for regulatory, in net movement for regulatory balances for accounting
				(493,491)	Accelerated CCA Bill C97 Impact (#4080) in regulatory, net movement in regulatory deferral account balances for accounting
				3,328,624	
				-	
Total Expenses	29,467,868	29,286,506	(181,362)		
			181,362		
Increase in Net Income (Carried Forward to Balance Sheet)	(6,575,853)	(6,317,448)	258,405		
		(258,405)			
		-			

Waterloo North Hydro

ATTACHMENT 1-17

CREDIT RATING REPORT

Date of Release: January 20, 2020

DBRS Morningstar Confirms Waterloo North Hydro Inc. at A (low), Stable

Industry Group: Corporate Finance
Sub-Industry: Utilities & Independent Power
Region: Canada

DBRS Morningstar (DBRS Morningstar) confirmed the Issuer Rating of Waterloo North Hydro Inc. (Waterloo North or the Company) at A (low) with a Stable trend. The rating reflects the stability of Waterloo North's electricity distribution business operating under a reasonable regulatory framework in a growing franchise area as well as the Company's strong financial risk profile. Waterloo North's rating is one notch lower than its DBRS Morningstar-rated peers in the Ontario electricity distribution sector, largely as a result of the Company's above-average refinancing risk.

Notes:

All figures are in Canadian dollars unless otherwise noted.

The principal methodologies are Rating Companies in the Regulated Electric, Natural Gas and Water Utilities Industry, and DBRS Morningstar Criteria: Rating Corporate Holding Companies and Parent/Subsidiary Rating Relationships, which can be found on dbrs.com under Methodologies & Criteria.

The related regulatory disclosures pursuant to the National Instrument 25-101 *Designated Rating Organizations* are hereby incorporated by reference and can be found by clicking on the link under Related Documents or by contacting us at info@dbrs.com.

The rated entity or its related entities did participate in the rating process for this rating action. DBRS Morningstar had access to the accounts and other relevant internal documents of the rated entity or its related entities in connection with this rating action.

For more information on this credit or on this industry, visit www.dbrs.com or contact us at info@dbrs.com.

DBRS Limited
DBRS Tower, 181 University Avenue, Suite 700
Toronto, ON M5H 3M7 Canada

Issuer	Debt Rated	Rating Action	Rating	Trend
Waterloo North Hydro Inc.	Issuer Rating	Confirmed	A (low)	Stable

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Waterloo North Hydro

ATTACHMENT 1-18

EFFICIENCY MODEL (PEG MODEL)

Data Required for Cost Benchmarking

Waterloo North Hydro Inc.

Select LDC from Dropdown Box: Waterloo North Hydro Inc.

Required Item		History 2018	History 2019	Bridge Year 2020	Test Year 2021
	Gross Capital Cost Additions Data				
1	Total Gross Capital Additions	19,537,430	19,651,071	19,356,304	18,585,765
2	HV Gross Capital Additions	736,383	136,374	1,076,395	999,063
	Output and Other Business Conditions				
3	Number of Customers	57,472	57,856	58,276	58,697
4	Delivery Volume	1,461,137,926	1,431,774,008	1,417,956,527	1,420,784,471
5	Annual Peak Demand	290,747	271,173	283,728	286,565
6	Distribution Circuit-km	1,652	1,648	1,657	1,666
7	Ten Year Customer Growth Percentage	13.86%	12.5%	12.5%	12.5%
	Inflation Measures				
8	Wage Growth	2.88%	2.88%	2.88%	2.88%
9	Growth in Economy-wide Inflation	1.60%	1.60%	1.60%	1.60%
10	Rate of Return (WACC)	6.02%	6.02%	6.02%	6.02%
	OM&A Expenses Included in Cost Benchmarking				
Choose a Method:	N **Use Method 1 [1A - 1B + 1C]**	(364,372)	(431,844)	(324,364)	(288,633)
	Y **Use Method 2 [2A - 2B + 2C]**	14,145,477	13,880,169	14,484,733	15,113,144
11	**OM&A Values Transfered to Calculations Worksheet**	14,145,477	13,880,169	14,484,733	15,113,144

Method 1: Enter Values Calculated Elsewhere

			Enter Values Supported by Separate Calculations		
1A	Total OM&A Consistent with accounts included in [2B]				
1B	HV Cost (Accounts 5014, 5015, and 5112) if included in total	382,709	450,547	343,441	308,092
1C	LV Adjustment	18,336	18,703	19,077	19,459

Method 2: Enter Detailed Data

OM&A Data

5005	Operation Supervision and Engineering	1,168,935	1,049,431	1,178,898	1,389,506
5010	Load Dispatching	999,918	1,152,893	1,098,517	1,137,034
5012	Station Buildings and Fixtures	182,336	190,124	226,426	223,135
5014	Transformer Station Equipment - Operation Labor	184,626	278,465	213,237	172,517
5015	Transformer Station Equipment - Operation Supplies and Expenses	104,523	127,891	91,005	96,218
5016	Distribution Station Equipment - Operation Labor	165,259	145,279	150,016	216,911
5017	Distribution Station Equipment - Operation Supplies and Expenses	68,244	70,130	96,417	103,998
5020	Overhead Distribution Lines and Feeders - Operation Labor	984,117	880,405	725,461	673,384
5025	Overhead Distribution Lines and Feeders - Operation Supplies and Expenses	237,587	240,367	277,311	285,800
5035	Overhead Distribution Transformers - Operation	2,929	11,434	3,172	3,210
5040	Underground Distribution Lines and Feeders - Operation Labor	77,397	89,228	62,120	71,100
5045	Underground Distribution Lines and Feeders - Operation Supplies and Expenses	30,008	40,103	29,128	31,448
5055	Overhead Distribution Lines and Feeders	15,193	14,638	4,434	4,490
5065	Meter Expense	339,211	409,202	450,515	457,709
5070	Customer Premises - Operation Labor	-	-	-	-
5075	Customer Premises - Operation Materials and Supplies	460,345	534,768	396,845	396,878
5085	Miscellaneous Distribution Expense	1,001,294	1,034,643	1,036,215	1,047,083
5090	Underground Distribution Lines and Feeders - Rental Paid	-	-	-	-
5095	Overhead Distribution Lines and Feeders - Rental Paid	-	-	-	-
5096	Other Rent (Distribution)	-	-	-	-
	Subtotal: Operation	**6,021,921**	**6,269,001**	**6,039,717**	**6,310,421**

	5105	Maintenance Supervision and Engineering	502,685	498,950	466,887	493,027
	5110	Maintenance of Buildings and Fixtures	18,874	21,416	31,646	32,023
	5112	Maintenance of Transformer Station Equipment	93,560	44,191	39,199	39,357
	5114	Maintenance of Distribution Station Equipement	11,213	6,504	43,110	44,173
	5120	Maintenance of Poles, Towers and Fixtures	281,022	114,092	285,031	317,521
	5125	Maintenance of Overhead Conductors and Devices	227,577	88,336	160,855	142,200
	5130	Maintenance of Overhead Services	67,642	75,959	72,392	71,473
	5135	Overhead Distribution Lines and Feeders - Right of Way	316,476	370,703	404,127	405,469
	5145	Maintenance of Underground Conduit	-	-	-	-
	5150	Maintenance of Underground Conductors and Devices	423	-	1,000	1,000
	5155	Maintenance of Underground Services	341,978	241,264	290,339	292,614
	5160	Maintenance of Line Transformers	101,746	36,288	72,746	64,554
	5175	Maintenance of Meters	-	-	-	-
		Subtotal: Maintenance	**1,963,196**	**1,497,703**	**1,867,332**	**1,903,411**
	5305	Supervision (Billing and Collection)	68,429	66,154	70,586	71,664
	5310	Meter Reading Expense	480,649	458,184	503,538	523,450
	5315	Customer Billing	1,650,055	1,730,574	1,599,221	1,670,315
	5320	Collecting	681,622	625,613	677,208	710,909
	5325	Collecting - Cash Over and Short	-	-	-	-
	5330	Collection Charges	(113,223)	(61,953)	(29,331)	(29,331)
	5340	Miscellaneous Customer Account Expenses	333,233			
		Subtotal : Billing and Collections	**3,100,765**	**2,818,572**	**2,821,222**	**2,947,007**
	5405	Supervision (Community Relations)	-	-	48,829	122,701
	5410	Community Relations - Sundry	176,175	200,382	213,704	238,121
	5420	Community Safety Program	24,155	43,807	39,536	40,462
	5425	Miscellaneous Customer Service and Informational Expens	-	-	-	-
		Subtotal: Community Relations	**200,330**	**244,189**	**302,069**	**401,284**
	5605	Executive Salaries and Expenses	826,589	769,946	797,474	857,807
	5610	Management Salaries and Expenses	148,979	169,709	169,709	169,709
	5615	General Administrative Salaries and Expenses	1,004,588	995,304	1,160,023	1,218,955
	5620	Office Supplies	187,113	356,917	294,181	310,024
	5625	Administrative Expense Transferred - Credit	(827,655)	(576,374)	(501,539)	(610,059)
	5630	Outside Services Employed	118,749	68,264	72,540	73,420
	5640	Injuries and Damages	1,998	1,711	6,000	6,000
	5645	OMERS Pensions and Benefits	-	-	-	-
	5646	Employee Pensions and OPEB	181,572	171,225	170,986	170,986
	5647	Employee Sick Leave	-	-	-	-
	5650	Franchise Requirements	-	-	-	-
	5655	Regulatory Expenses	411,069	409,604	439,583	486,027
	5665	Miscellaneous General Expenses	329,238	338,184	294,487	306,332
	5670	Rent (Administrative and General)	-	-	-	-
	5672	Lease Payment Expense	-	-	-	-
	5675	Maintenance of General Plant	653,549	596,738	683,709	658,849
	5680	Electrical Safety Authority Fees	-			
		Sutotal: A&G Expenses	**3,035,789**	**3,301,228**	**3,587,153**	**3,648,049**
	5635	Property Insurance	187,848	181,320	191,605	191,605
	6210	Life Insurance	-	-	-	-
		Subtotal: Insurance	**187,848**	**181,320**	**191,605**	**191,605**
	5515	Advertinsing	-	-	-	-
		Subtotal Advertising	**-**	**-**	**-**	**-**
	2A	**Total of Above Accounts Used for Benchmarking**	14,509,850	**14,312,013**	**14,809,097**	**15,401,777**
Adjustments to OM&A for Benchmarking						
		5014	184,626	278,465	213,237	172,517
		5015	104,523	127,891	91,005	96,218
		5112	93,560	44,191	39,199	39,357
	2B	**Subtotal: HV Adjustment (to subtract from cost)**	**382,709**	**450,547**	**343,441**	**308,092**
	2C	**LV Adjustment**	**18,336**	**18,703**	**19,077**	**19,459**

Benchmarking Calculations for LDC Forecasting

Selected LDC: Waterloo North Hydro Inc.

Line Reference Number	Row Nu	Account	2018	Forecasted Values 2019	2020	2021
		Section 1: Source Data and OM&A Calculations				
1		**OM&A Data (Detail may be hidden or expanded using the +/- buttons to the left of the row numbers)**				
22		**Subtotal: Operation**	**6,021,921**	**6,269,001**	**6,039,717**	**6,310,421**
36		**Subtotal: Maintenance**	**1,963,196**	**1,497,703**	**1,867,332**	**1,903,411**
44		**Subtotal : Billing and Collections**	**3,100,765**	**2,966,160**	**2,821,222**	**2,947,007**
49		**Subtotal: Community Relations**	**200,330**	**244,189**	**302,069**	**401,284**
67		**Sutotal: A&G Expenses**	**3,035,789**	**3,301,228**	**3,587,153**	**3,648,049**
70		**Subtotal: Insurance**	**187,848**	**181,320**	**191,605**	**191,605**
72		**Subtotal Advertising**	-	-	-	-
73		**Total of Above Accounts Used for Benchmarking**	**14,509,850**	**14,459,601**	**14,809,097**	**15,401,777**
74						
75		**Adjustments to OM&A for Benchmarking**				
79		Subtotal: HV Adjustment (to subtract from cost)	382,709	450,547	343,441	308,092
80		LV Adjustment	18,336	18,703	19,077	19,459
81		Total Adjusted OM&A Expense	13,837,414	13,880,169	14,484,733	15,113,144
82						
83		**Gross Capital Cost Additions Data**				
84		Total Gross Capital Additions	19,537,430	19,651,071	19,356,304	18,585,765
85		HV Gross Capital Additions	736,383	136,374	1,076,395	999,063
86						
87		**Output and Other Business Conditions**				
88		Number of Customers	57,472	57,856	58,276	58,697
89		Delivery Volume	1,461,137,926	1,431,774,008	1,417,956,527	1,420,784,471
90		Annual Peak Demand	290,747	271,173	283,728	286,565
91		Distribution Circuit km	1,652	1,648	1,657	1,666
92						
93						

Section 2: Actual Cost Calculations

94	**Actual Cost**					
95						
96	OM&A		13,837,414.24	13,880,168.96	14,484,733.15	15,113,143.64
97						
98	Capital					
99		Rate of Return	6.02%	6.02%	6.02%	6.02%
100		Depreciation Rate	4.59%	4.59%	4.59%	4.59%
101		Construction Cost Index	170.06	172.80	175.59	178.43
102		Capital Price	17.88	18.17	18.46	18.76
103		Gross Plant Additions	19,537,430	19,651,071	19,356,304	18,585,765
104		HV Capital Additions	736,383	136,374	1,076,395	999,063
105		Quantity of Capital Additions	110,556	112,930	104,104	98,566
106		Quantity of Capital Removed	84,111	85,325	86,592	87,396
107		Capital Quantity	1,858,933	1,886,537	1,904,050	1,915,220
108		Capital Cost	33,242,872	34,280,909	35,157,436	35,934,331
109						
110	Total Actual Cost		47,080,286	48,161,078	49,642,169	51,047,474

Section 3: Predicted Cost Calculations

111	**Predicted Cost**					
112						
113		**Output Quantity**				
114		Number of Customers	57,472	57,856	58,276	58,697
115		Delivery Volume	1,461,137,926	1,431,774,008	1,417,956,527	1,420,784,471
116		Annual Peak Demand	290,747	271,173	283,728	286,565
117		Capacity Proxy	295,130	295,130	295,130	295,130
118						
119		**Input Prices**				
120		GDP IPI [30% Weight]	120.3	122.3	124.3	126.3
121		Average Hourly Earnings [70% Weight]	1,021.53	1,051.36	1,082.07	1,113.66
122		OM&A Price Index Growth [30% GDPIPI growth + 70% AWE Growth]	2.495%	2.495%	2.495%	2.495%
123		OM&A Price Index Level	138.66	142.16	145.75	149.43
124						
125		Capital Price Index	17.88	18.17	18.46	18.76
126						
127		**Business Conditions**				
128		Line km	1,652.00	1,648.00	1,656.80	1,665.60
129		2002-2013 Average Line km	1,502.34	1,512.05	1,521.09	1,529.59
130		Customers Ten Years Ago	50,478			
131		Ten Year Customer Growth Percentage	13.86%	12.50%	12.50%	12.50%
132						
133	(Details of the predicted cost calculations may be hidden by using the +/- button to the left of row 248)					
134						
234		**Predicted Total Cost**	42,726,853	44,382,134	46,211,843	48,169,993
235						
236						

Section 4: Benchmarking Results

237	Actual Cost	47,080,286	48,161,078	49,642,169	51,047,474
238	Predicted Cost	42,726,853	44,382,134	46,211,843	48,169,993
239	Actual less Predicted Cost	4,353,433	3,778,943	3,430,326	2,877,481
240	Percentage Difference (Arithmetic for Comparison)	10.19%	8.51%	7.42%	5.97%
241					
242	**Percent Difference (Logarithmic)**	**9.70%**	**8.17%**	**7.16%**	**5.80%**

Summary of Cost Benchmarking Results

Waterloo North Hydro Inc.

Cost Benchmarking Summary	2018 (History)	2019 (History)	2020 (Bridge)	2021 (Test Year)
Actual Total Cost	47,080,286	48,161,078	49,642,169	51,047,474
Predicted Total Cost	42,726,853	44,382,134	46,211,843	48,169,993
Difference	4,353,433	3,778,943	3,430,326	2,877,481
Percentage Difference (Cost Performance)	**9.7%**	**8.2%**	**7.2%**	**5.80%**
Three-Year Average Performance			8.3%	7.04%
Stretch Factor Cohort				
Annual Result	3	3	3	3
Three Year Average			3	3



ATTACHMENT 1-19

ANNUAL REPORT 2019

ANNUAL REPORT

2019



Waterloo North Hydro

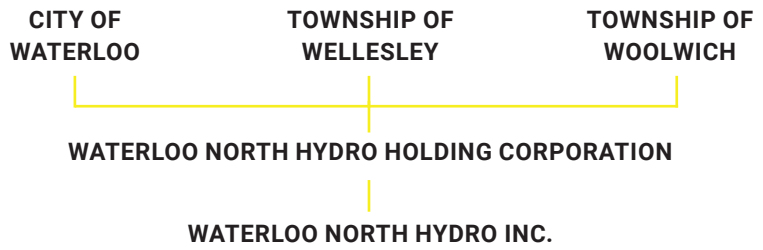
WHO WE ARE





Waterloo North Hydro Inc. (WNH) is a municipally-owned hydro distribution company incorporated under the Business Corporation Act (Ontario) on May 1, 2000.

WNH is a wholly-owned subsidiary of Waterloo North Hydro Holding Corporation, which is owned by the City of Waterloo, the Township of Wellesley, and the Township of Woolwich.



PURPOSE

Delivering electricity efficiently to our customers.

MISSION

To be of service to our customers by delivering electricity to homes and businesses in our communities – safely, reliably, 24/7.

VISION

Be the flexible, sustainable distribution platform for connecting consumers and producers of electricity, and be the trusted energy advisor of choice for our customers.

CORE VALUES

- ☑ Respect
- ☑ Commitment To Excellence
- ☑ Service
- ☑ Teamwork and Collaboration
- ☑ Responsible and Accountable
- ☑ Safety and Environmental Stewardship

57,814
customers

683 KM²
service territory

1,076 KM
of overhead line

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WE HAVE LOTS TO CELEBRATE

MESSAGE TO SHAREHOLDERS

Waterloo North Hydro (WNH) quietly moved forward in 2019, and yet, with significant changes in the Management team, advancements in the automation of our distribution systems, enhancements in customer communications and recognition for many years of diligent work, there is lots to celebrate.

Three of the five Executive team members were new in their positions for the 2019 year. Dorothy Moryc, Vice-President of Engineering and Stations, and John Stephens, Vice-President of Operations, were promoted to their positions in the fall of 2018, with 2019 being their first full year leading their areas of WNH. Mark Dillon joined WNH in July as the Vice-President of IT Services. These three have managed the transition very well and led their staff to ensure WNH did not miss a beat in serving our customers. Their ideas and collaboration had immediate impact to move WNH forward.

Automation of the distribution system showed great results in 2019. This project is the culmination of many years of deploying switches that could be controlled remotely. Fault Location Isolation and Service Restoration (FLISR) Technology was introduced in 2018 to connect the switches in semi-automated mode. In 2019, the switches were allowed to operate in automated mode to quickly self heal the distribution system and restore service after a fault. The result was a decrease in outage minutes by more than 30 per cent over what customers would have seen without FLISR, saving customers from experiencing an additional 1.6 million outage minutes in 2019.

WNH staff were diligent in working safely with no Lost Time Injuries (LTI) in 2019. This is the sixth consecutive year with no LTIs. We continue to add more health and mental wellness initiatives for our employees, and continued to educate the public on safety around our distribution plant.

These initatives gained WNH recognition provincially and nationally for the mental and physical safety of employees, and public safety and education in electrical safety. WNH also received the Waterloo Area's Top Employer recognition, for the fourth consecutive year.

As we move into the digital age for electric utilities, WNH added pre-design notices, pre-construction notices, and planned outage notices to the repertoire of digital communications for customers. Many self service tools are available to customers on-line, or on their mobile phone. Our quarterly customer newsletters have an open rate of 55% which far exceeds the LDC industry average, and more importantly demonstrates their usefulness to our customers.

WNH may have quietly gone about its business to be of service to customers by delivering electricity to homes and businesses – safely, reliably, 24/7 – but we think this Annual Report shows we have lots to celebrate.

Regards,



Michael Pley
Board of Directors Chair



Rene W. Gatien
President & C.E.O.

AN AWARD-WINNING UTILITY

An industry-leading mental health and well-being program led to nationwide recognition for WNH as the utility received two awards from Canada's Safest Employer.

WNH received a Gold Award in Psychological Safety. The Gold Award highlighted the robust mental health portion of WNH's corporate wellness program, which features mental health first aid training and awareness campaigns. The utility was also presented with the Silver Utilities Award, in acknowledgement of WNH's commitment to safety for its employees, the general public and the customers we serve.

The Electrical Safety Authority (ESA) awarded WNH with the Consumer Home and Safety Award for its Elementary School Poster Contest. The ESA recognized WNH's innovative efforts to educate consumers and work with younger generations to teach important safety messages to Waterloo Region residents.

The utility was also recognized as one of Waterloo Area's Top Employer for 2020. This is the fourth consecutive year WNH has received this prestigious honour.

FOR MORE INFORMATION ON WNH'S AWARD-WINNING YEAR VISIT WWW.WNHYDRO.COM/AWARDS

2019 CANADA'S SAFEST EMPLOYERS GOLD WINNER PSYCHOLOGICAL SAFETY

2019 CANADA'S SAFEST EMPLOYERS SILVER WINNER

WATERLOO AREA'S TOP EMPLOYERS 2020



Waterloo North Hydro received the Home and Consumer Safety Award from the Electrical Safety Authority during a ceremony in the fall of 2019.



WNH employees display the Gold Award in Psychological Safety and the Silver Utilities Award WNH received from Canada's Safest Employers. The utility's health and wellness program was also featured in a safety industry magazine.

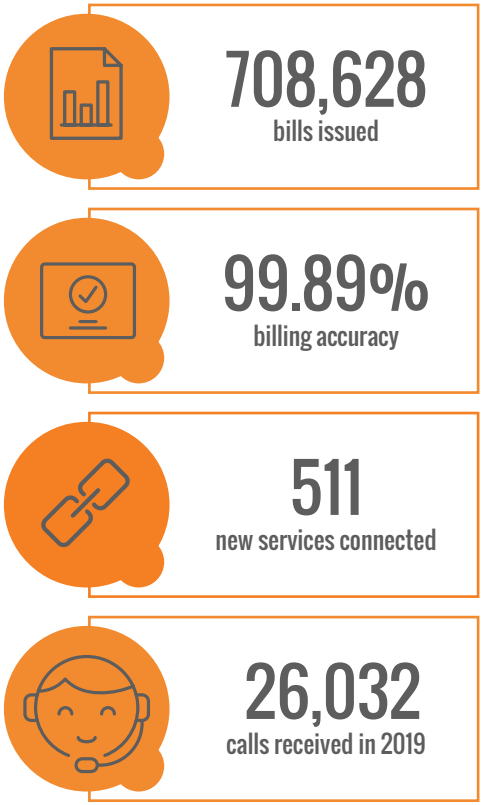
MEETING THE NEEDS OF OUR CUSTOMERS

Customer needs are changing and Waterloo North Hydro is adapting and embracing new technologies to meet the demands of a new generation of customers.

In 2019, WNH launched a revamped version of its My Account online customer portal. The portal allows customers to have 24/7 access to their account information and energy consumption data. The customer response to WNH's ongoing portal improvements has been positive, as more than 5,000 new users registered for My Account last year.

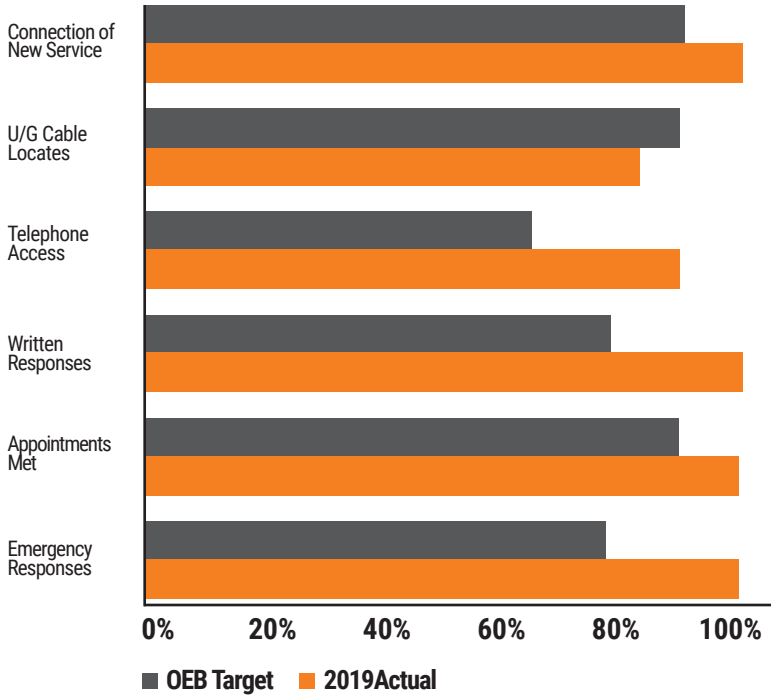
WNH continued its focus on switching customers to Paperless Billing. More than 35 per cent of WNH's customers are now enrolled in Paperless Billing, which is a five per cent increase over the previous year. There was also an increase in registration for Pre-Authorized Payment and Equal Payment Plans in 2019.

Customer tools are increasingly becoming more digital, and WNH continues to have a strong personal relationship with its customer base. Customer Support staff fielded more than 26,000 customer calls, and surpassed the Ontario Energy Board's Service Quality Indicators for 2019. WNH also seamlessly implemented a rate change for customers based on the introduction of the Ontario Electricity Rebate.



FOR MORE INFORMATION ON HOW WE'RE PUTTING OUR CUSTOMERS FIRST, VISIT WWW.WNHYDRO.COM/CUSTOMERNEEDS

SERVICE QUALITY INDICATORS



WNH staff in all departments strive to provide a positive customer experience every time, whether they are on the phone, working with customers at the front desk or out on a service call.







RELIABILITY

Delivering electricity to our residential and business customers safely and reliably is Waterloo North Hydro's mission. Our crews, and control room staff work tirelessly to minimize the severity and impact of power interruptions and keeping the lights on across our service territory.

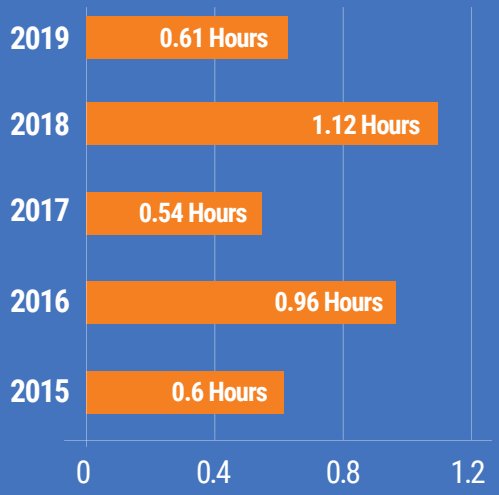
In 2019, WNH recorded 3,891,102 Customer Minutes of Interruption (CMI). This is a decrease of more than 45 per cent from the CMI recorded in 2018. Our continued commitment to technology, coupled with the hard work and expertise of our staff led to a decrease in average outage duration over the previous year.

There was one significant outage event in 2019. This occurred over two days in July as heavy winds and rain caused outages across our service territory. The outage event is responsible for more than 20 per cent of the total CMI recorded in 2019.

WNH also completed the final stages of a multi-year project to convert older 4.16 kV infrastructure in Elmira to 27.6 kV. This system renewal project included the removal of the final pieces of 4.16 kV plant we had in operation and will provide increased reliability to our customers for years to come.

TO LEARN MORE ABOUT OUR COMMITMENT TO RELIABILITY, VISIT WWW.WNHYDRO.COM/RELIABILITY

AVERAGE OUTAGE DURATION FOR WNH CUSTOMERS





Waterloo North Hydro's operations crews are out in the community serving our customers every day. The dedication of our staff helps to provide our customers with the service and reliability they have come to expect from WNH.



Through increased automation and the adoption of new technologies, our control room operators (shown here) are able to respond to power interruptions quickly and more easily.

SYSTEM AUTOMATION
(FLISR AND ADMS)

Waterloo North Hydro's ongoing distribution system automation efforts have decreased the length and frequency of unplanned power interruptions for our customers. The ongoing use of the Advanced Distribution Management System (ADMS) and Fault Location Isolation and Service Restoration (FLISR) technology decreased outage minutes by more than 30 per cent in 2019, resulting in 1.6 million customer outage minutes saved.

FLISR was introduced by WNH in 2018 and expanded in 2019. The program produced immediate benefits for our customers. With FLISR, switching can be completed in less than one minute per fault. Without this technology, switching would be less efficient and take more time, creating longer and more frequent power interruptions for customers.

WNH's commitment to distribution system automation has made the utility an industry leader. More than 95 per cent of customers are covered by automation through FLISR and the ADMS. We intend to have 100 per cent of our 13.8 kV and 27.6 kV feeders FLISR enabled by the end of 2023.

WNH is continuing to invest in system upgrades to provide more reliability to our customers. As customer needs and expectations change, WNH continues to adapt and invest in areas that create positive results for its customers.

1.6 million
customer outage minutes saved through automation

95%
customers covered by automation

VISIT WWW.WNHYDRO.COM/AUTOMATION TO FIND OUT MORE ABOUT OUR ONGOING SYSTEM INNOVATIONS

SAFETY

The safety of our employees, the customers we serve, and the general public is paramount to how we do business. All injuries are preventable and WNH is committed to continued safety training to ensure our staff return home safely each day.

WNH's focus on safety is evident through its commitment to ongoing health and safety training. In 2019, WNH employees received more than 3,400 hours of safety training on an evolving number of subjects, including first aid training, and mental health awareness training. The success of this training is reflected in the fact that WNH experienced zero lost-time injuries in 2019. This is the sixth consecutive year WNH has recorded zero lost-time injuries.

To ensure important safety messages are being shared with all employees, WNH holds monthly Health, Safety, and Environment meetings. The utility also circulates important safety tips, and distributes safety posters and news items throughout the service centre to keep employees and visitors up-to-date. In recent years, WNH has also reworked corporate policies to extend beyond physical safety to include care for mental health. This has helped complement the efforts of the utility's Wellness Program and assure employees that psychological well-being is an important component of one's safety.

WNH's commitment to safety is not limited to its employees. The organization shares safety messages with the greater public through its award-winning School Safety Program, electrical safety training for first responders, appearances at municipal open houses and at a variety of other community events.

3,421
training hours

0
lost-time injuries

13,648
locate requests



A meter technologist safely makes repairs to a meter at a customer property. WNH staff are committed to safety in all aspects of their work.

SAFETY SURVEY RESULTS

Every other year, Waterloo North Hydro conducts an Electrical Safety Awareness survey to get a clear understanding of how educated our customers are on various aspects of electrical safety. The results of this survey help to inform and steer our electrical safety education efforts.

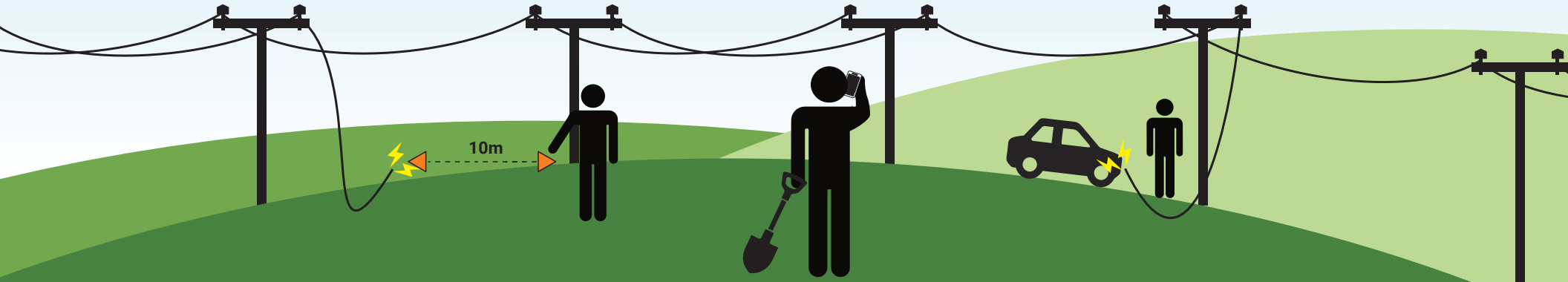
The 2019 survey showed that 84 per cent of respondents would call for a locate request before beginning a project that involved digging. This is a marked improvement over the 2017 survey results and can be directly tied to our efforts to educate customers on the importance of Call Before You Dig through bill inserts, ads, social media, and our 2018 School Electrical Safety Poster Contest. The 2019 survey also showed an increase in respondents understanding you need to remain at least 10 metres (the length of a school bus) away from a downed powerline.

WNH will continue to use the results of these surveys to educate our customers and help to keep our staff and the people we serve, safe from electrical hazards.

77%
of WNH customers know to stay at least 10 metres away from a downed powerline

84%
of WNH customers know to "Call Before You Dig"

92%
of WNH customers know what to do if a powerline falls on their vehicle



VISIT WWW.WNHYDRO.COM/SAFETYFIRST TO LEARN MORE ABOUT OUR SAFETY TRAINING



4,001
participants in school safety presentations in 2019

1,210
total views of the *Lucky the Squirrel* videos

WNH introduced six "Lucky" the Squirrel playing cards in 2019. The cards provide helpful electrical safety tips and important safety information to the younger generations of WNH customs

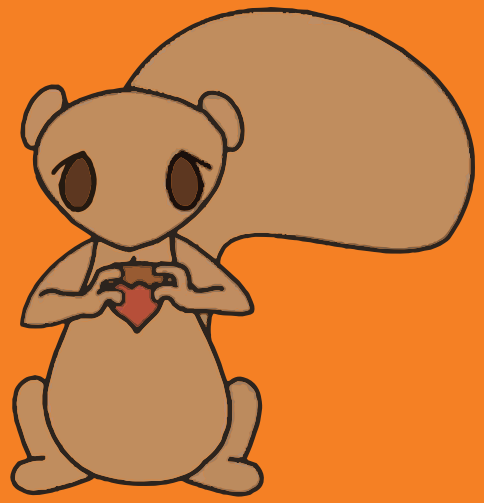
SAFETY THROUGH EDUCATION

Education is a key component of electrical safety awareness. Waterloo North Hydro understands this, and provides unparalleled electrical safety training to local elementary school students in Public, Catholic, and Mennonite schools through its award-winning School Electrical Safety Program.

The program includes a fun, interactive, in-school safety presentation by 'Lectric Larry, a retired WNH employee. In 2019, more than 4,000 students participated in the program, with Larry making 164 presentations. This represents a 12 per cent increase in presentations over the previous year.

'Lectric Larry's presentations are not limited to elementary schools, as he has also presented at fire halls, public open houses, farm safety days and city-run day camps.

WNH expanded its safety material aimed at the younger generation in 2019 through the introduction of "Lucky" the Squirrel playing cards. The set of six cards are based on animated videos used by utilities across Ontario. Each card includes an important electrical safety tip with a link to the respective "Lucky" video on the WNH corporate website. The cards are provided at each school presentation and during public events. "Lucky" the Squirrel is also featured prominently in WNH's safety messaging on social media and through the corporate website.



VISIT WWW.WNHYDRO.COM/SAFETYEDUCATION FOR INFORMATION ON OUR SAFETY EDUCATION EFFORTS

SCHOOL ELECTRICAL SAFETY POSTER CONTEST

For the second consecutive year, elementary school students from across Waterloo North Hydro's service territory took part in WNH's Elementary School Electrical Safety Poster Contest. WNH received the Electrical Safety Authority's Home and Safety Consumer Excellence Award in late 2019 for the Poster Contest and its role in teaching electrical safety to an underserved audience

The contest builds on WNH's strong relationship with local schools by turning younger students into safety ambassadors. Students in Grade 1 through 8 were asked to create a poster showing the importance of never tampering with electrical equipment. The Poster Contest utilized the animated videos of "Lucky" the Squirrel to help educate the students on the dangers of tampering with electrical equipment.

WNH received a number of high quality submissions from various schools in both the Public and Catholic School Boards. A panel of WNH employee judges selected their favourite posters from all the entries and online public voting then took place to choose winners in each age group.

The winning students were given their prizes during special in-school presentations in front of their classmates. The posters were used in WNH bill inserts, social media messages, newspaper ads, and on the corporate website.



These six students were selected as the winners of the 2019 Electrical Safety Poster Contest. Each winner received a special prize from WNH and their art-work was used in bill inserts, on social media, and on the corporate website as part of WNH's safety communication efforts.

VISIT WWW.WNYHYDRO.COM/POSTERS TO SEE SOME OF THE WINNING SUBMISSIONS AND FOLLOW ALONG WITH THIS YEAR'S COMPETITION

LIFE AT WNH



WNH holds a number of events for employees each year, including staff barbecues, and breakfasts.

6,147
sustainably traveled km

39%
increase in participation in eco-challenge from 2018

158
participants in wellness program activities

VISIT WWW.WNHYDRO.COM/LIFEATWNH TO SEE HOW WE HELP OUR EMPLOYEES

The physical and mental wellness of Waterloo North Hydro's employees is an ongoing focus of the organization. WNH invests heavily in its employees, and takes pride in offering award-winning wellness training and resources that benefit employees, their families, and the environment.

2019 saw a continued focus on mental and physical health awareness as WNH held several mental health wellness campaigns, weekly employee-led fitness classes, private wellness consultations, diabetes prevention campaign, healthy eating classes, lunch and learn classes, and an organization-wide campaign aimed at encouraging random acts of kindness. WNH also trained 14 new employees in Mental Health First Aid and had 43 employees attend its annual Wellness Fair.

WNH's health and wellness efforts are not confined to the office. Employees participated in a four-week Eco-Challenge, with events that included a 20-minute makeover, donations to a local thrift store, litterless lunches, a free bike tune-up and a workshop of green-cleaning programs. Participation in the challenge increased in 2019, with 64 per cent of WNH employees taking part in at least one activity.



WNH's annual Wellness Fair brings vendors from across Waterloo Region to WNH to help teach staff various health and wellness activities and programs.



WNH staff received training in mental health first aid in 2019.

Classes offered at WNH

- Soup in a Jar Workshop
- Crockpot Enchilada Soup Workshop
- Financial Wellness Seminars
- Lunch and Learn: Easy and Efficient Workouts
- ...and many more!

COMMUNITY SUPPORT

$12,000
raised for the United Way
Waterloo Region and Communities

3,600
meals donated to The Food Bank of Waterloo Region

The City of Waterloo, the Township of Wellesley, and the Township of Woolwich are home to many hard-working community groups, service organizations, charities and educational opportunities. Waterloo North Hydro is proud to support these various groups that help make Waterloo Region a vibrant, and caring place to live and work.

The utility's annual United Way Campaign was once again a success. Employees came together to raise $12,000 for the United Way of Waterloo Region Communities through fundraisers that included a silent auction, turkey raffle, carnival, bake sale, pancake breakfast and chili cook-off. WNH was nominated for 2019 United Way Rising Star Spirit Award in recognition of our ongoing support for the charity.

For the second consecutive year, WNH and its customers teamed up to make a donation to The Food Bank of Waterloo Region. As part of the fall Paperless

WNH employees volunteer their time to take part in the City of Waterloo Open House each year (Left)

WNH donated 3,600 meals to The Food Bank of Waterloo Region through its fall 2019 eBilling campaign (Right)





Billing Campaign, WNH donated three meals to The Food Bank for every new paperless billing sign up. Thanks to the efforts of our customers, 3,600 healthy meals were provided to families in need across the Waterloo Region. In addition to the meals donated through the campaign, WNH employees also gave more than 2,000 pounds of food to The Food Bank during the Stuff-A-Bus campaign, and $300 and two skids of food as part a charity hockey game between WNH staff and the Waterloo Fire Department.

Community involvement goes well beyond charitable support as WNH also works closely with area business groups, including Sustainable Waterloo Region, ClimateActionWR, REEP Green Solutions, and the Greater Kitchener-Waterloo Chamber of Commerce. WNH also has a strong relationship with the area's three large post-secondary institutions, including program support and scholarship at Wilfrid Laurier University, the University of Waterloo, and Conestoga College. In spring 2019, WNH, along with neighbouring utilities, teamed up with the International Brotherhood of Electrical Workers (IBEW) to sponsor an annual golf tournament that raised $12,500 in support of MySafeWork, an Ontario-based not-for-profit organization that promotes safe work practices through education, empowerment and employee engagement.

WNH employees provided money and food to The Food Bank of Waterloo Region though a charity hockey game (left), as well as supporting men's health through the Movember campaign (middle), and supported the United Way through a samosa sale (right).

LEARN MORE ABOUT OUR COMMITMENT TO COMMUNITY SUPPORT AT WWW.WNHYDRO.COM/COMMUNITY

WNH also provides support to the following organizations and programs across Waterloo Region

Bell Let's Talk Day

Conestoga College Powerline Maintainer Program

THEMUSEUM Kid's Inspiring Change Program

City of Waterloo Open House

University of Waterloo Engineering Program



CUSTOMER COMMUNICATION

Customer needs are changing, and Waterloo North Hydro has enhanced and evolved our communication strategy to fit the requirements of those we serve.

In 2019, we committed to increase our digital communication efforts. We introduced electronic planned outage notices, as well as digital pre-construction, and pre-design notices. We also introduced electronic quarterly newsletters for our residential and small business customers. The newsletters featured important updates on safety, energy efficiency, My Account, paperless billing, and key account information. Electronic communications proved to be a valuable resource for customers as the overall open rate for WNH's newsletters and notices exceeded the industry average by 40 per cent.

The information shared through the electronic newsletters highlighted the information on our corporate website and helped to introduce customer to My Account, the online customer portal, and WNH's interactive outage map. Both of these tools allow customers to access important information 24/7 from anywhere.

WNH continued to see an increase in followers and interactions on the corporate Facebook and Twitter pages. The corporation's social media sites are populated daily with messages regarding power outages, electrical safety, corporate news, and account management information. These channels are used extensively to keep customers informed during severe weather, power interruptions, instances of scams, and unplanned events.

FACEBOOK

1,575
Followers

1,426
Engagements
(Reactions, comments, shares)

TWITTER

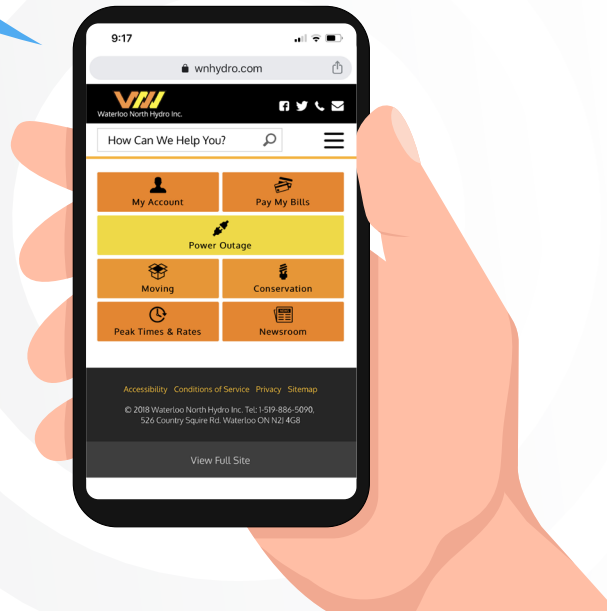
6,536
Followers

645
Tweets

NEWSLETTERS

55%
Open rate

191,398
Recipients of electronic communication in 2019



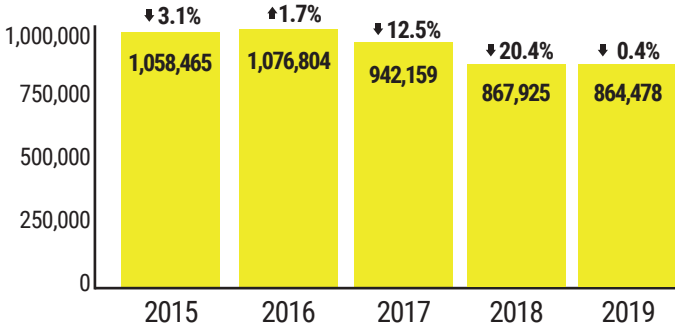


SUSTAINABILITY

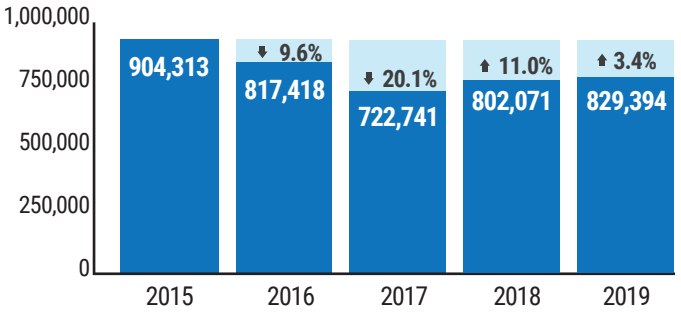
Environmental stewardship is one of Waterloo North Hydro's core values. The utility's commitment to the environment and its natural surroundings are evident in its Service Centre. The Administrative Building and Service Centre is LEED silver certified and was designed to include a number of important water and energy efficiency features, including rain water recovery, ground source heat pumps to help heat and cool office spaces and air handling systems designed to maximize energy savings by re-circulating air. The building's features have led to a reduction in electricity consumption in 2019 However, water consumption increased do to a dry spring, summer, and fall.

WNH's employees actively participate in environmental stewardship. Recycling stations around the building have allowed the organization to divert a large amount of waste away from landfills. Plans to further implement sustainability-related projects in 2020 will also help lower natural gas and energy usage and further reduce WNH's carbon footprint as it moves into a new decade.

ELECTRICITY CONSUMED (KWH)



WATER CONSUMPTION (LITRES)



In 2019, WNH recycled:

77,934 kg plastic and metals

33,600 kg of cardboard

655 kg of electronics

179 kg of batteries

PARTNERSHIPS

The sharing of knowledge and information is integral to ensuring customers are receiving the best value from Waterloo North Hydro. To ensure it remains an industry leader, WNH actively participates in a number of collaborative groups and partnerships both within the electricity industry and outside of it. The relationships formed through these partnerships and the sharing of information these groups foster, allows WNH to continue to innovate and provide the high quality service our customers have come to expect from us.



In addition to the above groups, WNH is a proud member of the following organizations:

GREATER KITCHENER WATERLOO CHAMBER OF COMMERCE
BUSINESS BUILDING COMMUNITY

Waterloo Regional Electrical Association

aeusp
Association of Electrical Utility Safety Professionals

EDA
The Voice of Ontario's Electricity Distributors

sustainable WATERLOO REGION

CLIMATE ACTION WR

A.E.S.P
ASSOCIATION OF ENERGY SERVICES PROFESSIONALS

MySafeWork

WE ARE MEMBERS OF A NUMBER OF GROUPS, INCLUDING:

Grand River Energy

Grand River Energy (GRE) is a joint venture of Energy Plus Inc., Kitchener Power Corp and Waterloo North Hydro Holding Corporation. The venture's mission is to provide and promote advanced energy technology and services that support the economic well-being of our customers and communities we serve. GRE provides full solutions for advanced technologies, including Solar Net Metering, Virtual Net Metering, Energy Storage, Sub Metering, Electric Vehicle Charging and Combined Heat and Power projects.

GridSmartCity

WNH is one of more than 30 organizations, including 14 electricity distributors, which make up the GridSmartCity Cooperative. The Cooperative aims to create efficiencies for utilities through collaboration without amalgamation, allowing utilities to maintain independence in the communities they serve. The group brings together electricity distributors, smart grid innovators, business leaders, academics, local government and other key partners to enhance the efficiency and sustainability of the local electricity infrastructure.

Smart Energy Consumer Collaborative

The Smart Energy Consumer Collaborative is a non-profit organization that monitors work to learn the wants and needs of energy consumers in North America, encourage the collaborative sharing of best practices in consumer engagement among industry stakeholders, and educate the public about the benefits of the smart grid.

Utilities Standards Forum

Utilities Standards Forum (USF) is a forum of electricity distribution members established for collaboration and mutual support. WNH was a founding member of the USF in 2004 in response to changing regulations around engineering standards. USF has progressed to include IT and Regulatory forums and has grown from 12 LDCs to 54 including Hydro One, Alectra, and Toronto Hydro.

VISIT WWW.WNHDYRO.COM/PARTNERSHIPS TO LEARN MORE

ENERGY EFFICIENCY

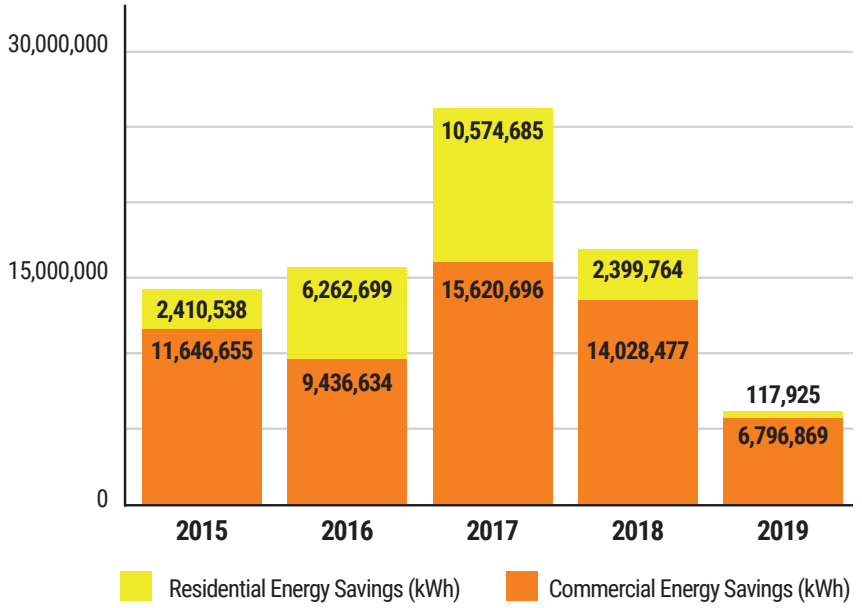
Waterloo North Hydro encourages all of its customers to be more energy efficient, save money, and better manage their energy costs.

The way WNH supports its customers in reaching their energy efficiency goals changed in early 2019 with the centralization of Ontario's conservation and demand management programs. The centralization included the cancellation of a number of Save on Energy Programs.

Despite these changes, WNH continued to provide assistance and guidance to its residential, small business, and medium and large commercial customers throughout the year. WNH's efforts and the willingness of our customers to embrace energy efficiency resulted in a projected savings of 6,914,794 kWh in 2019.

As a result of successful business cases and collaboration with several local distribution companies, WNH was able to introduce three Independent Electricity System Operator-funded, local programs including the Swimming Pool Efficiency Program, the Refrigeration Efficiency Program, and the Strategic Energy Management Program. These programs will ensure WNH continues to champion energy management efforts across its service territory.

ENERGY SAVINGS PER YEAR





FUTURE GROWTH

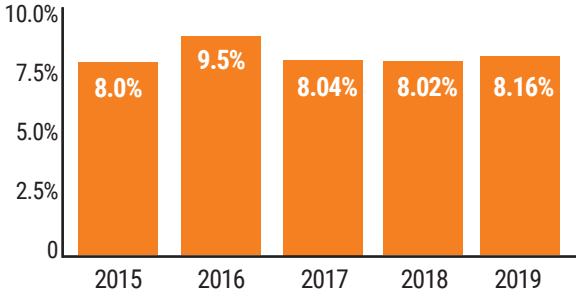
Waterloo North Hydro's connections to all aspects of its service territory continue to strengthen. Ensuring its infrastructure is able to adequately prepare for future growth while continuing to serve existing customers is an important part of the organization's overall corporate vision. In 2019, WNH invested more than $19.2 million in new and upgraded infrastructure to ensure an adequate and reliable supply of power is available to meet customer needs and enable economic growth in the region. Capital investments are used to replace aging poles, overhead lines and underground distribution systems in residential subdivisions, transformers and substation equipment



VALUE TO SHAREHOLDERS

Waterloo North Hydro continues to achieve strong financial performance by balancing system reliability and service while minimizing controllable costs, including costs associated with operating, maintenance and administration. For the year ending December 31, 2019, net income from operations amounted to $8,102,000 for a return on equity of 8.16%.

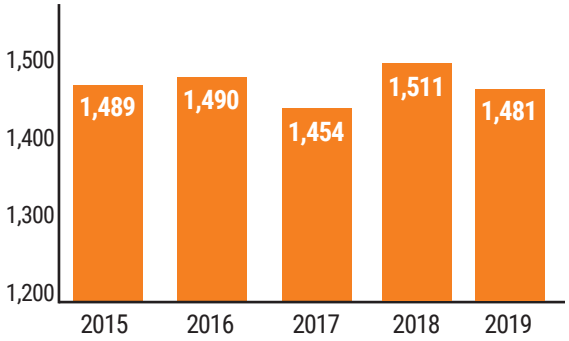
Return on Equity



FINANCIAL REPORTS

Waterloo North Hydro delivered approximately 1,481 gigawatt-hours (GWh) of energy to 57,819 customers in 2019. WNH's customer base has seen steady growth in recent years, with a growth rate of 4.3% over the past five years. While the customer base has continued to grow, the success of conservation programs and the prevalence of energy efficiency products for the home, has led to a slow decrease in customer consumption. Population growth within WNH's service territory is expected to continue to grow steadily, allowing for sustainable revenue generation. Energy Consumption decreased 9.8% in 2019 to 1.481 GWh in 2019.

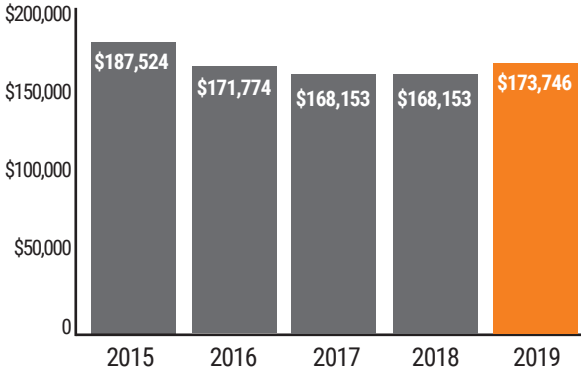
Electricity Sales (GWh)



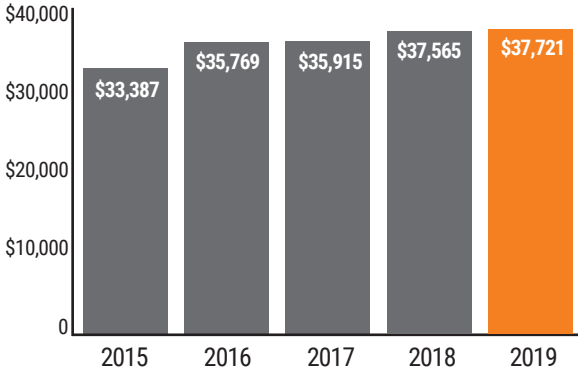


FINANCIAL HIGHLIGHTS ($000'S)

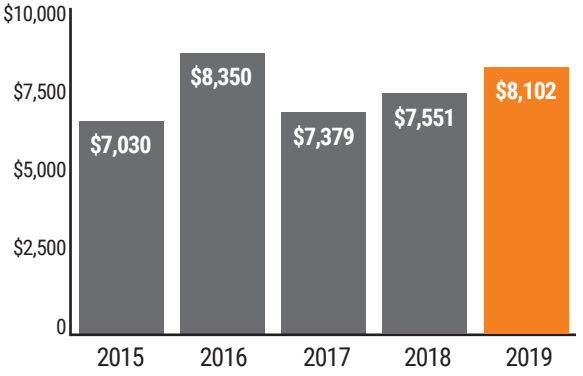
Energy Sales



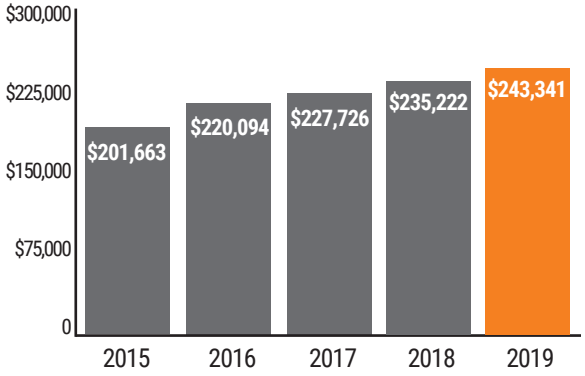
Distribution Revenues



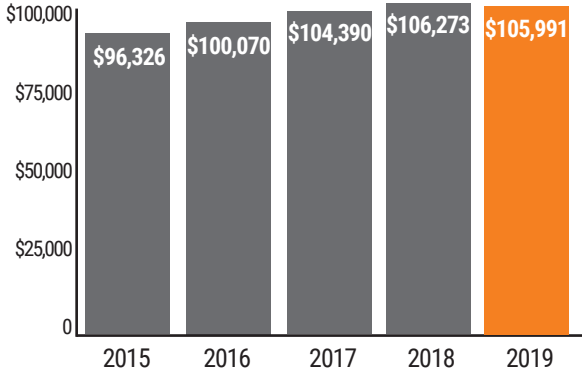
Net Income from Operations



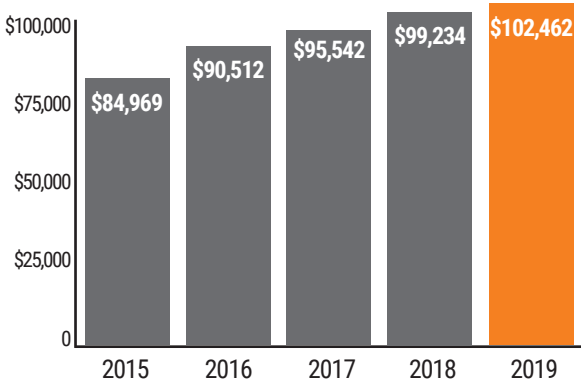
Capital Assets



Long-Term Debt



Shareholder Equity



CORPORATE STRUCTURE

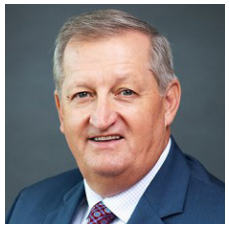
The Board of Directors of Waterloo North Hydro Inc. are appointed by the WNH Holding Corporation and are responsible for the overall direction of the company. Day-to-day leadership and management of the corporation are delegated to the Chief Executive Officer and the Leadership Team.

Bank **Canadian Imperial Bank of Commerce** 1 King St E., Kitchener

Counsel **Miller Thompson LLP** 295 Hagey Blvd, #300, Waterloo

Auditor **KMPG** 115 King St S., Waterloo

Executive



Rene W. Gatien
President & Chief Executive Officer



Albert P. Singh
Vice-President, Finance and Chief Financial Officer



Mark Dillon
Vice-President, Information Technology Services



Dorothy Moryc
Vice-President, Engineering and Stations



John Stephens
Vice-President, Operations.

Board of Directors

(l-r) Tim Martin; Michael Pley (Chair); Joe Nowak (Township of Wellesley Mayor); Sandy Shantz (Township of Woolwich Mayor); Dave Jaworsky (City of Waterloo Mayor); Arnold Drung; Jeff Henry; Micheal Kelly (Vice-Chair); Carol Leaman



Waterloo North Hydro

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