May 16, 2022

VIA RESS

Ms. Nancy Marconi
Registrar
Ontario Energy Board
2300 Yonge Street
27th Floor, Box 2319
Toronto, ON M4P 1E4
Email: Boardsec@oeb.ca

Dear Ms. Marconi;

RE: ALECTRA UTILITIES CORPORATION ("ALECTRA UTILITIES") INCREMENTAL CAPITAL MODULE ("ICM") APPLICATION FOR 2023 ELECTRICITY DISTRIBUTION RATES AND CHARGES (EB-2022-0013)

Alectra Utilities Corporation ("Alectra Utilities") submits an application for approval of ICM funding in the PowerStream and Enersource Rate Zones ("RZs") effective January 1, 2023.

This application is being filed in accordance with the OEB's *Filing Requirements for Electricity Distribution Rate Applications – Chapter 3 Incentive Rate-Setting Applications*, issued June 24, 2021 (the "Chapter 3 Filing Requirements").

This application includes live versions of the ICM Models for each RZ.

Alectra Utilities has filed an electronic version of this application via the Board's RESS filing system.

Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Yours truly,

Natalie Yeates
Director, Regulatory Affairs and Reporting
natalie.yeates@alectrautilities.com

cc: Charles Keizer, Torys LLP

EXHIBIT LIST

IN THE MATTER OF the *Ontario Energy Act, 1998*, being Schedule B to the *Energy Competition Act, 1998*, S.O. 1998, c.15;

AND IN THE MATTER OF an Application by Alectra Utilities Corporation 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, 2023.

LEGAL APPLICATION

Alectra Utilities Corporation (the "Applicant" or "Alectra Utilities"), is a corporation incorporated under the *Ontario Business Corporations Act*, and is licenced by the Ontario Energy Board (the "OEB") to own and operate electricity distribution facilities under licence number ED-2016-0360.

Alectra Utilities hereby applies to the OEB pursuant to section 78 of the *Ontario Energy Board Act, 1998*, as amended (the "OEB Act"), for orders approving Incremental Capital Module ("ICM") funding in the PowerStream and Enersource Rate Zones ("RZs"), through distribution rate riders effective January 1, 2023.

This Application is prepared in accordance with the OEB's:

a. *Report of the Board – New Policy Options for the Funding of Capital Investments: The Advanced Capital Module, dated September 18, 2014;*

b. *Report of the Board – New Policy Options for the Funding of Capital Investments: Supplemental Report, dated January 22, 2016;*

c. *Handbook for Utility Rate Applications (the "Rate Handbook"), dated October 13, 2016;*

d. *Filing Requirements for Electricity Distribution Rate Applications – Chapter 3 Incentive Rate-Setting Applications issued June 24, 2021 (the "Filing Requirements"); and*

e. *OEB Letter: Incremental Capital Modules During Extended Deferred Rebasing Periods, issued February 10, 2022.*

Further, in the OEB's Decision in Alectra Utilities' 2020 Electricity Distribution Rate ("EDR") application, the OEB stated that Alectra Utilities may consider a multi-year ICM that meets the ICM criteria if it seeks further ICM funding.[1] This application is consistent with OEB policy in relation to the availability of, and basis for, ICM funding for consolidating distributors.

This Application is supported by pre-filed written evidence which may be amended from time to time. For the reasons set out in this Application, Alectra Utilities submits that the proposed distribution rates are just and reasonable.

PROPOSED EFFECTIVE DATE

Alectra Utilities requests that the OEB make its Final Rate Order effective January 1, 2023. If the OEB does not expect that the Final Rate Order will be issued by such date, the Applicant requests that the OEB approve the recovery of any differences in ICM revenue between the effective date and the implementation date of the OEB's Decision and Order establishing final rates and charges.

FORM OF HEARING REQUESTED

Alectra Utilities requests that the elements of this Application be heard by way of written hearing.

CONTACT INFORMATION

Alectra Utilities requests that copies of all documents filed with the OEB by each party to this proceeding be served on the Applicant and the Applicant's counsel as follows:

The Applicant:

Natalie Yeates
Director, Regulatory Affairs and Reporting
Alectra Utilities Corporation

[1] EB-2019-0018, Partial Decision and Order, January 30, 2020, p.28.

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The Applicant's Counsel:

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Dated at Mississauga, Ontario this 16th day of May, 2022.

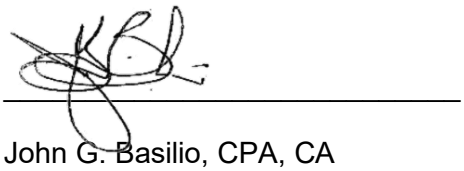
ALECTRA UTILITIES CORPORATION

Natalie Yeates

Director, Regulatory Affairs and Reporting

CERTIFICATION OF THE EVIDENCE

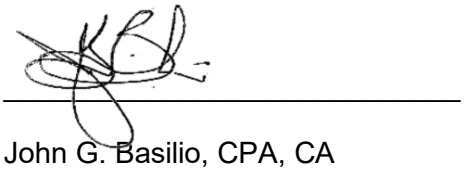
As Executive Vice-President and Chief Financial Officer of Alectra Inc., I certify that, to the best of my knowledge, the evidence filed in this Application is accurate, consistent and complete.



John G. Basilio, CPA, CA
Executive Vice-President and Chief Financial Officer

CERTIFICATION REGARDING PERSONAL INFORMATION

As Executive Vice-President and Chief Financial Officer of Alectra Inc., I certify that, to the best of my knowledge, that the evidence filed in this Application does not include any personal information, as defined in the *Freedom of Information and Protection of Privacy Act*, that is not otherwise redacted in accordance with Rule 9A of the OEB's *Rules of Practice and Procedure*.



John G. Basilio, CPA, CA
Executive Vice-President and Chief Financial Officer

EXECUTIVE OVERVIEW

Alectra Utilities is requesting approval of Incremental Capital Module ("ICM") funding for urgent underground cable renewal investments in the PowerStream and Enersource rate zones ("RZs") for 2023 and 2024. This Executive Overview provides a summary of the structure and key aspects of this Application.

Application Structure

Exhibit 2 sets out the OEB's ICM filing requirements and demonstrates how Alectra Utilities has satisfied the eligibility criteria of materiality, need and prudence. Exhibit 3 sets out the evidence in respect of the proposed ICM investments, including the need and drivers for the investment; the outcomes and benefits for customers; and how the ICM investment addresses customer needs and preferences. Exhibit 4 includes attachments in support of various aspects of the Application.

Background

Alectra Utilities, a wholly-owned subsidiary of Alectra Inc. ("Alectra"), is an Ontario corporation with its corporate head office in the City of Mississauga. Alectra Utilities carries on the business of distributing electricity within the communities of Mississauga, Hamilton, St. Catharines, Brampton, Alliston, Aurora, Barrie, Beeton, Bradford, Markham, Penetanguishene, Richmond Hill, Thornton, Tottenham, Vaughan, Guelph and Rockwood, pursuant to Ontario Energy Board ("OEB" or the "Board") Electricity Distributor Licence No. ED-2016-0360.

In April 2016, Enersource Hydro Mississauga Inc. ("Enersource"), Horizon Utilities Corporation ("Horizon Utilities"), and PowerStream Inc. ("PowerStream") (collectively the "predecessor Applicants") filed an application (the "MAADs Application"; EB-2016-0025) pursuant to the *Report of the Board: Rate-making Associated with Distributor Consolidations* and the *Handbook to Electricity Distributor and Transmitter Consolidation* (the "MAADs Handbook") seeking OEB approval to amalgamate to form Alectra, for Alectra to purchase and amalgamate with Hydro One Brampton Networks Inc. ("Hydro One Brampton") under section 86 of the *Ontario Energy Board Act 1998* (the "Act"), and for other related relief. In the MAADs Application, the predecessor Applicants selected a 10-year rebasing deferral period. On December 8, 2016, the OEB issued its Decision and Order granting the requested approvals in the MAADs Application, including the

10-year rebasing deferral period. This application was granted, and the amalgamation took effect February 1, 2017.

In March 2018, Alectra Utilities and Guelph Hydro Electric System Inc. ("GHESI") filed an application (the "Alectra/Guelph MAADs Application"; EB-2018-0014) seeking OEB-approval to amalgamate under section 86 of the Act. This application was granted, and the amalgamation took effect January 1, 2019.

As indicated in the MAADs Handbook and in the report entitled *Rate-making Associated with Distributors Consolidation*, issued July 23, 2007 (the "2007 Report"), as well as the updated report on the same topic issued by the OEB on March 26, 2015 (the "2015 Report"), Alectra Utilities' RZs will continue on their current rate plan terms until such terms expire. Once expired, all RZs migrate to the Price Cap Incentive Rate-setting option ("Price Cap IR). Currently, all of Alectra Utilities' RZs are on the Price Cap IR for the purpose of setting electricity distribution rates. Under the Price Cap IR rate plan, Alectra Utilities is permitted to apply for: a) inflationary increases to rates, adjusted for an efficiency factor; and b) funding of incremental capital projects through the ICM mechanism.

Investment is Needed to Address the Ongoing, Accelerating Deterioration of Underground Distribution Cable

As demonstrated in this application, Alectra Utilities must urgently invest to address worsening reliability due to deteriorated underground direct-buried cable and related equipment. While the company has been investing in these assets for multiple years, the increasing deterioration of this equipment is outpacing the level of investment supported by Alectra Utilities' base rates, resulting in an increasing volume of underground assets being replaced reactively. Beyond the inherent inefficiency of reactive replacement, the current level of underground cable renewal investment is insufficient to maintain the reliability of the distribution system in many communities. This investment cannot wait until Alectra Utilities' rebases; if the company does not increase the pace of renewal, it forecasts that one out of every four neighbourhoods in its service territory will be served by deteriorated and unreliable cables by 2025.

Alectra Utilities filed its first five-year Distribution System Plan ("DSP") on an integrated basis in its 2020 rate application. The DSP provided a comprehensive and detailed description of Alectra

Utilities' capital investment plans for its distribution system over the 2020 to 2024 planning period, including the need to invest in underground cable and related accessories. In the DSP, Alectra Utilities identified that defective equipment was a leading cause of declining reliability, both in terms of frequency and duration of outages. The DSP identified failures of underground direct-buried cable and cable accessories as a leading contributor to the declining reliability. A key objective of renewal investments in the DSP was to maintain historical reliability levels across the system.

As the OEB did not ultimately approve incremental capital funding in the 2020 rate application[2], Alectra Utilities reduced its planned capital expenditures over the 2020-2024 period following the OEB's decision. Alectra Utilities completed a comprehensive review of its capital investment plan to identify reductions and deferrals in order to align the level of investment with the funding available in rates. This resulted in the deferral of some prudent investments, and as described in Exhibit 3, Tab 1, Schedule 1, has led to the deferral of investments in underground system renewal.

The decision to reduce and defer significant investments in System Renewal was necessary to align the level of investment with the funding in base rates. The pace at which cable failures have intensified in existing or new emerging neighbourhoods is greater than what was contemplated in the DSP. These factors have resulted in an increasing volume of underground assets being replaced reactively through reactive capital or emerging underground renewal. The current level of underground cable renewal investment is insufficient to maintain the reliability of the distribution system in the growing number of neighbourhoods supplied by deteriorated and unreliabe cable.

Since preparing the DSP, Alectra Utilities has continued to enhance its capital planning tools, allowing the company to further focus its investments on work that provides value for customers. In particular, Alectra Utilities has implemented an Asset Analytics Platform to evolve the existing condition-based asset management practice towards predictive analytics, reliability-driven maintenance and machine learning. The Asset Analytics Platform provides Alectra Utilities with the functionality to compute asset condition assessments, overlay reliability data sets with maps

[2] The overall level of investment planned in the 2020-2024 DSP exceeded the funding available through rates.

to identify emerging hotspots and combine large data sets to establish cross-sectional relationships. Enhanced analytics has enabled Alectra Utilities to incorporate the most recent reliability events against up-to-date asset condition information to identify localized emerging issues. While these enhanced processes and tools will continue to benefit the utility's planning into the future, in this application they have specifically helped Alectra Utilities focus the underground cable renewal investments proposed for ICM funding on those assets and neighbourhoods where incremental investments will yield the greatest value.

Proposed Incremental Investment: Underground Cable Renewal

This section summarizes the incremental underground cable renewal investments that Alectra Utilities proposes to fund through the ICM funding requested in this application.

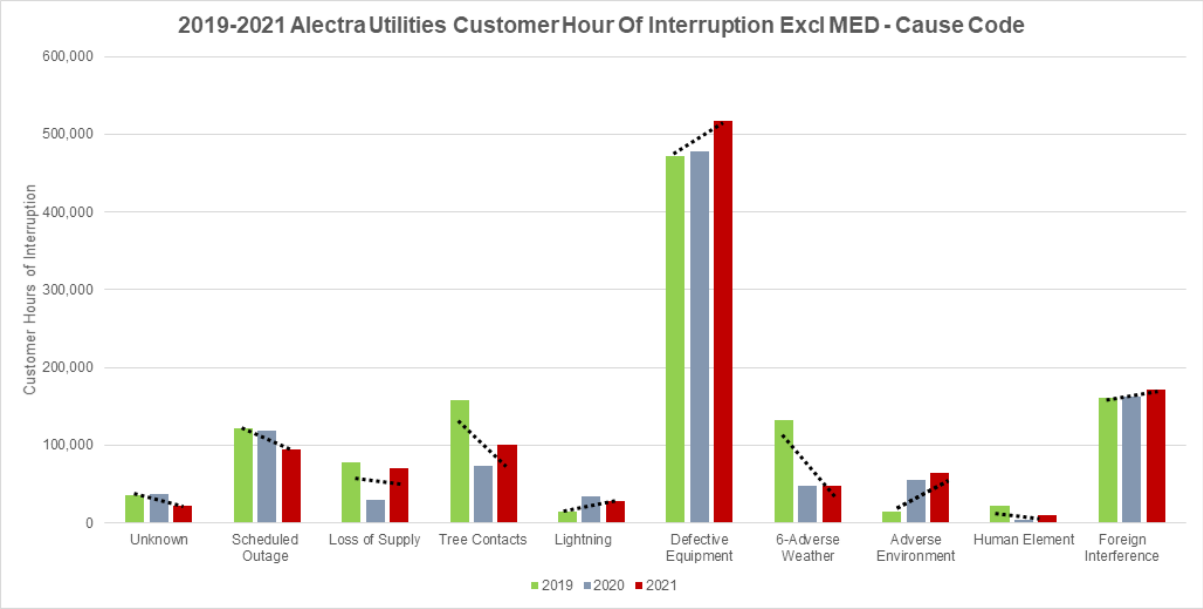
To address this urgent need, Alectra Utilities has identified incremental capital investments in the PowerStream and Enersource RZs to either replace or, where feasible, to rehabilitate using silicone injection to extend the life of the cable in these RZs. These investments are driven by deteriorating asset condition, specifically, an increase in cable failures in localized "hotspots." As summarized below, investment is needed urgently to address an increasing trend in the hours that customers' service is interrupted due to defective equipment. Alectra Utiliites has continued to refine the approach that is has used to identify the proposed incremental investments, using data analytics to identify neighbourhoods where significant outages are likely to occur due to failures of underground cable, and address these assets in a focused, localized basis. Based on the condition of the assets in a given location, Alectra Utilities may either replace deteriorated assets, or "rejuvenate" existing cable through silicone gel injection. The latter method is less disruptive to customers and can provide greater value than outright replacement, since renewal through injection extends the life of existing cable at one-sixth the cost of outright replacement. Injection also provides environmental benefits by reusing the existing cable. Timely investment is critical to the viability of this approach, as injection is not possible once cables have deteriorated too far. More detailed information on the proposed capital investments is provided in Exhibit 1, Tab 3, Schedule 4.

Since the 2020 DSP was prepared, system reliability has worsened due to several factors, including deteriorated distribution equipment and the increased impact of adverse weather events

and storms. When the DSP was prepared, Alectra Utilities had identified that 14% (3,173 km of a total of 22,140 km) of underground cable had a Health Index of poor or very poor condition. Notwithstanding the planned and reactive cable replacement work that Alectra Utilities conducted in the intervening years, the revised assessment of cable condition identified that the population of poor and very poor condition cable had increased to 3,793 km, representing 17% of the total cable population. This deteriorating trend is indicative of a longer-term issue that Alectra Utilities will continue to face in coming years: although the current population of deteriorated underground cable in the system is large, there is a much larger wave of cable that will deteriorate over the next twenty years.

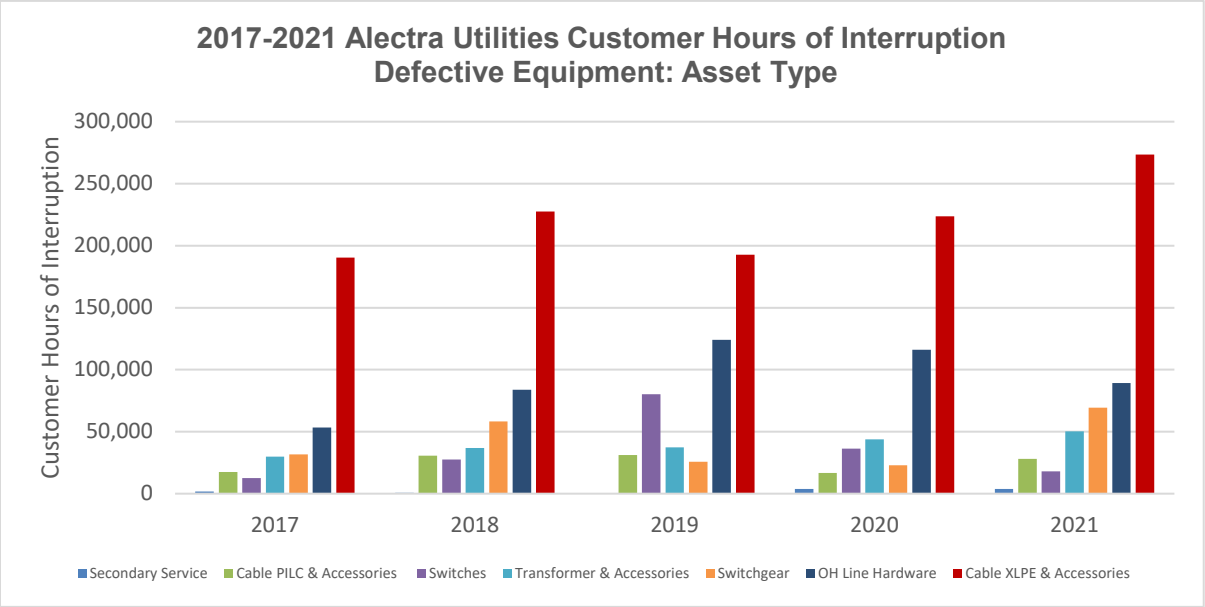
Since preparing the DSP, Alectra Utilities has implemented a number of initiatives to reverse the negative trend of worsening reliability. Investments in storm hardening of overhead systems have resulted in fewer customer hours of interruption resulting from adverse weather events since 2019. Further, as identified above, Alectra Utilities implemented an Asset Analytics platform to enable predictive maintenance of vegetation management which has reduced the outage impacts from tree contacts. Despite Alectra Utilities' efforts to maintain reliability performance as set out in the DSP, the impact of defective equipment outages has continued to increase. The increasing trend in customer hours of interruption indicates that the rate of asset degradation is greater than the pace of renewal. Since 2019, outages resulting from the failure of defective equipment account for 43% of all customer hours of interruption.

Figure 1 – Customer Hours of Interruption by Cause Code



The defective equipment sub-causes show that the failure of direct-buried underground cable and accessories is the most significant driver of the increasing trend. The average customer hours of interruption due to direct-buried cable and cable accessories increased by 10% over the 2019 to 2021 period, compared to the 2016 to 2018 period. Since 2017, the highest number of interruptions (66%) occurred in the PowerStream and Enersource RZs.

Figure 2 – Customer Hours of Interruption by Asset Type



Alectra Utilities is requesting approval of ICM funding of $25.4MM in 2023 and $26.9MM in 2024, respectively, for the PowerStream and Enersource RZs, for a total investment of $52.3MM. A summary of the proposed investment, by RZ, is provided in Tables 1 and 2, below.

Table 1 – 2023 Proposed ICM Capital Expenditure

2023 ICM	ERZ	PRZ	Total
Cable Injection	2,926,499	5,912,536	8,839,036
Cable Replacement	5,802,666	10,721,259	16,523,925
Total Incremental Capital	**$ 8,729,165**	**$ 16,633,796**	**$ 25,362,961**

Table 2 – 2024 Proposed ICM Capital Expenditure

2024 ICM	ERZ	PRZ	Total
Cable Injection	3,515,638	9,431,280	12,946,918
Cable Replacement	5,173,243	8,812,384	13,985,627
Total Incremental Capital	**$ 8,688,880**	**$ 18,243,664**	**$ 26,932,545**

As described above, Alectra Utilities is experiencing an increase in localized cable failures and plans to address these cables through a combination of two cable renewal strategies: cable injection and cable replacement. Based on the analysis of recent underground cable failures and asset condition assessment analysis, Alectra Utilities has identified the volume of localized

hotspots with the highest probability of imminent failure. These are the neighbourhoods included for ICM funding.

Case Study: Batson Drive (Aurora)

One example of an impacted community is the Batson Drive neighbourhood in Aurora. Over the last three years, the customers in the community have experienced eleven failures, resulting in an 80% increase in the rate of failures. In addition to the increasing frequency of cable failures in the community, the complexity and costs of emergency repairs required to restore power are increasing. Ultimately, the cable has deteriorated to the point that urgent replacement is required. Without the planned replacement of the cable, emergency repairs will no longer be an option and may result in costly emergency replacements and service disruptions to residents and businesses in the community.

In each neighbourhood, Alectra Utilities will implement the cable renewal strategy (cable injection and/or cable replacement) that delivers the best value for customers. To ensure the ICM investment is the most cost-effective option for customers, Alectra Utilities will leverage cable injection in neighbourhoods where it is feasible to do so (cables that are in very poor condition and too far deteriorated are not considered for injection). Approximately 46% of the proposed ICM projects will address deteriorated cables in the affected neighbourhoods with cable injection technology. The injection of silicone gel reinforces the weakened insulation and can extend the useful life of the cable up to 20 years without the costly and disruptive need to excavate or to replace entire cables. A key factor in planning these investments is that during the life of a cable there is a limited period during which lower cost injection work can be executed and, if that window is missed, then cable replacement will be the only remaining option. The cost of cable replacement is 6 times greater than the cost of injection on a per kilometer basis. The benefits of cable injection include: cost savings; minimal environmental impact; and fewer outages.

Each of the projects that comprise the proposed ICM investment are driven by specific reliability concerns identified in the respective neighbourhoods. These projects have been identified for ICM funding as the asset condition, reliability and quality of service in these areas create an urgent need for funding. This investment will provide benefits to the customers and will help avoid

situations in which Alectra Utilities is forced to respond reactively to a growing wave of deteriorated assets through more costly and less efficient means of renewal.

Without ICM funding, the outcome is a continued decline in reliability with an increase in localized cable failures. Further, critical investments would need to be deferred, resulting in increasing reactive expenditures and greater renewal costs in the long term. The proposed ICM investment of $52.3MM for the PowerStream and Enersource RZs over the 2023 to 2024 period will address the urgent reliability needs in the neighbourhoods with deteriorated cables and is expected to avoid approximately $180MM in future cable renewal expenditures.

Customer Engagement

Alectra Utilities engaged Innovative Research Group ("Innovative") to seek customer input on the proposed ICM investments in the PowerStream and Enersource RZs. The ICM customer engagement survey focused on customer preferences as between specific investment options and outcomes to address the challenges posed by deteriorating underground cable. Customers were presented with the trade-offs between bill impacts, reliability outcomes, and volume of cable injected or replaced under four different scenarios, including a "status quo" approach that would maintain the level of investment that would be funded within base rates. For each option, where applicable, customers were presented with the proposed incremental capital amount over the 2023 and 2024 period; the monthly and cumulative bill impact over the 2-year period; and the expected outcomes/benefits of the proposed investment.

Innovative's findings are provided in a written report, which is provided as Attachment 11 (the "Customer Engagement Report").

As set out in the Innovative Report, customers want Alectra Utilities to invest more in renewing deteriorated underground cable. In both RZs, a majority of customers across all rate classes supported an increase in investment in both strategies, and customers consistently preferred a more rapid pace of expenditure on these projects. Alectra Utilities incorporated customer preferences when identifying the projects proposed for ICM funding in this application. The bill impacts presented in the customer engagement survey align with the proposed bill impacts in this application. For a typical residential customer in the Enersource RZ, the total monthly bill impact is $0.13 in 2023 and $0.13 in 2024; for a typical residential customer in the PowerStream RZ, the

total monthly bill impact is $0.16 in 2023 and $0.17 in 2024. Details on the customer engagement, and the impact that customer input had on the proposed cable renewal investment is described in Exhibit 3, Tab 1, Schedule 3.

Conclusion

Alectra Utilities respectfully requests that the Board approve the relief sought in this Application.

INCREMENTAL CAPITAL MODULE ("ICM")

Alectra Utilities is requesting approval for incremental capital funding for the PowerStream and Enersource RZs in 2023 and 2024. Alectra Utilities has capital investment needs for these RZs that are not funded through existing distribution rates. The OEB's Capital Module for ACM and ICM ("ICM Model") for the PowerStream and Enersource RZs is filed as Attachments 3 and 4 for the PowerStream RZ and attachments 7 and 8 for the Enersource RZ.

The OEB's ICM policy, as set out in the *Report of the Board New Policy Options for the Funding of Capital Investments: The Advanced Capital Module,* dated September 18, 2014 and the subsequent *Report of the OEB New Policy Options for the Funding of Capital Investments: Supplemental Report* (collectively referred to as the ICM Report), dated January 22, 2016, was established to address the treatment of a distributor's capital investment needs that arise during a Price Cap IR rate-setting plan and which are incremental to a calculated materiality threshold

On February 10, 2022, the OEB issued a Letter re: *Incremental Capital Modules During Extended Deferred Rebasing Periods* (the "ICM Policy Update Letter"). The letter provides an update to the OEB's ICM policy for electricity distributors during extended rebasing deferral periods arising from utility consolidations. The policy update is applicable to utilities in years six to ten of their deferral period. For Alectra Utiltiies, this represents the 2022 to 2026 years of its rebasing deferral period; As of 2022, Alectra Utilities is currently in year 6 of its deferral period.

In the letter, the OEB stated that:

> *"To further enhance the efficiency of the regulatory process and to provide a further incentive for distributors considering consolidation, the OEB is updating the existing ICM policy for responding to capital investment needs of electricity distributors that select an extended deferred rebasing period (beyond five years) under the OEB's current MAADs policy. Specifically, the OEB is providing additional flexibility for these electricity distributors to apply for incremental capital funding for an annual capital program during the extended rebasing period…"*

In addition to the existing ICM requirements, electricity distributors in years six to ten of their deferral period must demonstrate the following:

- An urgent need for such additional funding that is based on new information that has arisen since the utility's most recent rebasing application related to the management of risk associated with asset condition, reliability and quality of service and public safety;

- History of good utility practice in capital planning, capital program management and asset maintenance;

- How this ICM investment addresses customer needs and preferences and delivers benefits to customers; and

- Exhaustion of other available options to manage its costs within the envelope provided by the existing price cap or another applicable formula.

Table 3 below, summarizes the existing ICM filing requirements and the additional filing requirements included in the OEB's February 10 ICM Policy Update letter. Alectra Utilities has mapped each ICM filing requirement to the ICM eligbility criteria of material, need and prudence.

Table 3 – ICM Filing Requirements

	ICM Filing Requirements	Evidence Reference
Materiality	Completed ICM Models in Excel and PDF	Attach 3-4; 7-8
	Calculation of the revenue requirement (i.e., the cost of capital, depreciation, and PILs)	Attach 3-4; 7-8
	Calculation of each incremental project's revenue requirement that will be offset by revenue generated through other means (e.g., customer contributions in aid of construction)	Attach 3-4; 7-8
	Calculation of a rate rider to recover the incremental revenue from each applicable customer class	Attach 3-4; 7-8
	An analysis demonstrating that the materiality threshold test has been met	Ex.2/T1/S1 pp.5-7;13-15
	Project-Specific Materiality Test	Ex.2/T1/S1 pp.7-8;15-16
	An analysis demonstrating that the amounts will have a significant influence on the operation of the distributor	Ex.2/T1/S1 p.8; 16
Need	Justification that amounts being sought are directly related to the cause, which must be clearly outside of the base upon which current rates were derived	Ex.2/T1/S1 pp.8-10;16-17
	Evidence that the incremental revenue requested will not be recovered through other means	Ex.2/T1/S1 pp.8-10;16-17
	A description of the actions the distributor would take in the event that the OEB does not approve the application	Ex.1/T1/S4 p.9
	An updated DSP is required for any ICM request that is filed beyond the five-year horizon of the distributor's current DSP.	N/A
	A distributor must demonstrate that an urgent need for additional incremental capital funding is based on new information that has arisen since the utility's most recent rebasing application related to the management of risk associated with asset condition, reliability and quality of service and public safety	Ex.3/T1/S2
	A distributor must demonstrate that it has exhausted other available options to manage its costs within the envelope provided by the existing price cap or another applicable formula	Ex.3/T1/S1
	How the ICM investment addresses customer needs and preferences and delivers benefits to customers	Ex.3/T1/S3
Prudence	Justification that the amounts to be incurred will be prudent. This means that the distributor's decision to incur the amounts represents the most cost-effective option (but not necessarily the least initial cost) for ratepayers	Ex.3/T1/S4
	Details by project for the proposed capital spending plan for the expected in-service year	Attach 5-6; 9-10
	A description of the proposed capital projects and expected in-service dates	Ex.3/T1/S4
	History of good utility practice in capital planning, capital program management and asset maintenance	Ex.3/T1/S1; Attach 12

In order to be eligible for incremental capital, an ICM claim must be incremental to a distributor's capital requirements within the context of its financial capacities underpinned by existing rates; and satisfy the eligibility criteria of materiality, need and prudence, as set out in the ICM Report.

These criteria are discussed in detail, below.

Materiality

The ICM addresses the question of materiality in two steps. The first is by applying the ICM "materiality threshold formula", which serves to define the level of capital expenditures that a distributor should be able to manage within current rates. This test provides that any incremental capital amounts approved for recovery must fit within the total eligible incremental capital amount and must clearly have a significant influence on the operation of the distributor.

The Board-defined materiality threshold is represented by the following formula:

$$\textit{Threshold Value}\ (\%) = 1 + [(\frac{RB}{d})\ x\ (g + PCI\ X\ (1 + g))]) \ x\ ((1 + g)\ x\ (1 + PCI)^{n-} + 10\%$$

RB = rate base from the distributor's last cost of service

d = depreciation from the distributor's last cost of service

g = growth calculated based on the percentage difference in distribution revenues between the most recent complete year and the distribution revenues from the most recent approved test year in a cost of service application

PCI = Price Cap Index (IPI-stretch_factor) from the distributor's most recent Price Cap IR application as a placeholder for the initial application filing to be updated when new information becomes available

n = number of years since the last rebasing

A second, project-specific, materiality test provides that minor expenditures, in comparison to the overall capital budget, should be considered ineligible for ICM treatment. Moreover, a certain degree of project expenditure over and above the OEB-defined threshold calculation is expected to be absorbed within the total capital budget.

Need

With regard to need, a distributor must satisfy the OEB that any incremental capital amount being requested is: (i) based on one or more discrete project(s) and should be directly related to the claimed driver, and (ii) clearly outside of the base upon which the distributor's rates were derived. Additionally, a distributor must also pass the "means test." Under the means test, if a distributor's regulated return, as calculated in its most recent calculation (Reporting and Record Keeping Requirements ("RRR") 2.1.5.6), exceeds 300 basis points above the deemed return on equity ("ROE") embedded in the distributor's rates, the funding for any incremental capital project will not be allowed.

Prudence

A distributor needs to establish that the incremental capital amount it proposes to incur is prudent. To satisfy the "prudence test", a distributor must demonstrate that its decision to incur the incremental capital represents the most cost-effective option for its customers (though, not necessarily the least initial cost option).

PowerStream RZ

Materiality

Materiality Threshold Test

The materiality threshold has been calculated for the PowerStream RZ using the Board-approved rate base and depreciation amounts from its 2017 Cost of Service Application (EB-2015-0003), a price cap index (PCI) of 3.0% and a growth rate of 0.18%.

The PCI of 3.0% is a placeholder to be updated with the OEB's approved PCI for 2023 and 2024 when it is available. It is based on inflation of 3.3% less a productivity factor of 0% and a stretch factor of 0.3%.

The growth rate of 0.18% has been calculated in accordance with the ICM Report and is equal to the increase in revenue based on PowerStream's 2021 actual billing determinants

divided by PowerStream's 2017 OEB approved billing determinants, using 2022 approved rates.

Table 4 below summarizes the calculation of the threshold capital expenditure amount using the Board's formula approved in the ICM Report. The threshold values for 2023 and 2024 are 187% and 190%, respectively, which results in a threshold capital expenditure value of $97,788,466 in 2023 and $99,070,252 in 2024.

Table 4 – Threshold Capital Expenditure Calculation – PowerStream RZ

Description	PRZ
Inflation	3.30%
Less: Productivity Factor	0.00%
Less: Stretch Factor	0.30%
Price Cap Index	3.00%
Growth Factor	0.18%
Rebasing Year	2017
# Years since rebasing	6
Price Cap Index	3.00%
Growth Factor	0.18%
Rate Base	$1,082,805,162
Depreciation	$52,272,173
Threshold Value	
Price Cap IR Year 2023	**187%**
Price Cap IR Year 2024	**190%**
Threshold CAPEX	
Price Cap IR Year 2023	**$97,788,466**
Price Cap IR Year 2024	**$99,070,252**

Eligible Capital Amount

Alectra Utilities provides a summary of its historical and proposed capital investments by category in Table 5 below. Alectra Utilities has filed at Attachments 5 and 6, details by project for the proposed 2023 and 2024 capital investment plan.

Table 5 – Capital Expenditures by Category PowerStream RZ ($MM)

Category	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024
System Access	$36.7	$42.0	$37.7	$28.8	$28.1	$30.3	$26.5	$25.8
System Service	$29.9	$12.0	$9.8	$11.7	$9.1	$9.7	$11.9	$10.5
System Renewal	$39.4	$38.1	$39.6	$48.0	$47.4	$48.9	$65.5	$68.0
General Plant	$6.6	$8.4	$7.9	$11.2	$10.8	$15.3	$16.1	$14.7
Total	**$112.6**	**$100.5**	**$95.0**	**$99.7**	**$95.4**	**$104.2**	**$120.0**	**$119.0**

Table 6 below compares the 2023 and 2024 capital budget for the PowerStream RZ to the materiality threshold to calculate the maximum eligible incremental capital.

Table 6 – Maximum Eligible Incremental Capital – PowerStream RZ

Eligible Incremental Capital	2023	2024
Capital Budget	119,919,658	118,939,805
Less: Materiality Threshold	97,788,466	99,070,252
Maximum Eligible Incremental Capital	**$22,131,192**	**$19,869,553**

Table 7 below identifies the eligible capital investment for which the PowerStream RZ is seeking approval. The business case summaries for each project included in this investment is filed under Exhibit 3, Tab 1, Schedule 4.

Table 7 – ICM Capital Expenditure – PowerStream RZ

Project Description	2023	2024	Total
Cable Injection	5,912,536	9,431,280	15,343,816
Cable Replacement	10,721,259	8,812,384	19,533,644
Total Incremental Capital	**$ 16,633,796**	**$ 18,243,664**	**$ 34,877,460**

The proposed ICM investments for 2023 and 2024 are below the annual maximum eligible incremental capital amounts in each respective year.

Project-Specific Materiality Test

Alectra Utilities' overall capital budget for all rate zones is $287.8MM in 2023 and $293.5MM in 2024. The proposed 2023 and 2024 ICM cable renewal investment in the PowerStream RZ of $16.6MM and $18.2MM, respectively, is significant relative to the overall capital budget. Alectra Utilities has assessed project-specific materiality in the

context of the OEB's ICM Policy Update Letter. Alectra Utilities is eligible to request ICM funding for an annual capital program, subject to the requirements[3] identified in the Letter. The proposed investments will allow Alectra Utilities to renew cables in 17 neighbourhoods over the 2023 to 2024 period.

Significant Influence

Alectra Utilities' total proposed ICM investment in the PowerStream RZ is $16.6MM in 2023 and $18.2MM in 2024, which is significant relative Alectra Utilities' overall capital budget in each year. The total proposed investment over the two-year period will avoid approximately 300 cable failure related outages in the PowerStream RZ, where each outage would impact 330 customers for approximately two hours per outage. Further, Alectra Utilities has forecast that the combined proposed ICM investment in both RZs will avoid future cable renewal costs of approximately $180MM, largely attributable to injecting cable now that would otherwise need to be replaced in the future as a result of missing the cable injection feasibility window.

Need

Means Test

Alectra Utilities' 2021 annual Reporting and Record Keeping Requirements ("RRRs") are filed for Alectra Utilities, and not individually, by rate zone. Alectra Utilities 2021 ROE was calculated to be 6.18%, 277 basis points below a calculated ROE for Alectra Utilities of 8.95%. Alectra Utilities calculated a consolidated deemed ROE percentage, using the weighted average of the OEB-approved deemed equity portion rate base amounts for each rate zone, from the most recent OEB-approved rebasing application for each of the predecessor companies. Therefore, Alectra Utilities meets the Means Test. Alectra Utilities ROE calculation for 2021, filed in RRR 2.1.5.6, is provided as Attachment 2.

[3] These requirements have been outlined on pp.1-2 of Exhibit 2, Tab 1, Schedule 1.

Discrete Project and Claimed Driver

The proposed investment in planned underground cable renewal in the PowerStream RZ will addresss the significant risk of failure associated with these assets in 17 neighbourhoods. The investment will address the compounding effect of a growing number of customer hours of interruption driven by XLPE cable failures and a rapidly growing backlog of in-service deteriorated and unreliable cable. Alectra Utilities has incorporated customer preferences and will pace the investment at an accelerated pace which will improve reliability in these 17 neighbourhoods.

Alectra Utilities leveraged its Asset Analytics platform to identify the projects for ICM funding. The utility employs overlays of reliability and cable condition maps to identify emerging hotspots and completes a full engineering assessment of the remediation needs. The engineering assessment of cable failures was completed utilizing the most recent reliability results as of year-end 2021. This assessment identified 78 projects that will address hotspots for cable failures in need of renewal over the 2023 to 2024 time period. Based on the engineering assessment, Alectra Utilities identified 20 high priority projects in the Enersource RZ and 32 high priority projects in the PowerStream RZ on the verge of cascading failures with an urgent need for renewal. Of these 52 projects, base funding was sufficient to address 24 cable renewal projects. Alectra Utilities is requesting ICM funding for the next 28 high priority cable renewal projects in need of urgent cable renewal in these two RZs (17 projects in the PowerStream RZ and 11 projects in the Enersource RZ).

Unfunded Through Base Rates

Alectra Utilities is experiencing a significant increase in localized cable failures and plans to address these cables through a combination of two cable renewal strategies: cable injection and cable replacement. The degradation of underground cables is significantly impacting customers in communities in the PowerStream RZ. The PowerStream RZ accounts for 35% of Alectra Utilities' customer hours of interruption since 2017. As identified in Exhibit 3, Tab 1, Schedule 2, the pace at which cable failures have intensified

in existing or new emerging neighbourhoods is greater than what was contemplated in the DSP.

Prudence

Alectra Utilities has considered various options to address the growing reliability issues due to underground cable failures resulting from ground moisture and corrosion. In each neighbourhood, Alectra Utilities will implement the cable renewal strategy that delivers the best value for customers. To ensure the ICM investment is the most cost-effective option for customers, Alectra Utilities will leverage cable injection in neighbourhoods where it is feasible to do so (cables that are in very poor condition and too far deteriorated are not considered for injection). A key factor in planning these investments is that during the life of a cable there is a limited period during which lower cost injection work can be executed and, if that window is missed, then cable replacement will be the only remaining option. Further details on the need and prudence of the investments are provided in Exhibit 3, Tab 1, Schedule 2.

Calculation of Revenue Requirement

The incremental revenue requirement associated with the ICM funding request is summarized in Table 8 below.

Table 8 – Incremental Revenue Requirement – PowerStream RZ

Incremental Revenue Requirement	2023	2024
Return on Rate base - Total	$946,902	$1,038,546
Amortization	$369,640	$405,415
Incremental Grossed Up PILs	($138,224)	($151,602)
Total Incremental Revenue	**$1,178,318**	**$1,292,359**

The Rate of Return has been calculated using the Board's deemed debt/equity ratios and the cost of capital parameters determined by the Board in its letter dated October 27, 2016 *"Cost of Capital Parameter Updates for 2017 Cost of Service and Custom Incentive Rate-setting Applications"*, consistent with those approved in PowerStream's 2017 Cost of Service application (EB-2015-0003).

A full year of depreciation has been included for recovery consistent with the ICM Report.

Similarly, PILs have been calculated using a full year of Capital Cost Allowance ("CCA").

The detailed calculation of 2023 incremental revenue requirement is provided in the Board's ICM Model filed as Attachment 3. Since the 2023 ICM Model does not include the incremental revenue requirement calculation and rate riders for 2024, Alectra Utilities has also filed a modified 2024 ICM Model for the PowerStream RZ as Attachment 4.

Rate Riders

Alectra Utilities is seeking Board approval for the 2023 ICM rate riders, for the PowerStream RZ, identified in Table 9. The revenue requirement has been allocated to rate classes based on the current allocation of revenue using Tab 7. Revenue Proportions of the ICM Model filed as Attachment 3. The revenue requirement for the residential class will be recovered via a fixed rate rider as per the OEB's letter issued July 16, 2015 (EB-2012-0410). Rate riders for all other rate classes are based on the current fixed/variable revenue split identified in the ICM Model Sheets 7 and 11.

Table 9 – 2023 ICM Rate Riders – PowerStream RZ

Rate Class	Unit	Service Charge Rate Rider	Volumetric Rate Rider
Residential	kWh	$0.16	$0.0000
General Service Less Than 50 kW	kWh	$0.17	$0.0001
General Service 50 To 4,999 kW	kW	$0.82	$0.0243
Large Use	kW	$35.15	$0.0130
Unmetered Scattered Load	kWh	$0.05	$0.0001
Sentinel Lighting	kW	$0.02	$0.0571
Street Lighting	kW	$0.01	$0.0366

Bill Impacts - ICM Rate Riders

Table 10 below identifies the monthly bill impact by rate class as a result of the addition of the 2023 ICM funding rate riders.

Table 10 – ICM Monthly Bill Impacts – PowerStream RZ (before HST and OER)

Rate Class	Unit	kWh	kW	ICM Monthly Rate Rider	% Increase vs 2022 Total Bill
Residential	kWh	750		$0.16	0.13%
General Service Less Than 50 kW	kWh	2,000		$0.37	0.11%
General Service 50 To 4,999 kW	kW	80,000	250	$6.90	0.06%
Large Use	kW	2,800,000	7,350	$130.70	0.03%
Unmetered Scattered Load	kWh	150		$0.05	0.16%
Sentinel Lighting	kW	180	1	$0.08	0.20%
Street Lighting	kW	280	1	$0.05	0.11%

Enersource RZ

Materiality

Materiality Threshold Test

The materiality threshold has been calculated for the Enersource RZ using the Board-approved rate base and depreciation amounts from its 2013 Cost of Service Application (EB-2012-0033), a price cap index (PCI) of 3.0% and a growth rate of -0.33%.

The PCI of 3.0% is a placeholder to be updated with the OEB's approved PCI for 2023 and 2024 when it is available. It is based on inflation of 3.3% less a productivity factor of 0% and a stretch factor of 0.3%.

The growth rate of -0.33% has been calculated in accordance with the ICM Report and is equal to the increase in revenue based on Enersource's 2021 actual billing determinants divided by Enersource's 2013 OEB approved billing determinants, using 2022 approved rates.

Table 11 below summarizes the calculation of the threshold capital expenditure amount using the Board's formula approved in the ICM Report. The threshold values for 2023 and 2024 are 182% and 184%, respectively, which results in a threshold capital expenditure value of $52,182,923 in 2023 and $52,731,092 in 2024.

Table 11 – Threshold Capital Expenditure Calculation – Enersource RZ

Description	ERZ
Inflation	3.30%
Less: Productivity Factor	0.00%
Less: Stretch Factor	0.30%
Price Cap Index	3.00%
Growth Factor	-0.33%
Rebasing Year	2013
# Years since rebasing	10
Price Cap Index	3.00%
Growth Factor	-0.33%
Rate Base	$610,456,583
Depreciation	$28,721,695
Threshold Value	
Price Cap IR Year 2023	**182%**
Price Cap IR Year 2024	**184%**
Threshold CAPEX	
Price Cap IR Year 2023	**$52,182,923**
Price Cap IR Year 2024	**$52,731,092**

Eligible Capital Amount

Alectra Utilities provides a summary of its historical and proposed capital investments by category in Table 12 below. Alectra Utilities has filed at Attachments 9 and 10, details by project for the proposed 2023 and 2024 capital investment plan.

Table 12 – Capital Expenditures by Category Enersource RZ ($MM)

Category	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024
System Access	$6.6	$9.1	$7.5	$8.0	$11.9	$11.3	$14.5	$15.4
System Service	$4.3	$2.6	$1.4	$3.5	$7.2	$2.7	$6.8	$2.2
System Renewal	$43.9	$41.6	$35.2	$32.6	$28.2	$23.6	$32.3	$32.3
General Plant	$4.8	$6.1	$5.7	$8.2	$7.9	$11.1	$11.7	$10.7
Total	**$59.6**	**$59.4**	**$49.8**	**$52.3**	**$55.2**	**$48.7**	**$65.3**	**$60.6**

Table 13 below compares the 2023 and 2024 capital budget for the Enersource RZ to the materiality threshold to calculate the maximum eligible incremental capital.

Table 13 – Maximum Eligible Incremental Capital – Enersource RZ

Eligible Incremental Capital	2023	2024
Capital Budget	65,401,326	60,617,884
Less: Materiality Threshold	52,182,923	52,731,092
Maximum Eligible Incremental Capital	**$13,218,402**	**$7,886,792**

Table 14 below identifies the eligible capital investment for which the Enersource RZ is seeking approval. The business case summaries for each project included in this investment is filed under Exhibit 3, Tab 1, Schedule 4.

Table 14 – ICM Capital Expenditure – Enersource RZ

Project Description	2023	2024	Total
Cable Injection	2,926,499	3,515,638	6,442,137
Cable Replacement	5,802,666	5,173,243	10,975,908
Total Incremental Capital	**$ 8,729,165**	**$ 8,688,880**	**$ 17,418,045**

The proposed ICM investment for 2023 is below the annual maximum eligible incremental capital amount. The proposed ICM investment for 2024 is $0.8MM higher than the annual maximum eligible capital amount. The OEB's approval of 2023 and 2024 inflation factors will determine the final materialty threshold and the total amount of capital eligible for ICM. For the purpose of the pre-filed evidence, the total revenue requirement and associated rate riders are presented in Table 16, assuming that the full amount of the investment is eligible for recovery. This is to ensure that the information presented in the application is consistent with the bill impacts presented to customers. Please refer to the section on "Treatment of 2024 Rate Riders" provided at pp.19-20 for details on Alectra Utilities' proposal on the treatment of the 2024 rate riders.

Project-Specific Materiality Test

Alectra Utilities' overall capital budget for all rate zones is $287.8MM in 2023 and $293.5MM in 2024. The proposed 2023 and 2024 ICM cable renewal investment in the Enersource RZ of $8.7MM (in each year), is significant relative to the overall capital

budget. Alectra Utilities has assessed project-specific materiality in the context of the OEB's ICM Policy Update Letter. Alectra Utilities is eligible to request ICM funding for an annual capital program, subject to the requirements[4] identified in the Letter. The proposed investments will allow Alectra Utilities to renew cables in 11 neighbourhoods over the 2023 to 2024 period.

Significant Influence

Alectra Utilities' total proposed ICM investment in the Enersource RZ is $8.7MM in 2023 and $8.7MM in 2024, which is significant relative Alectra Utilities' overall capital budget in each year. The total proposed investment over the two-year period will avoid approximately 150 cable failure related outages in the Enersource RZ, where each outage would impact 530 customers for approximately one hour per outage.

Need

Means Test

Alectra Utilities' 2021 annual Reporting and Record Keeping Requirements ("RRRs") are filed for Alectra Utilities, and not individually, by rate zone. Alectra Utilities 2021 ROE was calculated to be 6.18%, 277 basis points below a calculated ROE for Alectra Utilities of 8.95%. Alectra Utilities calculated a consolidated deemed ROE percentage, using the weighted average of the OEB-approved deemed equity portion rate base amounts for each rate zone, from the most recent OEB-approved rebasing application for each of the predecessor companies. Therefore, Alectra Utilities meets the Means Test. Alectra Utilities ROE calculation for 2021, filed in RRR 2.1.5.6, is provided as Attachment 2.

Discrete Project and Claimed Driver

The proposed investment in planned underground cable renewal in the Enersource RZ will addresss the significant risk of failure associated with these assets in 11

[4] These requirements have been outlined on pp.1-2 of Exhibit 2, Tab 1, Schedule 1.

neighbourhoods. The investment will address the compounding effect of a growing number of customer hours of interruption driven by XLPE cable failures and a rapidly growing backlog of in-service deteriorated and unreliable cable. Alectra Utilities has incorporated customer preferences and will pace the investment at an accelerated pace which will improve reliability in these 11 neighbourhoods.

Unfunded Through Base Rates

Alectra Utilities is experiencing a significant increase in localized cable failures and plans to address these cables through a combination of two cable renewal strategies: cable injection and cable replacement. The degradation of underground cables is significantly impacting customers in communities in the Enersource RZ. The Enersource RZ accounts for 31% of Alectra Utilities' CHI since 2017. As identified in Exhibit 3, Tab 1, Schedule 2, the pace at which cable failures have intensified in existing or new emerging neighbourhoods is greater than what was contemplated in the DSP.

Prudence

Please see Alectra Utilities' discussion on the prudence of the investments in the PowerStream RZ evidence at p. 10.

Calculation of Revenue Requirement

The incremental revenue requirement associated with the ICM funding request is summarized in Table 15 below.

Table 15 – Incremental Revenue Requirement – Enersource RZ

Incremental Revenue Requirement	2023	2024
Return on Rate base - Total	$561,642	$559,050
Amortization	$193,981	$193,086
Incremental Grossed Up PILs	($70,670)	($70,344)
Total Incremental Revenue	**$684,953**	**$681,792**

The Rate of Return has been calculated using the Board's deemed debt/equity ratios and the cost of capital parameters determined by the Board in its letter dated October 27, 2016 *"Cost of Capital*

Parameter Updates for 2017 Cost of Service and Custom Incentive Rate-setting Applications", consistent with those approved in Enersource's 2013 Cost of Service application (EB-2012-0033).

A full year of depreciation has been included for recovery consistent with the ICM Report.

Similarly, PILs have been calculated using a full year of Capital Cost Allowance ("CCA").

The detailed calculation of 2023 incremental revenue requirement is provided in the Board's ICM Model filed as Attachment 7. Since the 2023 ICM Model does not include the incremental revenue requirement calculation and rate riders for 2024, Alectra Utilities has also filed a modified 2024 ICM Model for the Enersource RZ as Attachment 8.

Rate Riders

Alectra Utilities is seeking Board approval for the 2023 ICM rate riders, for the Enersource RZ, identified in Table 16. The revenue requirement has been allocated to rate classes based on the current allocation of revenue using Tab 7. Revenue Proportions of the ICM Model filed as Attachment 7. The revenue requirement for the residential class will be recovered via a fixed rate rider as per the OEB's letter issued July 16, 2015 (EB-2012-0410). Rate riders for all other rate classes are based on the current fixed/variable revenue split identified in the ICM Model Sheets 7 and 11.

Table 16 – 2023 ICM Rate Riders – Enersource RZ

Rate Class	Unit	Service Charge Rate Rider	Volumetric Rate Rider
Residential	kWh	$0.13	$0.0000
General Service Less Than 50 kW	kWh	$0.24	$0.0001
General Service 50 To 499 kW	kW	$0.41	$0.0249
General Service 500 To 4,999 kW	kW	$9.43	$0.0128
Large Use	kW	$74.35	$0.0159
Unmetered Scattered Load	kWh	$0.05	$0.0001
Street Lighting	kW	$0.01	$0.0623

Bill Impacts - ICM Rate Riders

Table 17 below identifies the monthly bill impact by rate class as a result of the addition of the 2023 ICM funding rate riders.

Table 17 – ICM Monthly Bill Impacts – Enersource RZ (before HST and OER)

Rate Class	Unit	kWh	kW	ICM Monthly Rate Rider	% Increase vs 2022 Total Bill
Residential	kWh	750		$0.13	0.10%
General Service Less Than 50 kW	kWh	2,000		$0.44	0.13%
General Service 50 To 499 kW	kW	100,000	230	$6.14	0.04%
General Service 500 To 4,999 kW	kW	400,000	2,250	$38.23	0.06%
Large Use	kW	3,000,000	5,000	$153.85	0.04%
Unmetered Scattered Load	kWh	300		$0.08	0.15%
Street Lighting	kW	33	0.1	$0.02	0.28%

Treatment of 2024 ICM Riders

Alectra Utilities seeks OEB approval for the need for, and prudence of, the investment in 2023 and 2024. Further, Alectra Utilities seeks OEB approval of the 2023 ICM rate riders, effective January 1, 2023.

Alectra Utilities proposes that approval of the 2024 rate riders for the proposed ICM projects be determined in Alectra Utilities' 2024 Price Cap IR application. Alectra Utilities is guided by the OEB's treatment of ACM requests as part of cost of service applications. As provided in Section 3.3.1 of the Chapter 3 Filing Requirements:

- Cost recovery (i.e., rate riders) for qualifying ACM projects will be determined in the subsequent Price Cap IR application for the year in which the capital investment will come into service;
- Any approvals provided for an ACM in a cost of service application will be subject to the distributor passing the means test to receive its funding during the IR term;
- A distributor must provide the relevant project's updated cost projections, confirmation that the project(s) are on schedule to be completed as planned, and an updated ACM/ICM module in Excel format; and

- If the updated cost projections are greater than the pre-approved amount by 30% or more, the distributor must treat the project as a new ICM project and re-file the business case and other relevant material in the applicable IR year.

Alectra Utilities proposes to apply the above guidance when seeking approval of its 2024 ICM rate riders for the cable renewal investment. Specifically, Alectra Utilities proposes provide an updated ICM model as part of its 2024 IRM application to update for the following:

- The OEB-approved inflation factor applicable for 2024 rates;
- Any changes to Alectra Utilities' 2024 forecasted capital budget, if applicable; and
- Actual 2022 billing determinants data and the latest OEB-approved rates on Tab 3 of the ICM Model.

OVERVIEW OF CAPITAL INVESTMENTS FOR 2020-2024

This schedule summarizes how Alectra Utilities has managed its capital investments during the period covered by the DSP that was filed in the company's 2020 EDR application (EB-2019-0018). This evidence provides context for the ICM funding requested in this application, and demonstrates how Alectra Utilities has worked to effectively manage significant competing priorities within the funding envelope provided by the Price Cap formula.

Implementation of 2020 OEB Decision

Alectra Utilities' approach to capital investments over the 2020-2024 period was developed based on its 2020 DSP. Alectra Utilities manages its capital investments within its rates funding envelope, continually balancing expenditures based on identified business and system needs, and the priorities and preferences of its customers. Alectra Utilities cannot fund all of the invesments in the DSP within the funding available under the Price Cap formula, necessitating an ongoing balancing of investments to best satisfy those priorities. This results in the deferral of some prudent investments in underground system renewal. This section describes, at a high level, how Alectra Utilities has implemented its capital plan within these constraints.

The 2020 DSP was the first consolidated capital plan for Alectra Utilities, developed to address the needs of the system as a whole while also considering the priorities and preferences of Alectra Utilities' customers. The investments outlined in the 2020 DSP were identified and developed based on a data-driven asset management framework through which Alectra Utilities prioritized projects based on the value they provide to the entire distribution system.

The cost of implementing the 2020 DSP materially exceeds the capital funding available in Alectra Utilties' base distribution rates. The utility's base rates will support an average annual capital expenditure of approximately $236MM, whereas the DSP contemplates an annual average capital expenditure of approximately $291MM. To enable the critical work identified in the DSP to proceed, Alectra Utilities previously proposed a capital funding mechanism, which it called the "M-factor", to reconcile the investments set out in the DSP with the funding available in rates. Alectra Utilities requested $265MM in incremental capital funding through the M-factor over the 2020 to 2024 period. On January 30, 2020, the OEB issued its Decision and Order in the 2020 EDR application. The OEB did not approve Alectra Utilities' capital funding proposal, instead

inviting Alectra Utilities to consider a multi-year ICM for capital investments that meet the OEB's ICM criteria.

In April 2020, in response to the COVID-19 Pandemic, Alectra Utilities advised the OEB that it was continuing to re-evaluate its capital requirements, as projects were reprioritized within 2020 and beyond. At that time, Alectra Utilities advised that it would not seek incremental capital funding for 2020. In Alectra Utilities' 2021 EDR Application, the OEB approved $10.7MM in ICM funding for two road widening projects and a CCRA true-up.

Subsequent Adjustments to the Capital Plan

Alectra Utilities reviews its capital plan on an annual basis, in order to address the evolving needs and priorities of the distribution system and Alectra Utilities' customers. In this Application, Alectra Utilities presents actual capital expenditures for 2020 and 2021, a forecast for 2022, and budget for 2023 and 2024.

The 2022 to 2024 capital investments incorporate reductions and deferrals to capital investments to account for the unfavourable M-factor decision as well as the impact of the COVID-19 pandemic. In March 2022, Alectra Utilities implemented necessary adjustments to the 2022 to 2024 capital investments to account for the impact of supply chain challenges on the cost of materials and services, as well as the effect of inflation, as described further in this schedule. In April 2022, based on customer feedback, Alectra Utilities incorporated the proposed ICM investments in 2023 and 2024. The April 2022 update to the 2022 to 2024 capital investments is hereinafter referred to as the Adjusted Capital Plan.

In the Adjusted Capital Plan, Alectra Utilities reduced the pace of planned capital work, specifically in System Renewal and System Service. As set out in Table 18 below, relative to the DSP, the Adjusted Capital Plan reflects a net reduction in investments of $150.2MM over the 2020 to 2024 period, before consideration of the ICM investments of $52.3MM proposed in this application.

The Adjusted Capital Plan balances multiple priorities over the 2022-2024 planning period: infrastructure renewal to improve reliability (underground cables, storm resiliency); enhancing the customer experience by applying a "one-window" approach to provide a unified and personal

solution for all customer interactions; supporting growth and development in communities; and grid modernization through automation, digitization and system flexibility.

While Alectra Utilities has continued to invest in infrastructure renewal, the growing backlog of failing and deteriorated assets is outpacing the level of investment. Alectra Utilities must urgently increase investment to address worsening reliability due to deteriorated underground direct-buried cable and related equipment. The Adjusted Capital Plan strikes a balance between prioritizing investments in underground cable renewal in some of the most badly affected areas and ensuring that the organization continues to invest in other priority areas.

Table 18 below summarizes the net impact of the Adjusted Capital Plan relative to the DSP, before and after consideration of the proposed ICM investments.

Table 18 – Comparison of DSP to Actuals/Adjusted Capital Plan ($MM)

Capital Expenditures	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
DSP	$282.9	$280.2	$288.3	$295.8	$309.3	$1,456.5
Actual/Forecast, before ICM	$256.1	$261.9	$259.3	$262.4	$266.6	$1,306.3
Total Reduction, before ICM	**($26.8)**	**($18.3)**	**($29.0)**	**($33.4)**	**($42.7)**	**($150.2)**
Proposed ICM Investment	$0.0	$0.0	$0.0	$25.4	$26.9	$52.3
Total Net Reduction	**($26.8)**	**($18.3)**	**($29.0)**	**($8.0)**	**($15.8)**	**($97.9)**

Table 19 summarizes the net reductions by DSP capital investment category.

Table 19 – Variance by Investment Category ($MM)

Investment Category	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
System Access	($3.5)	$0.5	$1.6	$2.1	($1.9)	($1.2)
System Renewal	($3.5)	($5.5)	($28.6)	($31.4)	($41.2)	($110.2)
System Service	($11.2)	($8.5)	($8.8)	($18.0)	($15.2)	($61.7)
General Plant	($8.6)	($4.8)	$6.8	$13.9	$15.6	$22.9
Total Reduction, before Proposed ICM	**($26.8)**	**($18.3)**	**($29.0)**	**($33.4)**	**($42.7)**	**($150.2)**
System Renewal - ICM	$0.0	$0.0	$0.0	$25.4	$26.9	$52.3
Total Net Reduction	**($26.8)**	**($18.3)**	**($29.0)**	**($8.0)**	**($15.8)**	**($97.9)**

Table 20 summarizes the material changes in the 2020 to 2024 Adjusted Capital Plan, relative to the DSP.

Table 20 – Adjusted Capital Plan – Material Changes ($MM)

Summary of Material Changes	2020-2024 Variance
Underground Asset Renewal	($125.2)
Lines Capacity	($56.9)
Information Technology	$34.3
Other	($2.4)
Total Reduction, before Proposed ICM	**($150.2)**
Proposed ICM Investments	$52.3
Total Net Reduction	**($97.9)**

OEB Category Variance Analysis

This section summarizes major variances in actual and forecast capital expenditures relative to the 2020 DSP, at the OEB capital spending category level, as set out in Table 19 above.

System Access

System Access investments include mandatory capital expenditures required to meet customer service obligations to provide customers with access to electricity service, and as a result, Alectra Utilities has effectively maintained the level of investment for this category to the level set in the DSP. Investments in this category include: network metering; customer connections; road authority and transit projects; and transmitter related upgrades. Alectra Utilities has managed System Access investments based on the best available information from external parties such as municipal and regional plans, developers and other customers initiating distribution work to facilitate connections and appropriate metering of service. Over the five-year period, System Access investments are within $1.2MM of the $334.1MM level set in the DSP. During 2020, System Access investments were lower than the DSP due to the impact of the pandemic. Alectra Utilities' customers, developers and municipalities put their capital plans on hold temporarily, thereby reducing the funding required for System Access investments in 2020. With the reopening of the economy, these temporarily paused projects are proceeding and reflected in the capital plan over the 2022 to 2024 planning period.

System Renewal

System renewal investments include sustainment and asset replacement programs and projects required to maintain acceptable levels of existing asset performance. The projects include the replacement of aging equipment and/or refurbishment of distribution assets. Investments in this category include: overhead asset renewal; reactive renewal; rear lot conversions; substation renewal; transformer renewal and underground renewal. Alectra Utilities reduced and deferred significant investments in System Renewal over the five-year period, primarily driven by a decrease in investments in underground asset renewal of $125.2MM (before consideration of the proposed ICM investments).

In the 2020 DSP, Alectra Utilities identified that its customers have experienced declining reliability both in terms of frequency and duration of outages which necessitated an increase in the pace of investment in underground asset renewal during the 2020-2024 period. Accordingly, the largest category of capital expenditures planned in the DSP was for the renewal of deteriorated assets; specifically, 53% of the total five-year expenditure in the DSP was driven by System Renewal investments.

The decision to reduce and defer significant investments in System Renewal was necessary to align the level of investment with the funding in base rates. As identified above, due to the impact of the pandemic, System Access investments were temporarily reduced. In addition, the computation and negotiation of the ten-year Connection and Cost Recovery Agreement ("CCRA") true-up payment for Goreway TS and fifteen-year CCRA true-up payment for Midhurst TS were deferred. As a result, Alectra Utilities was able to temporarily avoid greater reductions to prudent investments in System Renewal that would otherwise have been needed in 2020 and 2021 to align with the funding supported by base rates.

However, in 2022 and onwards, the remaining investments in System Access, System Service and General Plant are either mandatory or are necessary to address the needs of the distribution system and the continued operation of critical business functions. Any additional capital deferrals would expose Alectra Utilities and its customers to unacceptable safety risks and potential non-compliance with regulatory obligations to connect customers. These reductions to System Renewal investments are not the most cost-effective approach to addressing the deteriorating

assets in the utility's distribution system. In addition, this approach poses significant risk to the reliability of service for affected customers.

As detailed in Exhibit 3, Tab 1, Schedule 2**,** proactive investment to address deteriorated direct-buried underground distribution cable remains urgently needed to prudently address reliability risks in specific neighbourhoods. The failure of direct-buried underground cable is the most significant contributor to the worsening reliability trend. Delaying these investments further will result in greater risk of extended outages for affected customers, alongside increasingly reactive, significantly less cost-effective capital expenditures. Many communities in Alectra Utilities' service area, specifically Mississauga, Vaughan, Richmond Hill, Aurora and Markham, experienced exponential growth and development between the 1960s and 1990s. This exponential growth occurred at a time when the electrical industry introduced cross-linked polyethylene (XLPE) underground cables. Consistent with installation practices of the time, utilities installed these cables using a direct buried methodology, resulting in exposure to soil conditions such as moisture, resulting in corrosion and erosion of insulating cable properties over time. Alectra Utilities has 3,793 km of direct-buried XLPE cable in service that has deteriorated, is failing and is no longer reliable. This substantial amount of deteriorated direct-buried cable represents 95% of all in-service poor and very poor cable in Alectra Utilities' service territory.

Alectra Utilities must urgently invest to reverse the trend of worsening reliability, especially in localized hotspots where the cable is failing at an increasing rate. While Alectra has been investing in these assets for multiple years, the ongoing deterioration of this equipment is outpacing the level of investment supported by Alectra Utilities' base rates. This results in an increasing volume of underground assets being replaced reactively through reactive capital or emerging underground renewal. The current level of planned underground cable renewal investment is insufficient to maintain the reliability of the distribution system, especially in the growing number of neighbourhoods supplied by deteriorated and unreliabe cable. The pace at which cable failures have intensified in existing or new emerging neighbourhoods is greater than what was contemplated in the DSP.

This investment cannot wait until Alectra Utilities rebases. If the company does not increase the pace of planned renewal, it forecasts that one out of every four neighbourhoods in its service territory will be served by deteriorated and unreliable cables by 2025. To address this urgent

need, Alectra Utilities proposes an incremental capital investment of $25.4MM in 2023 and $26.9MM in 2024 to address failing cable in the most pressing neighbourhoods in Alectra Utilities' service area.

System Service

System Service investments are modifications to the distribution system to ensure the distribution system continues to meet operational objectives while addressing anticipated future service capacity and reliability. Investments in System Service include: (i) modernization of protection and control systems to ensure the safe and reliable operation of the system; (ii) system station investments necessary to maintain the safe and efficient delivery of electrical service to customers; and (iii) investments in system automation and remote operating capabilities to permit expedient restoration of service in times of unforeseen outages. Drivers for System Service requirements include requirements to continue to provide safe, reliable, and quality electrical supply to customers as well as expansion or intensification of system capacity into high growth areas. The reduction in this category, over the five-year period, is primarily driven by a decrease in investments in Lines Capacity of $56.9MM.

Investment in Lines Capacity minimizes the impact of additional load growth on service levels for existing customers. Lines Capacity projects are primarily driven by: (i) the rapid expansion of urban development in historical rural greenfield regions, (ii) the intensification and redevelopment of multiple downtown areas where existing supply is insufficient to meet the increased demand, and (iii) the need to address specific locations where customers currently have inadequate backup capacity due to configuration of existing supply lines. As part of the utility's comprehensive review of the capital investment plan in 2020, Alectra Utilities deferred investments in Lines Capacity projects. The amount of investment in Lines Capacity each year is now paced at a bare minimum level to only match the timing of known and committed development, considering available capacity, and expected load growth, net of conservation and demand side management persistence. As a result, any further reductions in Lines Capacity work would result in Alectra Utilities operating feeders beyond loading limits. In order to mitigate capacity shortfall risks, Alectra Utilities has identified investments that will avoid some capacity additions and utilize existing resources more effectively.

General Plant

General Plant projects include investments in tools, vehicles, building and information systems technology equipment that are required to support the operation and maintenance of the distribution system and respond to the evolving needs of Alectra Utilities' customers. Investments in this category include: facilities; information technology ("IT"); fleet; and CCRAs. The increase in this category, over the five-year period, is primarily driven by an increase in investments in IT of $34.3MM. Specifically, the increase in IT is driven by investments in customer experience applications and processes; enhancements to systems to enable business optimization; and investments in ongoing IT infrastructure to support efficient business operations and communications.

Alectra Utilities relies on secure, effective and well-supported IT systems to plan and execute distribution system work, and to respond to the needs of customers. Projects in the IT investment category include software, hardware, security and business optimization.

As a result of the COVID-19 global pandemic, Alectra Utilities shifted the majority of its staff to working remotely. This shifted the focus of IT to ensuring that employees had the resources and equipment to work remotely, and to operate securely within the corporate network. This transition to remote work, resulted in the temporary deferral of previously planned IT projects. Further, with many external resources and support companies for IT related projects also working remotely, the ability to effectively execute projects, especially projects that were hardware dependent, was challenging in 2020 and 2021. This resulted in lower IT expenditures in 2020 and 2021.

Over the 2022 to 2024 period, Alectra Utilities will begin to execute on the previously deferred projects. Further, to enhance information systems to improve efficiency and advance innovative technology, IT investments were increased relative to the levels set in the DSP.

The primary drivers of the increase in IT investments include:

- The implementation of customer experience applications and processes, enhancing customer experience and customer satisfaction through digital transformation by applying a "one-window" approach to provide a unified and personal solution for all customer interactions. Customers will have a simplified and expanded set of offerings that will be provided by delivering insights and analytics, expanding self-service options, increasing

the adoption of e-billing services, delivering of power outage notifications, introducing signature services and enhancing the new services portal;

- Enhancements to the utility's investment portfolio planning system to align investment planning, optimization and resource allocation. This includes the addition of modules to manage assets throughout the operational lifecycle and updating of the investment criteria model to ensure traditional and emerging investments are appropriately evaluated and incorporated into future capital investment plans; and
- Enhancements to systems to enable business optimization/business processes (customer connections process; IVR enhancements; tablets for inspection and maintenance; upgrades to the Outage Management System; robotic process automation to advance artificial intelligence technology onto high volume, and repeatable tasks).

Supply Chain Challenges and Inflation Impacts on Materials and Services

The global supply chain challenges stemming from the ongoing global COVID-19 pandemic and most recent conflict in Ukraine are driving upward pressure on availability and cost of materials, services and labour. To date, Alectra Utilities has partly mitigated this unprecedented, extended and evolving global challenge through strategic supply chain management practices and effectively executing the capital plan. Despite Alectra Utilities leveraging its economies of scale and strong supplier relationships, manufacturers and suppliers of materials are passing through increasing material prices driven by increased raw material, freight, personnel and operating costs. The majority of the materials and equipment that Alectra Utilities purchases are comprised of raw materials such as metals (steel, aluminum, copper), resins (polyethylene for cables and insulators, epoxy, silicone) and lumber (wood poles) which have experienced significant increases in commodity prices and longer lead times.

Alectra Utilities' suppliers and manufacturers have informed the company that lead times will continue to trend upward. Prior to the pandemic, the lead time for transformers was between 16 to 20 weeks and has now increased to 35 to 55 weeks. Similarly, the lead time for underground cable and wire has increased from 12 to 22 weeks to 26 to 34 weeks. Alectra Utilities' practice has been to address increasing lead times for materials by planning work and ordering equipment well ahead of construction start dates. These approaches are not possible for reactive

expenditures. Accordingly, reductions to planned work will introduce additional supply chain risks and implementation delays should Alectra Utilities address the growing backlog of deteriorated assets in a reactive manner.

In addition to global supply chain challenges, Alectra Utilities is required to update equipment efficiency standards, which have resulted in increased material costs. For example, Ontario Regulations 509/18 requires Alectra Utilities and its suppliers to upgrade the energy efficiency of distribution transformers effective January 1, 2023. Alectra Utilities has also experienced increased costs for specific services due to increased environmental requirements. Upward cost pressures for excavation services are driven by additional environmental requirements from Municipalities and Regions who have introduced the need to test soil as part of the disposal practice. The costs are further increased as Alectra Utilities is required to dispose of the excavated soil at specific dumping sites, in accordance with environmental requirements, located further away from Alectra Utilities' service area.

The cumulative effect of increasing raw material prices, higher energy efficiency standards for equipment, higher cost from suppliers for freight, personnel and operating costs and inflationary pressures required Alectra Utilities to increase the overall capital expenditure in 2023 by $13.8MM and in 2024 by $16.0 MM. 82% of the increase in capital expenditure is driven by increases in material costs based on the most recent costs provided by suppliers and the expected persistence of ongoing cost pressures into 2023 and 2024. Increasing inflation driven pressure on labour and contractor costs accounts for the remaining 18% of the increase in capital expenditure in 2023 and 2024.

Alectra Utilities will true-up any variance between the approved and actual ICM amounts in accordance with the OEB's ICM policy. Section 7.4 of the *Report of the Board – New Policy Options for the Funding of Capital Investments: The Advanced Capital Module*, dated September 18, 2014, states that, "at the time of the next cost of service or Custom IR application, a distributor will need to file calculations showing the actual ACM/ICM amounts to be incorporated into the test year rate base. At that time, the Board will make a determination on the treatment of any difference between forecasted and actual capital spending under the ACM/ICM, if applicable, and the amounts recovered through ACM/ICM rate riders and what should have been recovered in the historical period during the preceding Price Cap IR plan term."

Third Party Review of Adjusted Capital Plan

In order to confirm that capital investment plans outlined in the 2020 DSP remains valid and the methodologies and approaches taken by Alectra Utilities in preparing the capital investment plan adjustments are reasonable and appropriate, Alectra Utilities engaged a third party expert to provide independent and objective reviews of significant aspects of the Adjusted Capital Plan.

Alectra Utilities retained Guidehouse Canada Ltd. ("Guidehouse") to undertake an independent, review of the utility's process and analytical methods used to develop the Adjusted Capital Plan. Guidehouse is a management consulting firm that provides a range of engineering and asset management services with a focus on electricity utilities and experience in evaluating capital investment decisions and plans. Guidehouse's assurance review assesses the planning practices, including the optimization and prioritization of the capital expenditure plans against industry best practices and the rationale and justification for adjustments to the plan driving additional funding requirements.

In Guidehouse's opinion, "Alectra's revised five-year investment plan is appropriate and justified based on the level of rigor applied in its capital planning process and rationale supporting each of the associated business cases in the DSP." Furthermore, Guidehouse identified that "[t]he methods Alectra applies to identify required investment for System Renewal is based on a thorough and consistently applied condition assessment methodology and analytics that balances cost versus risk." The Guidehouse report is provided as Attachment 12. As Guidehouse further concludes in its review of the Adjusted Capital Plan:

> *"The deferral of renewal investments is not sustainable as lines and equipment will deteriorate at increasing higher rates. Hence, the acceleration of investment of $52.3 million for cable and accessories is essential to enable Alectra to achieve a sustainable level of replacements without jeopardizing reliability in sections of its system where cable failures are highest, and customers are at risk of repeat and lengthy interruptions."*

UNDERGROUND CABLE RENEWAL INVESTMENTS & NEED

In developing the DSP, Alectra Utilities examined the leading causes of controllable outages. Defective equipment, or equipment failure, and foreign interference (i.e., animal contacts, vehicle accidents, contractor dig-ins etc.) accounted for 57.0% of all customer outages. Specifically, the DSP identified failures of underground direct-buired cable and cable accessories as the leading contributor to declining reliability. Since preparing the DSP, the pace at which cable failures have intensified in existing or new emerging neighbourhoods is greater than what was contemplated in the DSP. To address this urgent need, Alectra Utilities has identified incremental capital investments in the PowerStream and Enersource RZs to either replace or, where feasible, to rehabilitate using silicone injection to extend the life of the cable in these RZs.

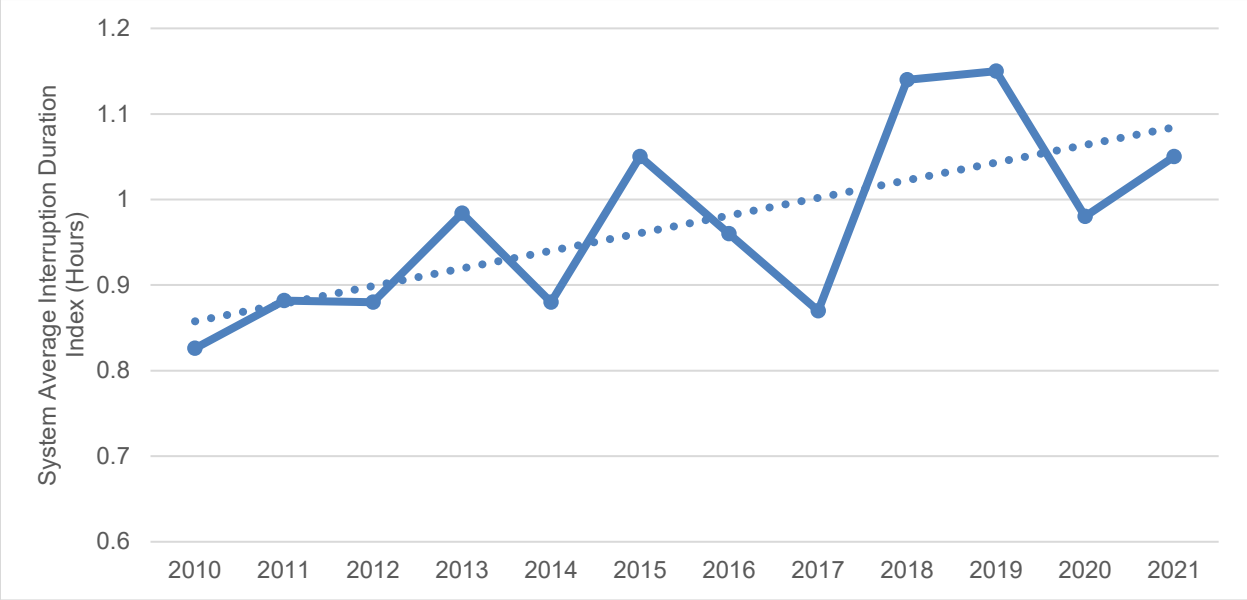
The first generation of underground cable technology was installed in the early 1960s, coincident with the start of large scale municipal growth and expansion. These assets are first generation cable technology, also known as Cross Linked Polyethylene Cable ("XLPE"), most of which are beyond their useful life and in very poor condition. This first generation cable was buried directly in the ground which has led to early degradation. Over time, the exposure and corrosion break down the cable's insulating properties and causes cable failures and service interruptions. Once the cable starts deteriorating, Alectra Utilities has limited time to implement an innovative cable injection process to replenish the insulating properties of the cable and extend the service life. If the cable is deemed to have deteriorated beyond the point that rehabilitation through injection is feasible, Alectra Utilities must urgently replace the cable before failures cascade into more considerable faults and increasing numbers of customers become impacted by service outages and interruptions.

This section provides an update of the most recent reliability trends emerging from the growing backlog of direct-burided XLPE cable and a detailed breakdown of the most pressing areas of the system where underground cable health has deteriorated, started failing, and is no longer reliable. Further, this section provides an overview of the options available to Alectra Utilities to remedy and reverse this worsening trend of failing cables and a summary of the most recent investments that Alectra Utilities has made in cable renewal.

Deteriorating Reliability Performance

Since 2010, Alectra Utilities (and its predecessor utilities) have been experiencing an adverse trend in system reliability as measured by the System Average Interruption Duration Index ("SAIDI"), excluding Major Event Days ("MED"). Alectra Utilities has identified and analyzed the root causes driving this adverse trend. Alectra Utilities has aligned the cause codes with standard industry outage cause codes and OEB reporting requirements.

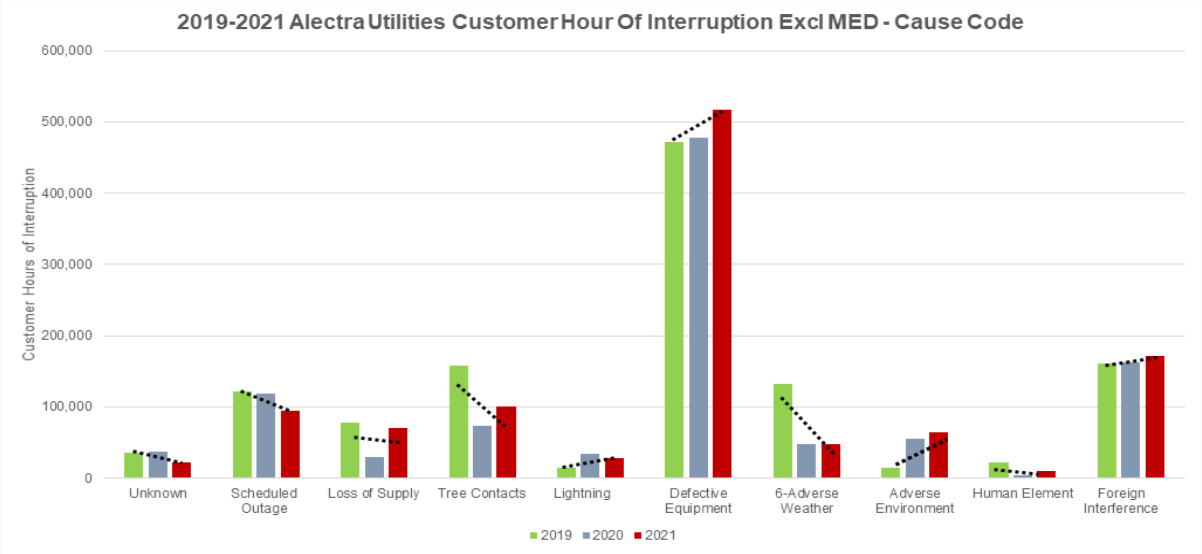
Figure 1: 2010-2021 Alectra Utilities System Average Interruption Duration Index (Excl.MED)



Since preparing the DSP, Alectra Utilities has implemented several initiatives to reverse the negative trend of worsening reliability. Investments in storm hardening of overhead systems have resulted in fewer CHI resulting from adverse weather events since 2019. In 2020, Alectra Utilities implemented an Asset Analytics Platform to enable predictive maintenance of vegetation management, reducing the outage impact from tree contacts. Despite Alectra Utilities' efforts to maintain reliable performance and reverse the negative trend of worsening reliability, defective equipment continues to be the leading cause of both the duration and frequency of outages. From 2019 to 2021, defective equipment has contributed 43% of all CHI, three times the amount of the next most significant cause of customer hours of interruption - foreign interference. Despite

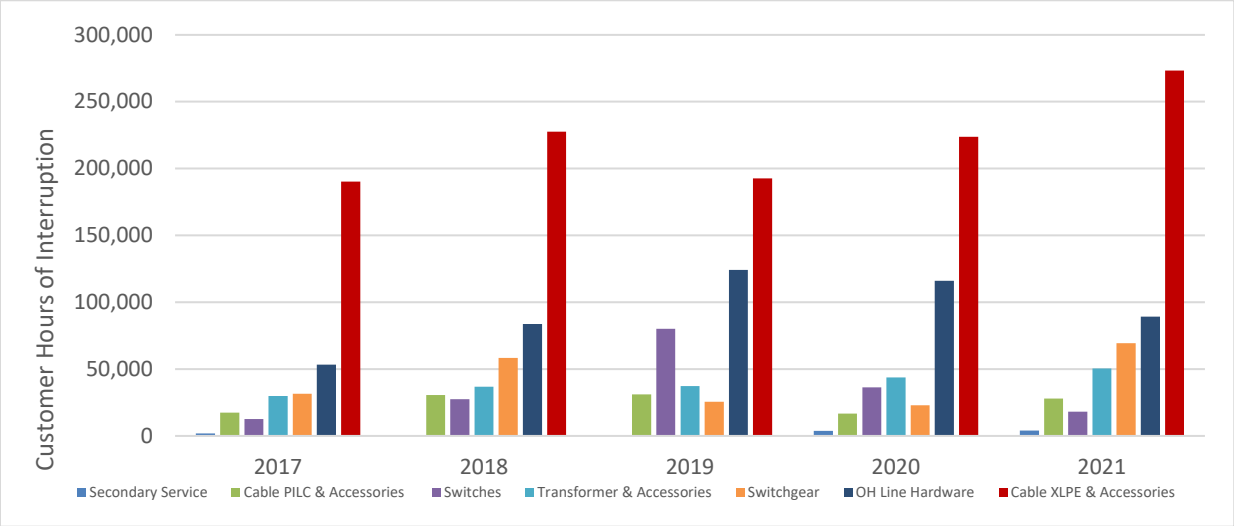
Alectra Utilities' efforts to renew deteriorated and failing equipment, customer hours of interruption resulting from defective equipment have increased by an average annual rate of 9% from 2017 to 2021. The increasing pace and magnitude of CHI stemming from defective equipment represent the single most significant driver of the increasing trend in worsening reliability.

Figure 2: 2019-2021 Customer Hours of Interruption (Excl. MED) by Cause Code



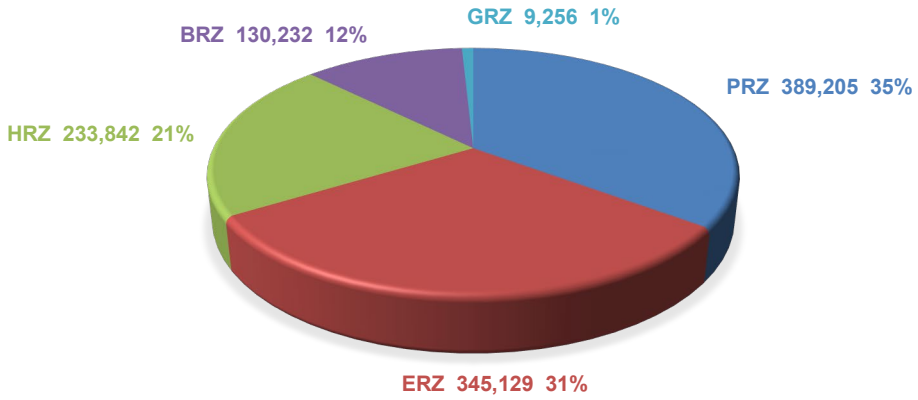
The defective equipment sub-causes, show that the failure of direct-buried XLPE cable and accessories is the most significant driver of the increasing trend. Since 2017, customer hours of interruption specifically caused by failed direct-buried XLPE cable have increased on average by 11% per year.

Figure 3: 2017-2021 Customer Hours of Interruption - Defective Equipment by Asset Type



The majority of customer hours of interruption due to the failed direct-buried XLPE cable and accessories occured in the Enersource and Powerstream RZs. Of the 1.1 million customer hours of interruption due to XLPE cable failures experienced since 2017, the Enersource and PowerStream RZs account for approximately 734,000 customer hours of interruption, representing 66% of all the XLPE cable outages experienced in Alectra Utilities' service territory.

Figure 4: 2017-2021 Total Customer Hours of Interruption Due to XLPE Cable & Accessories Failure



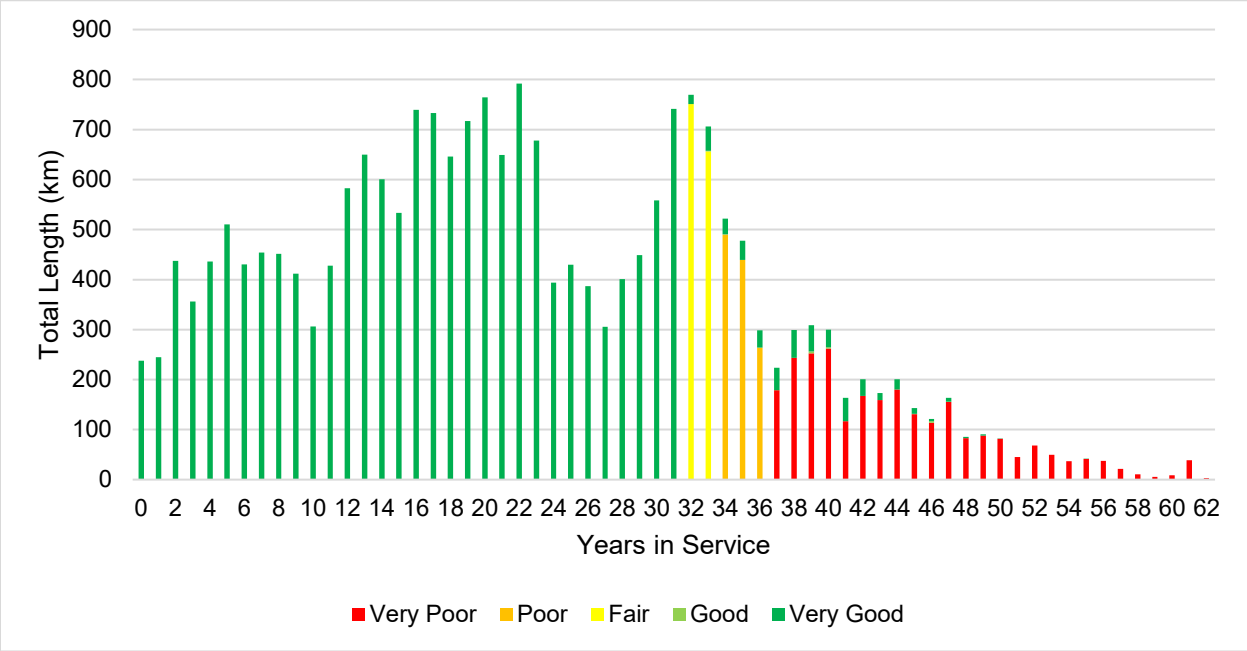
Alectra Utilities' service area currently contains an extensive population of direct-buried first-generation XLPE cable. Of the 22,656 km of in-service underground cable, Alectra Utilities maintains and operates 8,152 km of direct-buried XLPE cable. Cable manufacturers introduced first-generation XLPE cables in the late 1960s. First-generation XLPE cables were used extensively by Alectra Utilities' legacy utilities during extensive growth in the communities of Mississauga, Vaughan, Richmond Hill, Aurora and Markham. These first-generation XLPE cables have inherent problems due to the nature of the manufacturing processes, which led to impurities developing into electrical trees over time in the insulating medium. These impurities are responsible for the increase in cable failures that Alectra Utilities has been experiencing with the cables from this period. In the late 1980s, cable manufacturers introduced a second generation XLPE with enhanced polyethylene properties designed to mitigate and slow down cable insulation degradation, specifically addressing the issues of water and electrical trees that caused the first generation XLPE cable to fail. The second-generation cable is known as Tree-Retardent XLPE (TR-XLPE) cable. Cable manufacturers continued to develop underground cable technology and introduced a third-generation cable technology in the mid-1990s based on strand-filled (also termed strand block) conductors. The third generation cable is known as Strand Filled Tree-Retardent XLPE (SF TR-XLPE) cable. The third generation of the cable includes additional

insulation manufactured between conductor strands, further protecting the cable from deterioration.

Underground XLPE Cable Health Deterioration

As illustrated in Figure 5, the population of assets in need of renewal is not static. Alectra Utilities has observed that setting the renewal rate based on historical spend levels does not appropriately pace and address emerging needs, especially in system renewal of underground cable. Many of the communities that experienced significant development and growth from the 1960s until the 1990s are experiencing an increasing number of failures due to direct-buried XLPE Cables. In Alectra Utilities' services areas, these municipalities include Mississauga, Vaughan, Richmond Hill, Aurora and Markham.

Figure 5: Distribution of Underground XLPE Cable Health Condition as of 2020



From 2018 to 2020, the backlog of deteriorated underground cable has increased from 3,173 km (14% of the population) to 3,793 km (17% of the population). Despite Alectra Utilities' effort to keep the pace of renewal with the rate of cable deterioration, Alectra Utilities now manages an additional 620 km of deteriorated underground cable. Without additional investment in

underground renewal, Alectra Utilities projects that deteriorated underground cables will service one in four neighbourhoods in the service area by 2025.

As illustrated in Figure 5, the population of assets in need of renewal is not static. Alectra Utilities has observed that setting the renewal rate based on historical spend levels does not appropriately pace and address emerging needs, especially in system renewal of underground cable. Many of the communities that experienced significant development and growth from the 1960s until the 1990s are experiencing an increasing number of failures due to direct-buried XLPE Cables. In Alectra Utilities' services areas, these municipalities include Mississauga, Vaughan, Richmond Hill, Aurora and Markham.

Figures 6 through 8 illustrate the significant deterioration rate of underground cable in Mississauga, Vaughan and Markham.

Figure 6: Deterioration of Underground XLPE Cable from 2018 to 2020 in Mississauga (ERZ)

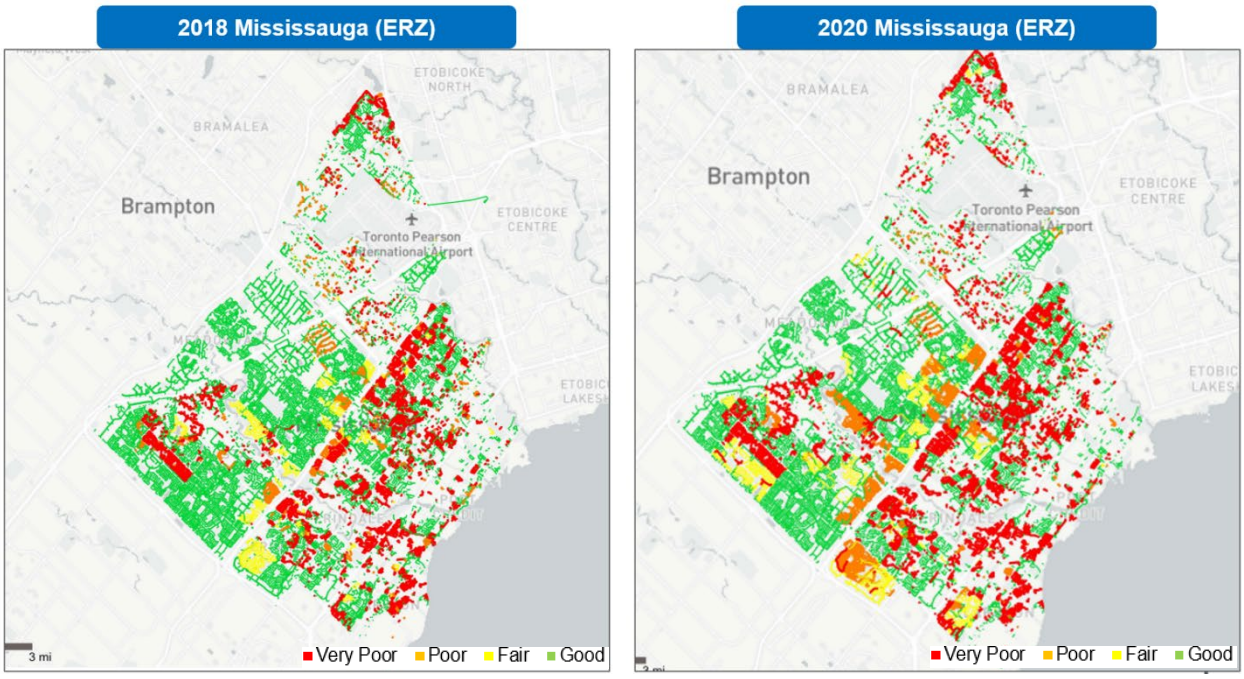


Figure 7: Deterioration of Underground XLPE Cable from 2018 to 2020 in Vaughan (PRZ)

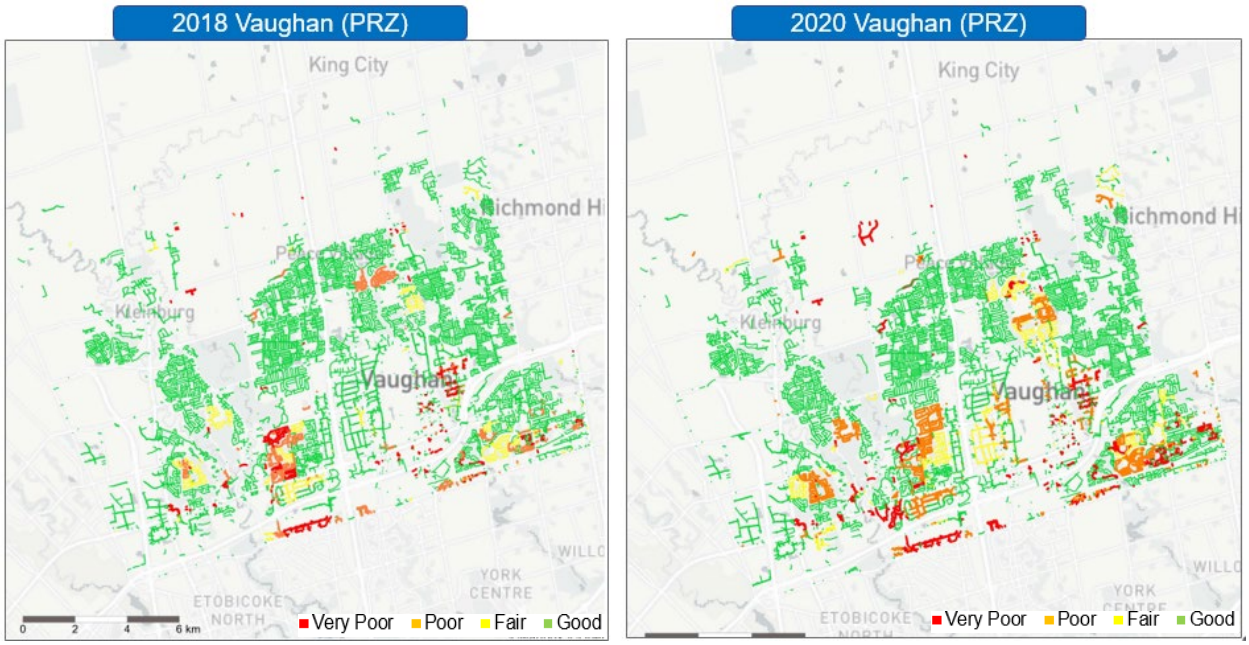
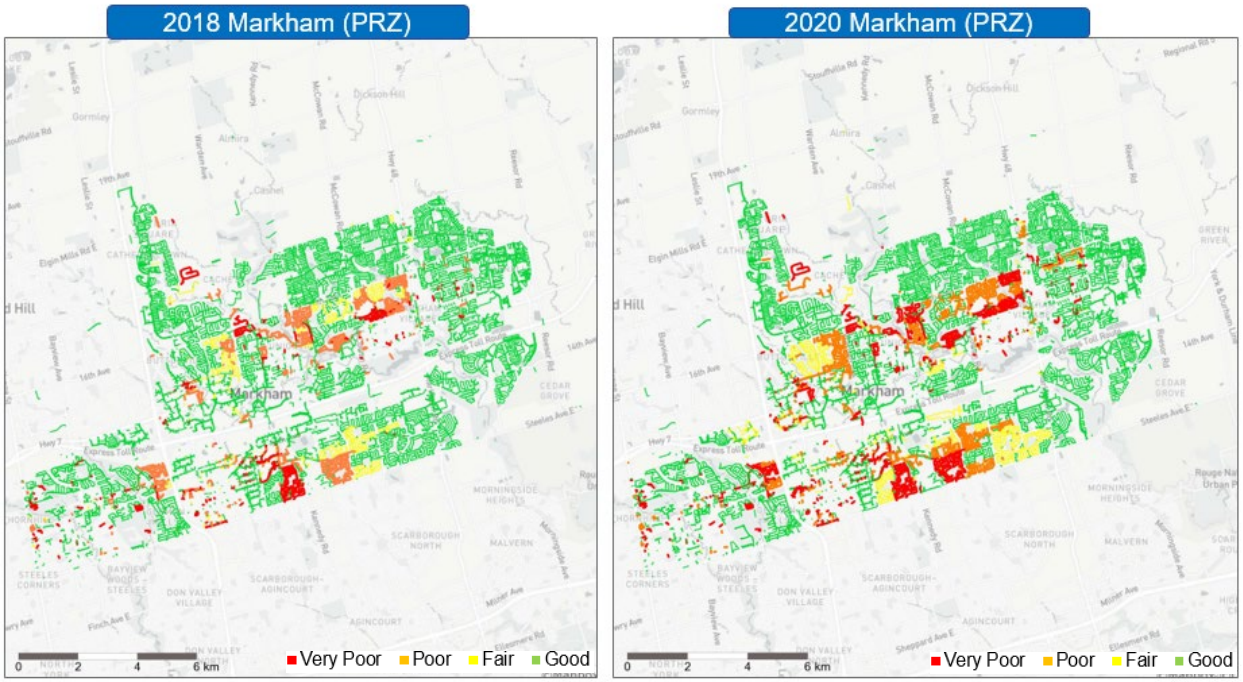


Figure 8: Deterioration of Underground XLPE Cable from 2018 to 2020 in Markham (PRZ)



XLPE Cable Renewal Options

The method of addressing XLPE cable failures is limited by the cable insulation method. Decades ago, utilities buried cable directly in the ground. Over time, the construction standard shifted to installing cable in protective conduits. When cable-in-duct fails, the entire cable can typically be removed and replaced with brand-new cable with relative ease. In contrast, direct-buried cables can only be repaired by excavating the cable and splicing in a replacement segment. This approach is fundamentally reactive and introduces further complications since the installed splice may become a future failure point. Further, it does not address the underlying issue since the deteriorated, direct-buried cable remains installed and is increasingly likely to fail again.

Figure 9: Excavated direct-buried XLPE Cable

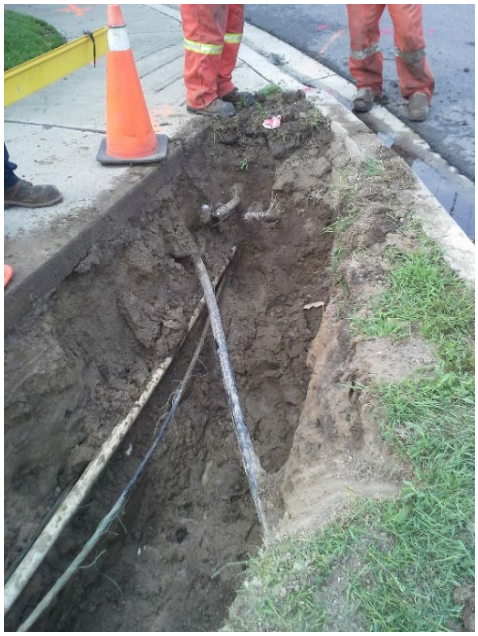


Figure 10: Excavated direct-buried XLPE under a sidewalk

Alectra Utilities has developed two renewal strategies for deteriorated direct-buried cable renewal: cable injection and cable replacement. Alectra Utilities will use the renewal strategy for each project that delivers the best value for customers.

Cable injection is a lower-cost solution that can extend the life of the XLPE cables by injecting afluid into the core of the buried XLPE cable. The fluid combines with the existing insulation, increases the insulation's strength, and slows down the rate of further degradation. This approach economically allows the life of the cable to be extended, provided that the cable is eligible to receive this treatment. Extending the life of the cable through injection avoids the need to excavate and replace the entire cable, which is more costly and disruptive to customers and neighbourhoods. Furthermore, cable injection is environmentally friendly in that rehabilitating existing cable avoids emissions required to manufacture, transport and install new cable. Since 2018, Alectra Utilities has avoided 5,012 tons of CO2 from the environment by renewing underground cables using cable injection.

Figure 11: Application of cable injection fluid

Where possible, Alectra Utilities will prioritize cable injection over replacement since it is less expensive. However, not all cables are candidates for cable injection. Cables in very poor condition or at their end-of-life cannot be rejuvenated through injection; they are too far deteriorated and tend to fail even if they are rejuvenated. Alectra Utilities also considers other factors that impact the cost-efficiency of cable injection compared to full replacement, including: the type of cable (strand filled or solid core cables are not eligible for injection); the number of splices within the cable segment; the location of the cable (e.g., under the sidewalk, under a roadway, under a driveway); and actual field conditions.

As the population of deteriorated cable increases, Alectra Utilities loses the opportunity to extend the life of cable through cable injection. A large population of Alectra Utilities' cables are quickly approaching their end-of-life or are in very poor condition. If Alectra Utilities does not increase investments to address these assets, the only option will be the outright replacement of cables, resulting in significant impacts on reliability and ultimately higher costs for customers.

In these instances, Alectra Utilities will replace the direct-buried cable with the new generation XLPE cable, which will deliver superior reliability over their lifetime relative to older standards of cable. The new cable will also be installed in conduit, which is a superior installation method compared to direct-buried cable.

Figure 12: Direction Bore Machine installing new duct for cable replacement

Figure 13: Installation of new cable in duct

The conduit protects the cable from mechanical and corrosive damage and will make future replacement much simpler and more cost-effective. During a planned cable replacement project, Alectra Utilities reviews the layout of the distribution system to optimize the configuration and layout. For many areas, Alectra Utilities can reconfigure the layout to minimize the replacement cost.

Historical Investment in Underground Cable Renewal

Alectra Utilities appropriately identified asset renewal needs, specifically the urgent need for cable renewal, through ongoing asset management processes and identified these needs through capital investment plans in the DSP. Asset management and asset lifecycle optimization of direct-buried XLPE cables are well understood and intrinsic to the operation of the distribution system. Since 2018, Alectra Utilities has attempted to allocate as much available funds into underground system renewal without compromising other urgent and critical investments.

Since 2018, Alectra Utilities has invested $ 236.1MM in cable renewal, including addressing an increasing volume of emerging hotspots of cable failures through investments in Emerging Underground Projects.

Table 21 – UG Cable Renewal Investments ($MM)

Investment	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Forecast 2022	Total
Cable Renewal – Replacement	$37.2	$31.2	$35.4	$25.3	$23.8	$152.9
Cable Renewal – Injection	$3.6	$4.9	$11.5	$13.7	$16.6	$50.3
Emerging Underground Projects	$2.3	$5.9	$8.0	$10.1	$6.9	$32.9
Total	**$43.1**	**$42.0**	**$54.9**	**$49.1**	**$47.3**	**$236.1**

Alectra Utilities prioritized investment in underground cable renewal to the extent that reductions or deferrals in other necessary capital investments did not: expose customers, the public and employees to increased safety risks; introduce more significant business or service interruptions; and result in compliance issues for Alectra Utilities to meet requirements set by regulations, laws and license obligations.

Other pressing and evolving system needs offset available funding for cable renewal, including the increasing demand from customer-initiated system distribution expansion and increased reactive renewal resulting from a growing backlog of deteriorating assets. Furthermore, the temporary deferral of investments in other areas does not provide a sustainable solution to the persistent and growing need to urgently address the root cause of underground cable failures: direct-buried XLPE cable.

Most Recent Trends & Observations in Underground Cable Performance

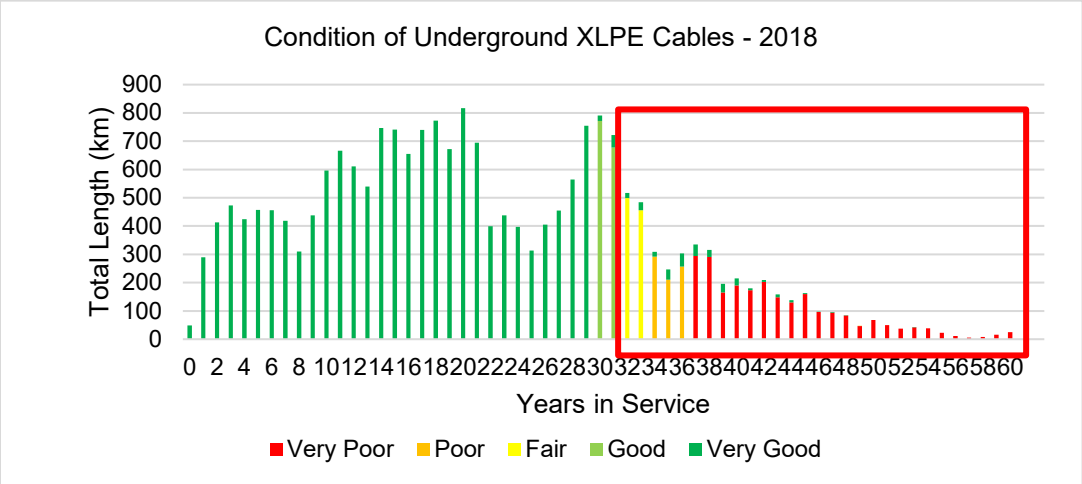
In 2020, Alectra Utilities implemented an Asset Analytics Platform to evolve the existing condition-based asset management practice towards predictive analytics, reliability-driven maintenance and machine learning. Alectra Utilities immediately began to populate the platform with large data sets required to extensively examine the triggering factors of outages caused by tree contacts and underground cable failures.

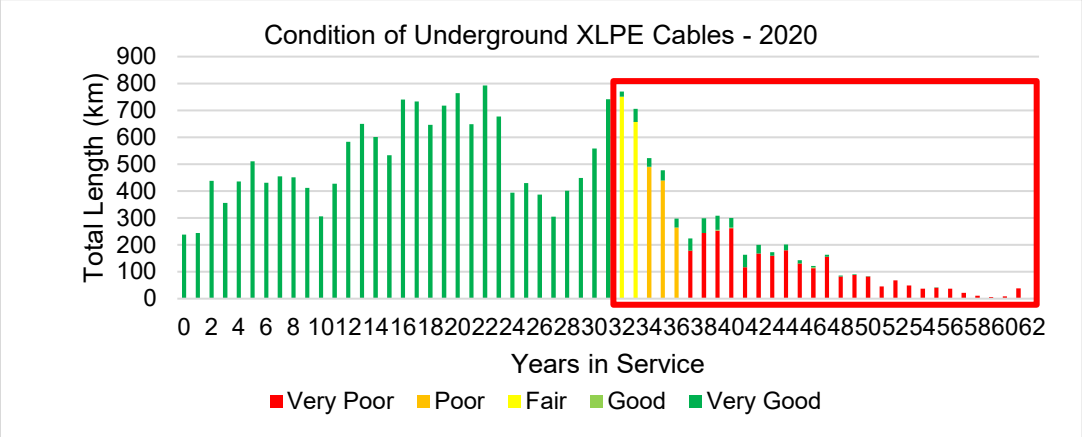
The Asset Analytics Platform provided Alectra Utilities with the functionality to compute asset condition assessments, overlay reliability data sets with maps to identify emerging hotspots and combine large data sets to establish cross-sectional relationships. Enhanced analytics has enabled Alectra Utilities to incorporate the most recent reliability events against up-to-date asset condition information. This allows the utility to identify localized emerging issues in order to quickly

remedy the situation before it cascades into a larger scale problem. Since implementation, Alectra Utilities has been able direct crews to address emerging cable failures before substantial cable replacement is required. Unfortunately, due to the significant backlog of direct-buried XLPE cable that is deteriorated and failing, Alectra Utilities cannot fund all the necessary renewals to address all the neighbourhoods identified through analytics and continues to experience increases in customer hours of interruption due to XLPE cable failures.

As required by the OEB Filing Requirements for Electricity Distributors submitting DSPs, Alectra Utilities developed a range of quantitative metrics to monitor the quality of its capital expenditure plans and the efficiency with which plans are implemented. To address the DSP objective to prudently invest in and maintain assets to provide sustainable value through the optimal allocation of resources in response to risks, compliance requirements and performance targets, Alectra Utilities established an asset condition metric to limit the population of underground cable that is in poor or very poor condition to 14% of the cable population. This level represents the health of the cable population at the start of the DSP period.

Figure 14: Condition of Underground XLPE Cables - 2018 vs 2020



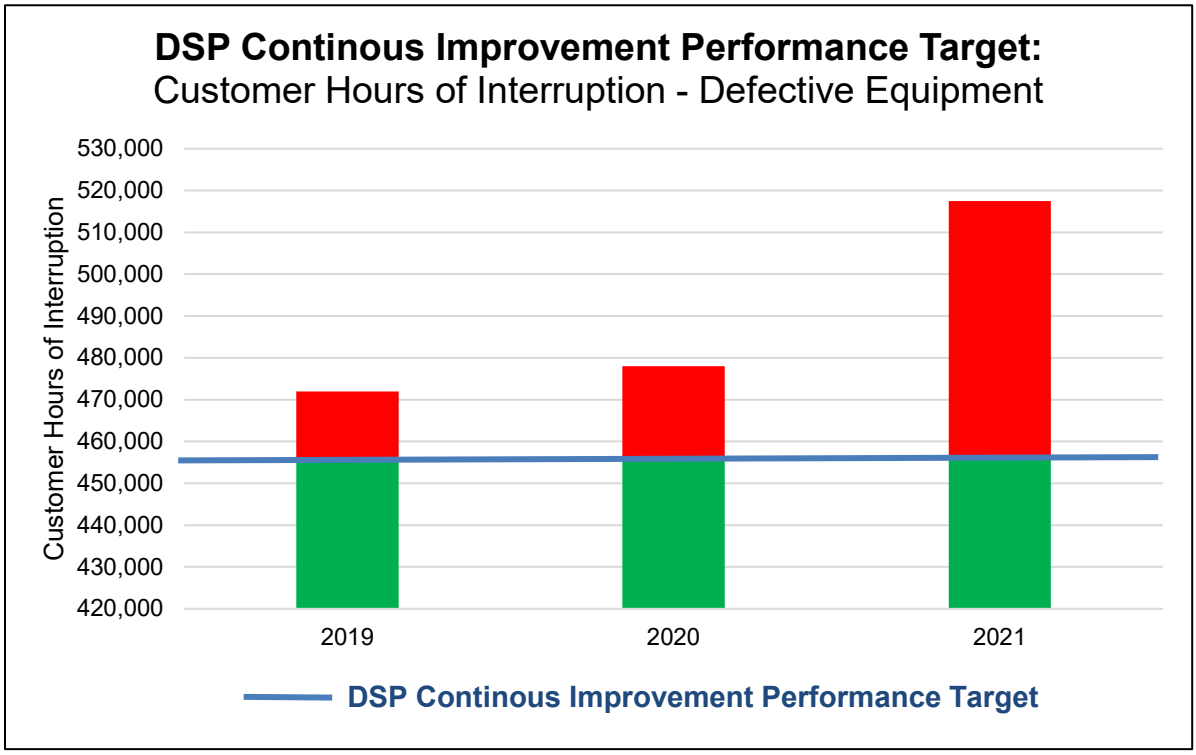


Despite the efforts of Alectra Utilities to increase cable renewal investment to match the pace of cable deterioration, additional funding and needs in other areas were required to meet compliance obligations and mitigate safety risks such as overhead system failures from occurring.

As a result, the amount of deteriorated and failing underground cable has increased from 3,173 km to 3,793 km, representing an increase from 14% to 17% of the population of underground cable that is deteriorating and failing. Over the next three years, Alectra Utilities will experience the first significant wave of XLPE cables nearing the end of typical life.

In addition to the DSP Performance measurement for continuous improvement set to limit the backlog of deteriorated underground cable population to 14%, Alectra Utilities was also required to set system operation performance measures. As provided in Section 2.3.2 of the DSP Filing Requirements, Alectra Utilities set a quantitative measure to maintain the number of customer hours of interruption due to defective equipment to no more than 455,651 hours per year, based on a five year historical average. Despite Alectra Utilities' effort to reverse the increasing trend of defective equipment failure, for each year since filing the DSP, Alectra Utilities has experienced increasing customer hours of interruption due to defective equipment and failed to meet the DSP target for each year. The main driver for the increase in customer hours of interruption has been the number of hours of interruption caused by failing direct-buried XLPE cable.

Figure 15: Continous Improvement Target - Customer Hours of Interruption due to Defective Equipment



Alectra Utilities examined the increasing hours of interruption due to failing direct-buried XLPE cable by overlaying maps of recent XLPE cable failures and cable asset condition for the Enersource and PowerStream RZs, where most of the cable failures are occurring.

Alectra Utilities combined reliability statistics by grid against the 2020 ACA as part of an enhanced overlay methodology. Reliability heat maps illustrate the most recent (2016 – 2021) outages due to cable failures, including the location of recently (2016-2021) completed projects, planned projects in base rates and the proposed incremental cable renewal projects.

Figure 16: Maps of XLPE Cable Failures and Condition of XLPE Cables for Mississauga

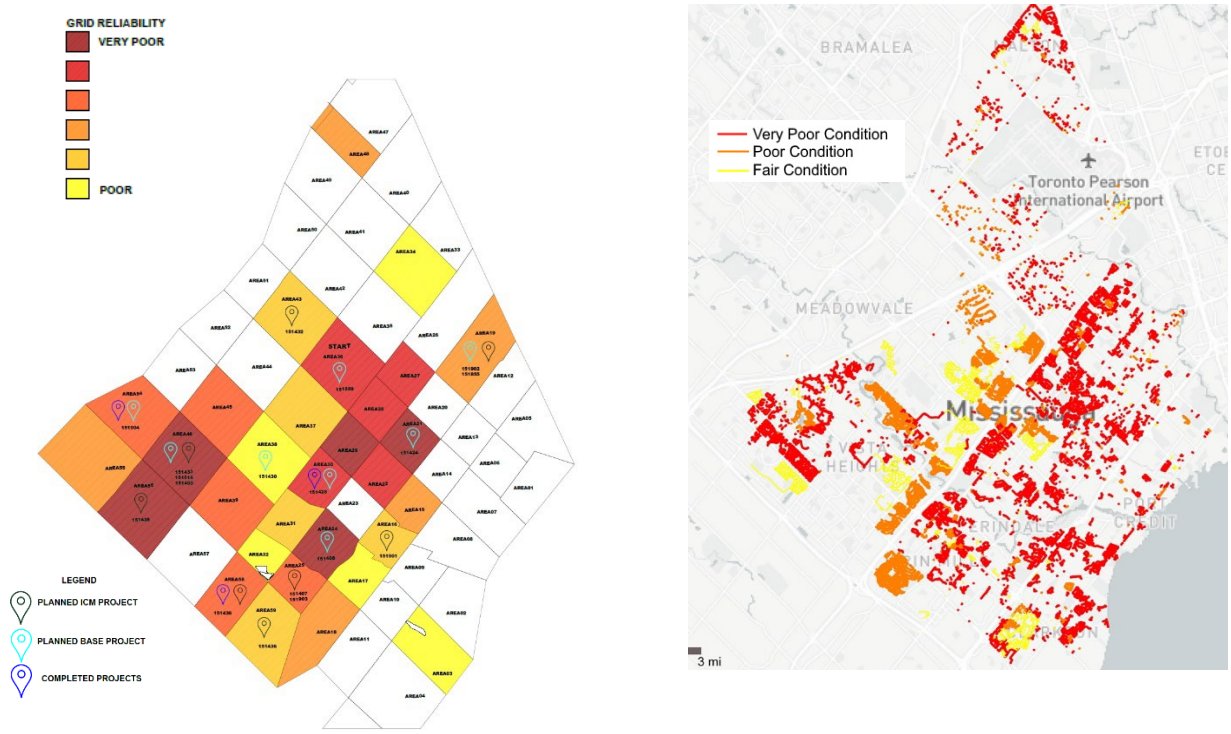
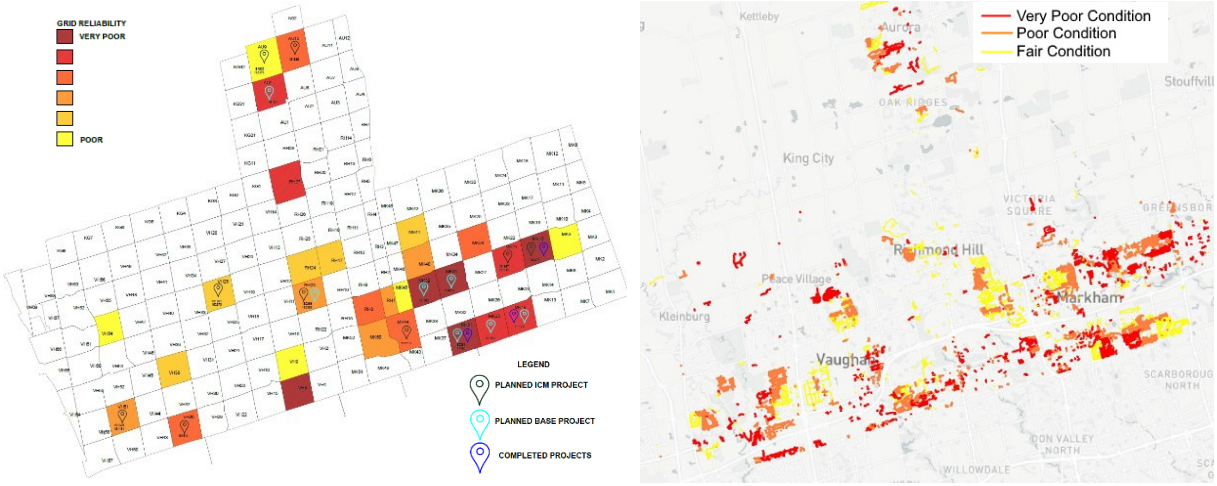


Figure 17: Maps of XLPE Cable Failures and Condition of XLPE Cables for PRZ



With the Asset Analytics Platform, Alectra Utilities can correlate the most recent areas of very poor reliability with very poor condition of cables to identify localized hotspots. Once Alectra Utilities' engineers identify emerging areas and hotspots for cable failures, a full engineering assessment of the site is completed, which includes:

- A complete reliability evaluation of all the outages the customers in the area have experienced over the last several years;
- Evaluation of all the assets in the area, including transformers and switchgear;
- Location of the cable, including available space considering other utilities in the corridor;
- Assessment of the phasing, fusing, plans and feeder configuration;
- Feasibility of applying cable injection to extend the life of the existing cable; and
- Other site-specific requirements (e.g., rear lot placement of cables and assets, environmental considerations such as conservation lands, driveways, roads, etc.).

The engineering assessment of the site also determines the proposed timeline to address the hotspot before the issue cascades into more extensive area outages disrupting a more significant number of customers and increasing the cost to remedy the problem.

CUSTOMER ENGAGEMENT

Alectra Utilities engaged Innovative Research Group ("Innovative") to undertake a customer engagement process in early 2022 seeking customer input on two topics: a broad engagement on customer needs and outcome priorities for future system investments (the "Needs and Outcomes Engagement"), and a focused engagement on potential near-term investments to renew underground cable in the PowerStream and Enersource rate zones ("RZs") (the "ICM Engagement").

The Needs and Outcomes Engagement was conducted alongside the ICM Engagement for efficiency. In this research, Innovative engaged with customers in all RZs to assess their views on the needs and the outcomes they want Alectra Utilities to prioritize in its long-term plans. The results of the Needs and Outcomes Engagement will be an important input to the development of Alectra Utilities' next DSP.

ICM Engagement – Overview

The purpose of the ICM Engagement was to assess customers' preferences between specific investment options and outcomes to address the challenges posed by deteriorating underground cable. Innovative's findings, along with a detailed review of the methods and materials used to conduct their research, are set out in Appendix 1.0 (ICM Report) of the Customer Engagement Report, which filed as Attachment 11. As described below, Alectra Utilities used the results of the ICM Engagement to select the proposed ICM investments set out in this application.

Alectra Utilities plans capital investments as a single, consolidated utility. However, pursuant to the Mergers, Amalgamations, Acquisitions and Divestitures ("MAADs") Decision approving the creation of Alectra Utilities (EB-2016-0025), distribution rates including ICM riders are established independently for customers in each RZ. Accordingly, the ICM Engagement was only directed to customers in in the PowerStream and Enersource RZs.

Innovative's methodology is described on pages 4-5 of the ICM Report. Innovative assessed customer preferences through an online workbook administered to representative samples of customers in each rate class and rate zone, where applicable. Each response was collected using a unique survey URL which was sent directly to customers by Alectra Utilities. Residential respondents were asked to indicate the size of their household as well as annual income in order

to identify vulnerable Ontarians who qualify for the OEB's Low-income Energy Assistance Program ("LEAP"). The engagement results for Residential and GS<50kW customers were weighted by consumption in order to be representative of customers in each RZ. Results from GS>50kW and Large Use customers were not weighted.

ICM Engagement - Results

The results of the ICM Engagement show that customers want Alectra Utilities to invest more in renewing deteriorated underground cable. As summarized on pages 7-10 of the ICM Report, Customers in both RZs and in all rate classes indicated that they are prepared to fund an increased level of investment in both cable injection and cable replacement during 2023 and 2024. In both RZs, a majority of customers across all rate classes supported an increase in investment in both strategies. Customers consistently indicated a preference for the highest level of investment. The percentage of customers that did not have a preference between the options ranged from 22% to 36%.

The ICM Engagement provided detailed information on the different potential approaches to addressing deteriorated underground cable in the distribution system. Customers were presented with the trade-offs between bill impacts, reliability outcomes, and volume of cable injected or replaced under four different scenarios, including a "status quo" approach that would maintain the level of investment that would be funded within base rates. For each option, where applicable, customers were presented with the proposed incremental capital amount over the 2023 and 2024 period; the monthly and cumulative bill impact over the 2-year period; and the expected outcomes/benefits of the proposed investment.

The following sections summarize the options presented to customers in each RZ, and what Innovative heard from customers.

Enersource RZ

The tables below, summarize the investment options and total bill impacts over the two-year period for the cable injection and cable replacement options presented to customers in the Enersource RZ. Customers were provided with three investment pacing options above the level funded in base rates. Customers were also given the option to maintain the current level of planned investment, resulting in no incremental bill increase.

For a typical residential customer, the total average monthly bill impact for the options presented to customers, ranged from $0.03 to $0.09 for cable injection, and $0.08 to $0.17 for cable replacement. This represents the bill impact from the combined 2023 and 2024 proposed ICM investment.

Table 22 – Cable Injection Investment Options and Bill Impacts ERZ

	Cable Injection				
Enersource RZ Options and Bill Impacts	**Residential**	**GS<50**	**GS 50-499**	**GS 500-4999**	**LU**
Increase investment by $6.4MM over 2 years	0.09	0.32	4.53	28.27	113.49
Increase investment by $4.3MM over 2 years	0.06	0.25	2.99	18.62	75.07
Increase investment by $2.1MM over 2 years	0.03	0.06	1.53	9.51	38.27
Maintain the current level of planned investment					
Don't Know					

Table 23 – Cable Replacement Investment Options and Bill Impacts ERZ

	Cable Replacement				
Enersource RZ Options and Bill Impacts	**Residential**	**GS<50**	**GS 50-499**	**GS 500-4999**	**LU**
Increase investment by $11.0MM over 2 years	0.17	0.55	7.72	48.15	193.37
Increase investment by $8.6MM over 2 years	0.12	0.49	6.03	37.55	151.32
Increase investment by $5.4MM over 2 years	0.08	0.14	3.80	23.62	95.01
Maintain the current level of planned investment					
Don't Know					

Based on the outcomes and bill impacts presented, a majority of customers supported an increase in investment in both cable renewal strategies. Table 24 summarizes customer preferences between the options for the cable injection and cable replacement investments.

Table 24 – Customer Preferences ERZ

	Cable Injection			Cable Replacement		
Enersource RZ	**Residential**	**GS<50**	**GS>50+LU**	**Residential**	**GS<50**	**GS>50+LU**
Increase - Injection $6.4MM, Replacement $11.0MM	36%	33%	43%	33%	31%	32%
Increase - Injection $4.3MM, Replacement $8.6MM	11%	8%	7%	12%	10%	5%
Increase - Injection $2.1MM, Replacement $5.4MM	10%	10%	2%	11%	11%	14%
Maintain the current level of planned investment	18%	13%	18%	18%	19%	16%
Don't Know	26%	36%	30%	25%	29%	34%

PowerStream RZ

The tables below, summarize the investment options and total bill impacts over the two-year period for the cable injection and cable replacement options presented to customers in the PowerStream RZ. Customers were provided with three investment pacing options above the

current level of planned investment. Customers were also given the option to maintain the level of investment funded in base rates, resulting in no incremental bill increase.

For a typical residential customer, the total average monthly bill impact for the options presented to customers, ranged from $0.04 to $0.15 for cable injection, and $0.04 to $0.18 for cable replacement. This represents the bill impact from the combined 2023 and 2024 proposed ICM investment.

Table 25 – Cable Injection Investment Options and Bill Impacts PRZ

	Cable Injection			
PowerStream RZ Options and Bill Impacts	**Residential**	**GS<50**	**GS>50**	**LU**
Increase investment by $15.3MM over 2 years	0.15	0.33	6.36	120.34
Increase investment by $6.8MM over 2 years	0.07	0.22	2.84	53.61
Increase investment by $3.6MM over 2 years	0.04	0.04	1.47	27.70
Maintain the current level of planned investment				
Don't Know				

Table 26 – Cable Replacement Investment Options and Bill Impacts PRZ

	Cable Replacement			
PowerStream RZ Options and Bill Impacts	**Residential**	**GS<50**	**GS>50**	**LU**
Increase investment by $19.5MM over 2 years	0.18	0.42	8.11	153.28
Increase investment by $11.9MM over 2 years	0.11	0.37	4.93	93.29
Increase investment by $5.1MM over 2 years	0.04	0.04	2.11	39.79
Maintain the current level of planned investment				
Don't Know				

Based on the outcomes and bill impacts presented, a majority of customers supported an increase in investment in both cable renewal strategies. Table 27 summarizes customer preferences between the options for the cable injection and cable replacement investments.

Table 27 – Customer Preferences PRZ

	Cable Injection			Cable Replacement		
PowerStream RZ	**Residential**	**GS<50**	**GS>50+LU**	**Residential**	**GS<50**	**GS>50+LU**
Increase - Injection $15.3MM, Replacement $19.5MM	33%	34%	31%	32%	33%	26%
Increase - Injection $6.8MM, Replacement $11.9MM	12%	8%	11%	14%	8%	17%
Increase - Injection $3.6MM, Replacement $5.1MM	10%	14%	11%	12%	13%	14%
Maintain the current level of planned investment	21%	14%	23%	20%	13%	20%
Don't Know	24%	30%	23%	22%	33%	23%

Alectra Utilities incorporated customer preferences when identifying the projects proposed for ICM funding in this application. The proposed ICM projects will allow Alectra Utilities to address reliability concerns in 28 of the most pressing communities in the Enersource and PowerStream RZs. These investments will also provide lower long-term costs to ratepayers and mitigate further outages in these areas.

SUMMARY OF PROPOSED INCREMENTAL PROJECTS

Alectra Utilities must accelerate its investment in cable renewal in order to address the compounding effect of a growing number of customer hours of interruption driven by XLPE cable failures and a rapidly growing backlog of in-service deteriorated and unreliable cable. Since 2017, communities in the Enersource and PowerStream RZs account for 66% of all customer hours of interruption caused by failing XLPE cable. Alectra Utilities has taken steps to advance analytics on cable failures to identify the worst neighbourhoods, however, the ongoing deterioration of this equipment is outpacing the level of investment supported by Alectra Utilities' base rates.

Cable injection is a cost-effective, comprehensive response to the growing impact of XLPE cable failures. Renewal through injection extends the life of the existing cable at one-sixth the cost of replacement and provides environmental benefits by reusing the existing cable. Alectra Utilities must urgently increase the pace of cable renewal to leverage the benefits of cable injection before the direct-buried XLPE cable deteriorates beyond the point that injection is feasible. Secondly, Alectra Utilities must urgently increase the pace of planned cable replacement in hotspot areas where cable failures are occurring and at risk of imminent failure that will cascade into more significant outages and higher emergency replacement costs. Alectra Utilities has identified that the implementation of incremental cable renewal solutions in 28 neighbourhoods in 2023 and 2024 will result in mitigating approximately 250,000 customer hours of interruption and avoid approximately $180MM in future capital renewal costs, by injecting cable now, rather than replacing cable later.

This section summarizes the incremental underground cable renewal investments that Alectra Utilities proposes to implement through ICM funding requested in this Application. These investments are driven by worsening reliability and deteriorating asset conditions in specific localized neighbourhoods throughout the Enersource and PowerStream RZs. As summarized below, investment is needed urgently to address an increasing trend in customer hours of interruption due to failing direct-buried XLPE cable. Alectra Utilities has evolved and refined the approach to identify hotspots that, without expedient action, will imminently cascade into much more significant issues causing a growing scale of disruption to larger numbers of customers and higher costs to address reactively.

Impact and Response to Underground Cable Failure

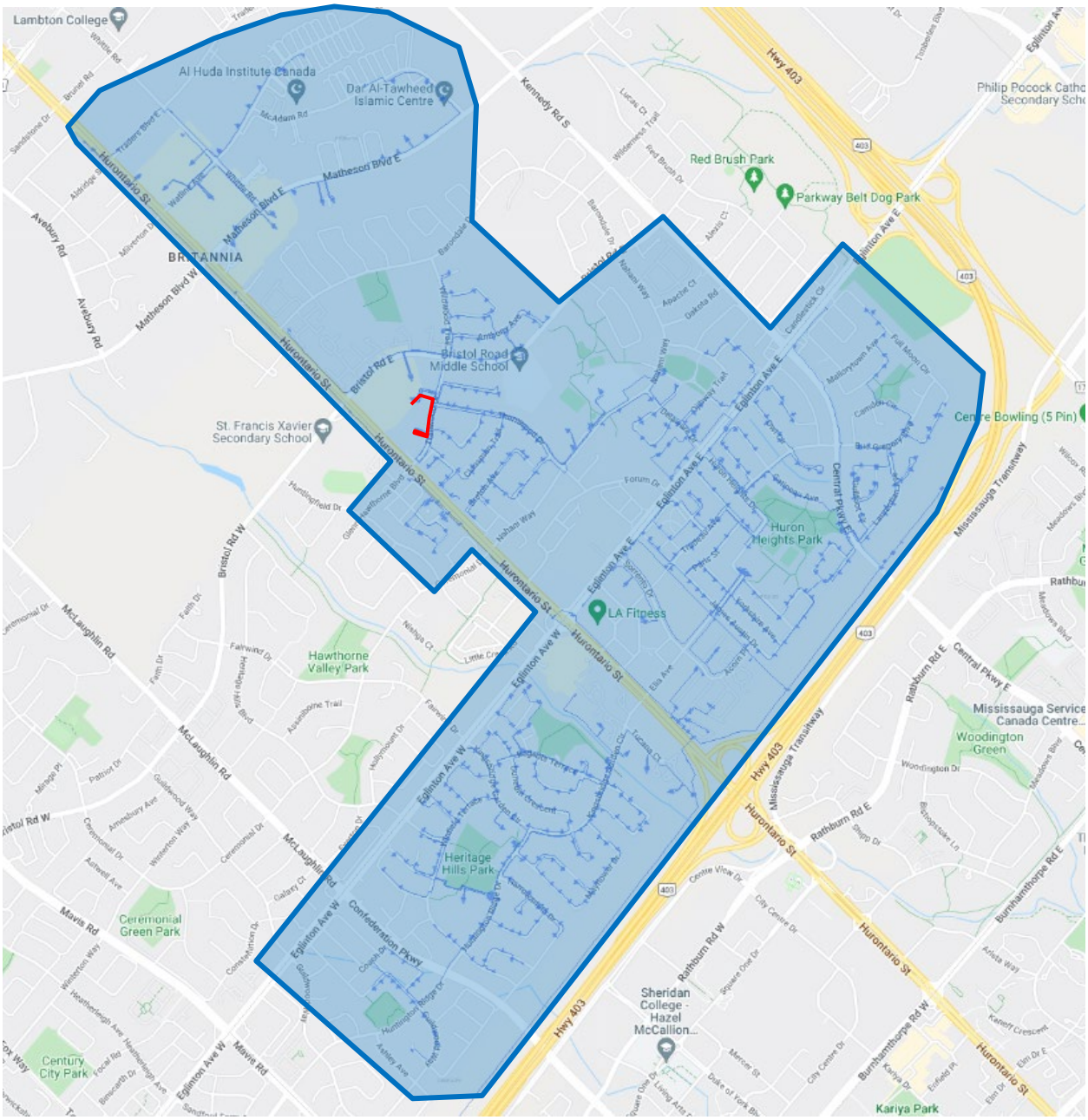
Alectra Utilities responds to and remediates an average of 488 cable failures events each year. This section outlines the steps Alectra Utilities takes to resolve a cable failure and provides an assessment of the impact to a customer. Alectra Utilities addresses underground cable failures in two phases. In the first phase of response, Alectra Utilities investigates and isolates the cable fault. Once Alectra Utilities identifies that the outage was caused by a cable fault, the failed cable segment is isolated and customers are temporarily switched to an altenative supply point. In the second phase of response, Alectra Utilities locates the faulted portion of the cable and excavates the cable for repair. If cable repair is not possible, the cable will be replaced. After Alectra Utilities repairs or replaces the cable, the customers are restored back to normal supply configuration.

The first phase of response is typically completed by Alectra Utilities in approximatley 1-2 hours, but the duration of the outage can vary significantly based on a wide range of factors. Some of the most common factors that may impact the duration of the outage include: the time of outage event (outage events outside of business hours require crews to be called in from home); location of the outage (impacts travel time, traffic issues); complexity of the distribution system layout (multiple cables or utilities within the same corridor, number of assets); number of switching or isolation points available; availablility and number of fault indicator devices installed; weather conditions; and access to assets for inspection and operation.

Alectra Utilities is typically alerted to an outage event through a breaker operation. Alternatively, Alectra Utilities may also receive calls from customers identifying that service has been interrupted. Alectra Utilities' control room initiates the first phase process with the implementation of a trouble ticket and dispatches a crew to the site. If the event occurs outside of normal business hours, additional time is required for employees to be called in from home and dispatched to the site. Once the crew arrives in the vicinity of the outage, investigation of the outage event is completed through a triage process of assessments. Alectra Utilities' crews must identify the root cause of the outage from a wide range of potential issues including foreign interference (e.g. vehicle accidents, contractor dig-in, animal contact), adverse environmental conditions or potentially defective equipment (transformer, switchgear, overhead or underground equipment

failure). Alectra Utilities' crews systematically progress through the investigation process until a root cause is identified. If the root cause was a cable or cable accessory failure, the crew identifies the faulted segment of cable between two switchable devices and informs the control room to initiate the switching orders for crews to begin switching customers onto an alternative supply. In the event that alternative supply is not available, Alectra Utilities must take immediate steps to repair or replace the faulted cable under an emergency procedure and the customers will remain without service until the cable is fully repaired or replaced. A typical cable failure initially impacts all the customers in the greater vicinity of the outage connected to the same main feeder through a momentary outage. Alectra Utilities typically services a mix of 2,000 to 3,000 residential and general service customers on each feeder. A momentary outage is typically under a minute in duration but requires residents and businesses to reset systems and operations.

Figure 18: Map of 5,087 Customers Affected by Typical Cable Fault (April 9, 2021 in Mississauga[5])



Alectra Utilities' distribution system includes protection and control schemes which utilize fuses to mitigate the scale of the damage of the fault. Fuse operation is designed to operate by breaking the circuit from the supply to minimize the amount of current that flows into the fault. High fault currents stresses all the distribution equipment on the system which further deteriorates and

damages the performance levels of the system. Once the protection scheme breaks the circuit in the vicinity of the fault, all the customers connected downstream of the fuse experience a sustained outage which continues until the crews and control room can establish an alternative supply path. A typical cable failure sustained outage impacts 300 to 500 customers, depending on the density and layout of the distribution system in the area.

Figure 19: Excavated direct-buried cables near pad-mounted transformer base

Once Alectra Utilities establishes an alternative supply path for the customers due to the cable failure, Alectra Utilities transitions to the second phase of the response: repair and restoration. Since the cables are installed underground, Alectra Utilities must attain locates from all the other utilities and telecommunication companies before any digging of cables. Attaining locates typically takes three to four weeks, depending on the volume of requests pending for each utility/telecommunication company. Alectra Utilities must attain locates from each utility and telecommunications company with infrastructure in the area before starting any repair or replacement work. Locates are required to mitigate the saftey risk of damage to other infrastructure while excavating the damaged cable. Once locates are attained, Alectra Utilities applies cable testing technology to approximate the exact location of the cable fault before excavating the portion of the cable suspected of failing. Once Alectra Utilities is able to locate and excavate the cable, repairs to the cable are completed.

Figure 20: Excavating direct-buried XLPE cables in a residential rear-lot

Figure 21: Excavating and repairing direct-buried XLPE cable

With each cable failure, a surge of fault current passes through all the equipment towards the fault location. This fault current further degrades the insulation and reliability of the equipment. The cable becomes more prone to further failure until it is no longer salvageable for service, resulting in recurring outages for customers in areas served by these cables. Alectra Utilities continues to repair the cable to provide the time necessary to allocate funding and plan for renewal. Once repairs are completed, the cable is tested to ensure that all the faults have been identified and repaired. If the cable fails the test, further segements of the cable are excavated, repaired and retested. If the cable is deteriorted beyond repair and unable to pass the commissioning tests, it will be replaced. Under the replacement scenario, Alectra Utilities must complete an emergency replacement at higher costs and disruption to customers to avoid a situation where customers are without power. Once the cable is replaced and tested, Alectra Utilities restores the customers back onto the permanent supply configuration.

Proposed Incremental Projects

Alectra Utilities has identified 28 distinct projects that are required to address urgent and necessary cable renewal work in the Enersource and PowerStream RZs. Alectra Utilities leveraged its Asset Analytics platform to identify the projects for ICM funding. As identified above, the utility employs overlays of reliability and cable condition maps to identify emerging hotspots and completes a full engineering assessment of the remediation needs. The engineering assessment of cable failures was completed utilizing the most recent reliability results as of year-end 2021. This assessment identified 78 projects that will address hotspots for cable failures in need of renewal over the 2023 to 2024 time period. Based on the engineering assessment, Alectra Utilities identified 20 high priority projects in the Enersource RZ and 32 high priority projects in the PowerStream RZ on the verge of cascading failures with an urgent need for renewal. Of these 52 projects, base funding was sufficient to address 24 cable renewal projects. Alectra Utilities is requesting ICM funding for the next 28 high priority cable renewal projects in need of urgent cable renewal in these two RZs.

The list of projects includes 13 cable injection projects and 15 projects for cable replacement. The cable replacement projects selected address the worst areas throughout Alectra Utilities' entire service area in terms of failing direct-buried XLPE cable. With the completion of the proposed cable injection projects, Alectra Utilities will achieve two objectives: i) prevent further cable failure outages; and ii) reduce the need for higher future costs to replace the cable. With the completion of the proposed cable replacement projects, Alectra Utilities will replace the existing deteriorated and failing cable in 15 neighbourhoods with new cable installed in protective conduit that will provide reliable service for the next 55 years. New cable will eliminate the increasing impact of outages from failing cable and reduce the need for reactive and emergency replacement which is more costly and disruptive to the customers in the area.

In total, the incremental cable renewal projects will avoid approximately 450 outages over the next five years. Specifically, Alectra Utilities will avoid approximately 150 cable failure related outages in the Enersource RZ, where each outage would impact approximately 530 customers for one hour. Alectra Utilities will avoid approximately 300 cable failure related outages in the PowerStream RZ, where each outage would impact approximately 330 customers for two hours per outage. In total, the combined investment will avoid approximately 250,000 customer hours

of interruption, equivalent to Alectra Utilities' yearly customer hours of interruption for cables. Additionally, Alectra Utilities has forecast that performing this work now will avoid a future cable renewal cost of approximately $180MM, largely attributable to injecting cable now that would otherwise need to be replaced in future as a result of missing the cable injection feasibility window.

Table 28 – ICM Projects PRZ and ERZ ($MM)

Project #	Project Name	2023	2024
151329	Cable Replacement – Raymerville Drive Area in Markham (M21)	$1.5	$1.6
151361	Cable Injection – Cairns Drive of Markham (M21)	$1.7	$1.9
151367	Cable Injection – McNaughton Road Area of Vaughan (V26)		$1.9
151403	Cable Replacement - Montevideo & Battleford Area in Mississauga (Area 46)	$1.4	
151407	Cable Replacement – Glen Erin & Burnhamthorpe of Mississauga (Area 25)	$2.2	$2.3
151431	Cable Injection – Glen Erin Dr & Bell Harbour Dr in Mississauga (Area 39)	$0.9	
151432	Cable Injection – Edwards Boulevard Area in Mississauga (Area 43 & 51)		$1.3
151435	Cable Injection – Derry Road & Ninth Line (Area 56)	$1.0	$1.1
151436	Cable Injection – Winston Churchill & The Collegeway (Area 58 & 59)	$1.0	$1.1
151456	Cable Injection – Sovereign Court Area in Vaughan (V50)		$1.6
151459	Cable Injection – Creditstone Road Area in Vaughan (V24)		$2.1
151461	Cable Injection - Jacob Keffer Parkway Area in Vaughan (V17)	$1.6	
151517	Cable Injection - 8th Line & Highway 11 Area in Bradford (BR5)		$1.3
151520	Cable Injection – Willow Farm Lane of Aurora (A09)	$1.1	
151889	Cable Replacement – Tomken Trail in Mississauga (Area 36)		$2.0
151895	Cable Replacement – Main Feeder Cable on Cantay Road (Area 44)	$0.9	
151901	Cable Replacement – Hemus Square in Mississauga (Area 16)	$0.7	
151902	Cable Replacement – Dixie Road & Winding Trail (Area 19)	$0.6	
151903	Cable Replacement – South Millway Area in Mississauga (Area 25)		$1.0
151912	Cable Replacement - Ashbridge Traffic Circle Area in Vaughan (V51)	$2.6	
151913	Cable Replacement – Cochrane Drive & Scolberg in Markham (M44)	$2.5	$2.5
151914	Cable Replacement – Aviva Park Area of Vaughan (V36)	$2.4	
151935	Cable Replacement - Larkin Ave Area of Markham (M15)		$1.8
152373	Cable Replacement - St. Joan of Arc Area of Vaughan (V26)		$1.6
152375	Cable Replacement – Hammond Drive Area in Aurora (A09)		$1.3
152379	Cable Replacement – Batson Drive in Aurora (A10)	$1.7	
152386	Cable Injection - Kersey Crescent Area in Richmond Hill (R23)	$1.5	
152387	Cable Injection – Rainbridge Ave (V51)		$0.6
	Total Proposed ICM Investment	**$25.3**	**$27.0**

Without incremental capital funding to implement these 28 urgent and necessary projects, Alectra Utilities is limited to only completing the 24 projects supported by base rates. The projects supported by base rates are not included in the list of the 28 ICM projects.

In the Enersource RZ, base rates support 9 cable renewal projects over the 2023 and 2024 period. With incremental funding, Alectra Utilities will be able to complete an additional 11 projects, for a total of 20 projects.

Figure 22: 2023 & 2024 ERZ Cable Renewal Projects - Base

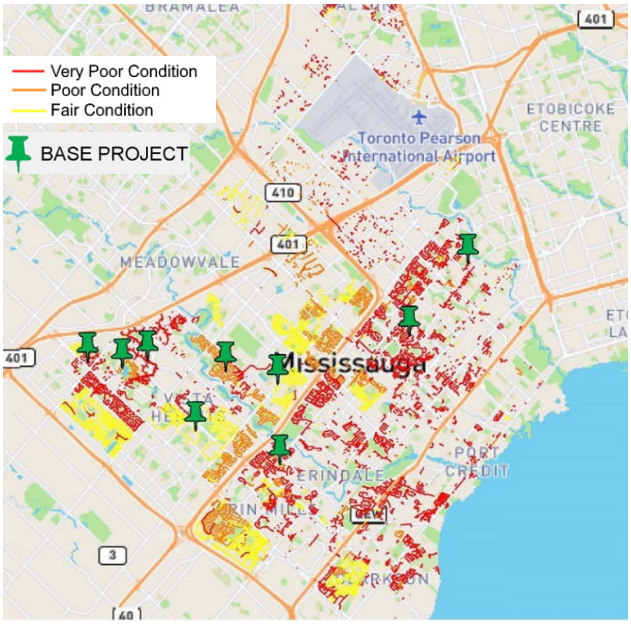
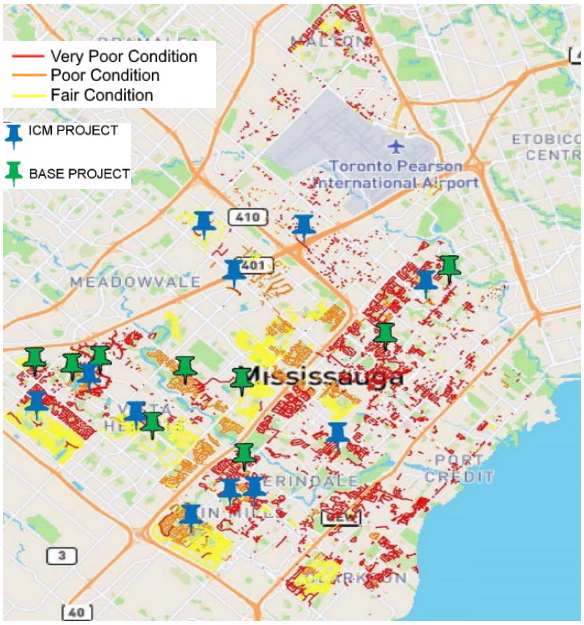


Figure 23: 2023 & 2024 ERZ Cable Renewal Projects - Base and Incremental



In the PowerStream RZ, base rate support 15 cable renewal projects over the 2023 and 2024 period. With incremental funding, Alectra Utilities will be able to complete an additional 17 projects, for a total of 32 projects.

Figure 24: 2023 & 2024 PRZ (Vaughan) Cable Renewal Projects - Base

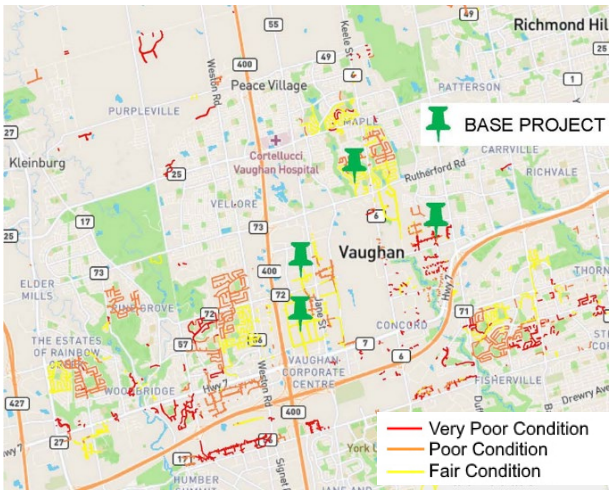


Figure 25: 2023 & 2024 PRZ (Vaughan) Cable Renewal Projects - Base and Incremental

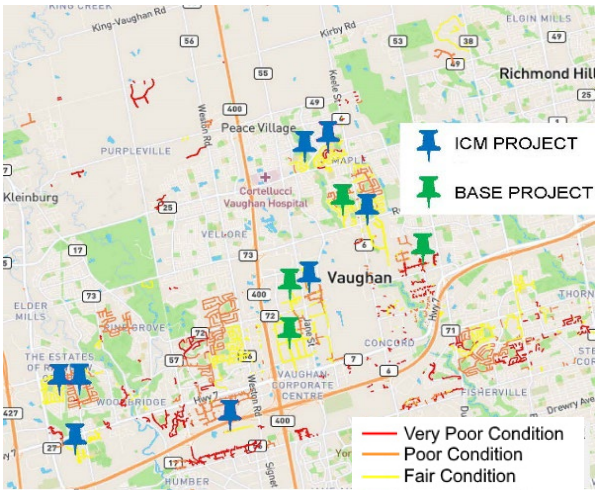


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Figure 26: 2023 & 2024 PRZ (Markham) Cable Renewal Projects - Base

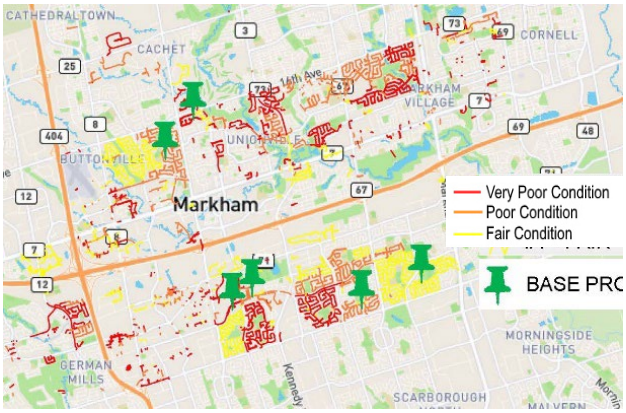
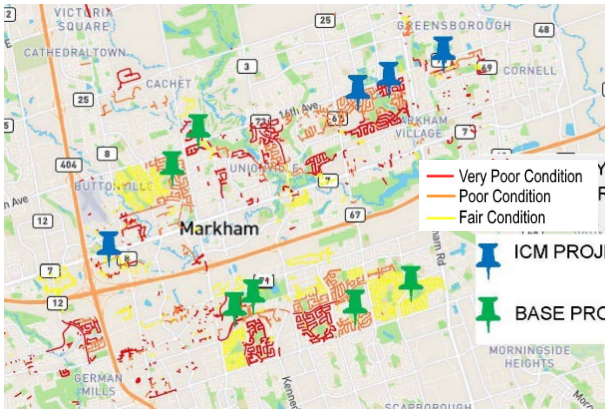
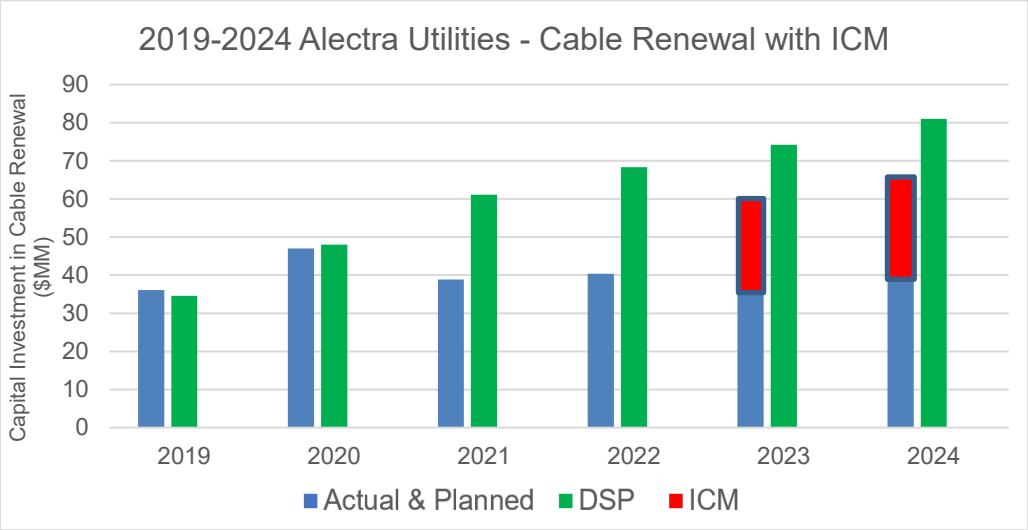


Figure 27: 2023 & 2024 PRZ (Markham) Cable Renewal Projects - Base and Incremental



2 Figure 28 highlights the disparity in spending if Alectra Utilities does not receive ICM funding for
3 cables. Finally, without the funding Alectra Utilities would need to defer investments leading to
4 increased spending at higher costs in later years and worsened reliability for rate payers.

Figure 28: 2019-2024 Alectra Utilities Cable Renewal Investment with ICM Relative to DSP



The following section highlights each proposed ICM project by operational area and then by cable renewal method with replacement projects listed first and injection second. All the projects are targeting first generation direct buried XLPE cable. The project summaries include: the project specific reliability along with the types of customers impacted; the cost; and maps highlighting the scope of the work and the condition/reliability of the affected assets. Alectra Utilities has also provided an estimate of avoided outages should the investment proceed as planned. The estimate is based on engineering judgement using asset condition, reliability, historical comparators, clustering of the failures, number of failures and probability of failure. The number of customers impacted, and the duration of each outage is based on an average of the historical five years. The estimate of avoided outages is capped to five years from completion of the investment, and assumes no benefit in the year of execution, to provide a conservative estimate. Although the business case summaries identify the customers directly within the project scope, customers both upstream and downstream of the project area will also benefit from these assets being renewed. This is identified in the project summaries where the number of customers within the project scope differ from the total number of customers impacted by the outage, both historically and in the estimate of future reliability.

Cable Replacement Projects in the Enersource RZ

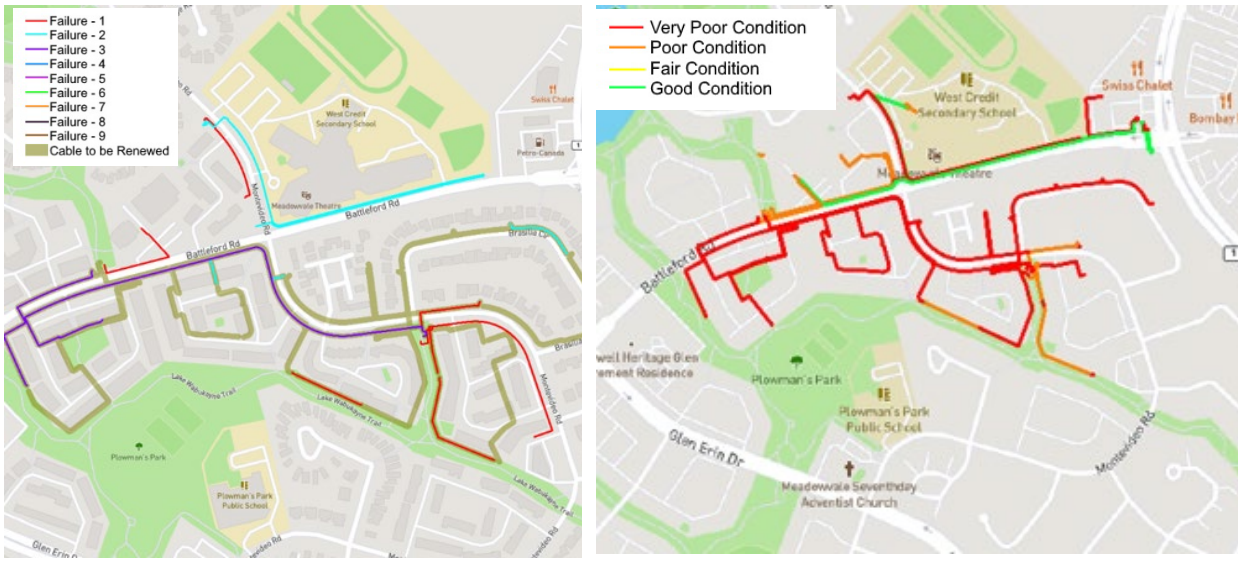
Table 29 – 2023 and 2024 Incremental Cable Replacement Projects – ERZ

Project #	Project Name	2023	2024
151403	Cable Replacement - Montevideo & Battleford Area in Mississauga (Area 46)	$1.4	
151407	Cable Replacement – Glen Erin & Burnhamthorpe of Mississauga (Area 25)	$2.2	$2.3
151889	Cable Replacement – Tomken Trail in Mississauga (Area 36)		$2.0
151895	Cable Replacement – Main Feeder Cable: Cantay Road in Mississauga (Area 44)	$0.9	
151901	Cable Replacement – Hemus Square in Mississauga (Area 16)	$0.7	
151902	Cable Replacement – Dixie Road & Winding Trail in Mississauga (Area 19)	$0.6	
151903	Cable Replacement – South Millway Area in Mississauga in Mississauga (Area 25)		$1.0
	Total Proposed ICM Investment	**$5.8**	**$5.3**

Project 151403: Cable Replacement: Montevideo & Battleford Area in Mississauga (ERZ)

This project will replace 2.5 km cable in the Montevideo & Battleford area in Mississauga with an investment of $1.4MM in 2023.

Figure 29 – Cable Failures and Condition Maps - Montevideo & Battleford Area



This investment is required to replace 2.5km of direct-buried XLPE cables with Tree Retardant-XLPE cables installed in conduit in the Central South (Mississauga) area within Montevideo & Battleford (AREA46). This area has 418 residential customers that were impacted 12 times for 50 minutes over the last 6 years due to cable failure. These customers have seen 7 outages over the last 3 years. In the 2020 ACA, these cables were determined to be beyond the end of useful

life of 40 years and in very poor condition. Completion of this project is expected to avoid 3 failures per year as of 2025, with each outage impacting 1,254 customers for 50 minutes for a total of 1,052 customer hours of interruption.

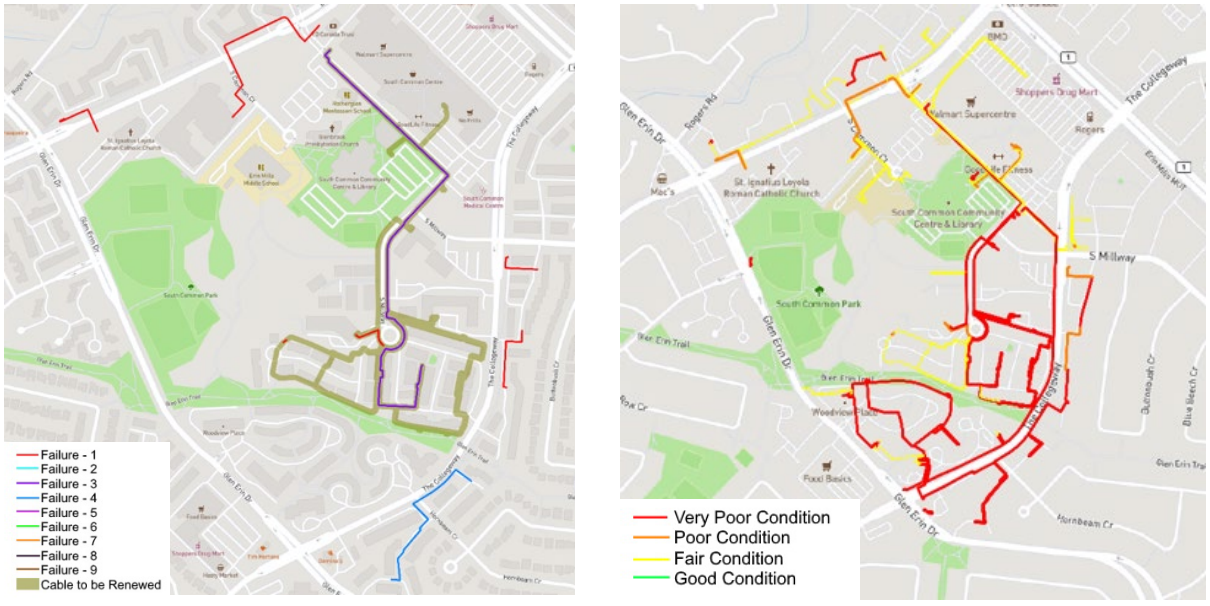
Project 151407: Cable & Transformer Replacement – Glen Erin & Burnhamthorpe Area in Mississauga

The customers in this area near Glen Erin and Burnhamthorpe are comprised of 13 commercial and 62 residential customers. These customers were impacted by cable failures two times over the last 6 years. The average duration of each outage was 3 hours and 22 minutes.

The main feeder in this area supplying the 13 commercial customers experienced a third cable failure in 2019. If not remediated within the next 2 years, these customers will experience more frequent outages due to the already damaged and weakened main feeder cables.

This investment will replace 9.7 km of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit with an investment of $2.2MM in 2023 and $2.3MM in 2024.

Figure 30– Cable Failures and Condition Maps - Glen Erin & Burnhamthorpe Area



The distribution cables and transformers supplying the residential area are located in rear lots which impacts restoration time in cases of cable failure or transformer failure. Two of the cables

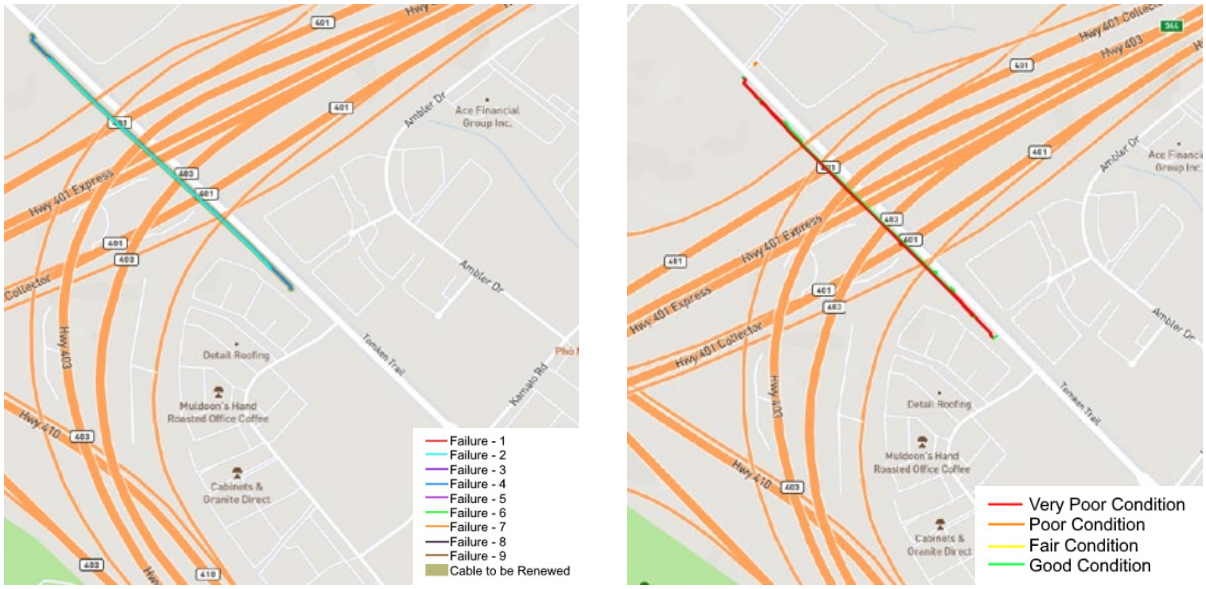
in the residential area have failed at least once in the past. With each cable failure, the cumulative impact of the damage on the cable substantially increases the probability of the next failure. This project will move the distribution cables and transformers to the front location which makes future cable remediation and transformer replacement easier to implement. The replacement of cables in this project will also increase the reliability to Pediatric Associates, the South Common Community Centre and the South Common Centre Shopping Mall which contains a Walmart, Shoppers Drug Mart, a food court and several other retail stores.

In the 2020 ACA, these cables were determined to be beyond typical useful life and in very poor condition. This investment will replace 9.7 km of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit. Alectra Utilities will replace 6.5km of cable in 2023 and 3.2km of cable in 2024 based on the scope of work that can be executed within each year. Completion of this project is expected to avoid 2 failures per year as of 2024, increasing to 7 outages per year as of 2028, impacting these 75 customers for a total 1,769 customer hours of interruption per year..

Project 151889: Cable Replacement – Tomken Trail in Mississauga (Area 36)

This project is urgently required to replace a main feeder cable on Tomken Trail. This main feeder cable has already failed four times and requires immediate replacement. This main feeder supplies 334 commercial and industrial customers. The investment to replace this cable is $2.0MM in 2024.

Figure 31– Cable Failures and Condition Maps - Tomken Trail



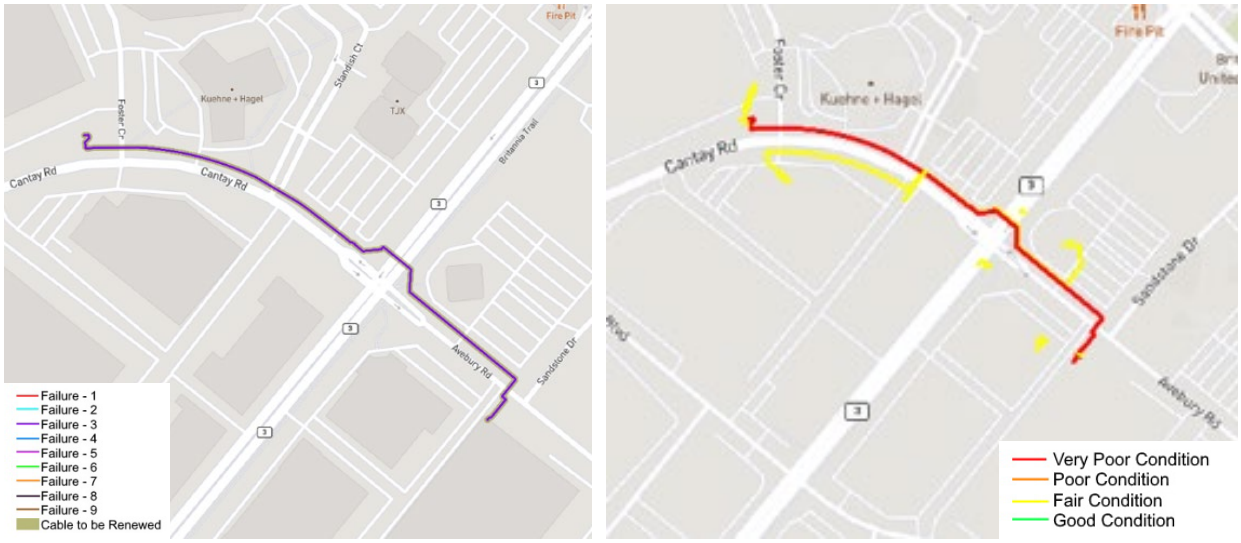
This cable segment, which crosses under Hwy 403, connecting the overhead distribution system north and south of Hwy 403 is located at the midpoint of circuit 17F1 which supplies commercial customers in the Tomken Rd area. If not remediated, these commercial customers will experience more frequent outages due to the already damaged and weakened cables. The cable segment from switch S5230 to switch S5227 has failed 4 times. This cable segment must be replaced with cable in duct. As this cable segment is underneath a highway crossing, Alectra Utilities plans to install 12 additional ducts for the other cables that are direct buried in the same run for future remediation works when needed. The number of customer hours of interruption for each cable failure on this segment was 454 hours and the number of customers affected by a cable failure on this segment is 334 customers. Completion of this project is expected to avoid 1 outage per year as of 2025, increasing to 4 avoided outages per year as of 2029.

Project 151895: Cable Replacement – Main Feeder Cable on Cantay Road in Mississauga (Area 44)

This project is urgently required to replace a main feeder cable on Cantay Road which is deteriorated and in very poor condition. This main feeder cable has already failed three times, and during the last attempt to repair the cable, operations staff determined it was too far damaged

to successfully repair and requires immediate replacement. This main feeder supplies 3,272 customers. The investment to replace this cable is $0.9MM in 2023.

Figure 32– Cable Failures and Condition Maps - Main Feeder Cable on Cantay Road



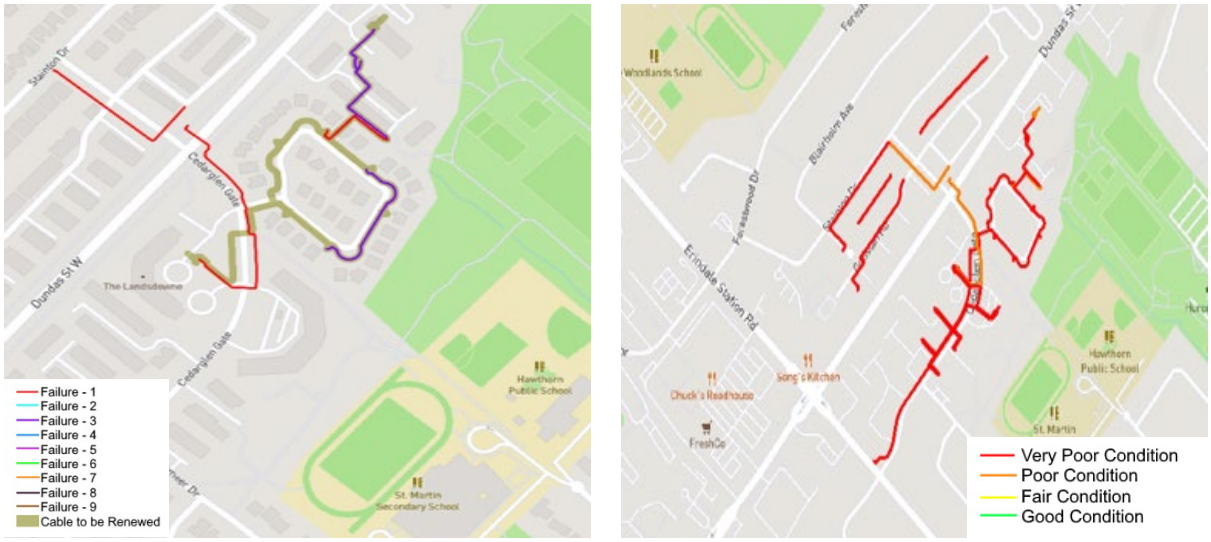
This cable segment is at a critical location as it supplies commercial customers in the Heartland area of Mississauga. If not remediated, these commercial customers will experience more frequent outages due to the already damaged and weakened cables.

Replacing this cable segment will maintain system reliability in the Heartland area. This cable segment will be abandoned in the field and there will be a reconfiguration of the distribution system. The number of customer hours of interruption for a cable failure on this segment was 407 hours and the number of customers affected by a cable failure on this segment are 3,272. Completion of this project is expected to avoid 1 outage per year as of 2024, increasing to 3 avoided outages per year as of 2028 saving a total of 1,220 customer hours of interruption per year.

Project 151901: Cable Replacement – Hemus Square in Mississauga (Area 16)

This project will replace 2.0 km cable in the Hemus Square area in Mississauga with an investment of $0.7MM in 2023.

Figure 33 – Cable Failures and Condition Maps - Hemus Square



This project replaces 1,973m of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit in the Central South (Mississauga) area within Hemus Square (AREA16). This area has 39 customers including a condominium building. These customers were impacted by cable failures 3 times over the last 4 years for an average of 62 minutes per each failure event. The 2018 and 2020 fault events caused several cable segments to experience 3 or more failures. Five cable segments in this area experienced 3 or more failures which reflects the significant deterioration of these assets. Therefore, these cables must be replaced within the next 2 years to avoid more frequent outages due to the number of already deteriorated cable segments. If any one segment of these cable fails and cannot be repaired, it would result in an abnormal system configuration and trigger the replacement of the faulted cable. As this would result in the replacement of a specific segment of the cable only based on an emergency repair, this approach would result in higher long-term costs for customers, compared to the proposed planned replacement of the cables in this area. The 2020 ACA identified the cables in this project to be beyond the end of useful life of 40 years and in very poor condition. Completion of this project will avoid 1 failure per year as of 2024, increasing to 4 avoided outages per year as of 2028, with each outage impacting 39 customers (including the condominium building) for 62 minutes.

Project 151902: Cable Replacement – Dixie & Winding Trail in Mississauga (Area 19)

An investment of $0.6MM in 2023 is required to replace 800m of direct-buried XLPE cable in the Dixie Road and Winding Trail area of Mississauga

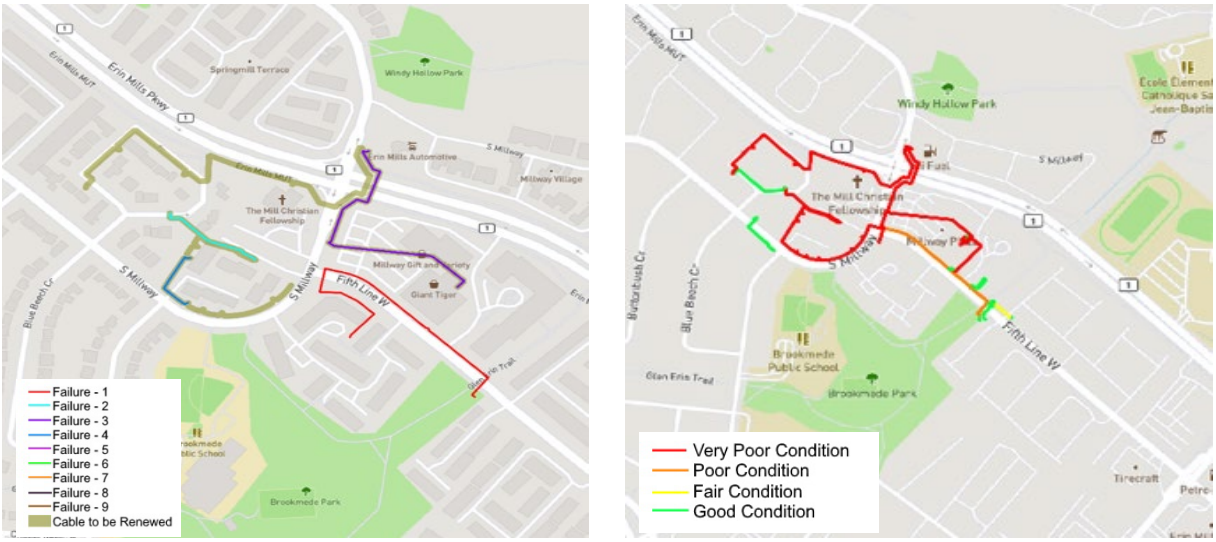
Figure 34 – Cable Failures and Condition Maps - Dixie & Winding Trail

This investment is required to replace 800m of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit in the Central South (Mississauga) area within Dixie Rd & Winding Trail (AREA19). The distribution system in the area of Winding Trail, east of Dixie Rd supplies 72 townhouses and a YMCA Child Care Centre. One cable segment which was installed in 1998 failed 6 times, impacting 9 townhouses and the Child Care Centre for 27 minutes per each failure event. The last outage event occurred in 2020 and the prior 5 failures occurred before 2016. If not remediated within the next two years, these outage events will become more frequent which will reduce reliability and customer satisfaction in this area. In the 2020 ACA, these cables were determined to be beyond the typical useful life and in poor condition. Completion of this project is expected to avoid 1 failure per year as of 2025, increasing to 3 avoided outages per year as of 2028 for a total of 182 customer hours of interruption.

Project 151903: Cable Replacement – South Millway Area in Mississauga (Area 25)

This project will replace 1.5 km cable in the South Millway area in Mississauga with an investment of $1.0MM in 2024.

Figure 35 – Cable Failures and Condition Maps - South Millway Area



This investment is required to replace 1.5km of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit in the Central South (Mississauga) near South Millway (AREA25). This neighbourhood in Mississauga has experienced a total of 8 cable failures since 2016, with multiple segments having now experienced multiple fault events. The cable failures impacted an average of 475 customers for 176 minutes per each failure event, more than once a year. The impact this project has on the customers in the area, also extends to a church and a strip mall in this area, thereby, impacting the larger community. In the 2020 ACA, these cables were determined to be beyond end of useful life of 40 years and in very poor condition. Completion of this project is expected to avoid 2 failures per year as of 2025, increasing to 4 avoided outages per year by 2029, impacting 1,900 customers for a total of 5,578 customer hours of interruption.

Cable Injection Projects in the Enersource RZ

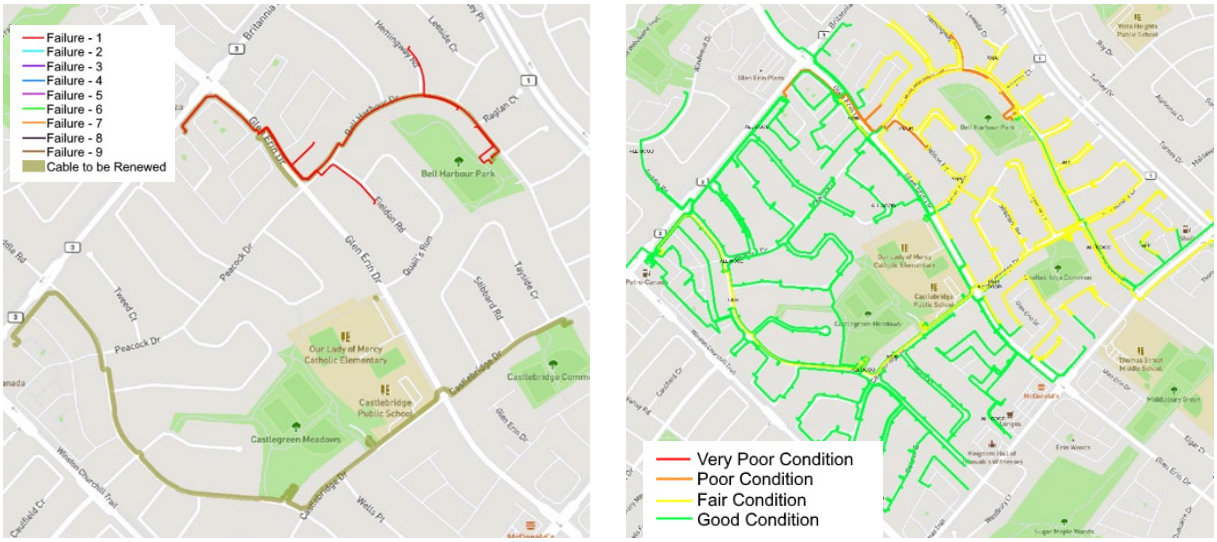
Table 30 – 2023 and 2024 Incremental Cable Renewal – Injection Projects in ERZ

Project #	Project Name	2023	2024
151431	Cable Injection – Glen Erin Dr & Bell Harbour Dr in Mississauga (Area 39)	$0.9	
151432	Cable Injection – Edwards Boulevard Area in Mississauga (Area 43 & 51)		$1.3
151435	Cable Injection – Derry Road & Ninth Line in Mississauga (Area 56)	$1.0	$1.1
151436	Cable Injection – Winston Churchill & The Collegeway in Mississauga (Area 58 & 59)	$1.0	$1.1
	Total Proposed ICM Investment	**$2.9**	**$3.5**

Project 151431: Cable Injection - Glen Erin Dr & Bell Harbour Dr in Mississauga (Area 39)

This project will inject cables in the Glen Erin and Bell Harbour Dr area (Area 39), with an investment of $0.9MM in 2023.

Figure 36 – Cable Failures and Condition Maps - Glen Erin Dr & Bell Harbour Dr



The feeder cable system in this area connects a series of pad-mounted switchgears that supply customers including the Erin Mills Shopping Mall and over 20 other commercial customers.

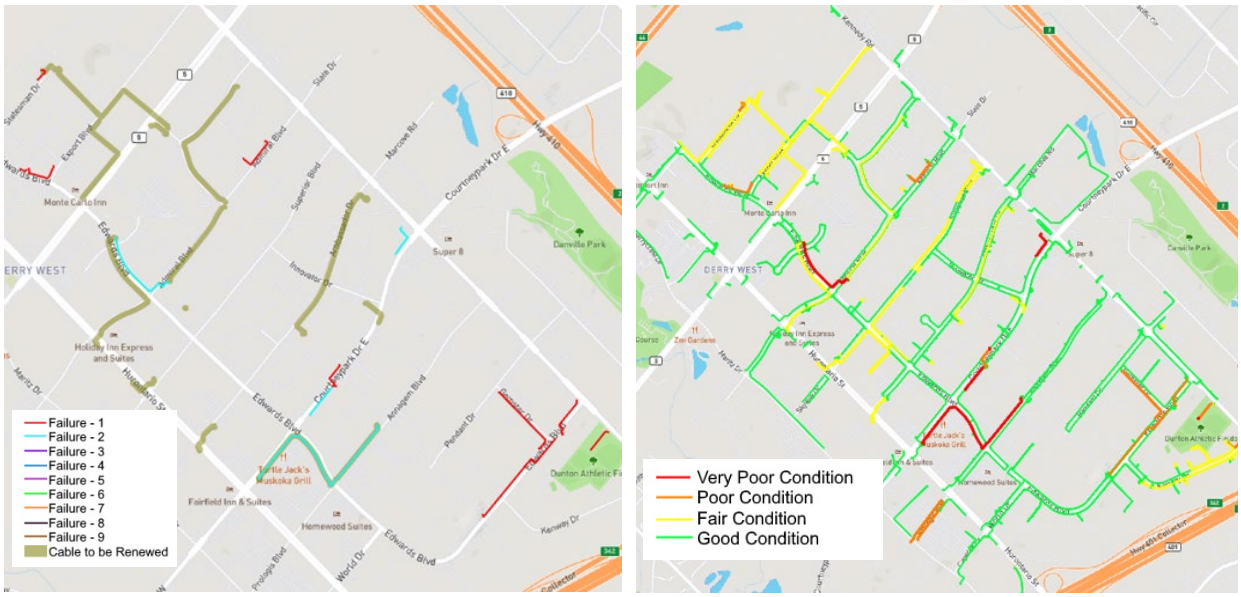
Alectra Utilities has experienced cable failures in this area and must perform cable injection within the next two years, for this to be a viable option. As there is a limited time opportunity when cable injection can be executed, deferring this investment would result in cable replacement as the only available option for Alectra Utilities.

This area has experienced 1 failure from 2019 to 2021 impacting 1,907 customers for 162 minutes. In 2020 ACA, these cables were determined to be in fair condition and candidates for cable injection. This investment will inject 9,057 m of direct-buried XLPE cables. Completion of this project is expected to avoid 2.3 failures per year as of 2024 impacting 4,386 customers for 162 minutes.

Project 151432: Cable Injection – Edwards Boulevard Area in Mississauga (Area 43 & 51)

This project will inject cables in the Hurontario & Derry Rd W (AREA43/51), with an investment of $1.3MM in 2024.

Figure 37 – Cable Failures and Condition Maps - Edwards Boulevard Area

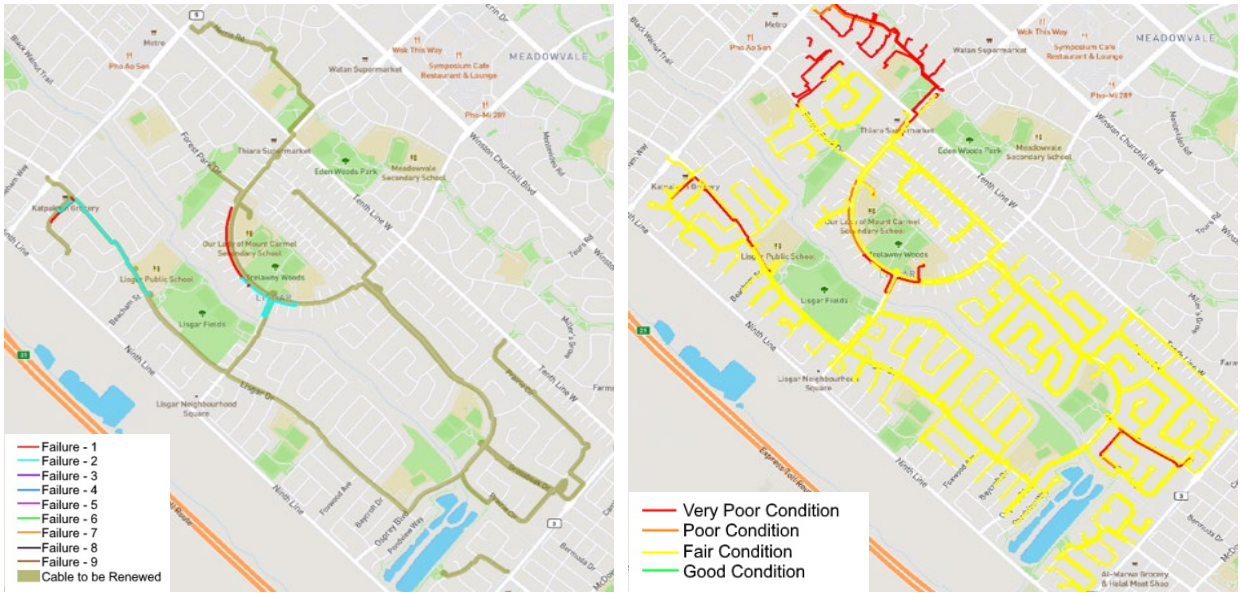


This area has experienced 7 cable failures impacting on average 191 mostly commercial customers for 108 minutes. In 2020 ACA, these cables were determined to be and in fair condition and candidates for cable injection. This investment will inject 16,419 m of direct-buried XLPE cables. Completion of this project is expected to avoid 1.6 failures per year as of 2025 impacting 306 commercial customers for 108 minutes.

Project 151435: Cable Injection – Derry Road & Ninth Line in Mississauga (Area 56)

The neighbourhoods around the Derry-Ninth Line-10th Line-Britannia area have experienced 7 outages over the last 6 years. The reliability in this area has worsened, and customers have experienced 5 outages in the last 3 years. Each feeder cable failure in this area impacted 1,520 customers including 8 public schools for 68 minutes. This investment will inject 20 km of direct-buried XLPE cables. Alectra Utilities plans to inject 10km of cable in each of 2023 and 2024, for an investment of $1.0MM and $1.1MM in 2023 and 2024 respectively.

Figure 38 – Cable Failures and Condition Maps - Derry Road & Ninth Line



Completion of this project is expected to avoid 1 failure per year as of 2024, increasing to 6 avoided failures per year as of 2029, which in total would impact 9,120 customers for a total of 10,311 hours of customer interruption.

Project 151436: Cable Injection – Winston Churchill & The Collegeway in Mississauga

This area, bounded by Winston Churchill-Hwy 403-Dundas, has 2,296 customers, including over 40 commercial customers, who have experienced 10 outages over the last 5 years, with 7 of these outages occurring in last 3 years. The average duration of these outages was 48 minutes to 2 hours. This investment will inject 20 km of direct-buried XLPE cables. Alectra Utilities plans to inject 10km in 2023, 10km in 2024 with an investment of $1.0 MM and $1.1 MM in 2023 and 2024 respectively.

Figure 39 – Cable Failures and Condition Maps - Winston Churchill & The Collegeway

This area has experienced 3 cable failures from 2016 to 2018 and 7 failures from 2019 to 2021, impacting on average 2,296 customers for 48 minutes, 2 times a year. Two of the feeder cable segments in this area experienced 2 failures. If not remediated within the next two years, the cable could experience a third failure and would no longer be eligible for cable injection. If the project is deferred, Alectra Utilities will have to replace the cable which is six times more costly than cable injection.

In the 2020 ACA, these cables were determined to be beyond typical useful life of 30 years and in fair condition. This investment will inject 20km of direct-buried XLPE cables. Completion of this project is expected to avoid an average of 1.2 failures per year as of 2024.

Cable Replacement Projects in the PowerStream RZ

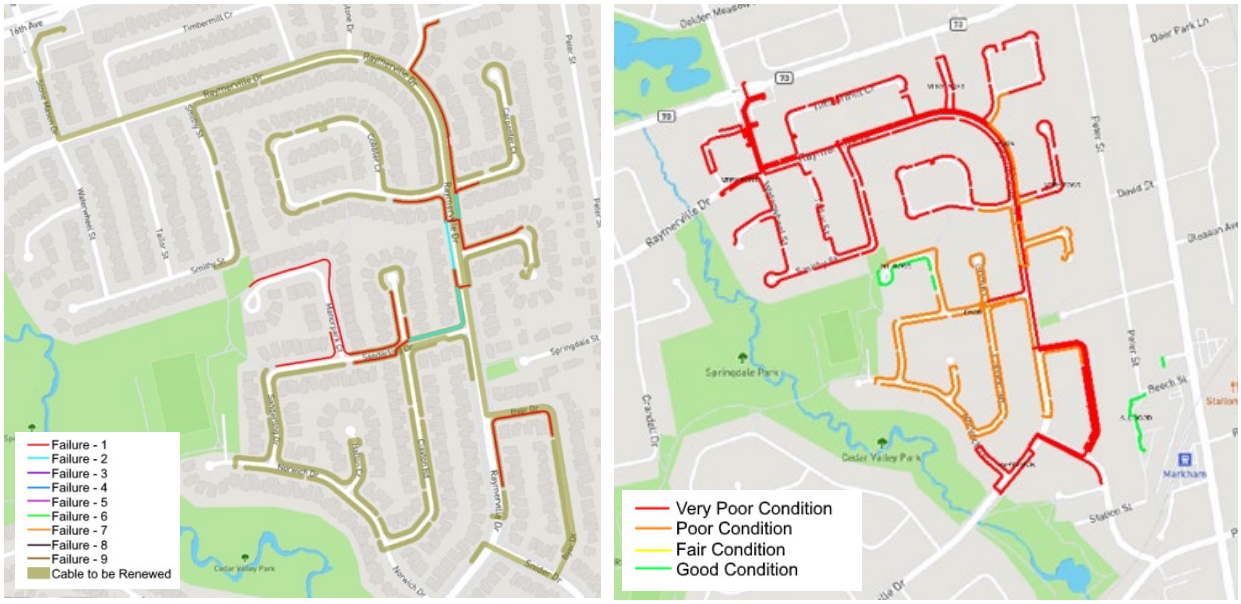
Table 31 – Cable Replacement Project PRZ

Project #	Project Name	2023	2024
151329	Cable Replacement – Raymerville Drive Area in Markham (M21)	$1.5	$1.6
151912	Cable Replacement: Ashbridge Traffic Circle Area in Vaughan (V51)	$2.6	
151913	Cable Replacement – Cochrane Drive & Scolberg in Markham (M44)	$2.5	$2.5
151914	Cable Replacement – Aviva Park Area of Vaughan (V36)	$2.4	
152373	Cable Replacement: St. Joan of Arc Area of Vaughan (V26)		$1.6
152375	Cable Replacement – Hammond Drive Area in Aurora (A09)		$1.3
151935	Cable Replacement - Larkin Ave Area of Markham (M15)		$1.8
152379	Cable Replacement – Batson Drive in Aurora (A10)	$1.7	
	Total Proposed ICM Investment	**$10.7**	**$8.8**

Project 151329: Cable Replacement – Raymerville Drive Area in Markham (M21)

This project will replace 5.1 km cable in the Raymerville Drive area in Markham with an investment of $1.5MM in 2023 and $1.6MM in 2024. The project is divided into two phases for coordination of work and to minimize disruption to the neighbourhood. Based on the scope of the project and configuration of the distribution system in this area, executing the project in two stages will result in the least amount of disruption to customers.

Figure 40 – Cable Failures and Condition Maps - Raymerville Drive Area



Raymerville is a main street in the Markville East area of Markham housing hundreds of residential customers. Since 2010, customers in this and nearby areas have experienced 17 outages. In the last 4 years, the cables in this area have seen 5 failures, with some segments having now experienced multiple failures. There continues to be an increasing number of cable faults, causing a clustering of failures in this area, leaving the same customers without power during each cable failure. Due to the deterioration of the cable, Alectra Utilities has determined that customers will experience more frequent outages in the future, starting with 1 outage per year in 2023, up to 3 outages per year in 2027. Cable in the area is on average 38 years old and considered in very poor condition.

Project 151912: Cable Replacement: Ashbridge Traffic Circle Area in Vaughan (V51)

This investment of $2.6MM in 2023 is urgently required to replace 6.2km of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit in the Ashbridge Traffic Circle Area in Vaughan (V51).

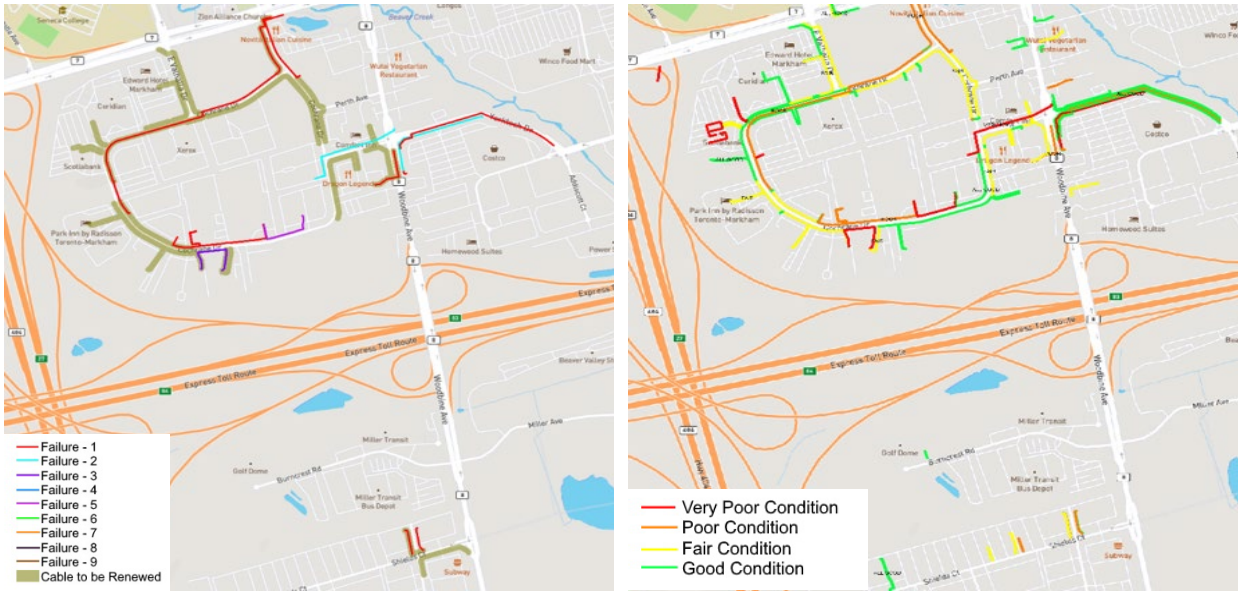
Figure 41 – Cable Failures and Condition Maps - Ashbridge Traffic Circle Area

Near St. Peters Catholic Church off Martin Grove Road a portion of this subdivision in Vaughan has been subjected to cable related outages. The 2020 ACA indicates that the cable is in poor and very poor condition, and cable in this area is on average 43 years old. Since 2016, the project area has had 7 outages. Due to the condition of the cable, customers will experience more frequent outages in the future, starting with 2 outages per year in 2023, up to 5 outages per year in 2027. Completion of this project is expected to avoid 5 failures per year as of 2027, and 5,039 customer hours of interruption.

Project 151913: Cable Replacement – Cochrane Drive & Scolberg in Markham

This multi-year project will replace 6.6 km direct buried XLPE cable in the Cochrane Drive & Scolberg area in Markham with an investment of $2.5MM in 2023 and $2.5MM in 2024.

Figure 42 – Cable Failures and Condition Maps - Cochrane Drive & Scolberg

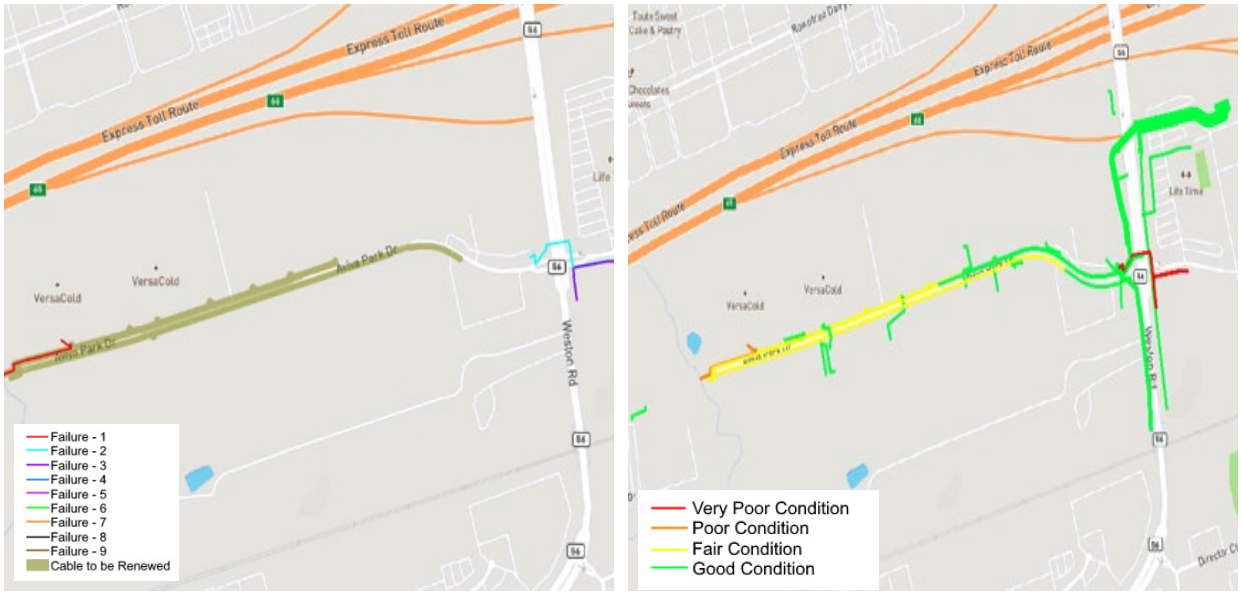


This investment will replace 6.6km (3.3km in each of 2023 and 2024) of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit in the East (Markham) M44 grid – Cochrane Dr (North) - Scolberg (South) area. In 2019, this commercial loop located in Markham just north of Highway 407 off Woodbine, required an emergency replacement on the southern portion and 4 failures occurred in the same year within short succession. This project was completed and for almost a year there were no cable issues. Unfortunately, in 2020 the north half of the loop suffered 3 cable failures. Based on the engineering analysis, this area will continue to experience additional failures, disrupting the businesses in this area. Cables in this area are on average 37 years old and are in fair or very poor condition. Customers in this project scope area in 2016-2018 experienced 1 outage. Between 2019-2021 this increased to 7 outages. The condition of the cables at this location are at end of life. Customers will experience more frequent outages, starting with 1 failure per year in 2023, and increasing to 3 failures per year by 2027. Completion of this project will avoid 3 failures per year as of 2027 and 214 hours of customer interruption per year.

Project 151914: Cable Replacement – Aviva Park Area of Vaughan (V36)

An investment of $2.4MM in 2023 is required to replace 4km of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit in the Aviva Park Area of Vaughan.

Figure 43 – Cable Failures and Condition Maps - Aviva Park Area



Aviva Park is a commercial area in Vaughan which has experienced an increase in failures of underground assets. Customers in this project area experienced 2 outages over the 2016 to 2018 period, and 4 outages from 2019 to 2021. The majority of switchgears within the project area are air insulated identified to exhibit deteriorated insulation, which are known to fail prematurely. Alectra Utilities initiated an infrared thermography scan ("IR") of all switchgear along Aviva Park Drive. That IR report raised significant concerns with several of the underground assets within the project scope. Alectra Utilities determined that based on all the available information, that a rebuild of the area, which includes modifications to the original supply configuration, will address both the cable and padmounted switchgear reliability issues. Since the assets at this location are nearing end of life, it is estimated that failures will occur starting with 1 failure per year in 2023, increasing to 2 failures per year by 2024, and up to 3 failures per year by 2027.

It is expected that completion of this project will avoid 3 failures per year as of 2027 and 500 hours of customer interruptions. Installing the new cables in conduit and altering the circuit topography will significantly improve reliability to customers within the project area, and customers downstream of the project area.

Project 151935: Cable Replacement - Larkin Ave Area of Markham (M15)

An investment of $1.8MM in 2024 is required for replacing 3.2km of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit in the Larkin Ave Area of Markham.

Figure 44 – Cable Failures and Condition Maps - Larkin Ave Area

This investment is urgently required to replacing 3.2 km of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit in the Larkin Ave Area of Markham. The Larkin Ave and Fincham Ave form a ring in a subdivision between 9th Line and Markham Road, just south of 16th Avenue. Cables in the area are an average age of 40 years old and considered to be in poor and very poor condition.

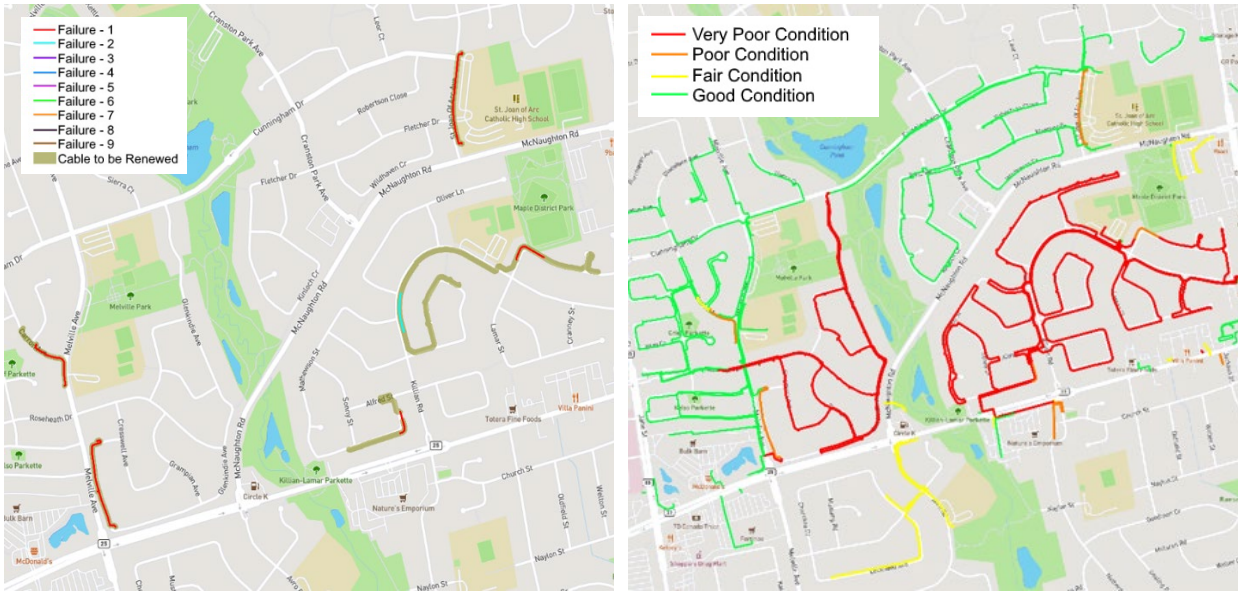
Since 2016, the project scope area has had 7 outages. More specifically customers in the project area experienced 3 outages between 2016 and 2018, and 4 outages between 2019 and 2021. Since the cables at this location are nearing end of life, it is estimated that failures will escalate starting with 3 failures per year in 2025, up to 5 failures per year by 2027.

It is expected that completion of this project will avoid 5 failures per year as of 2027 and 2,353 customer hours of interruption.

Project 152373: Cable Replacement: St. Joan of Arc Area of Vaughan (V26)

An investment of $1.6MM in 2024 is necessary to replace 3km of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit in the St. Joan of Arc Area of Vaughan.

Figure 45 – Cable Failures and Condition Maps - St. Joan of Arc Area



West of Keele and north of Major Mackenzie Drive West, the subdivision of Maple (part of Vaughan) and some of the surrounding area have experienced 8 outages since 2016. The average age of the cable in this area is 38 years. Since the cables at this location are nearing end of life, it is estimated that failures will escalate starting with 3 failures per year in 2025, up to 5 failures per year by 2027. Completion of this project is expected to avoid 5 failures per year as of 2027 and 4,439 customer hours of interruption.

Project 152375: Cable Replacement – Hammond Drive Area in Aurora (A09)

This investment of $1.3MM in 2024 is required to replace 2.2km of direct-buried XLPE cables with Tree-Retardant XLPE cables installed in conduit in the Hammond Drive Area in Aurora.

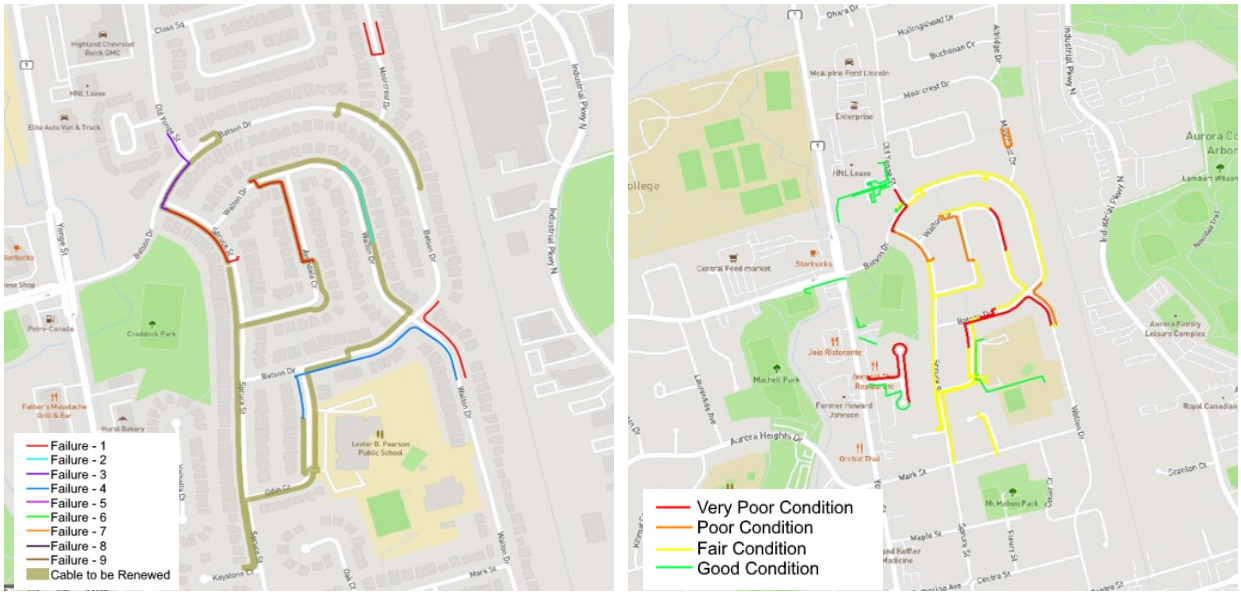
Figure 46 – Cable Failures and Condition Maps - Hammond Drive Area

The average age of cables in this area is 32 years. In the 2020 ACA, these cables were identified to be in poor condition. Since 2016, this community in Aurora, off Wellington Street West, and close to the York Region District School Board and Fleury Park area suffered 4 outages. The first occurred in 2016, followed by an outage in 2018, 2019, and 2020. Each outage occurred on a different cable within the same localized area. Since the cables at this location are at end of life, it is estimated that failures will escalate starting with 2 failures per year in 2025, and up to 3 failures per year by 2027. It is expected that completion of this project will avoid 450 hours of customer interruption resulting from the 3 projected failures in 2027.

Project 152379: Cable Replacement – Batson Drive in Aurora (A10)

This project will replace 2.8 km of direct buried XLPE cable in the Batson Drive area in Aurora with an investment of $1.7MM in 2023.

Figure 47 – Cable Failures and Condition Maps - Batson Drive



This investment will replace 2.8km of direct-buried XLPE cables in the East (Aurora) grid A10 - Batson Drive area. This area has experienced 21 cable failures since 2014. In the most recent five-year period, this area experienced 12 failures, of which 11 failures occurred in the last three years. Additionally, based on the 2020 ACA, these cables are beyond their typical useful life and in poor condition. It is estimated that based on the current trend this area will see 2 failures per year in 2024, up to 5 failures per year by 2027. It is expected that completion of this project will avoid 5 failures per year as of 2027 and 1,085 hours of customer interruption.

Cable Injection Projects in the PowerStream RZ

Table 32 – 2023 and 2024 Incremental Cable Renewal – Injection Projects (PRZ)

Project #	Project Name	2023	2024
151361	Cable Injection – Cairns Drive of Markham (M21)	$1.7	$1.9
151367	Cable Injection – McNaughton Road Area of Vaughan (V26)		$1.9
151456	Cable Injection Project – Sovereign Court Area in Vaughan (V50)		$1.6
151459	Cable Injection – Creditstone Road Area in Vaughan (V24)		$2.1
151461	Cable Injection - Jacob Keffer Parkway Area in Vaughan (V17)	$1.6	
151517	Cable Injection: 8th Line & Highway 11 Area in Bradford (BR5)		$1.3
151520	Cable Injection – Willow Farm Lane of Aurora (A09)	$1.1	
152386	Cable Injection: Kersey Crescent Area in Richmond Hill (R23)	$1.5	
152387	Cable Injection Project – Rainbridge Ave (V51)		$0.6
	Total Proposed ICM Investment	**$5.9**	**$9.4**

Project 151361: Cable Injection – Cairns Drive of Markham (M21)

This investment will inject 37.7km of direct-buried XLPE cables; 18.3km in 2023 and 19.4km in 2024, in the Cairns Drive area of Markham (Grid M21). The investment in 2023 is $1.7MM and in 2024 is $1.9MM.

Figure 48 – Cable Failures and Condition Maps - Cairns Drive

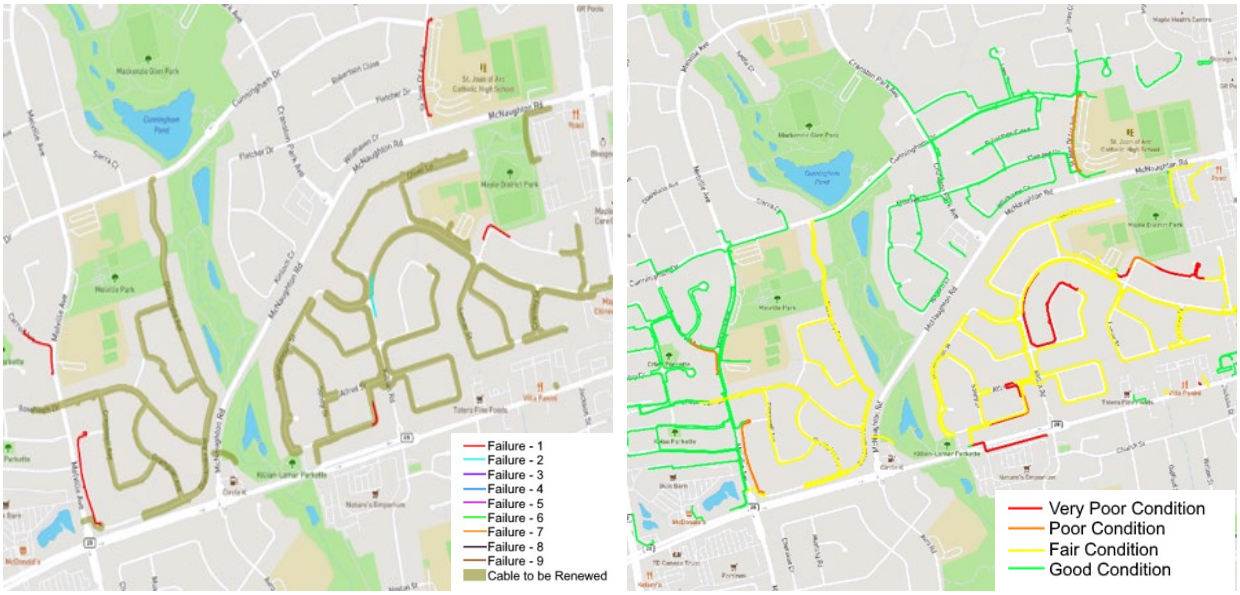
This grid has approximately 4,000 Alectra customers, who have been experiencing declining reliability recently due to cable failures. Since 2010, the project scope area has had 7 outages.

Customers in the project scope area experienced 2 outages between 2016 and 2018 and 3 outages between 2019 and 2021. There continues to be an increasing number of cable faults, causing a clustering of failures in this area. Due to the age of the cable, Alectra predicts that customers in this area will experience more frequent outages in the future, starting with 2 outages per year in 2024. Five outages per year are predicted, commencing in 2027 with a possible yearly 1,717 hours of customer interruption. During the 2020 ACA process, these cables were determined to be beyond typical useful life of 30 years and in poor or very poor condition.

Project 151367: Cable Injection – McNaughton Road Area of Vaughan (V26)

An investment of $1.9MM in 2024 is required to inject 17.1 km of direct-buried XLPE cables in the McNaughton Road Area of Vaughan.

Figure 49 – Cable Failures and Condition Maps - McNaughton Road Area



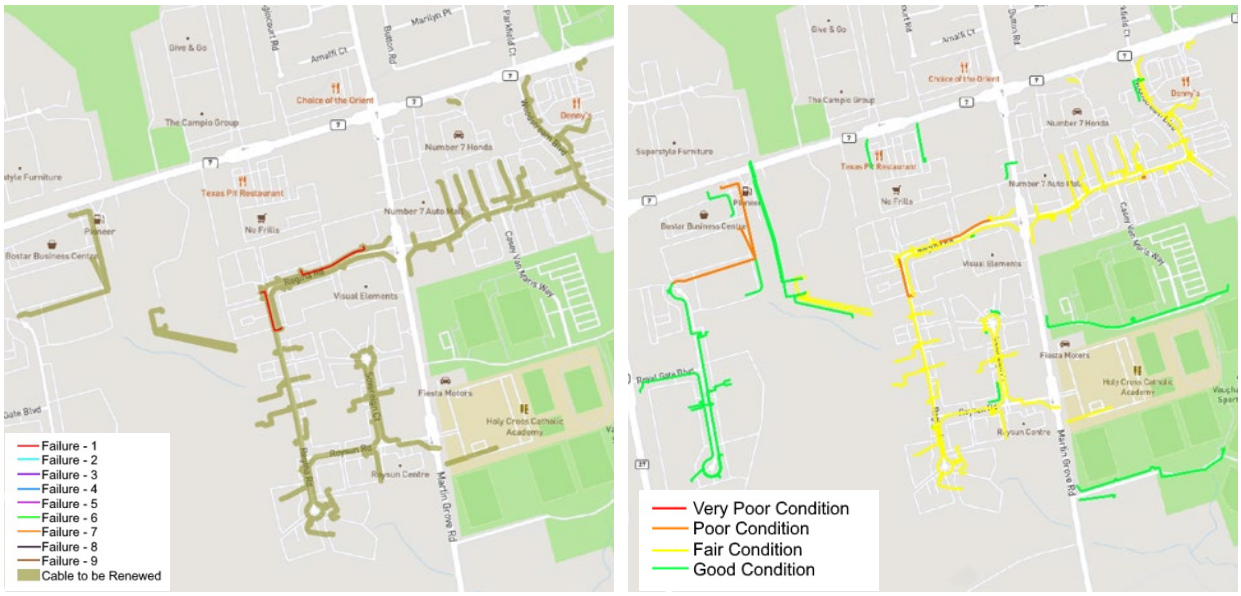
Subdivisions in Vaughan near McNaughton Rd have been affected by cable failures in recent years. Alectra plans to address the issue through both cable replacement and cable injection projects. This project area has experienced 8 cable & cable accessories failures since 2016 with 298 customers affected on average. During the 2020 ACA process, these cables were determined to in fair condition, hence candidates for injection. It is estimated that failures will escalate starting with 2 failures per year in 2025, up to 5 failures per year by 2027. It is expected that completion

of this project will avoid 5 failures per year as of 2027 and total of 4,439 hours of customer interruption each year.

Project 151456: Cable Injection Project – Sovereign Court Area in Vaughan (V50)

An investment of $1.6MM is urgently required in order to inject 14,950 m of direct-buried XLPE cables in 2024 in the Sovereign Court Area of Vaughan.

Figure 50 – Cable Failures and Condition Maps - Sovereign Court Area

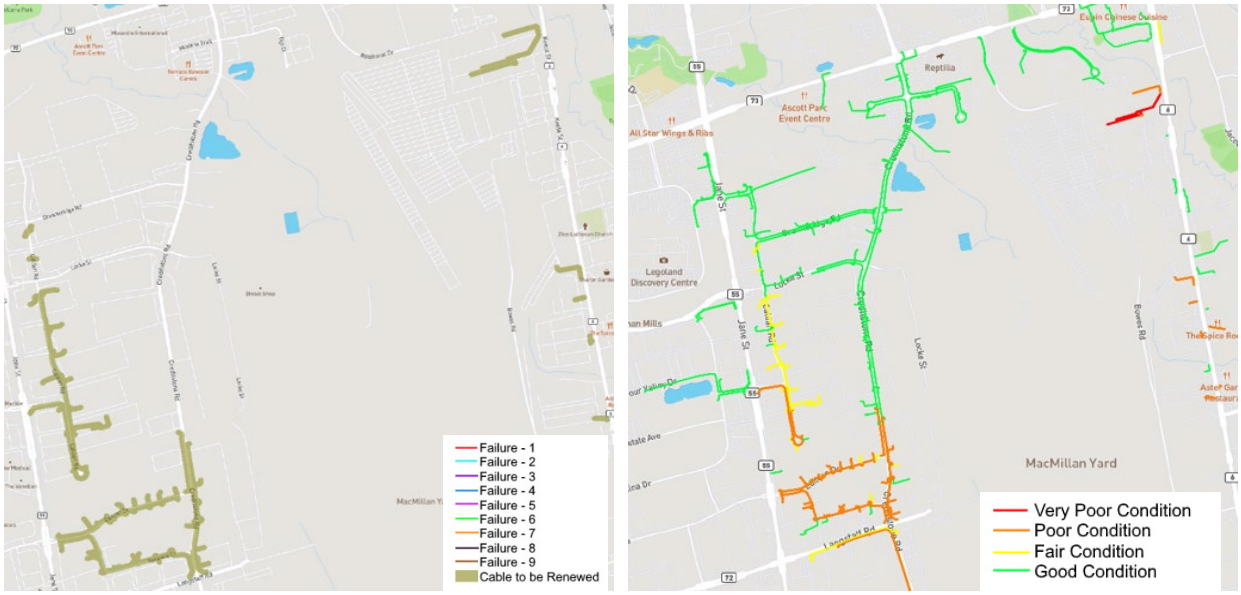


The area is a mix of residential, commercial customers and a school. This investment will inject 14,950 m of direct-buried XLPE cables in 2024 in the Sovereign Court Area of Vaughan. Customers in the project scope area experienced 2 outages between 2018 and 2021. Cable average age is 34 years old. Due to the age of the cable, customers will experience more frequent outages, starting with 1 outage per year in 2025, up to 3 outages per year by 2027. During the 2020 ACA process, these cables were determined to be beyond typical useful life of 30 years and in poor condition. It is expected that completion of this project will avoid 3 failures per year as of 2027 and total of 3,892 hours of customer interruption per year.

Project 151459: Cable Injection – Creditstone Road Area of Vaughan (V24)

An investment of $2.1MM in 2024 is required to inject 20.2 km of direct-buried XLPE cables in the Creditstone Road Area of Vaughan.

Figure 51 – Cable Failures and Condition Maps - Creditstone Road Area

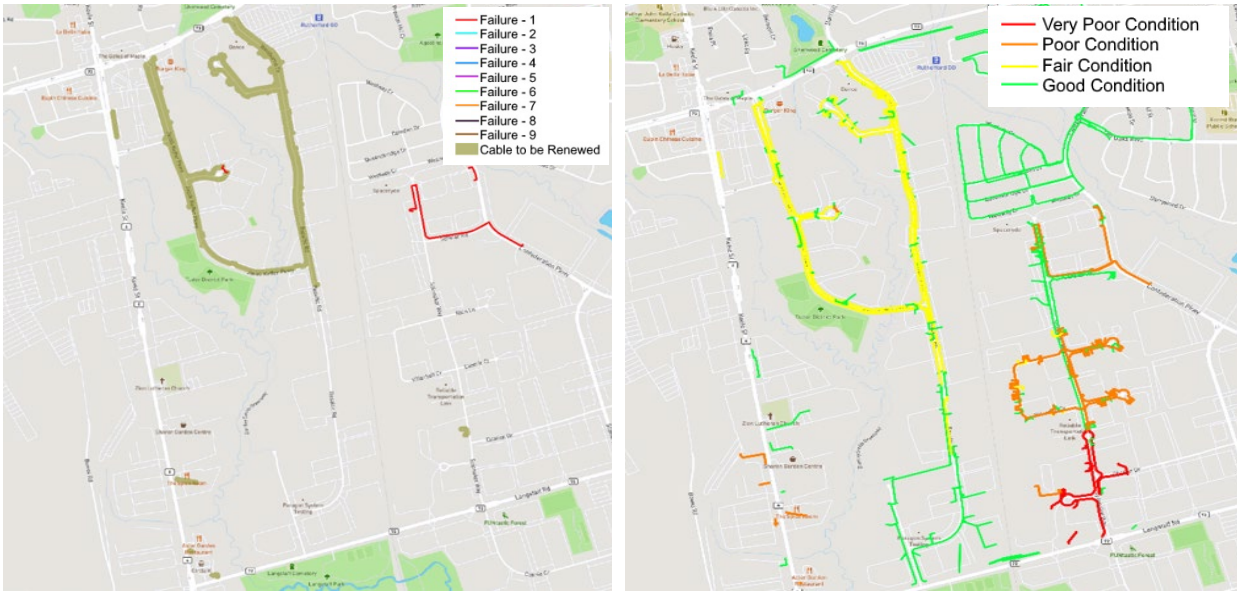


During the 2020 ACA process, the cables in this area were determined to be in fair and poor condition. Cable average age is 35 years old and just feasible for injection. It is estimated that failures will happen starting with 2 failures per year in 2025, escalating up to 3 failures per year by 2027. Alectra Utilities expects that completion of this project will avoid 3 failures per year as of 2027 and which would result in a potential yearly 3,892 customer hours of interruption.

Project 151461: Cable Injection - Jacob Keffer Parkway Area in Vaughan (V17)

This urgent investment of $1.6MM in 2023 is required to inject 21,861m of direct-buried XLPE cables in the Jacob Keffer Parkway Area in Vaughan.

Figure 52 – Cable Failures and Condition Maps - Jacob Keffer Parkway Area

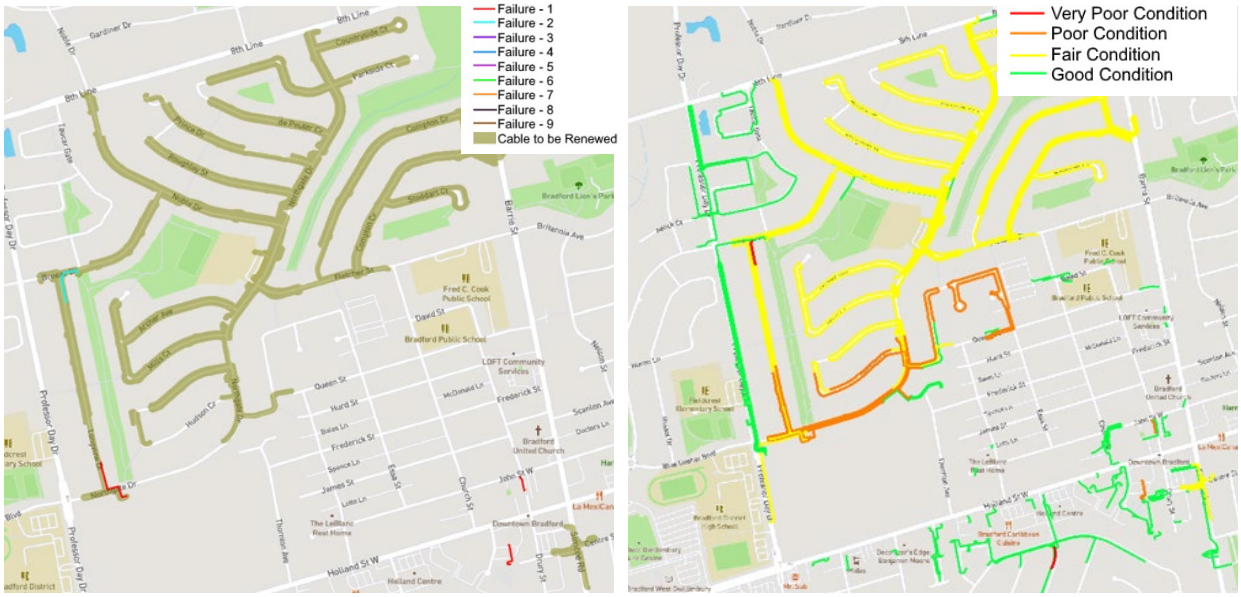


Since 2017, the project area has had 6 outages. Customers in the project area experienced 1 outage between 2016 and 2018 and 5 outages between 2019 and 2021. The average cable age is 33 years old and the cable is a candidate for cable injection. Due to the age of the cable in the project scope area and reliability history of adjacent cable, customers will experience more frequent outages in the future, starting with 1 outage per year in 2024, up to 3 outages per year in 2027. It is expected that completion of this project will avoid 3 failures per year as of 2027 and 734 hours of customer interruption per year.

Project 151517: Cable Injection: 8th Line & Highway 11 Area in Bradford

An investment of $1.3MM in 2024 is required to inject 14km of direct-buried XLPE cables in the 8th Line & Highway 11 Area in Bradford.

Figure 53 – Cable Failures and Condition Maps - 8th Line & Highway 11 Area



In the community of Bradford, cable injection is being planned to mitigate further cable failures that have been experienced by the more than 1,400 customers in this particular neighbourhood. Since 2018 the project scope area has had 2 outages. This area is expected to experience 1 cable/splice failure per year by 2025 and up to 2 failures per year by 2027. During the 2020 ACA process, these cables were determined to be in fair condition, hence candidates for cable injection. The project will help avoid a total of 2 potential cable failures per year as of 2027 and 2,594 customer hours of interruption per year.

Project 151520: Cable Injection – Willow Farm Lane Area of Aurora (A09)

This investment of $1.1MM in 2023 will inject 8.7km of direct-buried XLPE cables in the Willow Farm Lane area of Aurora (A09).

Figure 54 – Cable Failures and Condition Maps - Willow Farm Lane Area

Since 2016 the project scope area has had 3 outages, and cables of similar vintage in adjacent areas have also seen increased outages, which indicates that this area will develop into a hotspot for future cable failures. Due to the age of the cable, customer will experience more frequent outages in the future, starting with 1 outage per year in 2024, up to 3 outages per year in 2027. During the 2020 ACA process, these cables were determined to be beyond typical useful life of 30 years and in fair condition, which provides feasibility for injection. It is expected that completion of this project will avoid 3 failures per year as of 2027 and a total 1,130 customer hours of interruption per year.

Project 152386: Cable Injection: Kersey Crescent Area in Richmond Hill (R23)

An investment of $1.5MM in 2023 is required to inject 23,298m of direct-buried XLPE cables in the Kersey Crescent Area of Richmond Hill East.

Figure 55 – Cable Failures and Condition Maps - Kersey Crescent Area

This project scope area has had 2 outages. During the 2020 ACA process, these cables were determined to be in fair condition, and candidates for cable injection. Alectra Utilities estimated that failures will escalate starting with 1 failure per year in 2024, up to 3 failures per year by 2027. It is expected that completion of this project will avoid a total of 3 potential cable failures per year as of 2027 and 3,892 hours of customer interruptions.

Project 152387: Cable Injection Project – Rainbridge Ave

This investment of $0.6MM in 2024 is required inject direct-buried XLPE cables in the Rainbridge Ave area of Vaughan.

Figure 56 – Cable Failures and Condition Maps – Rainbridge Ave

This neighbourhood in Vaughan has been impacted by numerous cable failures in recent years. This area includes over 2,600 customers, both residential and commercial. Since 2016, the project area had 8 outages. Customers in the project area experienced 4 outages between 2016 and 2018 and an additional 4 outages between 2019 and 2021. The average age of the cable is 36 years old. Due to the age of the cable, customers will experience more frequent outages in the future, starting with 2 outages per year in 2025, up to 5 outages per year in 2027. During the 2020 ACA process, these cables were determined to be beyond typical useful life of and in fair condition. It is expected that completion of this project will avoid 5 failures per year as of 2027 and 5,039 hours of customer interruption per year.

ATTACHMENT 1
ICM CHECKLIST

ICM Checklist

Alectra Utilities Corporation

EB-2022-0013

Date: May 15, 2022

Filing Requirement Section/Page Reference	ICM Requirements	Evidence Reference, Notes
3.3.2 Incremental Capital Module		
3.3.2.1 ICM Filing Requirements		
	The following should be provided when filing for incremental capital:	
4	Capital Module applicable to ACM and ICM, for an incremental or pre-approved Advanced Capital Module (ICM/ACM) cost recovery and associated rate rider(s)	Attach 3-4; 7-8
28	An analysis demonstrating that the materiality threshold test has been met and that the amounts will have a significant influence on the operation of the distributor	Ex. 2/T1/S1 pp.5-8; 13-16
28	Justification that the amounts to be incurred will be prudent - amounts represents the most cost-effective option (but not necessarily the least initial cost) for ratepayers	Ex. 3/T1/S4
28	Justification that amounts being sought are directly related to the cause, which must be clearly outside of the base upon which current rates were derived	Ex. 2/T1/S1 pp.8-10; 16-17
28	Evidence that the incremental revenue requested will not be recovered through other means (e.g., it is not, in full or in part, included in base rates or being funded by the expansion of service to include new customers and other load growth)	Ex. 2/T1/S1 pp.8-10; 16-17
28	Details by project for the proposed capital spending plan for the expected in-service year	Attach 5-6; 9-10
28	Description of the proposed capital projects and expected in-service dates	Ex. 3/T1/S4
28	Calculation of the revenue requirement (i.e. the cost of capital, depreciation, and PILs) associated with each proposed incremental capital project	Attach 3-4; 7-8
29	Calculation of each incremental project's revenue requirements that will be offset by revenue generated through other means (e.g. customer contributions in aid of construction)	Attach 3-4; 7-8
29	Description of the actions the distributor would take in the event that the OEB does not approve the application	Ex. 1/T1/S4 p.9
29	Calculation of a rate rider to recover the incremental revenue from each applicable customer class. The distributor must identify and provide a rationale for its proposed rider design, whether variable, fixed or a combination of fixed and variable riders. As discussed at section 3.2.3, any new rate rider for the residential class must be applied on a fixed basis	Attach 3-4; 7-8
29	An updated DSP is required for any ICM request that is filed beyond the five-year horizon of the distributor's current DSP. Any ICM request that involves a significant increase to a capital budget may need to be supported by a DSP along with customer engagement analysis	N/A

ATTACHMENT 2
2021 ROE CALCULATION
ALECTRA UTILITIES

ROE Summary

Instructions

A distributor shall report, in the form and manner determined by the OEB, the Regulated Return on Equity (ROE) earned in the reporting year.

The reported ROE is to be calculated on the same basis as was used in the distributor's last Cost of Service (CoS).

The sign of the input cells are to be aligned with the sign of the accounts reported in RRR 2.1.7. Generally, revenue/gain items are to be entered as negative numbers and expense/loss items are to be entered as positive numbers.
Please read the RRR Filing Guide for the detailed guidance on the inputs of the form and appendices.
Click here for tips and examples (from RRR Filing Guide)

Information from the distributor's last CoS Decision and Order and the successfully submitted RRR 2.1.7 trial balance have been pre-populated in this form.
Please review each input for accuracy and contact Industry Relations Enquiry if you have any questions

CoS Decision and Order Info			**Data Source**
The CoS Decision and Order EB number for the ROE	- xx	EB-2017-0024	CoS Decision and Order (last CoS establishing the current reporting year's base rates)
Accounting standard used in CoS Decision and Order	- yy	Modified International Financial Reporting Standards (MIFRS)	CoS Decision and Order
Regulated Net Income			**Data Source**
Regulated net income (loss), as per RRR 2.1.7	- a	136,260,733.49	RRR 2.1.7 - USoA 3046 * (-1)
Adjustment items:			
Non-rate regulated items and other adjustments (Appendix 1)	- b	-45,531,793.26	Appendix 1 cell (aq)
Unrealized (gains)/losses on interest rate swaps (Not applicable if recorded in Other Comprehensive Income)	- c		Please provide USoAs
Actuarial (gains)/losses on OPEB and/or Pensions not approved by the OEB	- d		
Non-recoverable donations (Appendix 2)	- e	37.50	Appendix 2 cell (be)
Net interest/carrying charges from DVAs (Appendix 3)	- f	-240,065.91	Appendix 3 cell (cc)
Interest adjustment for deemed debt (Appendix 4)	- g	-20,236,326.30	Appendix 4 cell (dg)
Adjusted regulated net income before tax adjustments	- h=a+b+c+d+e+f+g	70,252,585.52	
Add back:			
Future/deferred taxes expense	- i	5,238,106.69	RRR 2.1.7 - USoA 6115
Current income tax expense (Does not include future income tax)	- j	12,753,724.96	RRR 2.1.7 - USoA 6110
Deduct:			
Current income tax expense for regulated ROE purposes (Appendix 6)	- k	4,307,170.35	Appendix 6 cell (fq)
Adjusted regulated net income	- l=h+i+j-k	83,937,246.82	

Deemed Equity			**Data Source**
Rate base:	- m	2,872,600,609.17	RRR 2.1.7 - Sum of USoA 4705-4751 inclusive
Cost of power	- n1	273,447,697.16	RRR 2.1.7 - Sum of USoA 4505-4640, 4805-5695, 6105, 6205, 6210, and 6225, then subtract ROE Summary cell (d) and subtract ROE Summary cell (e)
Operating expenses before any applicable adjustments			Please provide USoAs
Other Adjustments:			
Net OM&A Merger Savings	- n2	-32,568,001.01	various OM&A
Adjusted operating expenses	- n=n1-n2	306,015,698.17	
Total Cost of Power and Operating Expenses	- o=m+n	3,178,616,307.34	
Working capital allowance % as approved in the last CoS Decision and Order	- % p	10.50	CoS Decision and Order
Total working capital allowance ($)	- q=o*p	333,754,712.27	
PP&E			
Opening balance - regulated PP&E (NBV) (Appendix 5)	- r	3,018,896,431.70	Appendix 5 cell (ec)
Adjusted closing balance - regulated PP&E (NBV) (Appendix 5)	- s	3,103,769,307.60	Appendix 5 cell (el)
Average regulated PP&E	- t=(r+s)/2	3,061,332,869.65	
Total rate base	- u=q+t	3,395,087,581.92	
Regulated deemed short-term debt % and $	- % v 4.00	- v1=v*u 135,803,503.28	Cell (v) from CoS Decision and Order
Regulated deemed long-term debt % and $	- % w 56.00	- w1=w*u 1,901,249,045.88	Cell (w) from CoS Decision and Order
Regulated deemed equity % and $	- % x 40.00	- x1=x*u 1,358,035,032.77	Cell (x) from CoS Decision and order

Regulated Rate of Return on Deemed Equity (ROE)			**Data Source**
Achieved ROE %	- % y=l/x1	6.18	
Deemed ROE % from the distributor's last CoS Decision and Order	- % z	8.95	CoS Decision and Order
Difference - maximum deadband 3%	- % z1=y-z	-2.77	
ROE status for the year (Over-earning/Under-earning/Within 300 basis points deadband)	- z2 Within		If the distributor is in an over-earning position as indicated in cell (z2), please complete Appendices 7 & 8. If the distributor is in an under-earning position as indicated in cell (z2), please complete Appendices 9 & 10.

ATTACHMENT 3
2023 ICM MODEL PRZ

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Note: Depending on the selections made below, certain worksheets in this workbook will be hidden.

Version 1.0

Utility Name	Alectra Utilities Corporation-PowerStream Rate Zone
Assigned EB Number	EB-2022-0013
Name of Contact and Title	Natalie Yeates, Director, Regulatory Affairs and Reporting
Phone Number	905-798-2872
Email Address	natalie.yeates@alectrautilities.com
Is this Capital Module being filed in a CoS or Price-Cap IR Application?	**Price-Cap IR**
Rate Year	**2023**
Indicate the Price-Cap IR Year (1, 2, 3, 4, etc) in which Alectra Utilities Corporation-PowerStream Rate Zone is applying:	**6**
Next OEB Scheduled Rebasing Year	**2027**
Alectra Utilities Corporation-PowerStream Rate Zone is applying for:	**ICM Approval**
Last Rebasing Year:	**2017**
The most recent complete year for which actual billing and load data exists	**2021**
Current IPI	**3.30%**
Strech Factor Assigned to Middle Cohort*	**III**
Stretch Factor Value	**0.30%**
Price Cap Index	**3.00%**

Based on the inputs above, the growth factor utilized in the Materiality Threshold Calculation will be determined by:

Revenues Based on 2021 Actual Distribution Demand

Revenues Based on 2017 Board-Approved Distribution Demand

Notes

Pale green cells represent input cells.

Pale blue cells represent drop-down lists. The applicant should select the appropriate item from the drop-down list.

White cells contain fixed values, automatically generated values or formulae.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.

**As per ACM/ICM policy, the middle cohort stretch factor is applied to all ACM/ICM applications.*

OEB policies regarding rate-setting and rebasing following distributor consolidations could allow a distributor to not rebase rates for up to ten years. A distributor could also apply for and receive OEB approval to defer rebasing. If a distributor is under Price Cap IR for more than four years after rebasing and applies for an ICM, this spreadsheet will need to be adapted to accommodate those circumstances. The distributor should contact OEB staff to discuss the circumstances so that a customized model can be provided.

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-PowerStream Rate Zone

Select the appropriate rate classes as they appear on your most recent Board-Approved Tariff of Rates and Charges, excluding the MicroFit Class.

How many classes are on your most recent Board-Approved Tariff of Rates and Charges? **7**

Select Your Rate Classes from the **Blue Cells** below. Please ensure that a rate class is assigned to **each shaded cell.**

	Rate Class Classification
1	RESIDENTIAL
2	GENERAL SERVICE LESS THAN 50 kW
3	GENERAL SERVICE 50 TO 4,999 KW
4	LARGE USE
5	UNMETERED SCATTERED LOAD
6	SENTINEL LIGHTING
7	STREET LIGHTING

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-PowerStream Rate Zone

Input the billing determinants associated with Alectra Utilities Corporation-PowerStream Rate Zone's Revenues Based on 2021 Actual Distribution Demand.
Input the current approved distribution rates. Sheets 4 & 5 calculate the NUMERATOR portion of the growth factor calculation.

		2021 Actual Distribution Demand			Current Approved Distribution Rates		
Rate Class	**Units**	**Billed Customers or Connections**	**Billed kWh**	**Billed kW (if applicable)**	**Monthly Service Charge**	**Distribution Volumetric Rate kWh**	**Distribution Volumetric Rate kW**
RESIDENTIAL	$/kWh	342,946	2,962,781,846		29.84		
GENERAL SERVICE LESS THAN 50 kW	$/kWh	33,352	941,632,609		31.33	0.0200	
GENERAL SERVICE 50 TO 4,999 KW	$/kW	5,224	4,521,404,350	11,893,965	153.66		4.5817
LARGE USE	$/kW	2	91,936,942	163,835	6619.96		2.4437
UNMETERED SCATTERED LOAD	$/kWh	3,195	13,968,337		9.37	0.0212	
SENTINEL LIGHTING	$/kW	152	262,056	719	4.56		10.7570
STREET LIGHTING	$/kW	93,485	47,642,169	134,089	1.29		6.8907

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-PowerStream Rate Zone

Calculation of pro forma 2017 Revenues. No input required.

	2021 Actual Distribution Demand			Current Approved Distribution Rates										
Rate Class	Billed Customers or Connections	Billed kWh	Billed kW (if applicable)	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW	Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Revenues from Rates	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Total % Revenue
	A	B	C	D	E	F	G	H	I	J	K = G / J	L = H / J	M = I / J	N
RESIDENTIAL	342,946	2,962,781,846		29.84	0.0000	0.0000	122,802,104	0	0	122,802,104	100.0%	0.0%	0.0%	55.3%
GENERAL SERVICE LESS THAN 50 kW	33,352	941,632,609		31.33	0.0200	0.0000	12,539,018	18,832,652	0	31,371,670	40.0%	60.0%	0.0%	14.1%
GENERAL SERVICE 50 TO 4,999 KW	5,224	4,521,404,350	11,893,965	153.66	0.0000	4.5817	9,632,638	0	54,494,578	64,127,216	15.0%	0.0%	85.0%	28.9%
LARGE USE	2	91,936,942	163,835	6,619.96	0.0000	2.4437	158,879	0	400,363	559,242	28.4%	0.0%	71.6%	0.3%
UNMETERED SCATTERED LOAD	3,195	13,968,337		9.37	0.0212	0.0000	359,246	296,129	0	655,375	54.8%	45.2%	0.0%	0.3%
SENTINEL LIGHTING	152	262,056	719	4.56	0.0000	10.7570	8,317	0	7,732	16,050	51.8%	0.0%	48.2%	0.0%
STREET LIGHTING	93,485	47,642,169	134,089	1.29	0.0000	6.8907	1,447,148	0	923,970	2,371,118	61.0%	0.0%	39.0%	1.1%
Total	**478,356**	**8,579,628,310**	**12,192,608**				**146,947,350**	**19,128,781**	**55,826,644**	**221,902,775**				**100.0%**

Ontario Energy Board

Capital Module

Applicable to ACM and ICM

Alectra Utilities Corporation-PowerStream Rate Zone

Applicants Rate Base

Last COS Rebasing: 2017

Average Net Fixed Assets

Gross Fixed Assets - Re-based Opening	$	1,183,508,940	A			
Add: CWIP Re-based Opening	$	57,486,862	B			
Re-based Capital Additions	$	114,494,289	C			
Re-based Capital Disposals	-$	2,734,108	D			
Re-based Capital Retirements			E			
Deduct: CWIP Re-based Closing	-$	39,959,632	F			
Gross Fixed Assets - Re-based Closing	$	1,312,796,351	G			
Average Gross Fixed Assets				$	1,248,152,646	H = (A + G) / 2
Accumulated Depreciation - Re-based Opening	$	229,378,962	I			
Re-based Depreciation Expense	$	52,272,173	J			
Re-based Disposals	-$	717,703	K			
Re-based Retirements	$	-	L			
Accumulated Depreciation - Re-based Closing	$	280,933,432	M			
Average Accumulated Depreciation				$	255,156,197	N = (I + M) / 2
Average Net Fixed Assets				**$**	**992,996,449**	O = H - N

Working Capital Allowance

Working Capital Allowance Base	$	1,197,449,515	P			
Working Capital Allowance Rate		7.5%	Q			
Working Capital Allowance				**$**	**89,808,714**	R = P * Q
Rate Base				**$**	**1,082,805,162**	S = O + R

Return on Rate Base

Deemed ShortTerm Debt %		4.00%	T	$	43,312,206	W = S * T
Deemed Long Term Debt %		56.00%	U	$	606,370,891	X = S * U
Deemed Equity %		40.00%	V	$	433,122,065	Y = S * V
Short Term Interest		1.76%	Z	$	762,295	AC = W * Z
Long Term Interest		3.88%	AA	$	23,542,372	AD = X * AA
Return on Equity		8.78%	AB	$	38,028,117	AE = Y * AB
Return on Rate Base				**$**	**62,332,784**	AF = AC + AD + AE

Distribution Expenses

OM&A Expenses	$	96,167,243	AG			
Amortization	$	50,974,104	AH			
Ontario Capital Tax			AI			
Grossed Up Taxes/PILs	$	2,745,639	AJ			
Low Voltage			AK			
Transformer Allowance			AL			
			AM			
			AN			
			AO			
				$	**149,886,987**	AP = SUM (AG : AO)

Revenue Offsets

Specific Service Charges	-$	3,474,784	AQ			
Late Payment Charges	-$	2,076,532	AR			
Other Distribution Income	-$	2,025,296	AS			
Other Income and Deductions	-$	5,141,699	AT	**-$**	**12,718,312**	AU = SUM (AQ : AT)
Revenue Requirement from Distribution Rates				**$**	**199,501,459**	AV = AF + AP + AU

Rate Classes Revenue

Rate Classes Revenue - Total (Sheet 4)				$	221,902,775	AW

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-PowerStream Rate Zone

Input the billing determinants associated with Alectra Utilities Corporation-PowerStream Rate Zone's Revenues Based on 2017 Board-Approved Distribution Demand. This sheet calculates the DENOMINATOR portion of the growth factor calculation. Pro forma Revenue Calculation.

	2017 Board-Approved Distribution Demand			Current Approved Distribution Rates											
Rate Class	Billed Customers or Connections	Billed kWh	Billed kW	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW	Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Total Revenue By Rate Class	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Total % Revenue
	A	B	C	D	E	F	G	H	I	J	K = G / J_{total}	L = H / J_{total}	M = I / J_{total}	N
RESIDENTIAL	331,465	2,689,802,037		29.84	0.0000	0.0000	118,690,987	0	0	118,690,987	53.9%	0.0%	0.0%	53.9%
GENERAL SERVICE LESS THAN 50 kW	32,776	1,031,991,524		31.33	0.0200	0.0000	12,322,465	20,639,830	0	32,962,295	5.6%	9.4%	0.0%	15.0%
GENERAL SERVICE 50 TO 4,999 KW	5,081	4,566,530,904	12,192,632	153.66	0.0000	4.5817	9,368,958	0	55,862,980	65,231,938	4.3%	0.0%	25.4%	29.6%
LARGE USE	2	75,964,677	149,679	6,619.96	0.0000	2.4437	158,879	0	365,771	524,650	0.1%	0.0%	0.2%	0.2%
UNMETERED SCATTERED LOAD	3,044	14,542,413		9.37	0.0212	0.0000	342,267	308,299	0	650,567	0.2%	0.1%	0.0%	0.3%
SENTINEL LIGHTING	207	377,900	975	4.56	0.0000	10.7570	11,327	0	10,486	21,813	0.0%	0.0%	0.0%	0.0%
STREET LIGHTING	89,730	45,603,291	127,503	1.29	0.0000	6.8907	1,389,020	0	878,584	2,267,604	0.6%	0.0%	0.4%	1.0%
Total	**462,305**	**8,424,812,745**	**12,470,788**				**142,283,904**	**20,948,130**	**57,117,820**	**220,349,853**				**100.0%**

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-PowerStream Rate Zone

Current Revenue from Rates

This sheet is used to determine the applicant's most current allocation of revenues (after the most recent revenue to cost ratio adjustment, if applicable) to appropriately allocate the incremental revenue requirement to the classes.

	Current OEB-Approved Base Rates			2021 Actual Distribution Demand										
Rate Class	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW	Re-based Billed Customers or Connections	Re-based Billed kWh	Re-based Billed kW	Current Base Service Charge Revenue	Current Base Distribution Volumetric Rate kWh Revenue	Current Base Distribution Volumetric Rate kW Revenue	Total Current Base Revenue	Service Charge % Total Revenue	Distribution Volumetric Rate % Total Revenue	Distribution Volumetric Rate % Total Revenue	Total % Revenue
	A	B	C	D	E	F	G	H	I	J	L = G / J_{total}	M = H / J_{total}	N = I / J_{total}	O
RESIDENTIAL	29.84	0	0	342,946	2,962,781,846	0	122,802,104	0	0	122,802,104	55.34%	0.00%	0.00%	55.3%
GENERAL SERVICE LESS THAN 50 kW	31.33	0.02	0	33,352	941,632,609	0	12,539,018	18,832,652	0	31,371,670	5.65%	8.49%	0.00%	14.1%
GENERAL SERVICE 50 TO 4,999 KW	153.66	0	4.5817	5,224	4,521,404,350	11,893,965	9,632,638	0	54,494,578	64,127,216	4.34%	0.00%	24.56%	28.9%
LARGE USE	6619.96	0	2.4437	2	91,936,942	163,835	158,879	0	400,363	559,242	0.07%	0.00%	0.18%	0.3%
UNMETERED SCATTERED LOAD	9.37	0.0212	0	3,195	13,968,337	0	359,246	296,129	0	655,375	0.16%	0.13%	0.00%	0.3%
SENTINEL LIGHTING	4.56	0	10.757	152	262,056	719	8,317	0	7,732	16,050	0.00%	0.00%	0.00%	0.0%
STREET LIGHTING	1.29	0	6.8907	93,485	47,642,169	134,089	1,447,148	0	923,970	2,371,118	0.65%	0.00%	0.42%	1.1%
Total							**146,947,350**	**19,128,781**	**55,826,644**	**221,902,775**				**100.0%**

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-PowerStream Rate Zone

No Input Required.

Final Materiality Threshold Calculation

$$\textit{Threshold Value}\ (\%) = 1 + \left[\left(\frac{RB}{d}\right) \times (g + PCI \times (1 + g))\right] \times \left((1 + g) \times (1 + PCI)\right)^{n-1} + 10\%$$

Cost of Service Rebasing Year		**2017**	
Price Cap IR Year in which Application is made		**6**	n
Price Cap Index		**3.00%**	PCI
Growth Factor Calculation			
Revenues Based on 2021 Actual Distribution Demand		**$221,902,775**	
Revenues Based on 2017 Board-Approved Distribution Demand		**$220,349,853**	
Growth Factor		**0.18%**	g $(Note\ 1)$
Dead Band		**10%**	
Average Net Fixed Assets			
Gross Fixed Assets Opening	$	1,183,508,940	
Add: CWIP Opening	$	57,486,862	
Capital Additions	$	114,494,289	
Capital Disposals	-$	2,734,108	
Capital Retirements	$	-	
Deduct: CWIP Closing	-$	39,959,632	
Gross Fixed Assets - Closing	$	1,312,796,351	
Average Gross Fixed Assets	$	1,248,152,646	
Accumulated Depreciation - Opening	$	229,378,962	
Depreciation Expense	$	52,272,173	
Disposals	-$	717,703	
Retirements	$	-	
Accumulated Depreciation - Closing	$	280,933,432	
Average Accumulated Depreciation	$	255,156,197	
Average Net Fixed Assets	$	992,996,449	
Working Capital Allowance			
Working Capital Allowance Base	$	1,197,449,515	
Working Capital Allowance Rate		8%	
Working Capital Allowance	$	89,808,714	
Rate Base	**$**	**1,082,805,162**	RB
Depreciation	**$**	**52,272,173**	d

Threshold Value (varies by Price Cap IR Year subsequent to CoS rebasing)

Price Cap IR Year 2018	**176%**
Price Cap IR Year 2019	**178%**
Price Cap IR Year 2020	**180%**
Price Cap IR Year 2021	**182%**
Price Cap IR Year 2022	**185%**
Price Cap IR Year 2023	**187%**
Price Cap IR Year 2024	**190%**
Price Cap IR Year 2025	**192%**
Price Cap IR Year 2026	**195%**
Price Cap IR Year 2027	**197%**

Threshold CAPEX $\textit{Threshold Value} \times d$

Price Cap IR Year 2018	**$ 91,948,553**
Price Cap IR Year 2019	**$ 93,044,544**
Price Cap IR Year 2020	**$ 94,175,404**
Price Cap IR Year 2021	**$ 95,342,241**
Price Cap IR Year 2022	**$ 96,546,202**
Price Cap IR Year 2023	**$ 97,788,466**
Price Cap IR Year 2024	**$ 99,070,252**
Price Cap IR Year 2025	**$ 100,392,818**
Price Cap IR Year 2026	**$ 101,757,462**
Price Cap IR Year 2027	**$ 103,165,521**

Note 1: The growth factor g is annualized, depending on the number of years between the numerator and denominator for the calculation. Typically, for ACM review in a cost of service and in the fourth year of Price Cap IR, the ratio is divided by 2 to annualize it. No division is normally required for the first three years under Price Cap IR.

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-PowerStream Rate Zone

Identify ALL Proposed ACM and ICM projects and related CAPEX costs in the relevant years

	Cost of Service	*Price Cap IR*		*Price Cap IR*		*Price Cap IR*		*Price Cap IR*	
	Test Year	Year 1		Year 2		Year 3		Year 4	
	2017	2018		2019		2020		2021	
CAPEX[1]								$ 53,980,407	
Materiality Threshold		$ 91,948,553		$ 93,044,544		$ 94,175,404		$ 95,342,241	
Maximum Eligible Incremental Capital (Forecasted Capex less Threshold)		$ -		$ -		$ -		$ -	

		Test Year	Year 1 2018			Year 2 2019			Year 3 2020			Year 4 2021		
Project Descriptions:	Type	2017	Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA
Total Cost of ACM/ICM Projects			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maximum Allowed Incremental Capital			$ -			$ -			$ -			$ -		

			Price Cap IR (Deferred Rebasing) (if necessary)			Price Cap IR (Deferred Rebasing) (if necessary)		
			Price Cap IR			Price Cap IR		
			Year 5			Year 6		
			2022			2023		
Distribution System Plan CAPEX						$ 119,919,658		
Materiality Threshold			$ 96,546,202			$ 97,788,466		
Maximum Eligible Incremental Capital (Forecasted Capex less Threshold)			$ -			$ 22,131,192		
			Year 5			Year 6		
			2022			2023		
Project Descriptions:	Type		Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA
Cable Injection and Cable Replacement						$ 16,633,796	$ 369,640	$ 1,330,704
Total Cost of ACM/ICM Projects			$ -	$ -	$ -	$ 16,633,796	$ 369,640	$ 1,330,704
Maximum Allowed Incremental Capital			$ -			$ 16,633,796		

1. For the Cost of Service Test Year, CAPEX refers to the CAPEX approved in the DSP. For subsequent Price CAP IR years, the CAPEX to be entered is the actual CAPEX. For the current Price Cap IR year, the CAPEX to be entered is the proposed CAPEX including any ICM/updated ACM project CAPEX for the year.

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-PowerStream Rate Zone

Incremental Capital Adjustment **Rate Year:** 2023

Current Revenue Requirement

Current Revenue Requirement - Total	$ 199,501,459	A

Eligible Incremental Capital for ACM/ICM Recovery

	Total Claim	Eligible for ACM/ICM (Full Year Prorated Amount) *(from Sheet 10b)*	
Amount of Capital Projects Claimed	$ 16,633,796	$ 16,633,796	B
Depreciation Expense	$ 369,640	$ 369,640	C
CCA	$ 1,330,704	$ 1,330,704	V

ACM/ICM Incremental Revenue Requirement Based on Eligible Amount in Rate Year

Return on Rate Base

Incremental Capital			$	16,633,796	B
Depreciation Expense (prorated to Eligible Incremental Capital)			$	369,640	C
Incremental Capital to be included in Rate Base (average NBV in year)			$	16,448,976	D = B - C/2
	% of capital structure				
Deemed Short-Term Debt	4.0%	E	$	657,959	G = D * E
Deemed Long-Term Debt	56.0%	F	$	9,211,426	H = D * F
	Rate (%)				
Short-Term Interest	1.76%	I	$	11,580	K = G * I
Long-Term Interest	3.88%	J	$	357,634	L = H * J
Return on Rate Base - Interest			$	369,214	M = K + L
	% of capital structure				
Deemed Equity %	40.00%	N	$	6,579,590	P = D * N
	Rate (%)				
Return on Rate Base -Equity	8.78%	O	$	577,688	Q = P * O
Return on Rate Base - Total			$	946,902	R = M + Q

Amortization Expense

Amortization Expense - Incremental	C	$	369,640	S

Grossed up Taxes/PILs

Regulatory Taxable Income		O	$	577,688	T
Add Back Amortization Expense (Prorated to Eligible Incremental Capital)		S	$	369,640	U
Deduct CCA (Prorated to Eligible Incremental Capital)			$	1,330,704	V
Incremental Taxable Income			-$	383,376	W = T + U - V
Current Tax Rate	26.5%	X			
Taxes/PILs Before Gross Up			-$	101,595	Y = W * X
Grossed-Up Taxes/PILs			-$	138,224	Z = Y / (1 - X)

Incremental Revenue Requirement

Return on Rate Base - Total	Q	$	946,902	AA
Amortization Expense - Total	S	$	369,640	AB
Grossed-Up Taxes/PILs	Z	-$	138,224	AC
Incremental Revenue Requirement		$	1,178,318	AD = AA + AB + AC

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-PowerStream Rate Zone

Calculation of incremental rate rider. Choose one of the 3 options: Fixed and Variable Rate Riders

Rate Class	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Total Revenue by Rate Class	Billed Customers or Connections	Billed kWh	Billed kW	Service Charge Rate Rider	Distribution Volumetric Rate kWh Rate Rider	Distribution Volumetric Rate kW Rate Rider
	From Sheet 7	*From Sheet 7*	*From Sheet 7*	Col C * Col I_{total}	Col D* Col I_{total}	Col E* Col I_{total}	*Col I_{total}*	*From Sheet 4*	*From Sheet 4*	*From Sheet 4*	Col F / Col K / 12	Col G / Col L	Col H / Col M
RESIDENTIAL	55.34%	0.00%	0.00%	652,087	0	0	652,087	342,946	2,962,781,846		0.16	0.0000	0.0000
GENERAL SERVICE LESS THAN 50 kW	5.65%	8.49%	0.00%	66,583	100,003	0	166,586	33,352	941,632,609		0.17	0.0001	0.0000
GENERAL SERVICE 50 TO 4,999 KW	4.34%	0.00%	24.56%	51,150	0	289,370	340,520	5,224	4,521,404,350	11,893,965	0.82	0.0000	0.0243
LARGE USE	0.07%	0.00%	0.18%	844	0	2,126	2,970	2	91,936,942	163,835	35.15	0.0000	0.0130
UNMETERED SCATTERED LOAD	0.16%	0.13%	0.00%	1,908	1,572	0	3,480	3,195	13,968,337		0.05	0.0001	0.0000
SENTINEL LIGHTING	0.00%	0.00%	0.00%	44	0	41	85	152	262,056	719	0.02	0.0000	0.0571
STREET LIGHTING	0.65%	0.00%	0.42%	7,684	0	4,906	12,591	93,485	47,642,169	134,089	0.01	0.0000	0.0366
Total	**66.22%**	**8.62%**	**25.16%**	**780,300**	**101,575**	**296,443**	**1,178,318**	**478,356**	**8,579,628,310**	**12,192,608**			
							1,178,318						
							From Sheet 11, E93						

ATTACHMENT 4
2024 MODIFIED ICM MODEL PRZ

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Note: Depending on the selections made below, certain worksheets in this workbook will be hidden.

Utility Name	Alectra Utilities Corporation-PowerStream Rate Zone
Assigned EB Number	EB-2022-0013
Name of Contact and Title	Natalie Yeates, Director, Regulatory Affairs and Reporting
Phone Number	905-798-2872
Email Address	natalie.yeates@alectrautilities.com
Is this Capital Module being filed in a CoS or Price-Cap IR Application?	**Price-Cap IR**
Rate Year	**2024**
Indicate the Price-Cap IR Year (1, 2, 3, 4, etc) in which Alectra Utilities Corporation-PowerStream Rate Zone is applying:	**7**
Next OEB Scheduled Rebasing Year	**2027**
Alectra Utilities Corporation-PowerStream Rate Zone is applying for:	**ICM Approval**
Last Rebasing Year:	**2017**
The most recent complete year for which actual billing and load data exists	**2021**
Current IPI	**3.30%**
Strech Factor Assigned to Middle Cohort*	**III**
Stretch Factor Value	**0.30%**
Price Cap Index	**3.00%**

Based on the inputs above, the growth factor utilized in the Materiality Threshold Calculation will be determined by:

Revenues Based on 2021 Actual Distribution Demand

Revenues Based on 2017 Board-Approved Distribution Demand

Notes

Pale green cells represent input cells.

Pale blue cells represent drop-down lists. The applicant should select the appropriate item from the drop-down list.

White cells contain fixed values, automatically generated values or formulae.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.

**As per ACM/ICM policy, the middle cohort stretch factor is applied to all ACM/ICM applications.*

OEB policies regarding rate-setting and rebasing following distributor consolidations could allow a distributor to not rebase rates for up to ten years. A distributor could also apply for and receive OEB approval to defer rebasing. If a distributor is under Price Cap IR for more than four years after rebasing and applies for an ICM, this spreadsheet will need to be adapted to accommodate those circumstances. The distributor should contact OEB staff to discuss the circumstances so that a customized model can be provided.

No Input Required.

Final Threshold Calculation

$$Threshold\ Value\ (\%) = 1 + \left[\left(\frac{RB}{d}\right) \times (g + PCI \times (1 + g))\right] \times \left((1 + g) \times (1 + PCI)\right)^{n-1} + 10\%$$

Cost of Service Rebasing Year		**2017**	
Price Cap IR Year in which Application is made		**7**	n
Price Cap Index		**3.00%**	PCI
Growth Factor Calculation			
Revenues Based on 2020 Actual Distribution Demand		**$221,902,775**	
Revenues Based on 2017 Board-Approved Distribution Demand		**$220,349,853**	
Growth Factor		**0.18%**	$g\ (Note\ 1)$
Dead Band		**10%**	
Average Net Fixed Assets			
Gross Fixed Assets Opening	$	1,183,508,940	
Add: CWIP Opening	$	57,486,862	
Capital Additions	$	114,494,289	
Capital Disposals	-$	2,734,108	
Capital Retirements	$	-	
Deduct: CWIP Closing	-$	39,959,632	
Gross Fixed Assets - Closing	$	1,312,796,351	
Average Gross Fixed Assets	$	1,248,152,646	
Accumulated Depreciation - Opening	$	229,378,962	
Depreciation Expense	$	52,272,173	
Disposals	-$	717,703	
Retirements	$	-	
Accumulated Depreciation - Closing	$	280,933,432	
Average Accumulated Depreciation	$	255,156,197	
Average Net Fixed Assets	$	992,996,449	
Working Capital Allowance			
Working Capital Allowance Base	$	1,197,449,515	
Working Capital Allowance Rate		8%	
Working Capital Allowance	$	89,808,714	
Rate Base	**$**	**1,082,805,162**	RB
Depreciation	**$**	**52,272,173**	d

Threshold Value (varies by Price Cap IR Year subsequent to CoS rebasing)

Price Cap IR Year 2018	**176%**	$Threshold\ Value\ \times d$
Price Cap IR Year 2019	**178%**	
Price Cap IR Year 2020	**180%**	
Price Cap IR Year 2021	**182%**	
Price Cap IR Year 2022	**185%**	
Price Cap IR Year 2023	**187%**	
Price Cap IR Year 2024	**190%**	

Threshold CAPEX

Price Cap IR Year 2018	**$**	**91,948,553**
Price Cap IR Year 2019	**$**	**93,044,544**
Price Cap IR Year 2020	**$**	**94,175,404**
Price Cap IR Year 2021	**$**	**95,342,241**
Price Cap IR Year 2022	**$**	**96,546,202**
Price Cap IR Year 2023	**$**	**97,788,466**
Price Cap IR Year 2024	**$**	**99,070,252**

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation - PowerStream RZ

Incremental Capital Adjustment **Rate Year:** 2024

Current Revenue Requirement

Current Revenue Requirement - Total	$ 199,501,459	A

Eligible Incremental Capital for ACM/ICM Recovery

	Total Claim	Eligible for ACM/ICM (Full Year Prorated Amount)	
Amount of Capital Projects Claimed	$ 18,243,664	$ 18,243,664	B
Depreciation Expense	$ 405,415	$ 405,415	C
CCA	$ 1,459,493	$ 1,459,493	V

ACM/ICM Incremental Revenue Requirement Based on Eligible Amount in Rate Year

Return on Rate Base

Incremental Capital			$	18,243,664	B
Depreciation Expense			$	405,415	C
Incremental Capital to be included in Rate Base (avg NBV)			$	18,040,957	D = B - C/2
Deemed ShortTerm Debt %	4.0%	E	$	721,638	G = D * E
Deemed Long Term Debt %	56.0%	F	$	10,102,936	H = D * F
Short Term Interest	1.76%	I	$	12,701	K = G * I
Long Term Interest	3.88%	J	$	392,247	L = H * J
Return on Rate Base - Interest			$	404,948	M = K + L
Deemed Equity %	40.00%	N	$	7,216,383	P = D * N
Return on Rate Base -Equity	8.78%	O	$	633,598	Q = P * O
Return on Rate Base - Total			$	1,038,546	R = M + Q

Amortization Expense

Amortization Expense - Incremental	C	$	405,415	S

Grossed up PIL's

Regulatory Taxable Income	O	$	633,598	T
Add Back Amortization Expense	S	$	405,415	U
Deduct CCA		$	1,459,493	V
Incremental Taxable Income		-$	420,480	W = T + U - V
Current Tax Rate	26.5%	X		
PIL's Before Gross Up		-$	111,427	Y = W * X
Incremental Grossed Up PIL's		-$	151,602	Z = Y / (1 - X)

Incremental Revenue Requirement

Return on Rate Base - Total	Q	$	1,038,546	AA
Amortization Expense - Total		$	405,415	AB
Incremental Grossed Up PIL's	Z	-$	151,602	AC
Incremental Revenue Requirement		$	1,292,359	AD = AA + AB + AC

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation - PowerStream RZ

Calculation of incremental rate rider. Choose one of the 3 options: Fixed and Variable Rate Riders

PowerStream Rate Class	Service Charge % Revenue *From Sheet 8*	Distribution Volumetric Rate % Revenue kWh *From Sheet 8*	Distribution Volumetric Rate % Revenue kW *From Sheet 8*	Service Charge Revenue Col C * Col I_{total}	Distribution Volumetric Rate Revenue kWh Col D* Col I_{total}	Distribution Volumetric Rate Revenue kW Col E* Col I_{total}	Total Revenue by Rate Class *Col I total*	Billed Customers or Connections *From Sheet 4*	Billed kWh *From Sheet 4*	Billed kW *From Sheet 4*	Service Charge Rate Rider Col F / Col K / 12	Distribution Volumetric Rate kWh Rate Rider Col G / Col L	Distribution Volumetric Rate kW Rate Rider Col H / Col M
RESIDENTIAL	55.34%	0.00%	0.00%	715,198	0	0	715,198	342,946	2,962,781,846		0.17	0.0000	0.0000
GENERAL SERVICE LESS THAN 50 kW	5.65%	8.49%	0.00%	73,027	109,681	0	182,708	33,352	941,632,609		0.18	0.0001	0.0000
GENERAL SERVICE 50 TO 4,999 KW	4.34%	0.00%	24.56%	56,100	0	317,376	373,476	5,224	4,521,404,350	11,893,965	0.89	0.0000	0.0267
LARGE USE	0.07%	0.00%	0.18%	925	0	2,332	3,257	2	91,936,942	163,835	38.55	0.0000	0.0142
UNMETERED SCATTERED LOAD	0.16%	0.13%	0.00%	2,092	1,725	0	3,817	3,195	13,968,337		0.05	0.0001	0.0000
SENTINEL LIGHTING	0.00%	0.00%	0.00%	48	0	45	93	152	262,056	719	0.03	0.0000	0.0626
STREET LIGHTING	0.65%	0.00%	0.42%	8,428	0	5,381	13,809	93,485	47,642,169	134,089	0.01	0.0000	0.0401
Total	**66.22%**	**8.62%**	**25.16%**	**855,820**	**111,406**	**325,134**	**1,292,359**	**478,356**	**8,579,628,310**	**12,192,608**			
							1,292,359						

ATTACHMENT 5
2023 PROJECT LISTING PRZ

2023 Capital Project Listing - PowerStream Rate Zone

SYSTEM ACCESS	$MM
New Residential Subdivision and Condo Tower Development - Alectra East	9.0
New Subdivision Development - Secondary Service Lateral - Alectra East	2.1
New Services - PowerStream RZ	2.1
Road Authority Projects - East North	2.0
Road Authority Expenditure PS South	1.9
Services (New and Upgrades) - Commercial, Industrial and Institutional (ICI) Projects - East South	1.9
Services (New and Upgrades) - Layouts - East South	1.5
Barrie TS Upgrade Feeders and Metering	1.2
Renew Meter Equipment - PowerStream RZ	1.2
Sub-Total Material Projects	**23.0**
Miscellaneous Projects (under materiality threshold)	3.5
Total System Access	**26.5**
SYSTEM RENEWAL	
Reactive Capital, Alectra East - Distribution Equipment	8.6
Pole Renewal - East	5.6
Switchgear Renewal - East	3.2
Transformer Renewal - East	2.8
Cable Replacement Project – (V51) – Ashbridge Circle area in Vaughan	2.6
Cable Replacement Project - (M44) - Cochrane Dr (North) - Scolberg (South), Markham	2.5
Cable Replacement Project - (V36) - Aviva Park, Vaughan	2.4
Cable Replacement Project - East - Left Behind Cable	2.1
Cable Injection Project - (M19) - Markham - Steeles - McCowan - 14th, Markham	2.1
Cable Replacement Project - (A05) - Golf Links, Aurora	2.0
Cable Replacement Project - (M31) - Denison and Birchmount, Markham	1.8
Cable Replacement Project - (A10) -Batson Dr, Aurora	1.7
Joint Use Pole Removal - Alectra East	1.7
Cable Injection Project - (M21) - Cairns Drive area of Markham	1.7
Cable Injection Project - (V17) - Jacob Keffer Parkway area of Vaughan	1.6
Cable Replacement Project - (BA22) - Sunnidale and Anne, Barrie	1.6
Cable Injection Project - (R23) - Kersey Cr area of Richmond Hill	1.5
Rebuild 13.8 kV Pole line on Miller Ave to 27.6 kV with Road Widening	1.5
Cable Replacement Project - (M21) - Raymerville Dr, Markham	1.5
Underground Asset Renewal-Alectra Initiated Distribution System Projects-East	1.4
Cable Injection Project - (M31) - 14th - Old Kennedy - Steeles - Warden, Markham	1.4
Cable Injection Project - (M25) - 14th - McCowan - Steeles - Old Kennedy, Markham	1.3
Cable Injection Project - (M39) - 16th - Warden - Hwy 7 - Woodbine, Markham	1.2
Storm Hardening - Four-Circuit Poles - Alectra East	1.2
Cable Injection Project - (V23) - Hwy 7 - Keele - Langstaff - Jane, Vaughan	1.2
Cable Injection Project - (A09) - Willow Farm Lane of Aurora	1.1
Cable Injection Project - (V31) - Langstaff - Weston - Rutherford - Jane, Vaughan	1.1
Reactive Capital, Alectra East - Storm Damage	1.0
Sub-Total Material Projects	**59.3**
Miscellaneous Projects (under materiality threshold)	6.2
Total System Renewal	**65.5**

SYSTEM SERVICE	
Vaughan TS#4 Feeder Integration - Part 3	3.4
Install Two 27.6kV Ccts on 16th Ave from Hwy 404 to Woodbine Ave	2.3
Implementation of Enterprise DERMS Platform	1.3
Sub-Total Material Projects	**6.9**
Miscellaneous Projects (under materiality threshold)	5.0
Total System Service	**11.9**
GENERAL PLANT	
PowerStream Rate Zone Allocation of General Plant	16.1
Total General Plant	**16.1**
2023 Budget	**120.0**

GENERAL PLANT - ALECTRA UTILITIES	
CIS CC&B upgrade	6.3
Customer Service Strategy-CX Project	4.2
Work Force Management / Mobile Dispatch	2.9
ERP Continuous Improvement	2.1
C55 Alectra: Optimization of Business Practices	1.9
Client - IT Infrastructure	1.3
Facilities_West_Capital Replacement Investment Support	1.3
Sub-Total Material Projects	**19.9**
Miscellaneous Projects (under materiality theshold)	24.3
Total General Plant	**44.2**

ATTACHMENT 6
2024 PROJECT LISTING PRZ

2024 Capital Project Listing - PowerStream Rate Zone

SYSTEM ACCESS	$MM
New Residential Subdivision and Condo Tower Development - Alectra East	8.9
New Subdivision Development - Secondary Service Lateral - Alectra East	2.2
New Services - PowerStream RZ	2.1
Road Authority Projects - East North	2.0
Services (New and Upgrades) - Commercial, Industrial and Institutional (ICI) Projects - East South	2.0
Road Authority Expenditure PS South	2.0
Services (New and Upgrades) - Layouts - East South	1.5
Renew Meter Equipment - PowerStream RZ	1.3
Sub-Total Material Projects	**22.1**
Miscellaneous Projects (under materiality threshold)	3.7
Total System Access	**25.8**
SYSTEM RENEWAL	
Reactive Capital, Alectra East - Distribution Equipment	8.9
Pole Renewal - East	5.6
Switchgear Renewal - East	3.5
Cable Replacement Project - East - Left Behind Cable	3.0
Transformer Renewal - East	3.0
Cable Replacement Project - (M44) - Cochrane Dr (North) - Scolberg (South), Markham	2.5
Cable Injection Project - (V24) - Creditstone Rd area of Vaughan	2.1
Cable Injection Project - (M39) - 16th - Warden - Hwy 7 - Woodbine, Markham	2.1
Cable Replacement Project - (BA22) - Sunnidale and Anne, Barrie	2.0
Cable Replacement Project - (A05) - Golf Links, Aurora	2.0
Cable Injection Project - (V26) - McNaughton Road area of Vaughan	1.9
Cable Injection Project - (M21) - Cairns Drive area of Markham	1.9
Joint Use Pole Removal - Alectra East	1.8
Cable Replacement Project - (M15) - Larkin Ave area of Markham	1.8
Cable Injection Project - (V17) - Langstaff - Railway - Rutherford - Dufferin, Vaughan	1.7
Cable Injection Project - (R23) - Bathurst - Weldrick - Yonge - Carville, Richmond Hill	1.6
Cable Injection Project - (V50) - Sovereign Court area of Vaughan	1.6
Cable Replacement Project - (V26) - St. Joan of Arc area of Vaughan	1.6
Cable Replacement Project - (M21) - Raymerville Dr, Markham	1.6
Cable Injection Project - (M31) - 14th - Old Kennedy - Steeles - Warden, Markham	1.4
Cable Injection Project - (M25) - 14th - McCowan - Steeles - Old Kennedy, Markham	1.4
Cable Replacement Project - (A09) - Hammond Dr area of Aurora	1.3
Storm Hardening - Four-Circuit Poles - Alectra East	1.3
Cable Injection Project - (BR5) - 8th Line and Highway 11, Bradford	1.3
Cable Replacement Project - (B23) - Cundles Rd and Janine St, Barrie	1.2
Underground Asset Renewal-Alectra Initiated Distribution System Projects-East	1.1
Reactive Capital, Alectra East - Storm Damage	1.1
Sub-Total Material Projects	**60.3**
Miscellaneous Projects (under materiality threshold)	7.7
Total System Renewal	**68.0**
SYSTEM SERVICE	
Vaughan TS#4 Feeder Integration - Part 3	3.1
Extend feeder 24M8 from Hwy 7 to 16th Ave in Markham	1.3
Implementation of Enterprise DERMS Platform	1.3
Sub-Total Material Projects	**5.7**
Miscellaneous Projects (under materiality threshold)	4.7
Total System Service	**10.5**

GENERAL PLANT	
PowerStream Rate Zone Allocation of General Plant	14.7
Total General Plant	**14.7**
2024 Budget	**119.0**

GENERAL PLANT - ALECTRA UTILITIES	
Work Force Management / Mobile Dispatch	2.5
CIS CC&B Enhancements	2.1
ERP Continuous Improvement	1.9
CIS CC&B Modifications(Regulatory Enhancements)	1.7
Derry Generator Replacement	1.7
Customer Service Strategy-CX Project	1.6
Client - IT Infrastructure	1.5
Facilities_Replacement_Patterson Road Roof	1.3
Facilities_West_Capital Replacement Investment Support	1.0
Sub-Total Material Projects	**15.3**
Miscellaneous Projects (under materiality theshold)	25.0
Total General Plant	**40.3**

ATTACHMENT 7
2023 ICM MODEL ERZ

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Note: Depending on the selections made below, certain worksheets in this workbook will be hidden.

Version 1.0

Utility Name	Alectra Utilities Corporation-Enersource Rate Zone
Assigned EB Number	EB-2022-0013
Name of Contact and Title	Natalie Yeates, Director, Regulatory Affairs and Reporting
Phone Number	905-798-2872
Email Address	natalie.yeates@alectrautilities.com
Is this Capital Module being filed in a CoS or Price-Cap IR Application?	**Price-Cap IR**
Rate Year	**2023**
Indicate the Price-Cap IR Year (1, 2, 3, 4, etc) in which Alectra Utilities Corporation-Enersource Rate Zone is applying:	**10**
Next OEB Scheduled Rebasing Year	**2027**
Alectra Utilities Corporation-Enersource Rate Zone is applying for:	**ICM Approval**
Last Rebasing Year:	**2013**
The most recent complete year for which actual billing and load data exists	**2021**
Current IPI	**3.30%**
Strech Factor Assigned to Middle Cohort*	**III**
Stretch Factor Value	**0.30%**
Price Cap Index	**3.00%**

Based on the inputs above, the growth factor utilized in the Materiality Threshold Calculation will be determined by:

Revenues Based on 2021 Actual Distribution Demand

Revenues Based on 2013 Board-Approved Distribution Demand

Notes

Pale green cells represent input cells.

Pale blue cells represent drop-down lists. The applicant should select the appropriate item from the drop-down list.

White cells contain fixed values, automatically generated values or formulae.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.

**As per ACM/ICM policy, the middle cohort stretch factor is applied to all ACM/ICM applications.*

OEB policies regarding rate-setting and rebasing following distributor consolidations could allow a distributor to not rebase rates for up to ten years. A distributor could also apply for and receive OEB approval to defer rebasing. If a distributor is under Price Cap IR for more than four years after rebasing and applies for an ICM, this spreadsheet will need to be adapted to accommodate those circumstances. The distributor should contact OEB staff to discuss the circumstances so that a customized model can be provided.

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Select the appropriate rate classes as they appear on your most recent Board-Approved Tariff of Rates and Charges, excluding the MicroFit Class.

How many classes are on your most recent Board-Approved Tariff of Rates and Charges? **7**

Select Your Rate Classes from the **Blue Cells** below. Please ensure that a rate class is assigned to **each shaded cell.**

	Rate Class Classification
1	RESIDENTIAL
2	GENERAL SERVICE LESS THAN 50 kW
3	GENERAL SERVICE 50 TO 499 kW
4	GENERAL SERVICE 500 TO 4,999 kW
5	LARGE USE
6	UNMETERED SCATTERED LOAD
7	STREET LIGHTING

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Input the billing determinants associated with Alectra Utilities Corporation-Enersource Rate Zone's Revenues Based on 2021 Actual Distribution Demand. Input the current approved distribution rates. Sheets 4 & 5 calculate the NUMERATOR portion of the growth factor calculation.

		2021 Actual Distribution Demand			Current Approved Distribution Rates		
Rate Class	**Units**	**Billed Customers or Connections**	**Billed kWh**	**Billed kW (if applicable)**	**Monthly Service Charge**	**Distribution Volumetric Rate kWh**	**Distribution Volumetric Rate kW**
RESIDENTIAL	$/kWh	185,198	1,560,006,402		25.88		
GENERAL SERVICE LESS THAN 50 kW	$/kWh	19,152	650,022,841		47.52	0.0139	
GENERAL SERVICE 50 TO 499 kW	$/kW	3,560	1,802,899,951	5,106,990	83.70		5.0370
GENERAL SERVICE 500 TO 4,999 kW	$/kW	501	1,908,000,191	4,304,608	1905.96		2.5919
LARGE USE	$/kW	9	960,912,688	1,654,974	15027.75		3.2170
UNMETERED SCATTERED LOAD	$/kWh	3,131	11,802,772		9.82	0.0178	
STREET LIGHTING	$/kW	50,897	14,888,780	41,559	1.65		12.5850

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Calculation of pro forma 2013 Revenues. No input required.

	2021 Actual Distribution Demand			Current Approved Distribution Rates										
Rate Class	Billed Customers or Connections	Billed kWh	Billed kW (if applicable)	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW	Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Revenues from Rates	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Total % Revenue
	A	B	C	D	E	F	G	H	I	J	K = G / J	L = H / J	M = I / J	N
RESIDENTIAL	185,198	1,560,006,402		25.88	0.0000	0.0000	57,515,091	0	0	57,515,091	100.0%	0.0%	0.0%	41.5%
GENERAL SERVICE LESS THAN 50 kW	19,152	650,022,841		47.52	0.0139	0.0000	10,921,236	9,035,317	0	19,956,554	54.7%	45.3%	0.0%	14.4%
GENERAL SERVICE 50 TO 499 kW	3,560	1,802,899,951	5,106,990	83.70	0.0000	5.0370	3,575,664	0	25,723,911	29,299,575	12.2%	0.0%	87.8%	21.2%
GENERAL SERVICE 500 TO 4,999 kW	501	1,908,000,191	4,304,608	1,905.96	0.0000	2.5919	11,458,632	0	11,157,113	22,615,744	50.7%	0.0%	49.3%	16.3%
LARGE USE	9	960,912,688	1,654,974	15,027.75	0.0000	3.2170	1,622,997	0	5,324,052	6,947,049	23.4%	0.0%	76.6%	5.0%
UNMETERED SCATTERED LOAD	3,131	11,802,772		9.82	0.0178	0.0000	368,957	210,089	0	579,046	63.7%	36.3%	0.0%	0.4%
STREET LIGHTING	50,897	14,888,780	41,559	1.65	0.0000	12.5850	1,007,761	0	523,024	1,530,785	65.8%	0.0%	34.2%	1.1%
Total	**262,448**	**6,908,533,625**	**11,108,132**				**86,470,338**	**9,245,407**	**42,728,099**	**138,443,844**				**100.0%**

Ontario Energy Board

Capital Module

Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Applicants Rate Base

Last COS Rebasing: 2013

Average Net Fixed Assets

Gross Fixed Assets - Re-based Opening	$	541,300,088	A			
Add: CWIP Re-based Opening	$	4,371,226	B			
Re-based Capital Additions	$	46,257,875	C			
Re-based Capital Disposals	-$	1,026,755	D			
Re-based Capital Retirements			E			
Deduct: CWIP Re-based Closing	-$	4,371,726	F			
Gross Fixed Assets - Re-based Closing	$	586,530,708	G			
Average Gross Fixed Assets				$	563,915,398	H = (A + G) / 2
Accumulated Depreciation - Re-based Opening	$	45,750,490	I			
Re-based Depreciation Expense	$	28,721,695	J			
Re-based Disposals			K			
Re-based Retirements	-$	1,026,755	L			
Accumulated Depreciation - Re-based Closing	$	73,445,430	M			
Average Accumulated Depreciation				$	59,597,960	N = (I + M) / 2
Average Net Fixed Assets				**$**	**504,317,438**	O = H - N
Working Capital Allowance						
Working Capital Allowance Base	$	786,215,891	P			
Working Capital Allowance Rate		13.5%	Q			
Working Capital Allowance				**$**	**106,139,145**	R = P * Q
Rate Base				**$**	**610,456,583**	S = O + R

Return on Rate Base

Deemed ShortTerm Debt %	4.00%	T	$	24,418,263	W = S * T
Deemed Long Term Debt %	56.00%	U	$	341,855,687	X = S * U
Deemed Equity %	40.00%	V	$	244,182,633	Y = S * V
Short Term Interest	2.08%	Z	$	507,900	AC = W * Z
Long Term Interest	5.09%	AA	$	17,405,240	AD = X * AA
Return on Equity	8.93%	AB	$	21,805,509	AE = Y * AB
Return on Rate Base			**$**	**39,718,649**	AF = AC + AD + AE

Distribution Expenses

OM&A Expenses	$	52,564,731	AG			
Amortization	$	25,461,389	AH			
Ontario Capital Tax			AI			
Grossed Up Taxes/PILs	$	3,079,932	AJ			
Low Voltage			AK			
Transformer Allowance			AL			
	$	2,000,167	AM			
			AN			
			AO			
				$	**83,106,219**	AP = SUM (AG : AO)

Revenue Offsets

Specific Service Charges	-$	1,236,975	AQ			
Late Payment Charges	-$	1,800,000	AR			
Other Distribution Income	-$	1,260,695	AS			
Other Income and Deductions	-$	532,207	AT	**-$**	**4,829,877**	AU = SUM (AQ : AT)
Revenue Requirement from Distribution Rates				**$**	**117,994,991**	AV = AF + AP + AU

Rate Classes Revenue

Rate Classes Revenue - Total (Sheet 4)	$	138,443,844	AW

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Input the billing determinants associated with Alectra Utilities Corporation-Enersource Rate Zone's Revenues Based on 2013 Board-Approved Distribution Demand. This sheet calculates the DENOMINATOR portion of the growth factor calculation.
Pro forma Revenue Calculation.

	2013 Board-Approved Distribution Demand			Current Approved Distribution Rates										
Rate Class	Billed Customers or Connections	Billed kWh	Billed kW	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW	Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Total Revenue By Rate Class	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Total % Revenue
	A	B	C	D	E	F	G	H	I	J	K = G / J_{total}	L = H / J_{total}	M = I / J_{total}	N
RESIDENTIAL	176,865	1,423,857,475		25.88	0.0000	0.0000	54,927,194	0	0	54,927,194	38.6%	0.0%	0.0%	38.6%
GENERAL SERVICE LESS THAN 50 kW	17,702	612,188,101		47.52	0.0139	0.0000	10,094,388	8,509,415	0	18,603,803	7.1%	6.0%	0.0%	13.1%
GENERAL SERVICE 50 TO 499 kW	3,950		6,222,022	83.70	0.0000	5.0370	3,967,380	0	31,340,325	35,307,705	2.8%	0.0%	22.0%	24.8%
GENERAL SERVICE 500 TO 4,999 kW	464		5,154,338	1,905.96	0.0000	2.5919	10,612,385	0	13,359,529	23,971,914	7.5%	0.0%	9.4%	16.9%
LARGE USE	9		1,737,267	15,027.75	0.0000	3.2170	1,622,997	0	5,588,788	7,211,785	1.1%	0.0%	3.9%	5.1%
UNMETERED SCATTERED LOAD	2,942	10,383,027		9.82	0.0178	0.0000	346,685	184,818	0	531,503	0.2%	0.1%	0.0%	0.4%
STREET LIGHTING	49,985		49,889	1.65	0.0000	12.5850	989,703	0	627,853	1,617,556	0.7%	0.0%	0.4%	1.1%
Total	**251,917**	**2,046,428,603**	**13,163,516**				**82,560,733**	**8,694,232**	**50,916,494**	**142,171,460**				**100.0%**

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Current Revenue from Rates

This sheet is used to determine the applicant's most current allocation of revenues (after the most recent revenue to cost ratio adjustment, if applicable) to appropriately allocate the incremental revenue requirement to the classes.

	Current OEB-Approved Base Rates			2021 Actual Distribution Demand										
Rate Class	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW	Re-based Billed Customers or Connections	Re-based Billed kWh	Re-based Billed kW	Current Base Service Charge Revenue	Current Base Distribution Volumetric Rate kWh Revenue	Current Base Distribution Volumetric Rate kW Revenue	Total Current Base Revenue	Service Charge % Total Revenue	Distribution Volumetric Rate % Total Revenue	Distribution Volumetric Rate % Total Revenue	Total % Revenue
	A	B	C	D	E	F	G	H	I	J	L = G / J_{total}	M = H / J_{total}	N = I / J_{total}	O
RESIDENTIAL	25.88	0	0	185,198	1,560,006,402	0	57,515,091	0	0	57,515,091	41.54%	0.00%	0.00%	41.5%
GENERAL SERVICE LESS THAN 50 kW	47.52	0.0139	0	19,152	650,022,841	0	10,921,236	9,035,317	0	19,956,554	7.89%	6.53%	0.00%	14.4%
GENERAL SERVICE 50 TO 499 kW	83.70	0	5.037	3,560	1,802,899,951	5,106,990	3,575,664	0	25,723,911	29,299,575	2.58%	0.00%	18.58%	21.2%
GENERAL SERVICE 500 TO 4,999 kW	1905.96	0	2.5919	501	1,908,000,191	4,304,608	11,458,632	0	11,157,113	22,615,744	8.28%	0.00%	8.06%	16.3%
LARGE USE	15027.75	0	3.217	9	960,912,688	1,654,974	1,622,997	0	5,324,052	6,947,049	1.17%	0.00%	3.85%	5.0%
UNMETERED SCATTERED LOAD	9.82	0.0178	0	3,131	11,802,772	0	368,957	210,089	0	579,046	0.27%	0.15%	0.00%	0.4%
STREET LIGHTING	1.65	0	12.585	50,897	14,888,780	41,559	1,007,761	0	523,024	1,530,785	0.73%	0.00%	0.38%	1.1%
Total							**86,470,338**	**9,245,407**	**42,728,099**	**138,443,844**				**100.0%**

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

No Input Required.

Final Materiality Threshold Calculation

$$\textbf{Threshold Value}\ (\%) = 1 + \left[\left(\frac{RB}{d}\right) \times (g + PCI \times (1 + g))\right] \times \left((1 + g) \times (1 + PCI)\right)^{n-1} + 10\%$$

Cost of Service Rebasing Year		**2013**	
Price Cap IR Year in which Application is made		**10**	n
Price Cap Index		**3.00%**	PCI
Growth Factor Calculation			
Revenues Based on 2021 Actual Distribution Demand		**$138,443,844**	
Revenues Based on 2013 Board-Approved Distribution Demand		**$142,171,460**	
Growth Factor		**-0.33%**	g $(Note\ 1)$
Dead Band		**10%**	
Average Net Fixed Assets			
Gross Fixed Assets Opening	$	541,300,088	
Add: CWIP Opening	$	4,371,226	
Capital Additions	$	46,257,875	
Capital Disposals	-$	1,026,755	
Capital Retirements	$	-	
Deduct: CWIP Closing	-$	4,371,726	
Gross Fixed Assets - Closing	$	586,530,708	
Average Gross Fixed Assets	$	563,915,398	
Accumulated Depreciation - Opening	$	45,750,490	
Depreciation Expense	$	28,721,695	
Disposals	$	-	
Retirements	-$	1,026,755	
Accumulated Depreciation - Closing	$	73,445,430	
Average Accumulated Depreciation	$	59,597,960	
Average Net Fixed Assets	$	504,317,438	
Working Capital Allowance			
Working Capital Allowance Base	$	786,215,891	
Working Capital Allowance Rate		14%	
Working Capital Allowance	$	106,139,145	
Rate Base	**$**	**610,456,583**	RB
Depreciation	**$**	**28,721,695**	d

Threshold Value (varies by Price Cap IR Year subsequent to CoS rebasing)

Price Cap IR Year 2014	**167%**
Price Cap IR Year 2015	**168%**
Price Cap IR Year 2016	**170%**
Price Cap IR Year 2017	**171%**
Price Cap IR Year 2018	**173%**
Price Cap IR Year 2019	**175%**
Price Cap IR Year 2020	**176%**
Price Cap IR Year 2021	**178%**
Price Cap IR Year 2022	**180%**
Price Cap IR Year 2023	**182%**

Threshold CAPEX $Threshold\ Value\ \times d$

Price Cap IR Year 2014	**$ 47,846,833**
Price Cap IR Year 2015	**$ 48,279,557**
Price Cap IR Year 2016	**$ 48,723,801**
Price Cap IR Year 2017	**$ 49,179,874**
Price Cap IR Year 2018	**$ 49,648,089**
Price Cap IR Year 2019	**$ 50,128,769**
Price Cap IR Year 2020	**$ 50,622,248**
Price Cap IR Year 2021	**$ 51,128,865**
Price Cap IR Year 2022	**$ 51,648,970**
Price Cap IR Year 2023	**$ 52,182,923**

Note 1: The growth factor g is annualized, depending on the number of years between the numerator and denominator for the calculation. Typically, for ACM review in a cost of service and in the fourth year of Price Cap IR, the ratio is divided by 2 to annualize it. No division is normally required for the first three years under Price Cap IR.

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Identify ALL Proposed ACM and ICM projects and related CAPEX costs in the relevant years

	Cost of Service	*Price Cap IR*		*Price Cap IR*		*Price Cap IR*		*Price Cap IR*	
	Test Year	Year 1		Year 2		Year 3		Year 4	
	2013	2014		2015		2016		2017	
CAPEX[1]									
Materiality Threshold		$ 47,846,833		$ 48,279,557		$ 48,723,801		$ 49,179,874	
Maximum Eligible Incremental Capital (Forecasted Capex less Threshold)		$ -		$ -		$ -		$ -	

		Test Year	Year 1 2014			Year 2 2015			Year 3 2016			Year 4 2017		
Project Descriptions:	Type	2013	Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA
Total Cost of ACM/ICM Projects			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maximum Allowed Incremental Capital			$ -			$ -			$ -			$ -		

			Price Cap IR (Deferred Rebasing) (if necessary)			*Price Cap IR (Deferred Rebasing) (if necessary)*			*Price Cap IR (Deferred Rebasing) (if necessary)*			*Price Cap IR (Deferred Rebasing) (if necessary)*		
			Price Cap IR			***Price Cap IR***			***Price Cap IR***			***Price Cap IR***		
			Year 5			**Year 6**			**Year 7**			**Year 8**		
			2018			**2019**			**2020**			**2021**		
Distribution System Plan CAPEX														
Materiality Threshold			$ 49,648,089			$ 50,128,769			$ 50,622,248			$ 51,128,865		
Maximum Eligible Incremental Capital (Forecasted Capex less Threshold)			$ -			$ -			$ -			$ -		
			Year 5			**Year 6**			**Year 7**			**Year 8**		
			2018			**2019**			**2020**			**2021**		
Project Descriptions:	**Type**		**Proposed ACM/ICM**	**Amortization Expense**	**CCA**	**Proposed ACM/ICM**	**Amortization Expense**	**CCA**	**Proposed ACM/ICM**	**Amortization Expense**	**CCA**	**Proposed ACM/ICM**	**Amortization Expense**	**CCA**
Total Cost of ACM/ICM Projects			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maximum Allowed Incremental Capital			$ -			$ -			$ -			$ -		

			Price Cap IR (Deferred Rebasing) (if necessary)			Price Cap IR (Deferred Rebasing) (if necessary)		
			Price Cap IR			Price Cap IR		
			Year 9			Year 10		
			2022			2023		
Distribution System Plan CAPEX						$ 65,401,326		
Materiality Threshold			$ 51,648,970			$ 52,182,923		
Maximum Eligible Incremental Capital (Forecasted Capex less Threshold)			$ -			$ 13,218,402		
			Year 9			Year 10		
			2022			2023		
Project Descriptions:	**Type**		**Proposed ACM/ICM**	**Amortization Expense**	**CCA**	**Proposed ACM/ICM**	**Amortization Expense**	**CCA**
Cable Injection and Cable Replacement						$ 8,729,165	$ 193,981	$ 698,333
Total Cost of ACM/ICM Projects			$ -	$ -	$ -	$ 8,729,165	$ 193,981	$ 698,333
Maximum Allowed Incremental Capital			$ -			$ 8,729,165		

1. For the Cost of Service Test Year, CAPEX refers to the CAPEX approved in the DSP. For subsequent Price CAP IR years, the CAPEX to be entered is the actual CAPEX. For the current Price Cap IR year, the CAPEX to be entered is the proposed CAPEX including any ICM/updated ACM project CAPEX for the year.

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Incremental Capital Adjustment **Rate Year:** 2023

Current Revenue Requirement

Current Revenue Requirement - Total	$ 117,994,991	A

Eligible Incremental Capital for ACM/ICM Recovery

	Total Claim	Eligible for ACM/ICM (Full Year Prorated Amount) (from Sheet 10b)	
Amount of Capital Projects Claimed	$ 8,729,165	$ 8,729,165	B
Depreciation Expense	$ 193,981	$ 193,981	C
CCA	$ 698,333	$ 698,333	V

ACM/ICM Incremental Revenue Requirement Based on Eligible Amount in Rate Year

Return on Rate Base

Incremental Capital			$ 8,729,165	B
Depreciation Expense (prorated to Eligible Incremental Capital)			$ 193,981	C
Incremental Capital to be included in Rate Base (average NBV in year)			$ 8,632,174	D = B - C/2
	% of capital structure			
Deemed Short-Term Debt	4.0%	E	$ 345,287	G = D * E
Deemed Long-Term Debt	56.0%	F	$ 4,834,018	H = D * F
	Rate (%)			
Short-Term Interest	2.08%	I	$ 7,182	K = G * I
Long-Term Interest	5.09%	J	$ 246,119	L = H * J
Return on Rate Base - Interest			$ 253,301	M = K + L
	% of capital structure			
Deemed Equity %	40.00%	N	$ 3,452,870	P = D * N
	Rate (%)			
Return on Rate Base -Equity	8.93%	O	$ 308,341	Q = P * O
Return on Rate Base - Total			$ 561,642	R = M + Q

Amortization Expense

Amortization Expense - Incremental		C	$ 193,981	S

Grossed up Taxes/PILs

Regulatory Taxable Income		O	$ 308,341	T
Add Back Amortization Expense (Prorated to Eligible Incremental Capital)		S	$ 193,981	U
Deduct CCA (Prorated to Eligible Incremental Capital)			$ 698,333	V
Incremental Taxable Income			-$ 196,010	W = T + U - V
Current Tax Rate	26.5%	X		
Taxes/PILs Before Gross Up			-$ 51,943	Y = W * X
Grossed-Up Taxes/PILs			-$ 70,670	Z = Y / (1 - X)

Incremental Revenue Requirement

Return on Rate Base - Total	Q	$ 561,642	AA
Amortization Expense - Total	S	$ 193,981	AB
Grossed-Up Taxes/PILs	Z	-$ 70,670	AC
Incremental Revenue Requirement		$ 684,953	AD = AA + AB + AC

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Calculation of incremental rate rider. Choose one of the 3 options: Fixed and Variable Rate Riders

Rate Class	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Total Revenue by Rate Class	Billed Customers or Connections	Billed kWh	Billed kW	Service Charge Rate Rider	Distribution Volumetric Rate kWh Rate Rider	Distribution Volumetric Rate kW Rate Rider
	From Sheet 7	*From Sheet 7*	*From Sheet 7*	Col C * Col I_{total}	Col D* Col I_{total}	Col E* Col I_{total}	*Col I_{total}*	*From Sheet 4*	*From Sheet 4*	*From Sheet 4*	Col F / Col K / 12	Col G / Col L	Col H / Col M
RESIDENTIAL	41.54%	0.00%	0.00%	284,557	0	0	284,557	185,198	1,560,006,402		0.13	0.0000	0.0000
GENERAL SERVICE LESS THAN 50 kW	7.89%	6.53%	0.00%	54,033	44,702	0	98,735	19,152	650,022,841		0.24	0.0001	0.0000
GENERAL SERVICE 50 TO 499 kW	2.58%	0.00%	18.58%	17,691	0	127,270	144,960	3,560	1,802,899,951	5,106,990	0.41	0.0000	0.0249
GENERAL SERVICE 500 TO 4,999 kW	8.28%	0.00%	8.06%	56,692	0	55,200	111,892	501	1,908,000,191	4,304,608	9.43	0.0000	0.0128
LARGE USE	1.17%	0.00%	3.85%	8,030	0	26,341	34,371	9	960,912,688	1,654,974	74.35	0.0000	0.0159
UNMETERED SCATTERED LOAD	0.27%	0.15%	0.00%	1,825	1,039	0	2,865	3,131	11,802,772		0.05	0.0001	0.0000
STREET LIGHTING	0.73%	0.00%	0.38%	4,986	0	2,588	7,574	50,897	14,888,780	41,559	0.01	0.0000	0.0623
Total	**62.46%**	**6.68%**	**30.86%**	**427,814**	**45,742**	**211,398**	**684,953**	**262,448**	**6,908,533,625**	**11,108,132**			
							684,953						
							From Sheet 11, E93						

ATTACHMENT 8
2024 MODIFIED ICM MODEL ERZ

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Note: Depending on the selections made below, certain worksheets in this workbook will be hidden.

Utility Name	Alectra Utilities Corporation-Enersource Rate Zone
Assigned EB Number	EB-2022-0013
Name of Contact and Title	Natalie Yeates, Director, Regulatory Affairs and Reporting
Phone Number	905-798-2872
Email Address	natalie.yeates@alectrautilities.com
Is this Capital Module being filed in a CoS or Price-Cap IR Application?	**Price-Cap IR**
Rate Year	**2024**
Indicate the Price-Cap IR Year (1, 2, 3, 4, etc) in which Alectra Utilities Corporation-Enersource Rate Zone is applying:	**11**
Next OEB Scheduled Rebasing Year	**2027**
Alectra Utilities Corporation-Enersource Rate Zone is applying for:	**ICM Approval**
Last Rebasing Year:	**2013**
The most recent complete year for which actual billing and load data exists	**2021**
Current IPI	**3.30%**
Strech Factor Assigned to Middle Cohort*	**III**
Stretch Factor Value	**0.30%**
Price Cap Index	**3.00%**

Based on the inputs above, the growth factor utilized in the Materiality Threshold Calculation will be determined by:

Revenues Based on 2021 Actual Distribution Demand

Revenues Based on 2013 Board-Approved Distribution Demand

Notes

Pale green cells represent input cells.

Pale blue cells represent drop-down lists. The applicant should select the appropriate item from the drop-down list.

White cells contain fixed values, automatically generated values or formulae.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.

**As per ACM/ICM policy, the middle cohort stretch factor is applied to all ACM/ICM applications.*

OEB policies regarding rate-setting and rebasing following distributor consolidations could allow a distributor to not rebase rates for up to ten years. A distributor could also apply for and receive OEB approval to defer rebasing. If a distributor is under Price Cap IR for more than four years after rebasing and applies for an ICM, this spreadsheet will need to be adapted to accommodate those circumstances. The distributor should contact OEB staff to discuss the circumstances so that a customized model can be provided.

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation - Enersource RZ

No Input Required.

Final Threshold Calculation

$$Threshold\ Value\ (\%) = 1 + \left[\left(\frac{RB}{d}\right) \times (g + PCI \times (1 + g))\right] \times \left((1 + g) \times (1 + PCI)\right)^{n-1} + 10\%$$

Cost of Service Rebasing Year		**2013**	
Price Cap IR Year in which Application is made		**11**	n
Price Cap Index		**3.00%**	PCI
Growth Factor Calculation			
Revenues Based on 2020 Actual Distribution Demand		**$138,443,844**	
Revenues Based on 2013 Board-Approved Distribution Demand		**$142,171,460**	
Growth Factor		**-0.33%**	$g\ (Note\ 1)$
Dead Band		**10%**	
Average Net Fixed Assets			
Gross Fixed Assets Opening	$	541,300,088	
Add: CWIP Opening	$	4,371,226	
Capital Additions	$	46,257,875	
Capital Disposals	-$	1,026,755	
Capital Retirements	$	-	
Deduct: CWIP Closing	-$	4,371,726	
Gross Fixed Assets - Closing	$	586,530,708	
Average Gross Fixed Assets	$	563,915,398	
Accumulated Depreciation - Opening	$	45,750,490	
Depreciation Expense	$	28,721,695	
Disposals	$	-	
Retirements	-$	1,026,755	
Accumulated Depreciation - Closing	$	73,445,430	
Average Accumulated Depreciation	$	59,597,960	
Average Net Fixed Assets	$	504,317,438	
Working Capital Allowance			
Working Capital Allowance Base	$	786,215,891	
Working Capital Allowance Rate		14%	
Working Capital Allowance	$	106,139,145	
Rate Base	**$**	**610,456,583**	RB
Depreciation	**$**	**28,721,695**	d

Threshold Value (varies by Price Cap IR Year subsequent to CoS rebasing)

		$Threshold\ Value\ \times d$
Price Cap IR Year 2014	**167%**	
Price Cap IR Year 2015	**168%**	
Price Cap IR Year 2016	**170%**	
Price Cap IR Year 2017	**171%**	
Price Cap IR Year 2018	**173%**	
Price Cap IR Year 2019	**175%**	
Price Cap IR Year 2020	**176%**	
Price Cap IR Year 2021	**178%**	
Price Cap IR Year 2022	**180%**	
Price Cap IR Year 2023	**182%**	
Price Cap IR Year 2024	**184%**	

Threshold CAPEX

Price Cap IR Year 2014	**$**	**47,846,833**
Price Cap IR Year 2015	**$**	**48,279,557**
Price Cap IR Year 2016	**$**	**48,723,801**
Price Cap IR Year 2017	**$**	**49,179,874**
Price Cap IR Year 2018	**$**	**49,648,089**
Price Cap IR Year 2019	**$**	**50,128,769**
Price Cap IR Year 2020	**$**	**50,622,248**
Price Cap IR Year 2021	**$**	**51,128,865**
Price Cap IR Year 2022	**$**	**51,648,970**
Price Cap IR Year 2023	**$**	**52,182,923**
Price Cap IR Year 2024	**$**	**52,731,092**

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Incremental Capital Adjustment **Rate Year:** 2024

Current Revenue Requirement

Current Revenue Requirement - Total	$ 117,994,991	A

Eligible Incremental Capital for ACM/ICM Recovery

	Total Claim	Eligible for ACM/ICM (Full Year Prorated Amount)	
Amount of Capital Projects Claimed	$ 8,688,880	$ 8,688,880	B
Depreciation Expense	$ 193,086	$ 193,086	C
CCA	$ 695,110	$ 695,110	V

ACM/ICM Incremental Revenue Requirement Based on Eligible Amount in Rate Year

Return on Rate Base

Incremental Capital			$	8,688,880	B
Depreciation Expense			$	193,086	C
Incremental Capital to be included in Rate Base (avg NBV)			$	8,592,337	D = B - C/2
Deemed ShortTerm Debt %	4.0%	E	$	343,693	G = D * E
Deemed Long Term Debt %	56.0%	F	$	4,811,709	H = D * F
Short Term Interest	2.08%	I	$	7,149	K = G * I
Long Term Interest	5.09%	J	$	244,983	L = H * J
Return on Rate Base - Interest			$	252,132	M = K + L
Deemed Equity %	40.00%	N	$	3,436,935	P = D * N
Return on Rate Base -Equity	8.93%	O	$	306,918	Q = P * O
Return on Rate Base - Total			$	559,050	R = M + Q

Amortization Expense

Amortization Expense - Incremental	C	$	193,086	S

Grossed up PIL's

Regulatory Taxable Income	O	$	306,918	T
Add Back Amortization Expense	S	$	193,086	U
Deduct CCA		$	695,110	V
Incremental Taxable Income		-$	195,106	W = T + U - V
Current Tax Rate	26.5% X			
PIL's Before Gross Up		-$	51,703	Y = W * X
Incremental Grossed Up PIL's		-$	70,344	Z = Y / (1 - X)

Incremental Revenue Requirement

Return on Rate Base - Total	Q	$	559,050	AA
Amortization Expense - Total		$	193,086	AB
Incremental Grossed Up PIL's	Z	-$	70,344	AC
Incremental Revenue Requirement		$	681,792	AD = AA + AB + AC

Ontario Energy Board

Capital Module
Applicable to ACM and ICM

Alectra Utilities Corporation-Enersource Rate Zone

Calculation of incremental rate rider. Choose one of the 3 options: Fixed and Variable Rate Riders

Enersource Rate Class	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Total Revenue by Rate Class	Billed Customers or Connections	Billed kWh	Billed kW	Service Charge Rate Rider	Distribution Volumetric Rate kWh Rate Rider	Distribution Volumetric Rate kW Rate Rider
	From Sheet 8	*From Sheet 8*	*From Sheet 8*	Col C * Col I_{total}	Col D* Col I_{total}	Col E* Col I_{total}	*Col I_{total}*	*From Sheet 4*	*From Sheet 4*	*From Sheet 4*	Col F / Col K / 12	Col G / Col L	Col H / Col M
RESIDENTIAL	41.54%	0.00%	0.00%	283,244	0	0	283,244	185,198	1,560,006,402		0.13	0.0000	0.0000
GENERAL SERVICE LESS THAN 50 kW	7.89%	6.53%	0.00%	53,784	44,496	0	98,280	19,152	650,022,841		0.23	0.0001	0.0000
GENERAL SERVICE 50 TO 499 kW	2.58%	0.00%	18.58%	17,609	0	126,682	144,291	3,560	1,802,899,951	5,106,990	0.41	0.0000	0.0248
GENERAL SERVICE 500 TO 4,999 kW	8.28%	0.00%	8.06%	56,430	0	54,945	111,375	501	1,908,000,192	4,304,608	9.39	0.0000	0.0128
LARGE USE	1.17%	0.00%	3.85%	7,993	0	26,219	34,212	9	960,912,688	1,654,974	74.01	0.0000	0.0158
UNMETERED SCATTERED LOAD	0.27%	0.15%	0.00%	1,817	1,035	0	2,852	3,131	11,802,772		0.05	0.0001	0.0000
STREET LIGHTING	0.73%	0.00%	0.38%	4,963	0	2,576	7,539	50,897	14,888,780	41,559	0.01	0.0000	0.0620
Total	**62.46%**	**6.68%**	**30.86%**	**425,839**	**45,531**	**210,422**	**681,792**	**262,448**	**6,908,533,626**	**11,108,132**			
							681,792						

ATTACHMENT 9
2023 PROJECT LISTING ERZ

2023 Capital Project Listing - Enersource Rate Zone

SYSTEM ACCESS	$MM
Road Authority Projects - Central South	3.8
New Residential Subdivision and Condo Tower Development - Alectra Central South	2.8
Service (new and upgrades) - Commercial, Industrial and Institutional (ICI) Projects - Central South	2.5
Customer Initiated Distribution System Projects - Central South	1.4
New Services - Enersource RZ	1.3
Sub-Total Material Projects	**11.8**
Miscellaneous Projects (under materiality threshold)	2.7
Total System Access	**14.5**
SYSTEM RENEWAL	**$MM**
Lines Central-South - Reactive Renewal	3.9
Pole Renewal - Central South	3.3
Cable and Transformer Replacement Project - (AREA25) - Glen Erin & Burnhamthorpe, Mississauga	2.2
Switchgear Renewal - Central South	1.8
Cable and Transformer Replacement Project - (AREA24) - Burnhamthorpe & Miss. Road, Mississauga	1.6
Cable Replacement and Switchgear Removal - (AREA19) - Fieldgate and Ponytrail Dr, Mississauga	1.6
Cable Replacement Project - (AREA46)- Millcreek Dr & Erin Mills Pkway, Mississauga	1.5
Cable Replacement Project - (AREA46) - Montevideo & Battleford, Mississauga	1.4
Transformer Renewal - Central South	1.3
Joint Use Pole Removal - Central South	1.2
Underground Asset Renewal-Alectra Initiated Distribution System Projects-Central South	1.1
Cable Injection - (AREA58 & 59) - Winston Churchill & The Collegeway, Mississauga	1.0
Cable Injection - (AREA56) - Derry Rd W & Ninth Line, Mississauga	1.0
Cable Injection - (AREA46) - Glen Erin & Aquitane, Mississauga	1.0
Sub-Total Material Projects	**24.0**
Miscellaneous Projects (under materiality threshold)	8.3
Total System Renewal	**32.3**
SYSTEM SERVICE	**$MM**
New build - 44kV Feeder Extension York/Meadowpine, Mississauga	2.3
New build - 25M9 Extension to Derry Rd, Mississauga	2.3
Sub-Total Material Projects	**4.6**
Miscellaneous Projects (under materiality threshold)	2.2
Total System Service	**6.8**
GENERAL PLANT	
Enersource Rate Zone Allocation of General Plant	11.7
Total General Plant	**11.7**
2023 Budget	**65.3**

GENERAL PLANT - ALECTRA UTILITIES	
C2M (CIS CC&B upgrade)	6.3
Customer Service Strategy-CX Project	4.2
Work Force Management / Mobile Dispatch	2.9
ERP Continuous Improvement	2.1
C55 Alectra: Optimization of Business Practices	1.9
Client - IT Infrastructure	1.3
Facilities_West_Capital Replacement Investment Support	1.3
Sub-Total Material Projects	**19.9**
Miscellaneous Projects (under materiality theshold)	24.3
Total General Plant	**44.2**

ATTACHMENT 10
2024 PROJECT LISTING ERZ

2024 Capital Project Listing - Enersource Rate Zone

SYSTEM ACCESS	$MM
Road Authority Projects - Central South	3.9
New Residential Subdivision and Condo Tower Development - Alectra Central South	3.2
Service (new and upgrades) - Commercial, Industrial and Institutional (ICI) Projects - Central South	2.6
Customer Initiated Distribution System Projects - Central South	1.5
New Services - Enersource RZ	1.3
Sub-Total Material Projects	**12.6**
Miscellaneous Projects (under materiality threshold)	2.7
Total System Access	**15.4**
SYSTEM RENEWAL	**$MM**
Lines Central-South - Reactive Renewal	3.9
Pole Renewal - Central South	2.9
Cable and Transformer Replacement Project - (AREA21) - Miss. Valley & Bloor, Mississauga	2.4
Cable and Transformer Replacement Project - (AREA25) - Glen Erin & Burnhamthorpe, Mississauga	2.3
Cable Replacement Project - (AREA54) - Copenhagen Rd, Mississauga	2.2
Cable Remediation- Main Feeder Cable (S5230 to S5227), Mississauga	2.0
Switchgear Renewal - Central South	1.9
Cable Injection - (AREA43 & 51) - Hurontario & Derry Rd W, Mississauga	1.3
Joint Use Pole Removal - Central South	1.3
Cable Injection - (AREA56) - Derry Rd W & Ninth Line, Mississauga	1.1
Transformer Renewal - Central South	1.1
Underground Asset Renewal-Alectra Initiated Distribution System Projects-Central South	1.1
Cable Injection - (AREA58 & 59) - Winston Churchill & The Collegeway, Mississauga	1.1
Switch Renewal - Central South	1.0
Sub-Total Material Projects	**25.7**
Miscellaneous Projects (under materiality threshold)	6.6
Total System Renewal	**32.3**
SYSTEM SERVICE	**$MM**
Miscellaneous Projects (under materiality threshold)	2.2
Total System Service	**2.2**
GENERAL PLANT	
Enersource Rate Zone Allocation of General Plant	10.7
Total General Plant	**10.7**
2024 Budget	**60.6**
GENERAL PLANT - ALECTRA UTILITIES	
Work Force Management / Mobile Dispatch	2.5
CIS CC&B Enhancements	2.1
ERP Continuous Improvement	1.9
CIS CC&B Modifications(Regulatory Enhancements)	1.7
Derry Generator Replacement	1.7
Customer Service Strategy-CX Project	1.6
Client - IT Infrastructure	1.5
Facilities_Replacement_Patterson Road Roof	1.3
Facilities_West_Capital Replacement Investment Support	1.0
Sub-Total Material Projects	**15.3**
Miscellaneous Projects (under materiality theshold)	25.0
Total General Plant	**40.3**

ATTACHMENT 11
INNOVATIVE CUSTOMER ENGAGEMENT REPORT

INNOVATIVE RESEARCH GROUP

Customer Engagement

2022 ICM Application

April 2022

Prepared for:

Alectra Utilities
2185 Derry Road West
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alectra utilities

PRIVILEGED AND CONFIDENTIAL

Customer Engagement Overview

April 2022

Confidentiality

This Overview and all the information and data contained within it may not be released, shared or otherwise disclosed to any other party, without the prior, written consent of Alectra Utilities Corporation ("Alectra Utilities").

Acknowledgement

This overview has been prepared by Innovative Research Group Inc. ("INNOVATIVE") for Alectra Utilities. The conclusions drawn, and opinions expressed are those of the authors.

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Table of Contents

Table of Appendices

Introduction

Innovative Research Group Inc. (INNOVATIVE) was engaged by Alectra Utilities Corporation (Alectra Utilities) to assist in meeting Alectra Utilities' customer engagement commitments under the Renewed Regulatory Framework for Electricity Distributors.

Alectra Utilities is in the early stages of preparing for a rate rebasing application to the Ontario Energy Board (OEB). The results of this survey will provide early insight on customer needs and the outcomes they care about. In addition, Alectra Utilities is assessing the need for a rate adjustment for increased investment to address cable renewal in two of its rate zones: the former Enersource and PowerStream service territories.

Alectra Utilities assessed customer preferences through a workbook-style survey administered to representative samples of each rate class in each rate zone. Each response was collected using a unique survey URL which was sent directly to customers by Alectra Utilities. The data was collected by INNOVATIVE to provide customers with anonymity. A total of 24 different versions of the workbook were created to provide each customer with a workbook customised to their rate zone and class. Residential respondents were asked to indicate the size of their household as well as annual income in order to identify vulnerable Ontarians who qualify for the OEB's Low-income Energy Assistance Program (LEAP).

The results of the online workbook survey were reported to Alectra Utilities in two stages.

The first report ("**ICM Report**") focused only on the results gathered in the legacy Enersource and PowerStream rate zones on questions related to the ICM portion of the rate application. These results were reported as soon as possible following data collection to give planners and engineers timely customer feedback for planning purposes. A preliminary version of this report was shared with Alectra Utilities on March 31st, 2022, with a final version delivered on April 6th, 2022. The data contained in both versions was identical, with the only revisions being improving clarity of language and updating customer population figures.

The second report ("**Needs and Outcomes Report**") provided Alectra Utilities with customers views from across all five rate zones and all rate classes on their needs and outcome priorities. The survey asked customers both to rate and rank outcomes. This was done for both overall priorities as well as more detailed reliability and power quality outcomes. These results were reported later in order to provide hard-to-reach rate classes more time to complete the survey. A preliminary version of this report was shared with Alectra Utilities on April 8th, 2022, with a final version delivered on April 25th, 2022. Adjustments were made to improve the accuracy of the weights applied to the GS>50kW and Large Use customers, and to improve clarity of language and reorganize the report structure.

This document highlights the results contained in both reports.

Executive Summary

Customers are generally satisfied with Alectra Utilities and have few unmet needs.

Across all rate zones, overall satisfaction with Alectra Utilities among residential and GS<50kW business customers ranges from 63% to 81%. Sample sizes are smaller among higher volume business customers, and satisfaction ranges from 15 out of 24 customers in Brampton to universal satisfaction in this rate class in the Horizon (n=22) and Guelph (n=6) rate zones. When asked what the utility could improve, most had no suggestions. Among those who did suggest improvements, lower rates were the most common mention from residential and GS>50kW customers. The larger GS<50kW customers were more concerned about improving communications/customer service.

Satisfaction is also high for customer service, with no dominant issues to address.

Looking at customer service, satisfaction among residential and GS<50kW customers ranges from 74% to 85%. Among higher volume business customers, satisfaction ranges from 19 out of 24 in Brampton to 34 out of 39 in the PowerStream rate zone. Asked how Alectra Utilities could do a better job of meeting their needs, most customers had no specific suggestions. No particular issue was mentioned by more than five percent in any rate class.

Reliability and pricing are top outcomes.

Customers were asked to rate the importance of seven customer outcomes. Across all rate classes ensuring reliable electrical service and delivering reasonable electricity distribution prices were the top two outcomes. Protecting the safety of employees and customers was third for residential and GS>50kW customers, while customer service was third among GS<50kW customers. Helping customers manage electricity consumption, minimizing impact on the environment and enabling customer choice to access new electricity services were rated less important (albeit still important to at least about four-in-ten customers across all rate classes).

Customers were then asked to rank their top three outcomes. For residential and GS<50kW business customers, delivering reasonable electricity distribution prices came out on top, followed by ensuring reliable service and helping customers manage electricity consumption. A slightly different result among higher volume business customers, with reliability and price topping the list, followed by safety. Across all rate classes, providing quality customer service dropped out of the top three when customers went from rating outcomes to ranking them.

Reliability outcome priorities differ by volume.

Asked to rank their top three from a list of six reliability outcomes, residential and GS<50kW prioritize reducing time to restoration and number of outages during extreme weather events as their top two priorities, followed by improving communication during outages for residential customers and improving power quality for GS<50kW customers. Among GS>50kW and Large Use customers, the top three reliability priorities are improving power quality, reducing the number of day-to-day outages, and reducing time to restoration of power during extreme weather events.

Customers are willing to pay more to increase investment in cable renewal.

Whether it be cable injection or cable replacement, most customers would like to see at least some increase in the level of investment. In fact, the preferred option for both strategies is the highest level of investment. Interestingly, customers in all rate classes tend to prefer no additional investment over the two mid-tier levels of investment between the status quo and the highest level of investment. It is also noteworthy that between 23% and 36% said they didn't know which cable injection option they preferred, and between 22% and 34% said the same about cable replacement.

Key Findings: Cable Renewal Strategies

In both the Enersource and PowerStream rate zones, a majority of customers in all rate classes would like to see at least some increase in investment in cable injection. A plurality chose the most accelerated investment option. A significant proportion – ranging from 23% to 36% – of customers in all rate classes in both rate zones said they "don't know" which option they prefer.

LEAP-qualified customers were least able to choose of the options presented to them, with 44% in the Enersource rate zone and 38% in the PowerStream rate zone saying they "don't know". In the Enersource rate zone, LEAP-qualified customers who did make a selection tended to choose the status quo (20%), whereas, in the PowerStream rate zone, there was a marginal preference for the highest level of investment over the status quo (24% vs 19%).

Preferences for Cable Injection Strategies

Rate Zone & Rate Class Breakdown *% Choosing each option* *n-size for sample sizes where n<50*	**Enersource**			**PowerStream**		
	Residential	**GS<50kW**	**GS>50kW + Large Use**	**Residential**	**GS<50kW**	**GS>50kW + Large Use**
Increase investment in cable injection by [$6.4MM (ERZ), $15.3MM (PRZ)] over 2 years	36%	33%	19/44 (43%)	33%	34%	11/35 (31%)
Increase investment in cable injection by [$4.3MM (ERZ), $6.8M (PRZ)] over 2 years	11%	8%	3/44 (7%)	12%	8%	4/35 (11%)
Increase investment in cable injection by [$2.1MM (ERZ), $3.6MM (PRZ)] over 2 years	10%	10%	1/44 (2%)	10%	14%	4/35 (11%)
Maintain current level of planned investment in cable injection	18%	13%	8/44 (18%)	21%	14%	8/35 (23%)
Don't know	26%	36%	13/44 (30%)	24%	30%	8/35 (23%)

The pattern of results for cable replacement strategies is similar to the results for cable injection, with a majority of customers in both rate zones and all rate classes choosing at least some increase in the amount invested. And, again, the preferred option is the most accelerated level of investment. The proportion who "don't know" ranges from 22% to 34%.

As with cable injection, a plurality of LEAP-qualified customers in the Enersource (42%) and PowerStream (34%) rate zones said they "don't know" which level of investment in cable replacement they prefer. In both rate zones, preference was fairly evenly divided between the highest level of investment (21% in both rate zones) and the status quo (17% in both).

Preferences for Cable Replacement Strategies

Rate Zone & Rate Class Breakdown *% Choosing each option* *n-size for sample sizes where n<50*	**Enersource**			**PowerStream**		
	Residential	**GS<50kW**	**GS>50kW + Large Use**	**Residential**	**GS<50kW**	**GS>50kW + Large Use**
Increase investment in cable replacement by [$11.0MM (ERZ), $19.5MM (PRZ)] over 2 years	33%	31%	14/44 (32%)	32%	33%	9/35 (26%)
Increase investment in cable replacement by [$8.6MM (ERZ), $11.9MM (PRZ)] over 2 years	12%	10%	2/44 (5%)	14%	8%	6/35 (17%)
Increase investment in cable replacement by [$5.4MM (ERZ), $5.1MM (PRZ)] over 2 years	11%	11%	6/44 (14%)	12%	13%	5/35 (14%)
Maintain current level of planned investment in replacement	18%	19%	7/44 (16%)	20%	13%	7/35 (20%)
Don't know	25%	29%	15/44 (34%)	22%	33%	8/35 (23%)

Key Findings: Needs and Outcomes

Customer Satisfaction

A strong majority of Alectra Utilities customers across all rate classes and in all rate zones are satisfied with the utility overall. More often than not, residential customers are more satisfied than business customers, but this varies by rate zone. Among business customers, larger volume customers tend to be more satisfied than lower volume customers.

Percentage of Customers Satisfied with Alectra Utilities

Rate Zone Breakdown *% Very or somewhat satisfied* *n-size for sample sizes where n<50*	**ERZ**	**BRZ**	**HRZ**	**PRZ**	**GRZ**
Residential	80%	78%	74%	76%	72%
GS<50kW	69%	76%	63%	66%	81%
GS>50kW and Large Use	37/49 (76%)	15/24 (63%)	22/22 (100%)	31/39 (79%)	6/6 (100%)

Focusing specifically on customer service, satisfaction is again high across all rate classes and rate zones. The level of satisfaction with Alectra Utilities' customer service among business customers is on par with that of residential customers.

Percentage of Customers Satisfied with Alectra Utilities' Customer Service

Rate Zone Breakdown *% Very or somewhat satisfied* *n-size for sample sizes where n<50*	**ERZ**	**BRZ**	**HRZ**	**PRZ**	**GRZ**
Residential	78%	81%	78%	80%	74%
GS<50kW	74%	85%	80%	81%	77%
GS>50kW and Large Use	41/49 (84%)	19/24 (79%)	18/22 (82%)	34/39 (87%)	5/6 (83%)

Customer Outcomes

Asked to rate potential priorities on a scale from 0 to 10 (where 0 is not at all important at 10 is extremely important), customers in all rate classes are in agreement that reliability and price are the most important priorities, followed by safety and customer service.

Across all rate classes, even the lowest rated priority (enabling customer choice to access new electricity services) is considered extremely important to about four-in-ten customers.

There are no significant variations across rate zones, or LEAP qualification segments among residential customers.

Importance of Potential Alectra Utilities Priorities: Rating

Rate Class Breakdown *(% rating 9 or 10)*	**Residential**	**GS<50kW**	**GS>50kW + Large Use**
Ensuring reliable electrical service	81%	80%	88%
Delivering reasonable electricity distribution prices	78%	78%	81%
Protecting the safety of employees and customers	70%	67%	76%
Providing quality customer service	65%	71%	69%
Helping customers manage electricity consumption	59%	55%	56%
Minimizing impact on the environment	54%	55%	48%
Enabling customer choice to access new electricity services	42%	44%	38%

When asked to rank the same list of outcomes by choosing their top three priorities, a slightly different story emerges. For residential and GS<50kW customers, reliability falls to second place behind price, and helping customers manage electricity consumption rounds out the top three. Among higher volume business customers, reliability remains number one, followed by price and then safety.

Among residential customers, those who qualify for financial assistance through LEAP identify helping customers manage electricity consumption as their second highest priority (behind price), whereas those who do not qualify for LEAP rank reliability as second to price. Another way in which LEAP-qualified customers differ from those who do not qualify is that they are more likely to say “don’t know” when asked to identify their top three priorities (17% vs 13% of those not qualified due to a combination of household size and income and 5% among those not qualified based on income alone).

GS>50kW customers in Guelph are unique in that they rank safety ahead of all other outcomes, whereas every other rate zone puts reliability at the top of the list. It is worth bearing in mind that the sample size of high-volume business customers in Guelph is very small.

Top Three Priorities by Rate Class

Residential	GS<50kW	GS>50kW + Large Use
Delivering reasonable electricity distribution prices (67%)	Delivering reasonable electricity distribution prices (65%)	Ensuring reliable electrical service (73%)
Ensuring reliable electrical service (56%)	Ensuring reliable electrical service (57%)	Delivering reasonable electricity distribution prices (69%)
Helping customers manage electricity consumption (40%)	Helping customers manage electricity consumption (38%)	Protecting the safety of employees and customers (37%)

Reliability Outcomes

Residential and GS<50kW business customers identify reducing restoration time and reducing the number of outages during extreme weather events as their top priority reliability outcomes, followed by improving communication during outages for residential customers and improving power quality for GS<50kW customers. Day-to-day outages are at the bottom of the list of priorities for these two rate classes.

Among residential customers, the results are generally consistent across all rate zones, with the exception of Guelph, where power quality is ranked a higher priority than improving communication during outages. Once again, LEAP-qualified customers are more likely to say "don't know" when asked to identify their top three priorities (21% vs 16% and 9% among those not qualified for LEAP assistance).

The results among GS<50kW customers are very consistent across the five rate zones.

It is a different story among GS>50kW and Large Use customers. Customers in this rate class prioritize power quality and reducing the number of day-to-day outages as their top reliability outcomes, followed by time to restoration during extreme weather events. While still a top three priority, reducing the time to restoration during extreme weather events is a less important priority compared to lower volume customers.

Top Three Reliability Priorities by Rate Class

Residential	GS<50kW	GS>50kW + Large Use
Reducing the length of time to restore power during extreme weather events (58%)	Reducing the length of time to restore power during extreme weather events (57%)	Improving the quality of power, as judged by momentary interruptions (59%)
Reducing the number of outages during extreme weather events (51%)	Reducing the number of outages during extreme weather events (46%)	Reducing the overall number of day-to-day outages (49%)
Improving communication during outages (45%)	Improving the quality of power, as judged by momentary interruptions (44%)	Reducing the length of time to restore power during extreme weather events (45%)

Customer Engagement Diagnostics

The data provided in this section reflect the results shown in the Needs and Outcomes report, which included all five rate zones and a larger overall sample size.

Overall Impression

Respondents were asked for their overall impression of the workbook they had completed. Across all rate zones and customer segments, the proportion who had a favourable impression ranges from 71% to 93%.

Percentage Who Had a Favourable Impression of the Workbook

Rate Zone Breakdown *% Very or somewhat favourable* *n-size for sample sizes where n<50*	**ERZ**	**BRZ**	**HRZ**	**PRZ**	**GRZ**
Residential	85%	86%	87%	86%	84%
GS<50kW	71%	85%	83%	82%	93%
GS>50kW and Large Use	41/49 (84%)	22/24 (92%)	18/22 (82%)	35/39 (90%)	6/6 (100%)

Volume of Information

Customers across all rate zones and rate classes found the workbook provided the right balance of information. A clear majority of customers in all segments stated that the workbook contained "just the right amount" of information.

Percentage Who Feel the Workbook Had "Just the Right Amount" of Information

Rate Zone Breakdown *% Saying "just the right amount"* *n-size for sample sizes where n<50*	**ERZ**	**BRZ**	**HRZ**	**PRZ**	**GRZ**
Residential	81%	86%	89%	80%	89%
GS<50kW	71%	91%	73%	79%	90%
GS>50kW and Large Use	38/49 (78%)	22/24 (92%)	18/22 (82%)	30/39 (77%)	4/6 (67%)

About this Consultation

Methodology

The basic challenge for electricity consultations is to get meaningful input from a wide variety of customers, many of whom begin with a very limited understanding of the electricity system, its governance, and the role of distributors such as Alectra Utilities.

To overcome this challenge, INNOVATIVE worked with Alectra Utilities to develop a workbook-based consultation. The core idea behind this approach is to provide customers with basic background information about the electricity system, their electricity bill, and contextual information to allow them to make informed choices when it comes to the cable renewal options under consideration.

Workbook Development

The initial task was to develop an online workbook for the customer engagement. As noted above, a key challenge in collecting meaningful input from many customers is their initial low level of knowledge about the electricity system.

The customer engagement workbook gave customers a basic overview of Alectra Utilities and where it fits in the electricity system before they were asked about their experience with Alectra Utilities and how they can do better, and what potential outcomes matter most to them. Questions also asked customers about their experience with outages, and which reliability outcomes they consider top priorities.

Customers in the Enersource and PowerStream rate zones were also provided with some background and reliability issues associated with underground cable failures and then were asked about their preferred level of increased investment (if any) in cable injection and cable replacement.

The workbook was tested in a series of online one-on-one interviews with residential and small business (GS<50kW) customers to ensure comprehension and to test for length. Diagnostic questions were included to assess the customer experience and the workbook included a comment box for every substantive question to allow customers to flag concerns.

Why Online?

In most rate zones, Alectra Utilities has emails for half or more of each rate class. Only Guelph has a lower level of coverage. The table below illustrates a typical level of email coverage using the Enersource rate zone customer base.

Email Coverage by Rate Class in Enersource

Rate Class	Full Population	Email Coverage	
Residential	185,198 records	100,877 records	**54%**
GS<50kW	19,152 records	15,852 records	**83%**
GS.50kW	4,061 records	3,720 records	**92%**
Large Use	9 records	9 records	**100%**

A 2019 comparison of customers with emails to the overall customer base was completed on known characteristics of region and electricity usage. Customers with emails are similar to the overall customer base which made an online survey a viable alternative to traditional telephone surveys. Using Enersource as an example, email coverage has gone from 38% among residential customers in 2019 to 54% of customers in 2022, which further enhances the viability of an online methodology.

Sampling

For this engagement, Alectra Utilities aimed to secure the view of a representative sample of customers. For low volume rate classes, this involved sending invitations to a representative sample of customers. INNOVATIVE and Alectra Utilities worked together to ensure the sample was representative by managing sample invitations and responses by the known characteristics of rate class, rate zone and usage. For Residential and GS<50kW customers, quartiles were established according to actual consumption data. Batches of increasingly targeted invitations were sent to these customers by Alectra Utilities until the sample quotas were filled.

Because the total population of GS>50kW and Large Use customers is much smaller, Alectra Utilities sent invitations to all customers for whom they have an email address on file, with the goal of getting as many completes as possible. In an effort to increase response rates, business customers were contacted via reminder emails and follow-up phone calls. Customers had an opportunity to complete the workbook between March 10th and April 5th, 2022.

The data for the ICM Report was pulled on March 28th, 2022. Between March 28th and April 5th, an additional 65 customers from the Enersource and PowerStream rate zones completed the survey (47 of whom were residential customers). The ICM Report was not updated to include those customers, but a review of the data showed that the results did not differ in any significant way from what was originally reported.

Total Number of Customer Engagement Workbook Completes by Rate Zone and Rate Class

Unweighted Completes	ERZ	BRZ	HRZ	PRZ	GRZ	Total
Residential	1,235	613	597	1,200	697	4,342
GS<50kW	68	26	64	139	21	318
GS>50kW	46	23	20	37	5	131
Large Use	3	1	2	2	1	9
Total Customer Engagement	**1,352**	**663**	**683**	**1,378**	**724**	**4,800**

The residential and GS<50kW online workbook samples were weighted by region and consumption quartiles in order to be representative of customers across the entire Alectra Utilities service territory. The GS>50kW and Large Use customer sample was weighted by region only*.

Weighted Completes	ERZ	BRZ	HRZ	PRZ	GRZ	Total
Residential	668	572	836	1,236	188	3,500
GS<50kW	45	23	45	78	10	200
GS>50kW	41	18	21	53	6	140
Large Use†	<1	<1	<1	<1	<1	<1
Total Customer Engagement	**754**	**613**	**903**	**1,367**	**204**	**3,840**

† *Weighted figures for Large Use cells are reduced to less than one as a result of weights that reflect the small proportion of these customers.*

* *For the ICM Report, the residential and GS<50kW online workbook sample was weighted by consumption quartiles only because only the Enersource and PowerStream were relevant and each rate zone was reported separately. The GS>50kW and Large Use customer sample for the report was not weighted.*

INNOVATIVE RESEARCH GROUP

2022 ICM Application Customer Engagement

ICM Report

alectra utilities

March 2022

Introduction

Alectra Utilities' 2022 ICM Application Customer Engagement

Innovative Research Group Inc. (INNOVATIVE) was engaged by Alectra Utilities Corporation (Alectra Utilities) to assist in meeting Alectra Utilities' customer engagement commitments under the Renewed Regulatory Framework for Electricity Distributors. The information contained within this report are the result of a series of customer engagements workbooks.

Each response from within this report was collected using a unique survey URL which was sent directly to customers via Alectra Utilities. Each workbook was customized to the individual customers' rate zone and rate class.

Setting the Context

Alectra Utilities is in the early stages of preparing for a rate rebasing application to the Ontario Energy Board (OEB). The results of this survey will provide early insight as to the priority outcomes for customers, both overall and with regard to reliability specifically. In addition, Alectra Utilities is seeking a rate adjustment for increased investment to address cable renewal in two of its rate zones: the former Enersource and Powerstream service territories. This report details only the results of the questions pertaining directly to this issue in order to give Alectra Utilities planners sufficient time to incorporate customer feedback. See slide 3 for additional details about the survey.

Interpreting the Results

This report covers the findings of an online workbook distributed to customers who have provided email addresses to Alectra Utilities. Analysis conducted by INNOVATIVE in 2019, comparing usage rates between customers with emails and customers without emails, showed that customers with emails are very similar to customers without emails.

For the Residential and GS<50kW rate classes, responses were weighted by consumption to ensure the responses were representative of the broader customer base. Due to the sample size in the higher volume rate classes (GS>50kW) and Large Use, this data has not been weighted by consumption quartiles.

About this Report

This report presents the results of a subset of questions within a larger customer engagement survey. An outline of the entire survey is shown below, with the questions pertaining to the rate adjustment for an incremental capital module (ICM) identified in red.

The purpose of this ICM report is to give Alectra Utilities' planners and engineers insight as to customer preferences with regard to potentially increasing investment in two cable renewal strategies that are under consideration within the former Enersource and Powerstream service territories only.

- About this Customer Engagement
- Electricity 101: How rates are set in Ontario & Alectra Utilities' role
- Customer Outcomes: Customer Service
- Bill Breakdown: How much goes to Alectra Utilities?
- Customer Outcomes: Priority Goals
- Reliability: Experience and Priority Outcomes

Covered in the Needs and Priority Outcomes report

- Choices: Pacing Investments in the Underground System
- Environmental Controls: Bill Impact and Satisfaction with System
- Feedback: Workbook Diagnostics

Included in this ICM-only report

INNOVATIVE RESEARCH GROUP

Methodology
Online Workbook

Field Dates & Workbook Delivery

For Residential and GS<50kW customers, quartiles were established according to actual consumption data. Batches of increasingly targeted invitations were sent to these customers by Alectra Utilities until the sample quotas were filled (see tables below). For GS>50kW and Large Use customers, Alectra Utilities sent invitations to all customers for whom they have an email address on file, with the goal of getting as many completes as possible. In an effort to increase response rates, customers were contacted via reminder emails and follow-up phone calls. Customers had an opportunity to complete the workbook between March 10th and 28th, 2022.

Each customer received a unique URL to take them to a workbook customized to their rate zone and rate class.

Sample Weighting: Residential and GS<50kW Customers

The Residential and GS<50kW online workbook samples have been weighted by consumption quartiles in order to be representative of customers within each rate zone (ERZ=Enersource, PRZ=PowerStream).

RESIDENTIAL	UNWEIGHTED		WEIGHTED	
Consumption Quartile	**ERZ**	**PRZ**	**ERZ**	**PRZ**
Low	303	284	250	250
Medium-low	272	306	250	250
Medium-high	289	310	250	250
High	346	278	250	250
TOTAL	**1,210**	**1,178**	**1,000**	**1,000**

GS<50kW	UNWEIGHTED		WEIGHTED	
Consumption Quartile	**ERZ**	**PRZ**	**ERZ**	**PRZ**
Low	18	42	15	15
Medium-low	15	35	15	15
Medium-high	15	21	15	15
High	18	35	15	15
TOTAL	**66**	**133**	**60***	**60***

Sample: GS>50kW and Large Use Customers

Due to the smaller size of these rate classes, the results have been combined for reporting purposes. The data have not been weighted and therefore the samples cannot be described as representative of each rate class.

Rate Class	ERZ	PRZ
GS > 50kW	41	32
Large Use	3	2
TOTAL	**44**	**35**

* The results for GS<50kW customers have been reported as percentages herein for ease of interpretation and comparison across rate zones. However, due to the small sample size, the results should be interpreted with caution.

Note: *Graphs and tables may not always total 100% due to rounding values rather than any error in data. Sums are added before rounding numbers.*

Sample Validation

Email Coverage

Looking at email coverage in each rate zone and across all rate classes, we see that Alectra Utilities has email addresses on file for at least half of customers across all rate classes. Email coverages increases from 54% to 60% of residential customers to 100% of Large Use customers.

Enersource Coverage

More than half of Enersource residential customers have email addresses on file. Email coverage is even higher among business customers, ranging from 83% of GS<50 customers to 100% of Large Use customers.

Rate Class	Full Population	Email Coverage	
Residential	185,198 records	100,877 records	**54%**
GS<50	19,152 records	15,852 records	**83%**
GS>50	4,061 records	3,720 records	**92%**
Large Use	9 records	9 records	**100%**

PowerStream Coverage

More than half of PowerStream residential customers have email addresses on file. Email coverage is even higher among business customers, ranging from 71% of GS<50 customers to 100% of Large Use customers.

Rate Class	Full Population	Email Coverage	
Residential	342,946 records	205,509 records	**60%**
GS<50	33,352 records	23,844 records	**71%**
GS>50	5,224 records	4,390 records	**84%**
Large Use	2 records	2 records	**100%**

INNOVATIVE RESEARCH GROUP

Summary of Customer Preferences

Summary of Customer Preferences

Cable Injection Strategies | ERZ

Based on the outcomes and rate impacts presented to them (summarized in the tables below), in the Enersource rate zone a majority of customers in all rate classes would like to see an increase in investment in cable injection. In fact, the preferred option is consistently the most accelerated level of investment. The proportion of customers who don't know ranges from 26% to 36%.

Q Which of the following cable injection strategies would you prefer?

	Rate Class		
	Residential	Small Business (GS<50kW)	Medium and Large Business (GS>50kW + Large Use)
[OPTION 1] Increase investment in cable injection by $6.4MM over 2 years	36%	33%	43% (19)
[OPTION 2] Increase investment in cable injection by $4.3MM	11%	8%	7% (3)
[OPTION 3] Increase investment in cable injection by $2.1MM	10%	10%	2% (1)
[STATUS QUO] Maintain current level of planned investment in cable injection	18%	13%	18% (8)
Don't know	26%	36%	30% (13)

Option	Increased investment	Cable injected (km)	Outcomes over 5 year period:		
			# neighbourhoods	Outage impact	Impact on Future Costs
OPTION 1	$6.4MM	additional 69.37	6	36 prevented	$60.91MM offset
OPTION 2	$4.3MM	additional 44.65	4	24 prevented	$42.05MM offset
OPTION 3	$2.1MM	additional 22.71	2	12 prevented	$26.78MM offset
Status Quo	none	35.97	n/a	~36 expected	$60.91MM additional

Cumulative Rate Impact 2023/24	Residential	GS<50kW	GS 50-499kW	GS>500kW	Large Use
OPTION 1	$1.08/yr	$3.84/yr	$54.36/yr	$339.24/yr	$1361.88/yr
OPTION 2	$0.72/yr	$3.00/yr	$35.88/yr	$223.44/yr	$900.84/yr
OPTION 3	$0.36/yr	$0.72/yr	$18.36/yr	$114.12/yr	$459.24/yr
Status Quo	none	none	none	none	none

Summary of Customer Preferences

Cable Injection Strategies | PRZ

Similar to Enersource, based on the outcomes and rate impacts presented to them (summarized in the tables below), in the PowerStream rate zone a majority of customers in all rate classes would like to see an increase in investment in cable injection. In fact, the preferred option is consistently the most accelerated level of investment. The proportion of customers who don't know ranges from 23% to 30%.

Q Which of the following cable injection strategies would you prefer?

	Rate Class		
	Residential	Small Business (GS<50kW)	Medium and Large Business (GS>50kW + Large Use)
[OPTION 1] Increase investment in cable injection by $15.3MM over 2 years	33%	34%	31% (11)
[OPTION 2] Increase investment in cable injection by $6.8MM	12%	8%	11% (4)
[OPTION 3] Increase investment in cable injection by $3.6MM	10%	14%	11% (4)
[STATUS QUO] Maintain current level of planned investment in cable injection	21%	14%	23% (8)
Don't know	24%	30%	23% (8)

Option	Increased investment	Cable injected (km)	Outcomes over 5 year period:		
			# neighbourhoods	Outage impact	Impact on Future Costs
OPTION 1	$15.3MM	additional 157.89	10	71 prevented	$129.43MM offset
OPTION 2	$6.8MM	additional 71.55	5	42 prevented	$61.80MM offset
OPTION 3	$3.6MM	additional 37.11	2	15 prevented	$36.48MM offset
Status Quo	none	184.43	n/a	~71 expected	$129.43 additional

Cumulative Rate Impact 2023/24	Residential	GS<50kW	GS 50-4,999kW	Large Use
OPTION 1	$1.80/yr	$3.96/yr	$76.32/yr	$1444.08/yr
OPTION 2	$0.84/yr	$2.64/yr	$34.08/yr	$643.32/yr
OPTION 3	$0.48/yr	$0.48/yr	$17.64/yr	$332.40/yr
Status Quo	none	none	none	none

Summary of Customer Preferences

Cable Replacement Strategies | ERZ

Similar to cable injection, in the Enersource rate zone a majority of customers in all rate classes would like to see an increase in investment in cable replacement, based on the outcome and rate impact information presented to them (summarized in the tables below). Again, the preferred option is consistently the most accelerated level of investment. The proportion of customers who don't know ranges from 25% to 34%.

Q Which of the following cable replacement strategies would you prefer?

	Rate Class		
	Residential	Small Business (GS<50kW)	Medium and Large Business (GS>50kW + Large Use)
[OPTION 1] Increase investment in cable replacement by $11.0MM	33%	31%	32% (14)
[OPTION 2] Increase investment in cable replacement by $8.6MM	12%	10%	5% (2)
[OPTION 3] Increase investment in cable replacement by $5.4MM	11%	11%	14% (6)
[STATUS QUO] Maintain current level of planned investment in replacement	18%	19%	16% (7)
Don't know	25%	29%	34% (15)

Option	Increased investment	Cable replaced (km)	Outcomes over 5 year period:		
			# neighbourhoods	Outage impact	Impact on Future Costs
OPTION 1	$11.0MM	additional 21.21	8	100 prevented	$23.06MM offset
OPTION 2	$8.6MM	additional 14.74	6	80 prevented	$19.43MM offset
OPTION 3	$5.4MM	additional 9.25	3	43 prevented	$15.42MM offset
Status Quo	none	18.4	n/a	~100 expected	$23.06MM additional

Cumulative Rate Impact 2023/24	Residential	GS<50kW	GS 50-499kW	GS>500kW	Large Use
OPTION 1	$2.04/yr	$6.60/yr	$92.94/yr	$577.80/yr	$2320.44/yr
OPTION 2	$1.44/yr	$5.88/yr	$72.36/yr	$450.60/yr	$1815.84/yr
OPTION 3	$0.96/yr	$1.68/yr	$45.60/yr	$283.44/yr	$1140.12/yr
Status Quo	none	none	none	none	none

Summary of Customer Preferences

Cable Replacement Strategies | PRZ

Similar to Enersource, based on the outcomes and rate impacts presented to them (summarized in the tables below), in the PowerStream rate zone a majority of customers in all rate classes would like to see an increase in investment in cable replacement. Again, the preferred option is consistently the most accelerated level of investment. The proportion of customers who don't know ranges from 22% to 33%.

Q Which of the following cable replacement strategies would you prefer?

	Rate Class		
	Residential	Small Business (GS<50kW)	Medium and Large Business (GS>50kW + Large Use)
[OPTION 1] Increase investment in cable replacement by $19.5MM	32%	33%	26% (9)
[OPTION 2] Increase investment in cable replacement by $11.9MM	14%	8%	17% (6)
[OPTION 3] Increase investment in cable replacement by $5.1MM	12%	13%	14% (5)
[STATUS QUO] Maintain current level of planned investment in cable replacement	20%	13%	20% (7)
Don't know	22%	33%	23% (8)

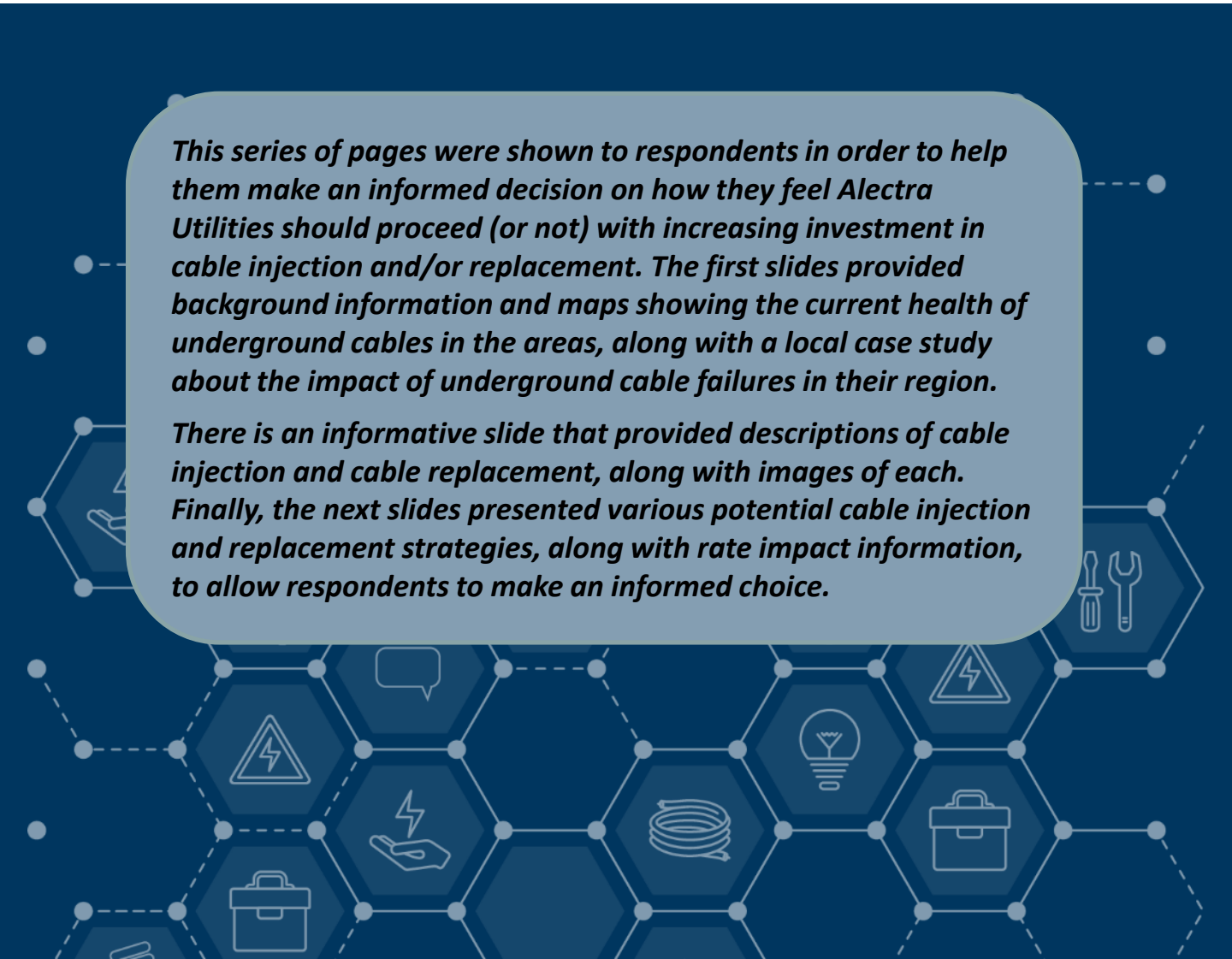
Option	Increased investment	Cable replaced (km)	Outcomes over 5 year period:		
			# neighbourhoods	Outage impact	Impact on Future Costs
OPTION 1	$19.5MM	additional 40.29	10	112 prevented	$38.90MM offset
OPTION 2	$11.9MM	additional 20.43	6	93 prevented	$24.33MM offset
OPTION 3	$5.1MM	additional 8.73	2	33 prevented	$14.34MM offset
Status Quo	none	28.57	n/a	~112 expected	$38.90MM additional

Cumulative Rate Impact 2023/24	Residential	GS<50kW	GS 50-4,999kW	Large Use
OPTION 1	$2.16/yr	$5.04/yr	$97.32/yr	$1839.36/yr
OPTION 2	$1.32/yr	$4.44/yr	$59.16/yr	$1119.48/yr
OPTION 3	$0.48/yr	$0.48/yr	$25.32/yr	$477.48/yr
Status Quo	none	none	none	none

Background Information

This series of pages were shown to respondents in order to help them make an informed decision on how they feel Alectra Utilities should proceed (or not) with increasing investment in cable injection and/or replacement. The first slides provided background information and maps showing the current health of underground cables in the areas, along with a local case study about the impact of underground cable failures in their region.

There is an informative slide that provided descriptions of cable injection and cable replacement, along with images of each. Finally, the next slides presented various potential cable injection and replacement strategies, along with rate impact information, to allow respondents to make an informed choice.



Choices

Underground Cable Renewal

Alectra Utilities has identified a growing reliability issue it feels should not wait until the core planning cycle is complete. This is an issue with Alectra Utilities' underground cables which make up the majority of Alectra Utilities' distribution system.

Over the last five years, customer hours of interruption due to underground cable failures have increased by an average of 11% annually. Alectra Utilities has identified that the failures of direct-buried first generation underground cable is impacting a growing number of communities in Mississauga.

Underground cable has now become the single largest cause of electricity outages due to deterioration from ground moisture and corrosion. Over the past five years, there have been an average of 194 outages every year due to these type of equipment failure. The typical outage results in 375 customers losing power for an hour. Once any specific circuit has its first outage due to cable failure, it is more likely to experience additional outages.

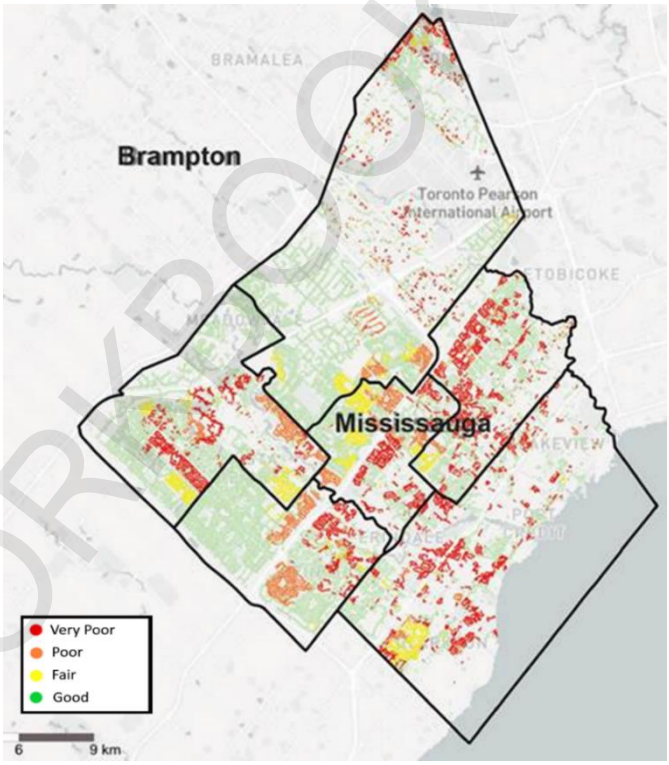


Image: Heat map of cable health condition

Note: Enersource respondents were able to scroll down directly to the information on the following page

Choices

Underground Cable Renewal | ERZ

Impact on Customers

Although Alectra Utilities has been working to renew underground cable on the grid, in some neighbourhoods the rate of underground cable failures has almost doubled since 2018. As a result, customers served by underground cable have been experiencing a greater number of prolonged power outages.

One example of an impacted community in Mississauga is the Sir John's Homestead neighbourhood in Erindale. Over the last three years, customers in the community have experienced nine failures, resulting in a 200% increase in the rate of failures. In addition to the increasing frequency of cable failures in the community, the complexity and costs of emergency repairs required to restore power are increasing, with outages increasing in duration over two and a half hours. Ultimately, the cable deteriorates to the point that emergency repairs are no longer an option resulting in an emergency replacement at a higher cost and inconvenience to residents and businesses in the community.

Choices

Underground Cable Renewal | PRZ

Underground Cable Renewal

Alectra Utilities has identified a growing reliability issue it feels should not wait until the core planning cycle is complete. This is an issue with Alectra Utilities' underground cables which make up the majority of Alectra Utilities' distribution system.

Over the last five years, customer hours of interruption due to underground cable failures have increased by an average of 11% annually. Alectra Utilities has identified that the failures of direct-buried first generation underground cable is impacting a growing number of communities in York and Simcoe regions.

Underground cable has now become the single largest cause of electricity outages due to deterioration from ground moisture and corrosion. Over the past five years, there have been an average of 162 outages every year due to these type of equipment failure. The typical outage results in 307 customers losing power for two hours. Once any specific circuit has its first outage due to cable failure, it is more likely to experience additional outages.

Image: Heat map of cable health condition across former Powerstream service territory (Barrie shown in inset)

Note: Powerstream respondents were able to scroll down directly to the information on the following page

Choices

Underground Cable Renewal | PRZ

Impact on Customers

Although Alectra Utilities has been working to renew underground cable on the grid, in some neighbourhoods the rate of underground cable failures has almost doubled since 2018. As a result, customers served by underground cable have been experiencing a greater number of prolonged power outages.

One example of an impacted community is the Batson Drive neighbourhood in Aurora. Over the last three years, the customers in the community have experienced eleven failures, resulting in an 80% increase in the rate of failures. In addition to the increasing frequency of cable failures in the community, the complexity and costs of emergency repairs required to restore power are increasing. Ultimately, the cable has deteriorated to the point that emergency repairs are no longer an option resulting in an emergency replacement at a higher cost and inconvenience to residents and businesses in the community.

Choices
Underground Cable Renewal

Underground Cable Renewal

There are two things Alectra Utilities can do to reduce outages from underground cables failures and to avoid higher future costs.

1. **Cable Injection**: For cable that is still in fair condition, Alectra Utilities can inject a fluid that re-enforces the weakened insulation. Cable injection can add up to 20 years to the life of a fair condition cable and is six times cheaper than replacement. While cable in fair condition does not have the same level of reliability issues as cable in poor or very poor condition, the injection process also prevents further outages. Once a cable moves from fair to poor condition, the injection process is no longer possible.

Image: Cable injection preparation

2. **Planned Replacement:** For cable in worse condition, Alectra Utilities can avoid the problem of escalating outages on problem lines by replacing the cable once there is clear evidence the cable is beginning the cycle of escalating outages. This is more cost efficient than waiting until the cable experiences multiple outages. It also provides a significant reduction in unplanned outages. The new cable is installed in a protective duct and is expected to reliably perform for at least 45 years. That allows Alectra Utilities to plan any disruption due to repairs to minimise unexpected impacts on customers.

Image: Cable-duct being installed along a residential street

Image: Cable truck parked in residential neighbourhood

The current funding does not permit Alectra Utilities to increase renewal of underground cable to keep pace with the increasing rate of cable failure. Within its current funding, Alectra Utilities cannot address this problem without limiting its ability to achieve other important performance levels.

Note: In the online workbook, options were set up to be rotated to avoid order issues

Pacing Investments in the Underground System

[IF ERZ ONLY:] Under the plan funded by current rates, the number of outages is expected to increase by approximately 19% over the next 5 years. In the following discussion, please keep in mind that the average outage caused by underground cable results in 375 customers losing power for an hour.

[IF PRZ ONLY:] Under the plan funded by current rates, the number of outages is expected to increase by approximately 32% over the next 5 years. In the following discussion, please keep in mind that the average outage caused by underground cable results in 307 customers losing power for two hours.

Choices
Cable Injection Strategies

Injection for Cables in Fair Condition

The goal of injecting cables currently in fair condition is to extend the life of the cables by up to 20 years. Paying more now will provide lower long-term costs to rate payers and prevent further outages.

Q Which of the following cable injection strategies would you prefer?

Option	Cable injected	Expected Outcome
Increase investment in cable injection by $xxMM over 2 years ***Additional Rate Impact*** ***$x.xx*** *per month in 2023 and* ***$x.xx*** *per month in 2024. The cumulative impact from 2023 and 2024 is an additional* ***$x.xx*** *per year*	**Additional xx.xx km**	This investment will allow Alectra Utilities to inject cables in x neighbourhoods. Over a 5 year period this work is expected to prevent xx outages. The $xxMM investment today will offset future costs to customers of approximately $xxMM.
Increase investment in cable injection by $xxMM. ***Additional Rate Impact*** ***$x.xx*** *per month in 2023 and* ***$x.xx*** *per month in 2024. The cumulative impact from 2023 and 2024 is an additional* ***$x.xx*** *per year*	**Additional xx.xx km**	This investment will allow Alectra Utilities to inject cables in x neighbourhoods. Over a 5 year period this work is expected to prevent xx outages. The $xxMM investment today will offset future costs to customers of approximately $xxMM.
Increase investment in cable injection by $xxMM. ***Additional Rate Impact*** ***$x.xx*** *per month in 2023 and* ***$x.xx*** *per month in 2024. The cumulative impact from 2023 and 2024 is an additional* ***$x.xx*** *per year*	**Additional xx.xx km**	This investment will allow Alectra Utilities to inject cables in x neighbourhoods. Over a 5 year period this work is expected to prevent xx outages. The $xxMM investment today will offset future costs to customers of approximately $xxMM.
Maintain current level of planned investment in cable injection ***Within current rates***	**xx km**	Alectra Utilities assumes that without additional investment it would be unable to avoid approximately xx outages. This will result in additional future costs of approximately $xxMM.
Don't know		

Note: In the online workbook, table content differed based on rate zone and rate class (see slides 7 and 8 for details) Order of Injection and Replacement were set up to be randomized to avoid order bias.

Choices
Cable Replacement Strategies

Replacing Underground Cable in Poor or Very Poor Condition

The goal of replacing cable in poor or very poor condition is to avoid unplanned outages. Paying more now would reduce the number of outages likely to occur in the next few years as well as provide some efficiency savings and reduce unplanned disruption to neighbourhoods.

Q Which of the following cable replacement strategies would you prefer?

Option	Cable replaced	Expected Outcome
Increase investment in cable replacement by $xxMM over 2 years ***Additional Rate Impact*** ***$x.xx*** *per month in 2023 and* ***$x.xx*** *per month in 2024. The cumulative impact from 2023 and 2024 is an additional* ***$x.xx*** *per year*	**Additional xx.xx km**	This investment will allow Alectra Utilities to replace cables in x neighbourhoods. Over a 5 year period this work is expected to prevent xx outages. The $xxMM investment today will offset future costs to customers of approximately $xxMM.
Increase investment in cable replacement by $xxMM. ***Additional Rate Impact*** ***$x.xx*** *per month in 2023 and* ***$x.xx*** *per month in 2024. The cumulative impact from 2023 and 2024 is an additional* ***$x.xx*** *per year*	**Additional xx.xx km**	This investment will allow Alectra Utilities to replace cables in x neighbourhoods. Over a 5 year period this work is expected to prevent xx outages. The $xxMM investment today will offset future costs to customers of approximately $xxMM.
Increase investment in cable replacement by $xxMM. ***Additional Rate Impact*** ***$x.xx*** *per month in 2023 and* ***$x.xx*** *per month in 2024. The cumulative impact from 2023 and 2024 is an additional* ***$x.xx*** *per year*	**Additional xx.xx km**	This investment will allow Alectra Utilities to replace cables in x neighbourhoods. Over a 5 year period this work is expected to prevent xx outages. The $xxMM investment today will offset future costs to customers of approximately $xxMM.
Maintain current level of planned investment in cable replacement ***Within current rates***	**xx km**	Alectra Utilities assumes that without additional investment it would be unable to avoid approximately xx outages. This will result in additional future costs of approximately $xxMM.
Don't know		

Note: In the online workbook, table content differed based on rate zone (see slides 9 and 10 for details) Order of Injection and Replacement were set up to be randomized to avoid order bias.

INNOVATIVE RESEARCH GROUP

Workbook Results

Residential Customers

Rates 101

Residential

How Much Can You Expect To Pay Over The Next Few Years?

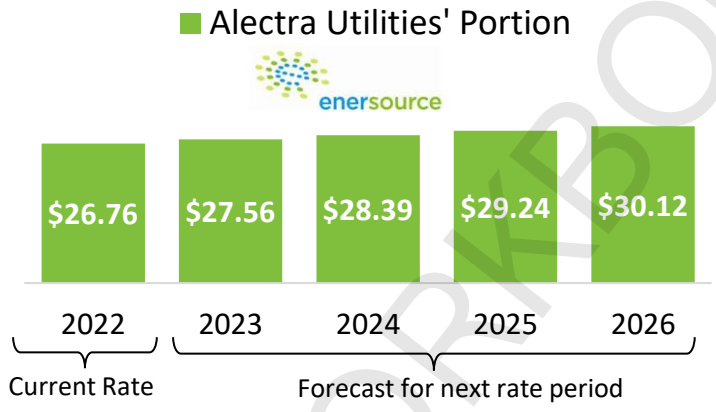
How much can you expect to pay over the next few years?

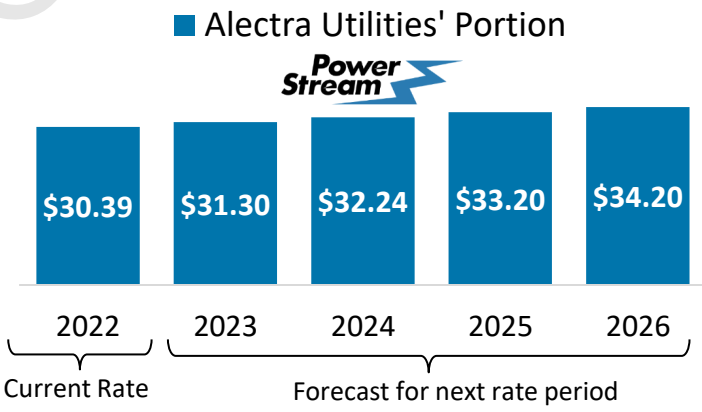
The earlier questions will be used to inform planners as they begin the process of Alectra Utilities' next major planning cycle. That process will impact rates beginning in 2027. Now the workbook will turn to an issue with underground electricity cables that Alectra Utilities feels should not wait until the new planning cycle is complete. If any additional effort is made to deal with this issue, it will require an increase in the rates you pay before 2027.

Before discussing a potential rate increase, it is important to understand the rates increases that have been previously approved. The rates you currently pay to Alectra Utilities were set earlier by the OEB through a public process for each of Alectra Utilities' predecessor firms. Until new rates are set by the OEB in 2027, your future rate increases will be limited by an **OEB-set Price Cap Formula**. The OEB has established a savings target for each of the predecessor firms. Each year Alectra Utilities is permitted to increase rates to reflect inflation minus that savings target. This requires Alectra Utilities to keep cost increases below inflation.

For customers in your area and rate class, the distribution charge for the typical bill is estimated to increase by 3.0% on average, per year, for the next five years.

Estimated Increase in Alectra Utilities' Portion of a Typical Monthly Bill†





[***NOTE***: Respondents were only shown the estimates for their rate zone]

† On November 18, 2021, the OEB approved a Price Cap Adjustment for Alectra Utilities of 3.0% for rate changes effective 2022. This 3.0% increase has been used to forecast the rates for 2023 to 2026. Actual impacts may differ from these estimates based on subsequent Price Cap Adjustments determined by the OEB.

Responding to Evolving Needs

As mentioned earlier, Alectra Utilities has identified a growing problem with underground electricity cables that it feels needs to be addressed now. OEB rules allow the utility to apply for additional rate increases for capital projects or programs that are prudent, needed and not supported by existing rates.

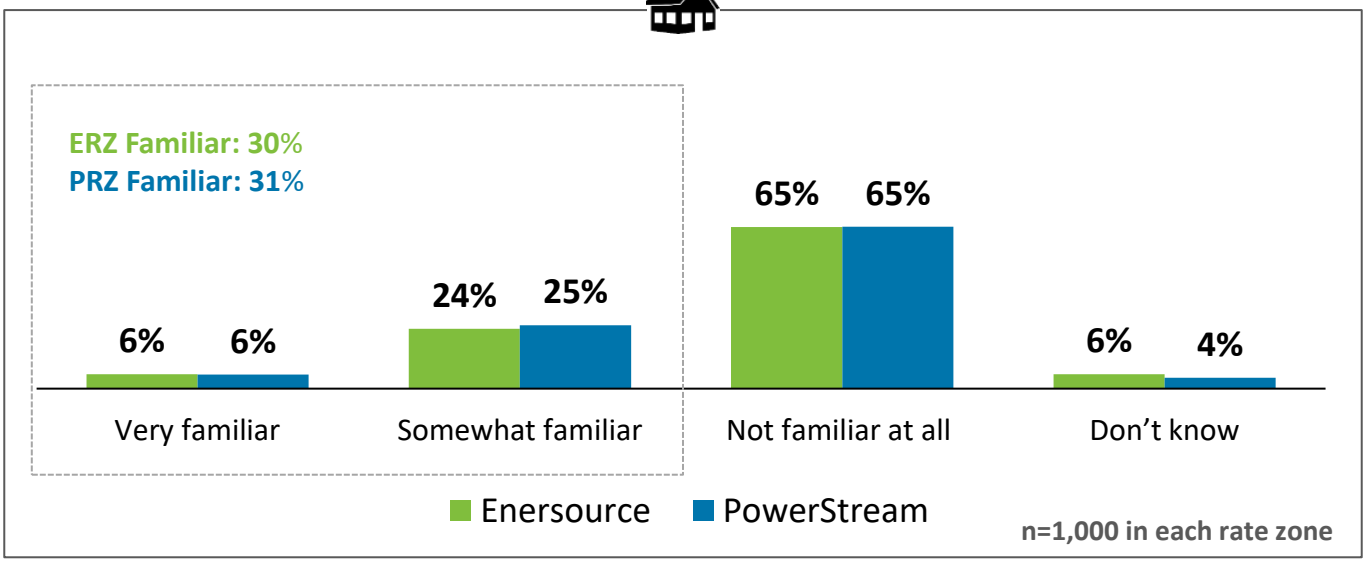
The next questions are about this proposal.

Rates 101

Familiarity With OEB Requirement to Find Savings

Residential

Q Before this survey, how familiar were you with the OEB requirement for Alectra Utilities to find savings every year?



enersource

LEAP Qualification

	Yes	No <$52K	No >$52K
Very familiar	15%	5%	5%
Somewhat familiar	23%	23%	23%
Not familiar at all	49%	67%	68%
Don't know	12%	4%	4%
Familiar (Very + Somewhat)	**38%**	**29%**	**27%**

Power Stream

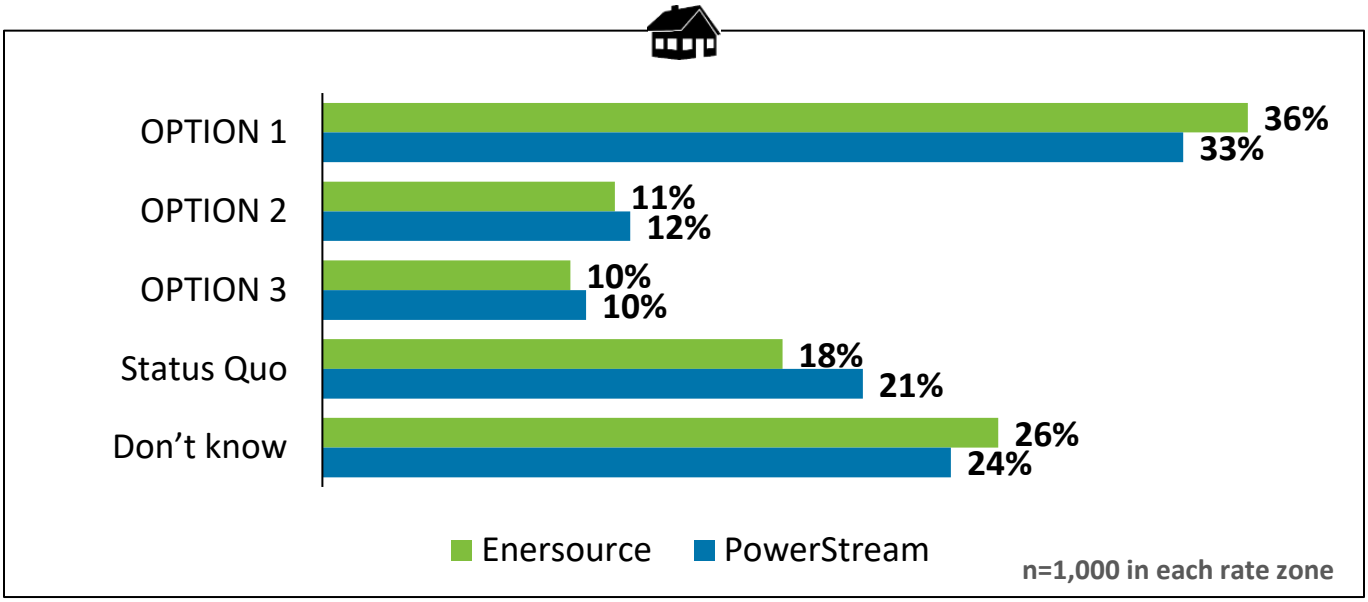
LEAP Qualification

	Yes	No <$52K	No >$52K
Very familiar	7%	10%	4%
Somewhat familiar	24%	32%	24%
Not familiar at all	60%	53%	69%
Don't know	9%	6%	2%
Familiar (Very + Somewhat)	**31%**	**42%**	**29%**

Choices
Cable Injection Strategies

Residential

Q Which of the following cable injection strategies would you prefer?



enersource

	LEAP Qualification		
	Yes	No <$52K	No >$52K
OPTION 1	13%	30%	44%
OPTION 2	14%	11%	12%
OPTION 3	8%	10%	11%
Status quo	20%	17%	15%
Don't know	44%	32%	18%

PowerStream

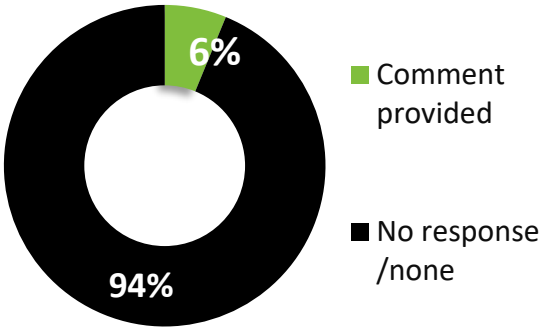
	LEAP Qualification		
	Yes	No <$52K	No >$52K
OPTION 1	24%	25%	39%
OPTION 2	10%	13%	12%
OPTION 3	10%	11%	10%
Status quo	19%	24%	21%
Don't know	38%	28%	19%

Choices

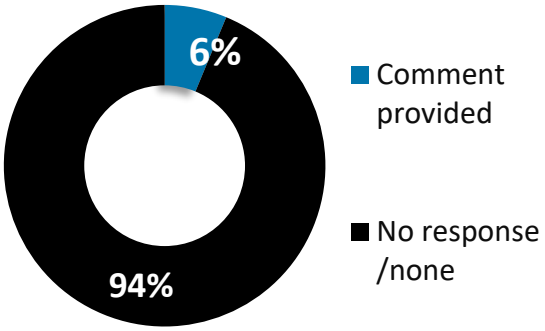
Cable Injection Strategies – Additional Feedback

Residential

After making their choice, respondents were given an opportunity to make any additional comments they may have.



enersource



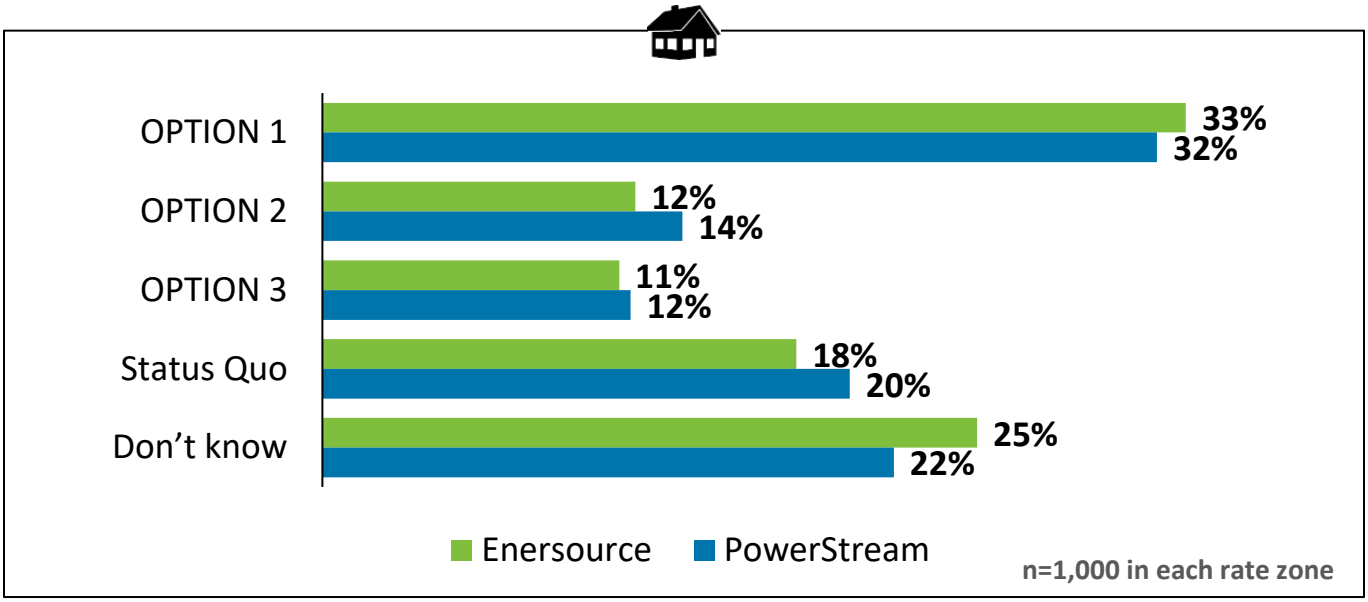
Power Stream

Responses	ERZ	PRZ
Support initiative	2.4%	1.1%
Need more info - rates, funding, progress	1.2%	0.5%
Concern over rate increase	0.9%	1.3%
Find other funding sources	0.5%	1.2%
Rely on experts/laymen aren't qualified to answer	0.4%	0.3%
Focus upgrades on most dire areas first	0.2%	0.3%
Don't like the question	0.1%	0.1%
Safety concern	-	0.2%
Other	0.4%	1.4%
No response/none	93.8%	93.7%

Choices
Cable Replacement Strategies

Residential

Q Which of the following cable replacement strategies would you prefer?



enersource

	LEAP Qualification		
	Yes	No <$52K	No >$52K
OPTION 1	21%	24%	41%
OPTION 2	8%	12%	13%
OPTION 3	12%	13%	12%
Status quo	17%	16%	17%
Don't know	42%	34%	18%

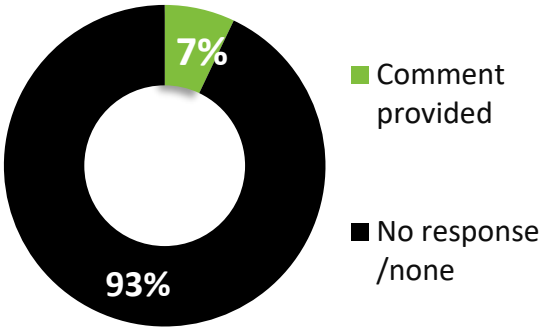
PowerStream

	LEAP Qualification		
	Yes	No <$52K	No >$52K
OPTION 1	21%	24%	38%
OPTION 2	12%	15%	14%
OPTION 3	16%	14%	10%
Status quo	17%	20%	21%
Don't know	34%	27%	17%

Choices

Cable Replacement Strategies – Additional Feedback

After making their choice, respondents were given an opportunity to make any additional comments they may have.



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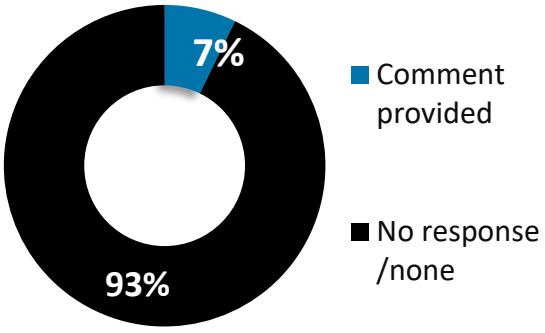

Power Stream

Responses	ERZ	PRZ
Support initiative	2.2%	1.9%
Concern over rate increase	1.5%	1.5%
Safety concern	1.0%	0.5%
Find other funding sources	0.5%	0.4%
Need more info - rates, funding, progress	0.3%	1.1%
Don't like the question	0.3%	-
Focus upgrades on most dire areas first	0.3%	0.2%
Rely on experts/laymen aren't qualified to answer	-	0.3%
Other	0.9%	1.3%
No response/none	92.9%	92.8%

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Workbook Results

Business Customers

Rates 101

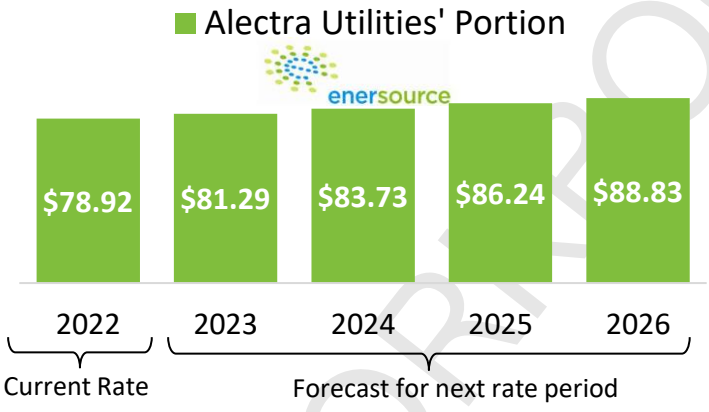
How much can you expect to pay over the next few years?

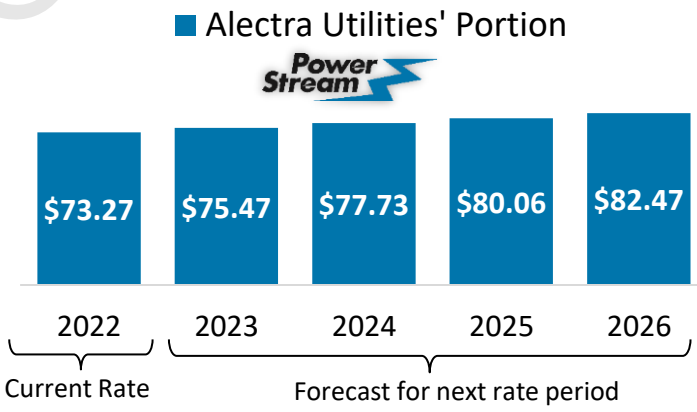
The earlier questions will be used to inform planners as they begin the process of Alectra Utilities' next major planning cycle. That process will impact rates beginning in 2027. Now the workbook will turn to an issue with underground electricity cables that Alectra Utilities feels should not wait until the new planning cycle is complete. If any additional effort is made to deal with this issue, it will require an increase in the rates you pay before 2027.

Before discussing a potential rate increase, it is important to understand the rates increases that have been previously approved. The rates you currently pay to Alectra Utilities were set earlier by the OEB through a public process for each of Alectra Utilities' predecessor firms. Until new rates are set by the OEB in 2027, your future rate increases will be limited by an **OEB-set Price Cap Formula**. The OEB has established a savings target for each of the predecessor firms. Each year Alectra Utilities is permitted to increase rates to reflect inflation minus that savings target. This requires Alectra Utilities to keep cost increases below inflation.

For customers in your area and rate class, the distribution charge for the typical bill is estimated to increase by 3.0% on average, per year, for the next five years.

Estimated Increase in Alectra Utilities' Portion of a Typical Monthly Bill†





[***NOTE***: Respondents were only shown the estimates for their rate class and rate zone. Figures for GS<50 are shown above for illustrative purposes]

† On November 18, 2021, the OEB approved a Price Cap Adjustment for Alectra Utilities of 3.0% for rate changes effective 2022. This 3.0% increase has been used to forecast the rates for 2023 to 2026. Actual impacts may differ from these estimates based on subsequent Price Cap Adjustments determined by the OEB.

Responding to Evolving Needs

As mentioned earlier, Alectra Utilities has identified a growing problem with underground electricity cables that it feels needs to be addressed now. OEB rules allow the utility to apply for additional rate increases for capital projects or programs that are prudent, needed and not supported by existing rates.

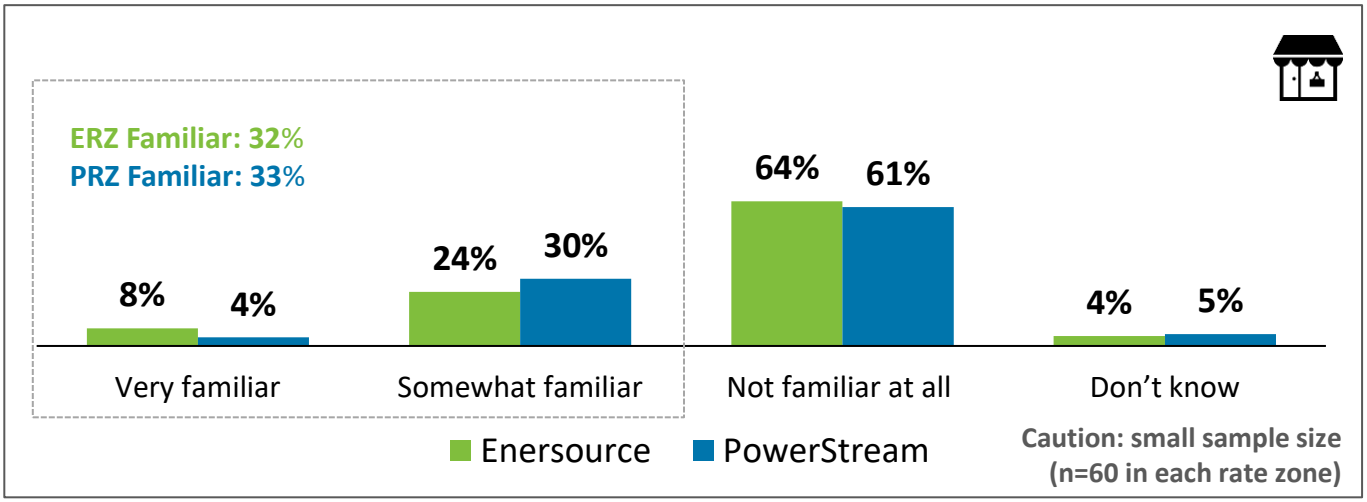
The next questions are about this proposal.

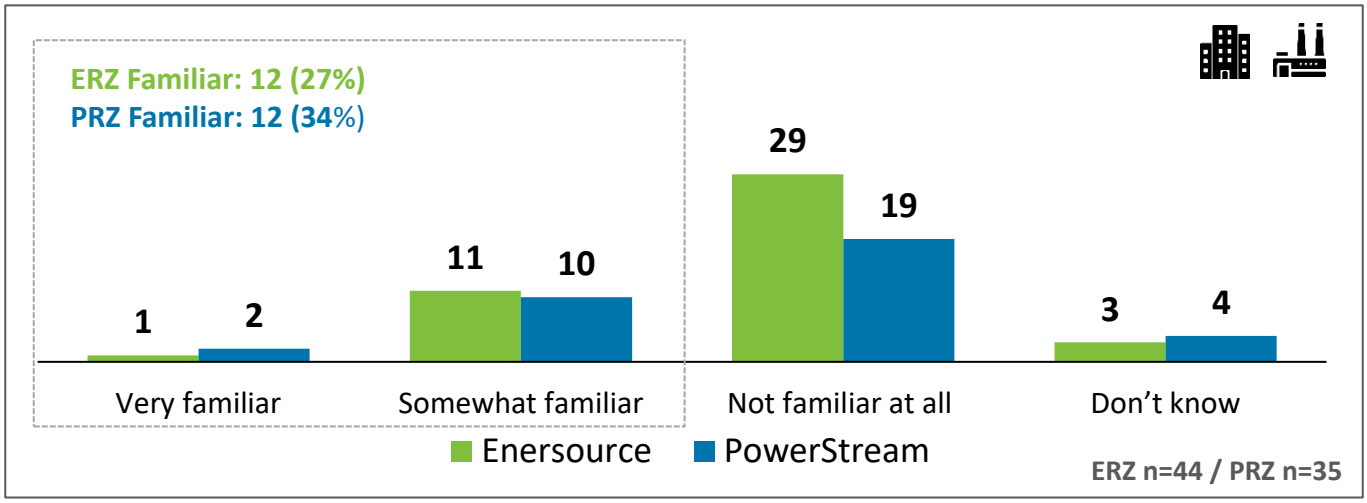
Rates 101

Business

Familiarity With OEB Requirement to Find Savings

Q Before this survey, how familiar were you with the OEB requirement for Alectra Utilities to find savings every year?





LEGEND FOR BUSINESS RATE CLASS REPORTING:

= Small Business

= Medium & Large Business

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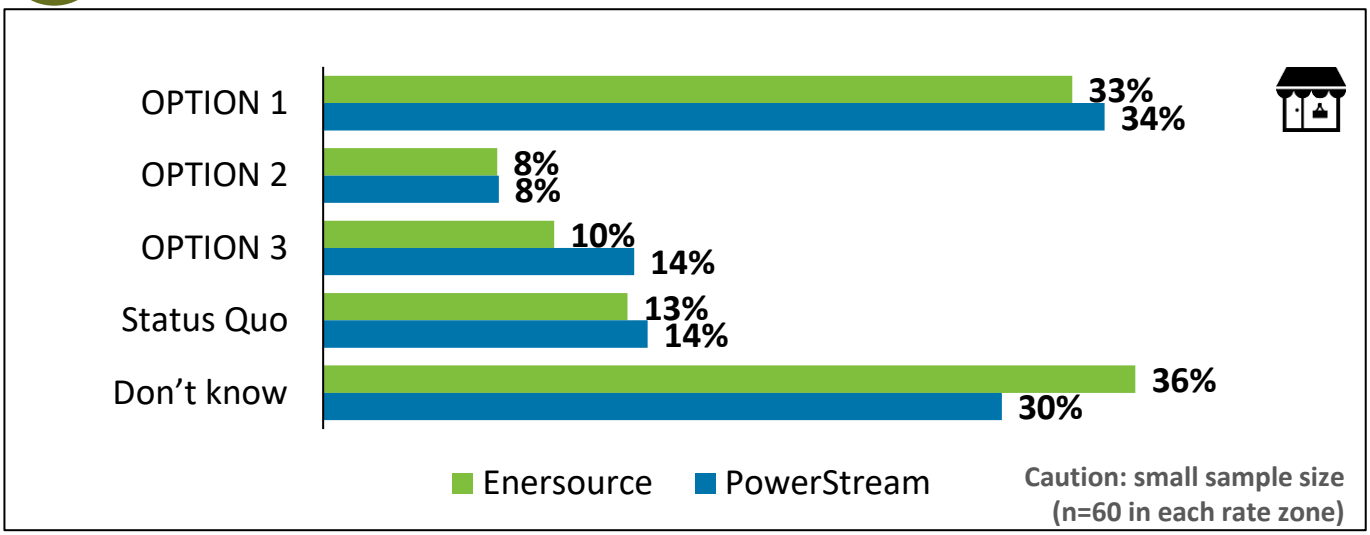
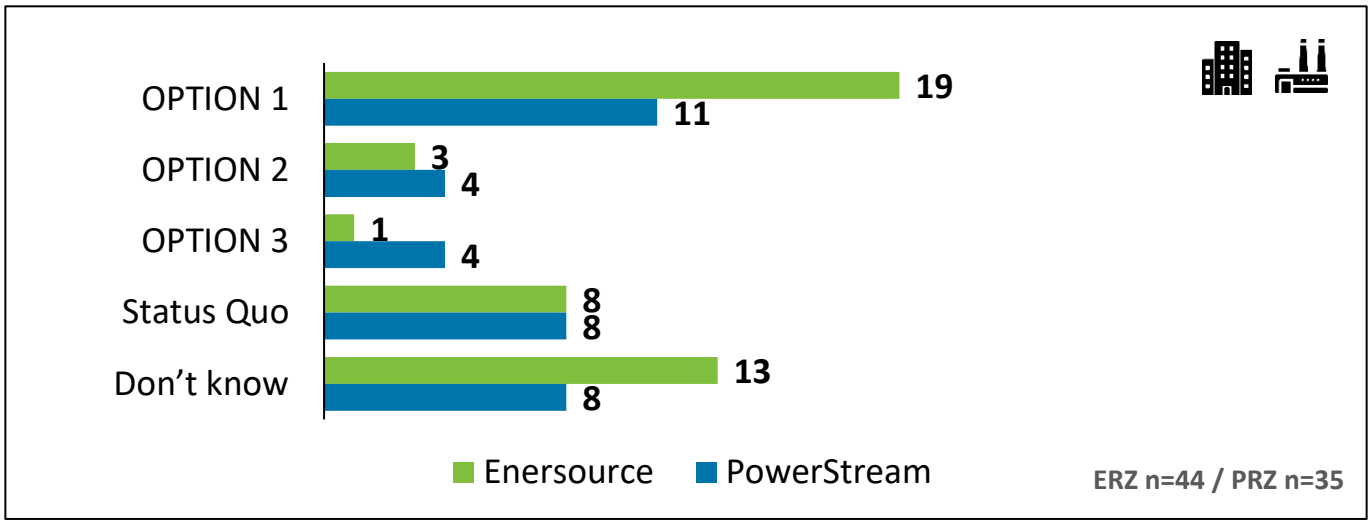
Choices

Cable Injection Strategies

Q Which of the following cable injection strategies would you prefer?



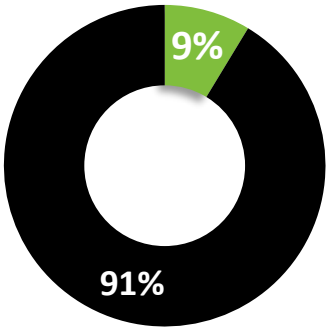


Choices

Cable Injection Strategies – Additional Feedback

Small Business

After making their choice, respondents were given an opportunity to make any additional comments they may have.



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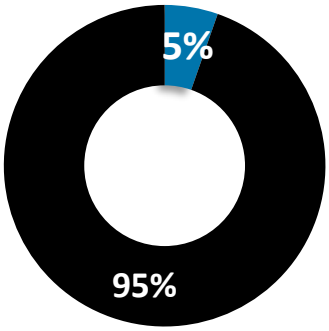


PowerStream

Responses	ERZ	PRZ
Support initiative	3.1%	1.9%
Concern over rate increase	1.4%	0.7%
Rely on experts/laymen aren't qualified to answer	1.4%	-
Focus upgrades on most dire areas first	1.4%	0.7%
Safety concern	-	0.6%
Other	1.4%	1.4%
No response	91.3%	94.6%

Caution: small sample size (n=60 in each rate zone)

Choices

Medium & Large Business

Cable Injection Strategies – Additional Feedback

After making their choice, respondents were given an opportunity to make any additional comments they may have.

"Can you provide more information on the gel/ fluid being injected? Is it safe for the environment and the community? Without knowing this, we won't know how much is would cost the community to clean up/ repair any potential damage/ toxic waste in the future." [ERZ]

"Alectra should use it's $75M of net income from 2020 to pay for these expenses. Rates should not increase as a result of this work, especially for those that don't work/live in the affected neighbourhoods. This is long term maintenance which should be budgeted for over long term periods." [PRZ]

"Gradual increase is more manageable." [PRZ]

"Read my previous comments." (Why customers should carry any additional costs? Costs are already included in our bills, albeit hidden, and normal definition of it is: 'repair and maintenance'.) [PRZ]

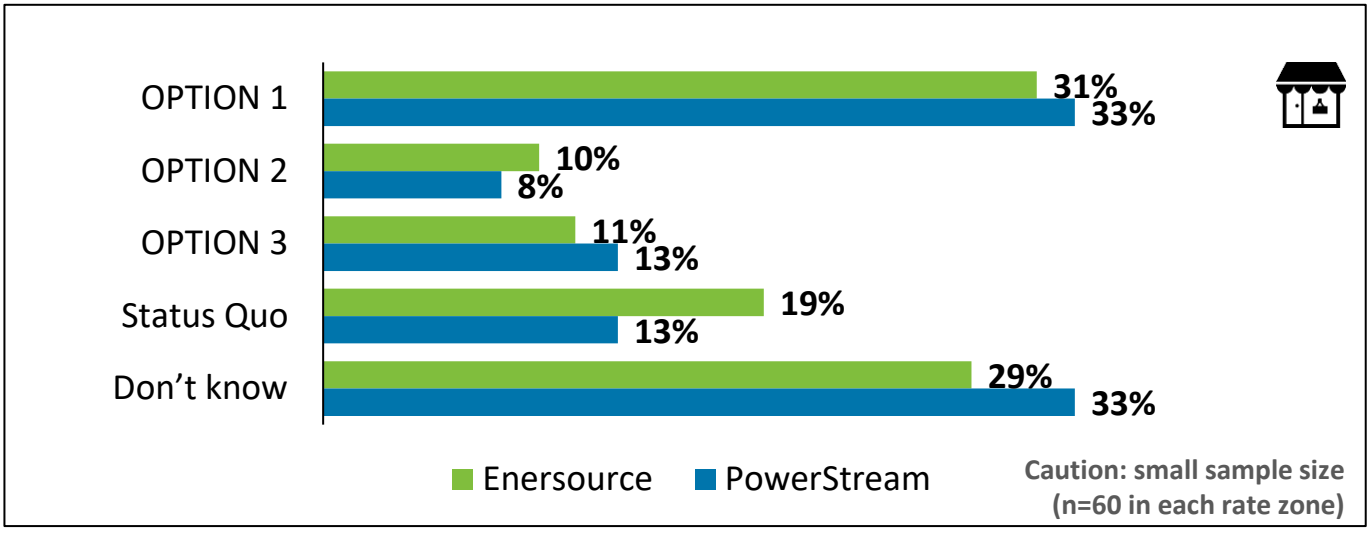
"Again, complete ASAP." [PRZ]

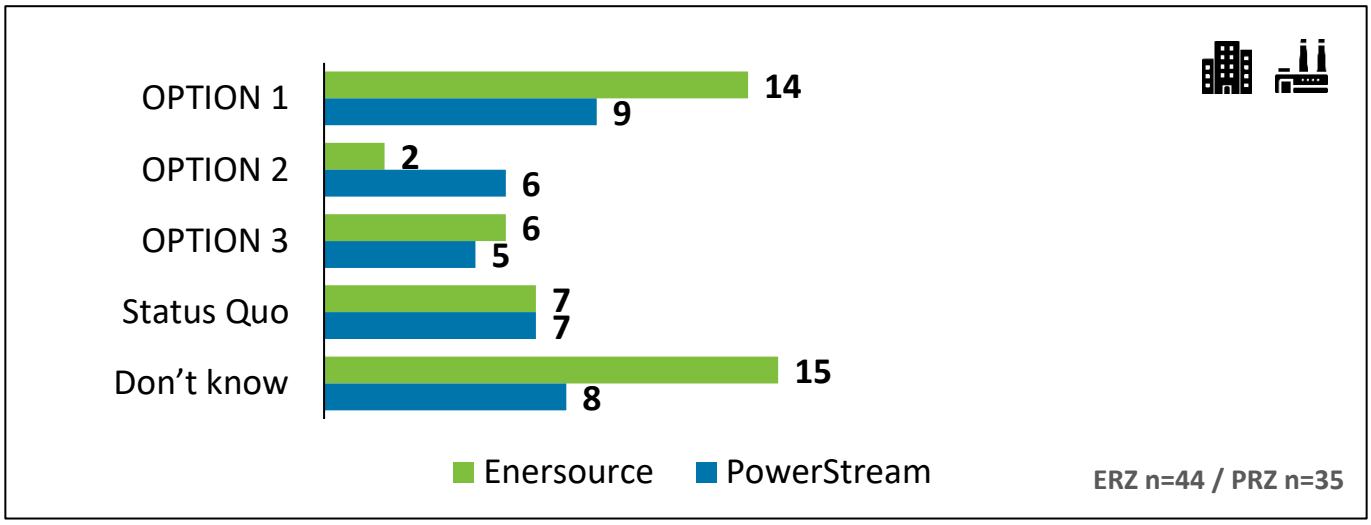
"Prefer proper replacement." [PRZ]

Choices

Cable Replacement Strategies | ERZ

Q Which of the following cable replacement strategies would you prefer?



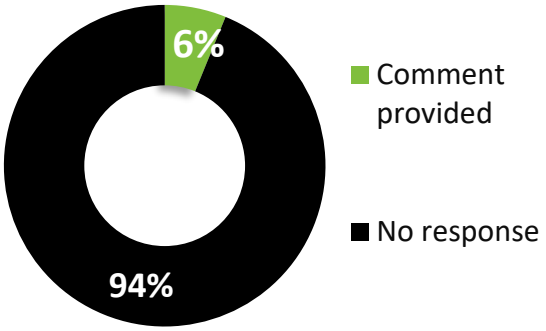


Choices

Cable Replacement Strategies – Additional Feedback

Small Business

After making their choice, respondents were given an opportunity to make any additional comments they may have.



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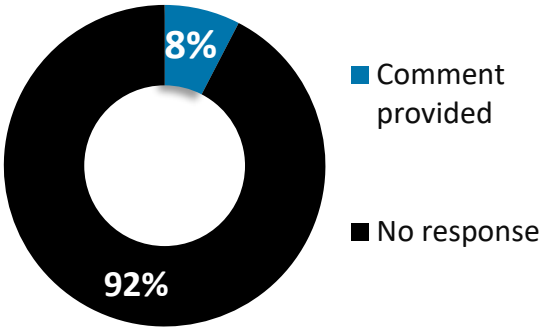

PowerStream

Responses	ERZ	PRZ
Need more info - rates, funding, progress	3.0%	-
Find other funding sources	3.2%	0.7%
Support initiative	-	2.7%
Focus upgrades on most dire areas first	-	1.4%
Concern over rate increase	-	1.3%
Safety concern	-	0.7%
Other	-	0.7%
No response	93.8%	92.4%

Caution: small sample size (n=60 in each rate zone)

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Choices

Medium & Large Business

Cable Replacement Strategies – Additional Feedback

After making their choice, respondents were given an opportunity to make any additional comments they may have.

"See previous feedback" (Alectra should use it's $75M of net income from 2020 to pay for these expenses. Rates should not increase as a result of this work, especially for those that don't work/live in the affected neighbourhoods. This is long term maintenance which should be budgeted for over long term periods.) [PRZ]

"Why customers should carry any additional costs? Costs are already included in our bills, albeit hidden, and normal definition of it is: 'repair and maintenance'." [PRZ]

"This work should be completed ASAP." [PRZ]

"Go out for competitive pricing - lock in the cable future cost." [PRZ]

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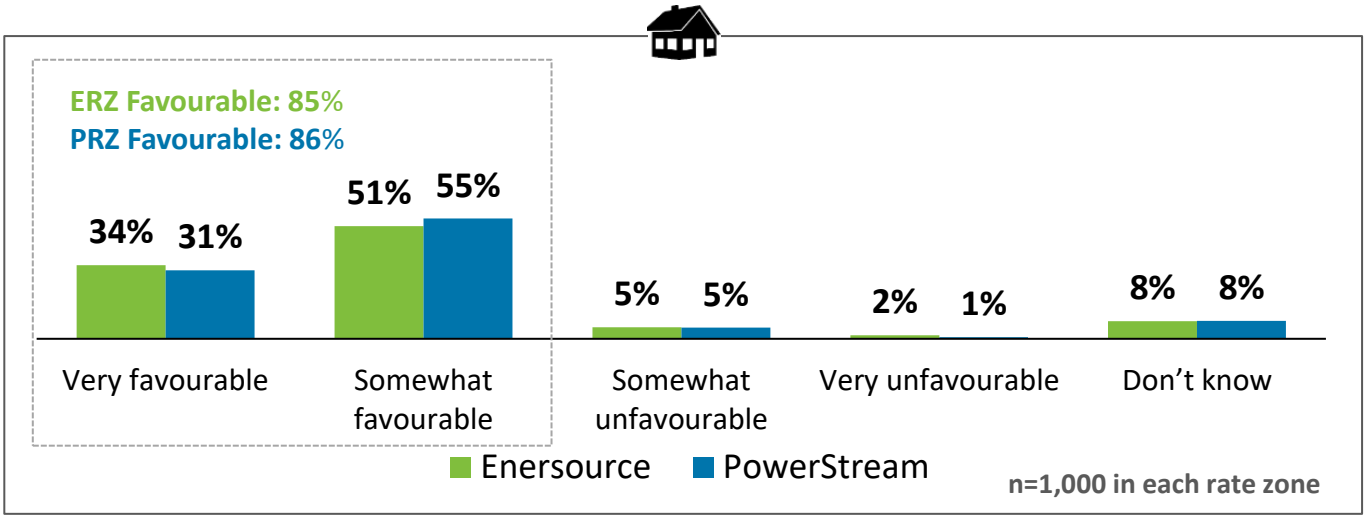
Workbook Diagnostics

Workbook Diagnostics

Workbook Impression

Residential

Q Overall, do you have a favourable or unfavourable impression of the customer engagement you just completed?



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	LEAP Qualification		
	Yes	No <$52K	No >$52K
Very favourable	30%	31%	38%
Somewhat favourable	53%	54%	51%
Somewhat unfavourable	4%	6%	4%
Very unfavourable	3%	1%	1%
Don't know	10%	8%	6%
Favourable (Very + Somewhat)	**83%**	**85%**	**89%**
Unfavourable (Very + Somewhat)	**7%**	**7%**	**5%**

PowerStream

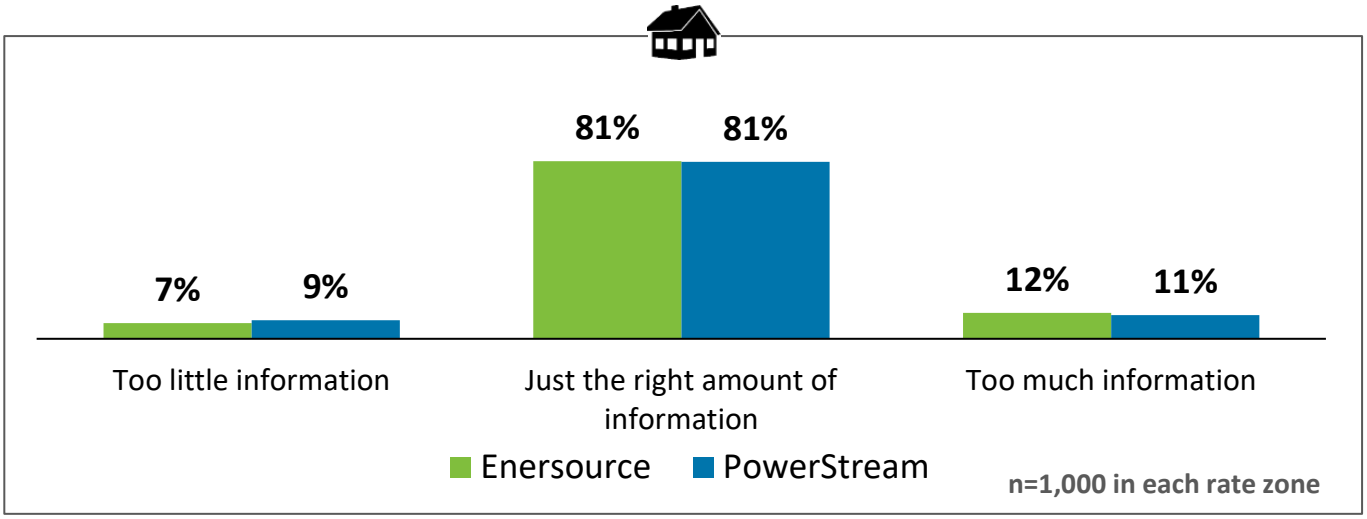
	LEAP Qualification		
	Yes	No <$52K	No >$52K
Very favourable	29%	28%	36%
Somewhat favourable	50%	57%	55%
Somewhat unfavourable	5%	7%	4%
Very unfavourable	1%	1%	0%
Don't know	16%	8%	5%
Favourable (Very + Somewhat)	**78%**	**85%**	**91%**
Unfavourable (Very + Somewhat)	**6%**	**8%**	**4%**

Workbook Diagnostics

Amount Of Information

Residential

Q In this customer engagement, do you feel that Alectra Utilities provided too much information, not enough, or just the right amount?



enersource

	LEAP Qualification		
	Yes	No <$52K	No >$52K
Too little information	12%	8%	6%
Just the right amount of information	74%	78%	83%
Too much information	14%	14%	11%

Power Stream

	LEAP Qualification		
	Yes	No <$52K	No >$52K
Too little information	17%	10%	6%
Just the right amount of information	71%	79%	83%
Too much information	12%	11%	10%

Workbook Diagnostics

Content Missing From Engagement

Residential

Q Was there any content missing that you would have liked to have seen included in this customer engagement? (OPEN)

Responses	ERZ	PRZ
Comments on format/content	1.9%	1.4%
Lower rates	1.7%	1.6%
Focus on green/renewable energy	1.2%	1.1%
More info on Alectra/profit info	1.2%	1.1%
More info about rate increases	0.9%	1.1%
Specific neighborhood breakdowns	0.6%	0.2%
Info on infrastructure updates	0.5%	1.2%
More information/interest about EVs	0.3%	0.4%
Improve billing options/more info on bill	0.3%	0.7%
Better website/online tools	0.3%	0.2%
Improve customer service/point of contact	0.2%	0.3%
Outage information	0.1%	0.2%
Other	1.4%	1.0%
Don't know	0.1%	0.3%
None	89.2%	89.4%

SAMPLE OF VERBATIM COMMENTS:

"I would like a copy of this presentation to refer back on."

"Too much unnecessary info."

"Provide everything in a pdf so I can read it in detail later. Scanning through is not the same as reading it on my own time."

"I thought the graphics and extra information were very helpful!"

"A bit obvious that this survey was a vehicle to tell customers about Alectra. Too much about Alectra and not enough about our customers."

"Video messages can be much more effective than pictures and graphs. A short 1 minute video message will go a long way."

Workbook Diagnostics

Outstanding Questions

Residential

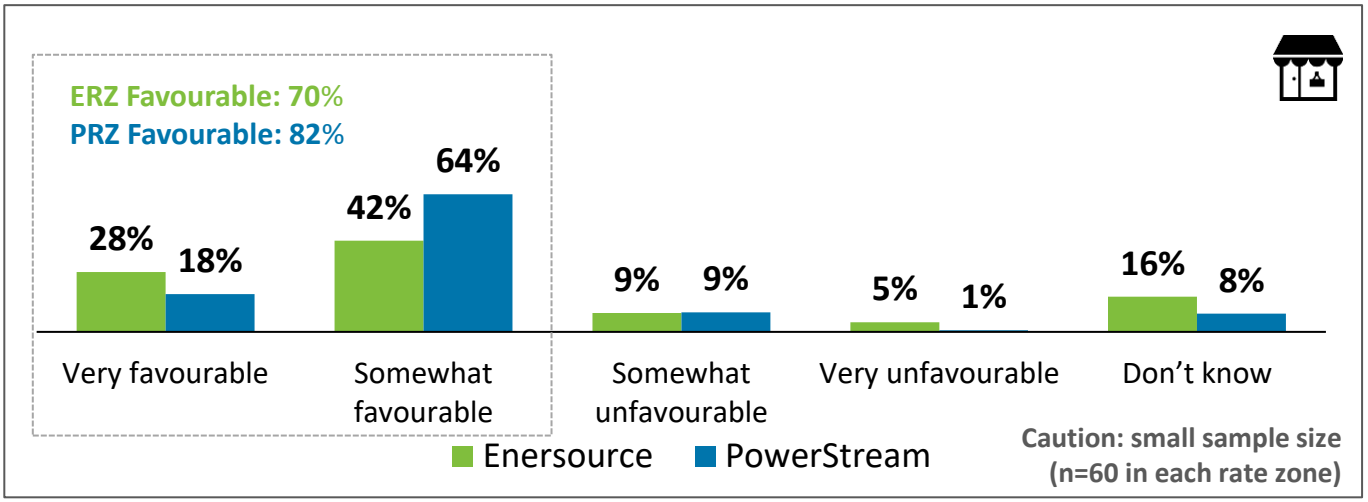
Q Is there anything that you would still like answered?

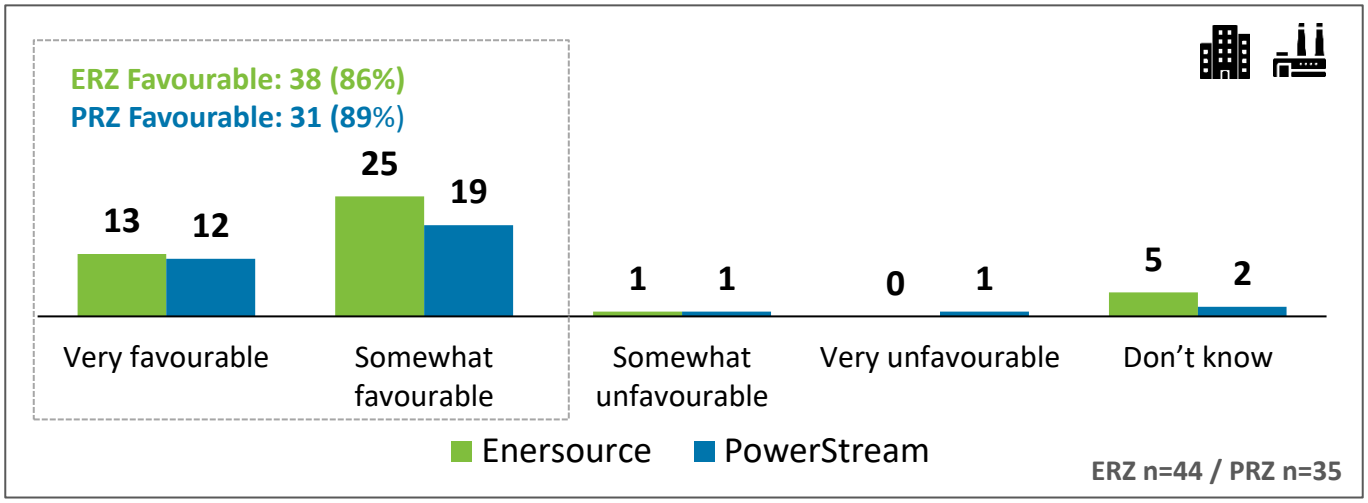
Responses	ERZ	PRZ
Lower rates/costs	2.1%	2.3%
More information on survey and results	1.1%	0.3%
Green/renewable energy tech	1.0%	0.8%
Update infrastructure	0.4%	0.7%
Improve phone services	0.3%	-
Alectra's approach towards EVs	0.2%	0.3%
Improve billing/breakdown info on bill	0.2%	0.7%
Change/update time-of-use	0.2%	0.5%
Info on Alectra/profit info	0.1%	0.1%
More/better outage info	-	0.1%
Improve customer service	-	0.1%
Improve online tools	-	0.1%
Other	1.2%	0.9%
Don't know	0.1%	0.3%
None	93.0%	93.0%

Workbook Diagnostics

Workbook Impression

Q Overall, do you have a favourable or unfavourable impression of the customer engagement you just completed?

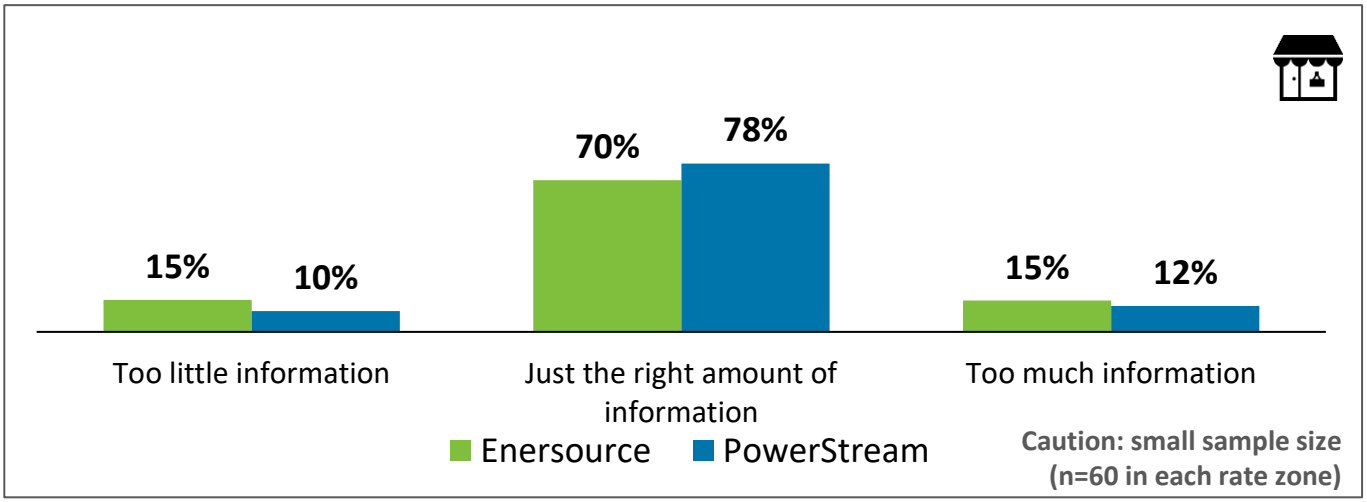


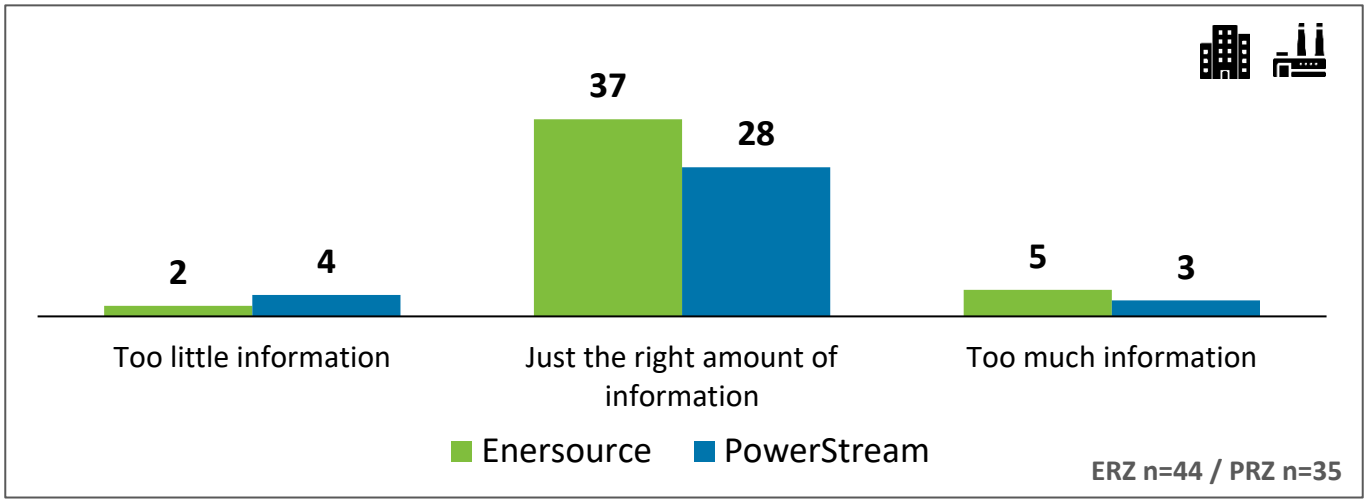


Workbook Diagnostics

Amount Of Information

Q In this customer engagement, do you feel that Alectra Utilities provided too much information, not enough, or just the right amount?





Workbook Diagnostics

Content Missing From Engagement

Business

Q Was there any content missing that you would have liked to have seen included in this customer engagement? (OPEN)

Responses	ERZ	PRZ
More info about rate increases	3.1%	0.6%
Specific neighborhood breakdowns	-	1.9%
More information/interest about EVs	1.6%	-
Comments on format/content	-	1.4%
More info on Alectra/profit info	-	1.3%
Better website/online tools	-	0.7%
Improve billing options/more info on bill	-	0.6%
Other	1.4%	3.6%
Don't know	1.7%	0.6%
None	92.3%	89.3%

Caution: small sample size (n=60 in each rate zone)

"The number of people employed by Alectra and how Alectra rates compare to other provincial utilities." [ERZ]

"Common outage map." [ERZ]

"Some of the stuff irrelevant." [ERZ]

"The purpose of this survey is to justify a rate increase. We are already burdened with huge power bills." [PRZ]

"More questions focusing on customer service." [PRZ]

"A map of planned cable replacement that would show (interactive) the impact of the additional investment chosen would be helpful." [PRZ]

"Breakers are mentioned, substations are mentioned. It would be helpful if this was Breaker xx feeding your mill Substation xx feeding your mill power line xx operated by Ontario hydro between Timmins and Mississauga...' [PRZ]

"Better understanding and description of the Global Adjustment costs and reasons." [PRZ]

"A breakdown of Alectra costs would help assess and budget - Alectra should be able to reduce their budget to cover some of the emergency budget costs they are now facing." [PRZ]

"What kind of cost savings initiatives is Alectra Utilities implementing to help keep costs in check for rate payers?" [PRZ]

Workbook Diagnostics

Outstanding Questions

Q Is there anything that you would still like answered?

Responses	ERZ	PRZ
More information on survey and results	1.6%	1.9%
Update infrastructure	-	1.9%
Lower rates/costs	-	1.3%
Green/renewable energy tech	-	0.7%
Change/update time-of-use	-	0.7%
Info on Alectra/profit info	-	0.6%
Other	1.4%	1.9%
Don't know	1.7%	0.7%
None	95.4%	90.2%

Caution: small sample size (n=60 in each rate zone)

"Comparison of hydro rates to Quebec and New York." [ERZ]

"Still very interested in knowing more about cable injection. What type of gel/fluid is it? Is there any potential of leaking? is it hazardous? Where is it sourced from?" [ERZ]

"The account manager and specialist help a lot. Thanks." [ERZ]

"Better understanding and description of the Global Adjustment costs and reasons." [PRZ]

"How will future expansion costs be dealt with to meet with the future electrification of vehicles and heating." [PRZ]

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APPENDIX:

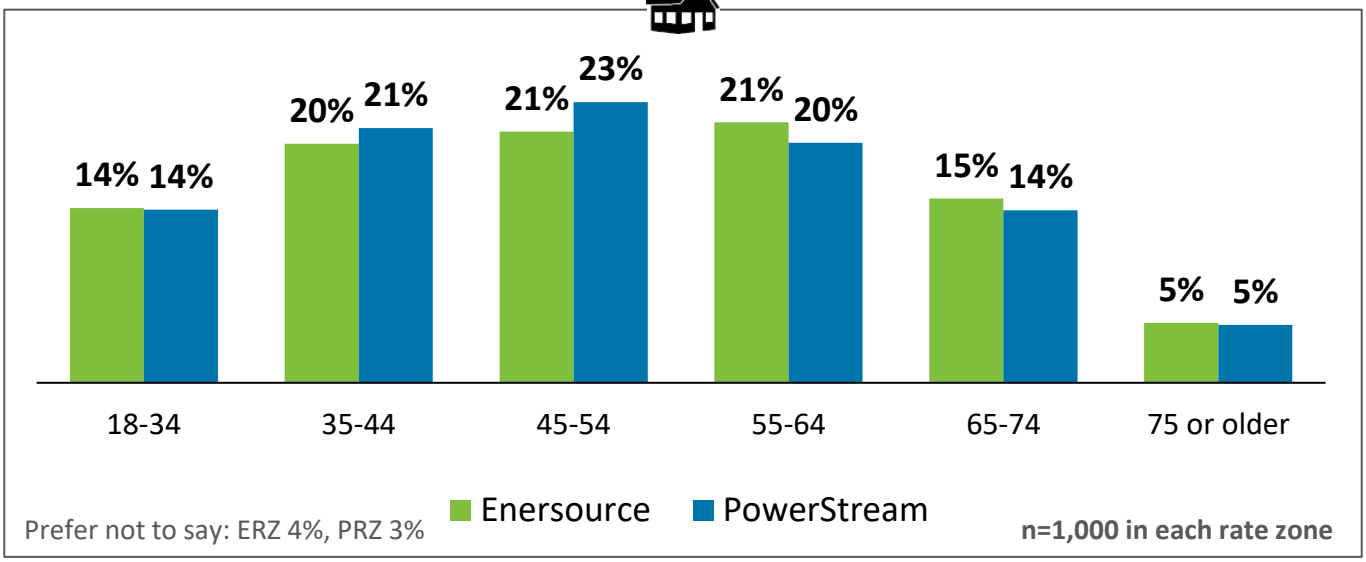
Respondent Profiles & Environmental Controls

Demographic Breakdown

Age and Gender

Residential

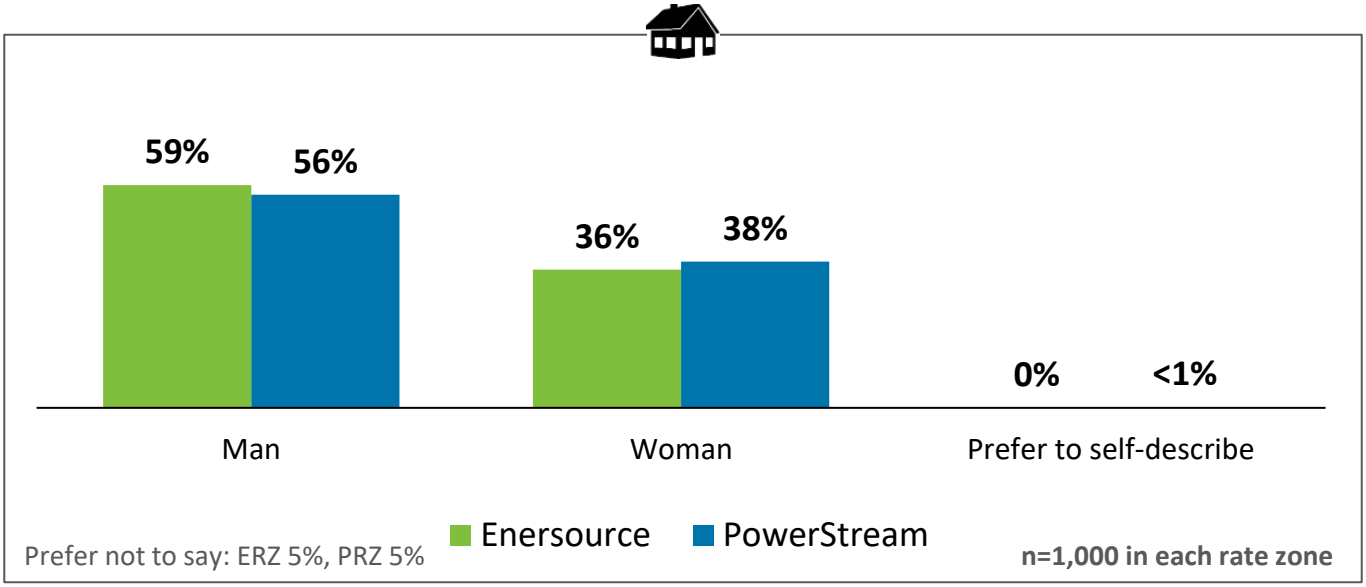
Q Age



Prefer not to say: ERZ 4%, PRZ 3%

n=1,000 in each rate zone

Q Gender



Prefer not to say: ERZ 5%, PRZ 5%

n=1,000 in each rate zone

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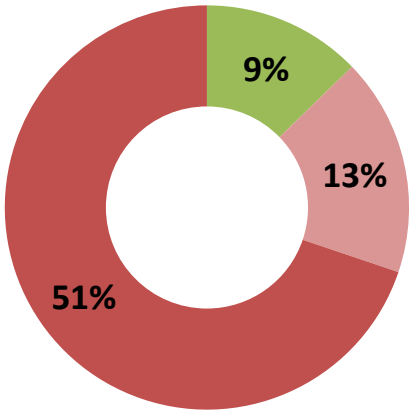
Demographic Breakdown
LEAP Qualification

Residential

Q LEAP Eligibility Criteria & Qualification | ERZ

Household after tax income ($)	Household Size							
	1	2	3	4	5	6	7+	Prefer not to say
Less than $28,000	15%	5%	3%	3%	3%	7%	7%	2%
$28,000 to <$39,000	8%	6%	7%	6%	7%	-	11%	-
$39,000 to <$48,000	8%	5%	5%	5%	4%	11%	-	5%
$48,000 to <$52,000	7%	6%	6%	6%	6%	7%	9%	-
$52,000 or more	41%	56%	54%	54%	48%	56%	62%	2%
Prefer not to say	20%	22%	26%	26%	32%	20%	12%	90%

Note: LEAP Eligibility Criteria table totals 100%



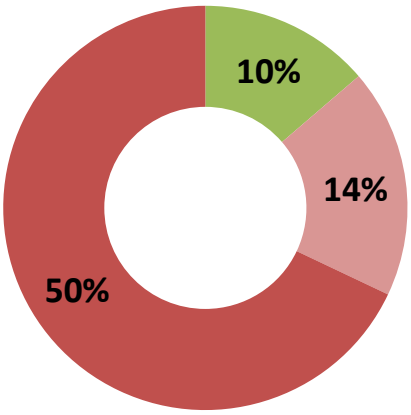
- LEAP Qualified
- Income <$52k, not Leap Qualified
- Income>$52k, not LEAP Qualified

"Prefer not to say" (27%) not shown.

Q LEAP Eligibility Criteria & Qualification | PRZ

Household after tax income ($)	Household Size							
	1	2	3	4	5	6	7+	Prefer not to say
Less than $28,000	20%	6%	5%	3%	4%	3%	16%	-
$28,000 to <$39,000	9%	5%	6%	7%	3%	3%	18%	-
$39,000 to <$48,000	9%	7%	6%	6%	5%	-	11%	-
$48,000 to <$52,000	6%	8%	5%	5%	6%	6%	6%	-
$52,000 or more	32%	50%	52%	56%	63%	59%	38%	12%
Prefer not to say	24%	24%	27%	22%	18%	29%	12%	88%

Note: LEAP Eligibility Criteria table totals 100%



- LEAP Qualified
- Income <$52k, not Leap Qualified
- Income>$52k, not LEAP Qualified

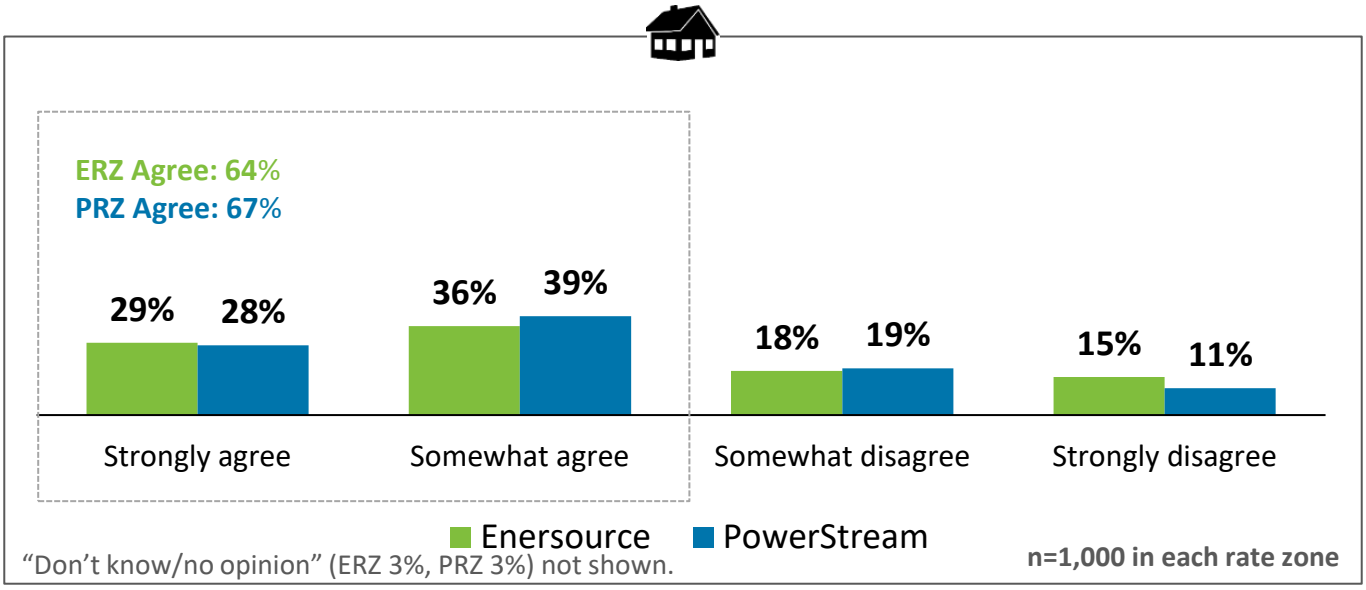
"Prefer not to say" (26%) not shown.

n=1,000 in each rate zone

Environmental Controls

Now we would like to shift the focus, and ask you some general questions about the electricity system in Ontario. To what extent do you agree or disagree with the following statements?

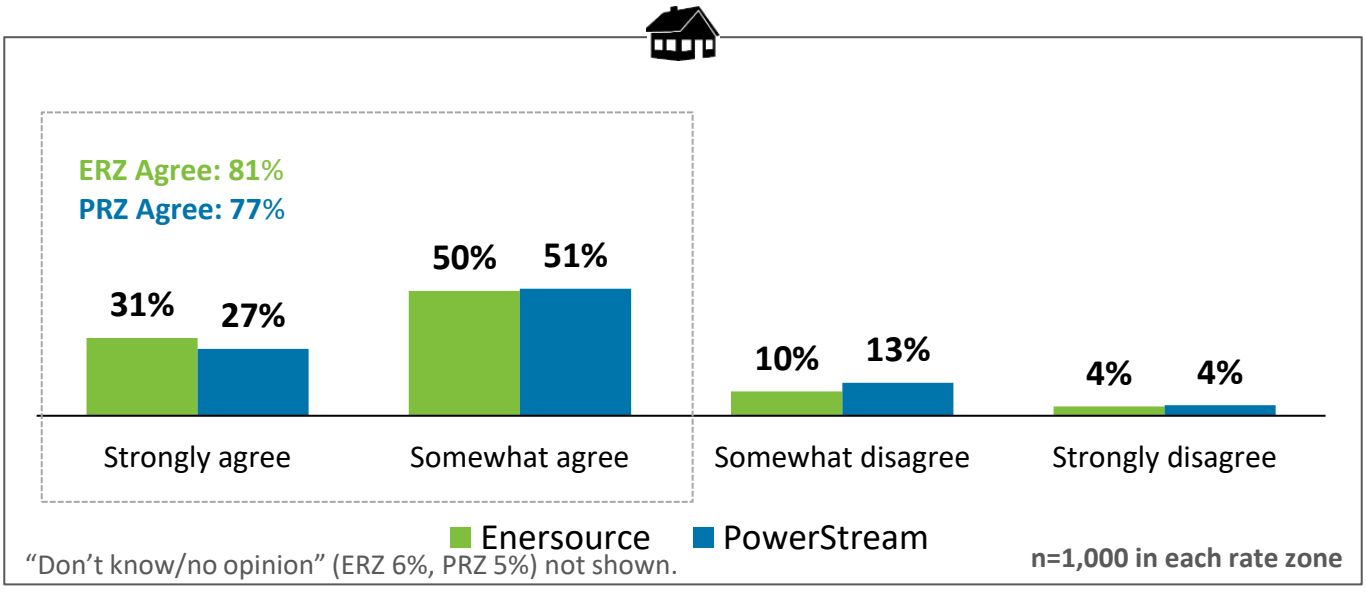
Q The cost of my electricity bill has a major impact on my finances and requires I do without some other important priorities.



"Don't know/no opinion" (ERZ 3%, PRZ 3%) not shown.

n=1,000 in each rate zone

Q Customers are well served by the electricity system in Ontario.

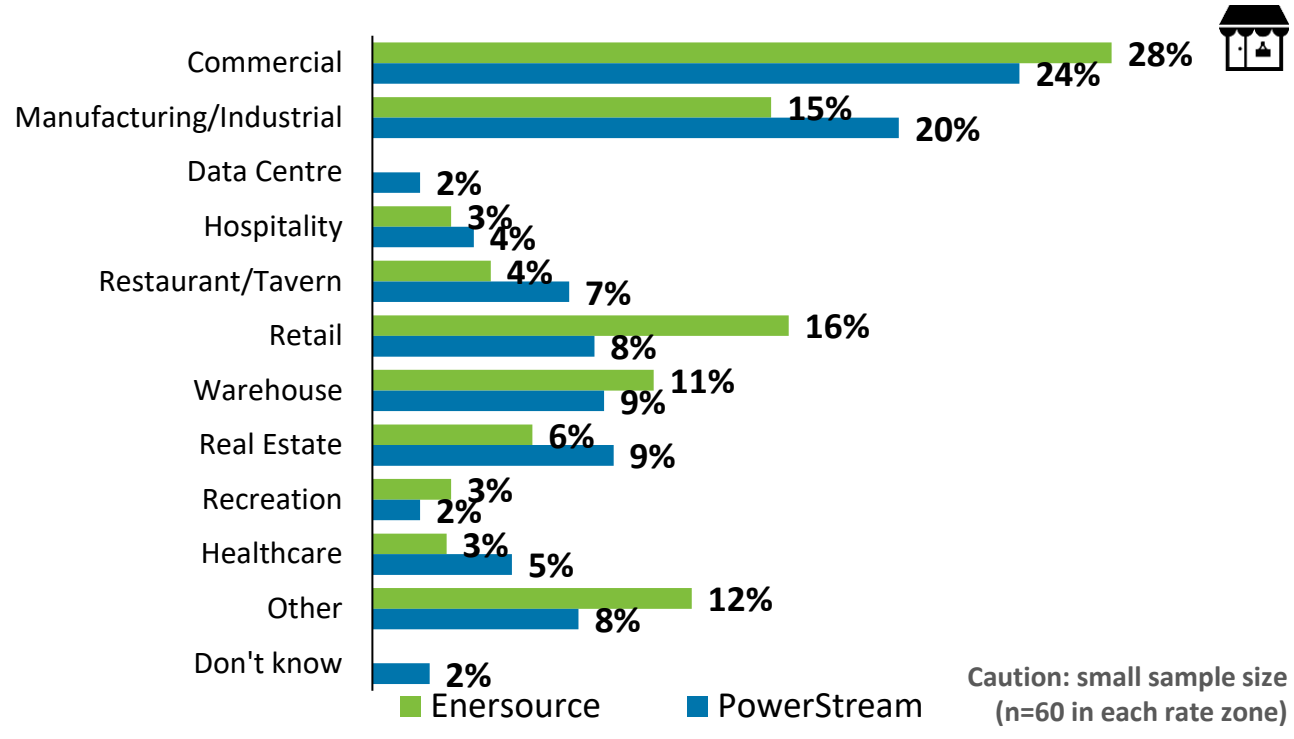


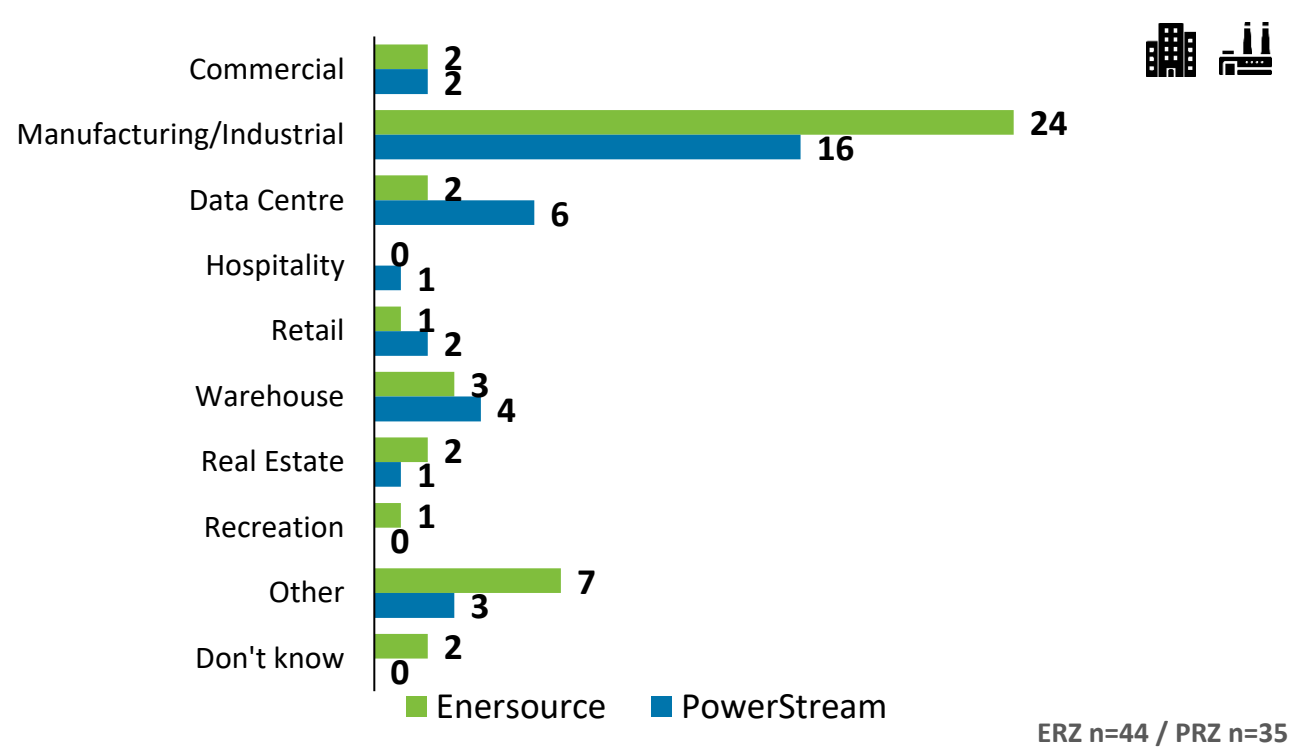
"Don't know/no opinion" (ERZ 6%, PRZ 5%) not shown.

n=1,000 in each rate zone

Firmographics
Employees

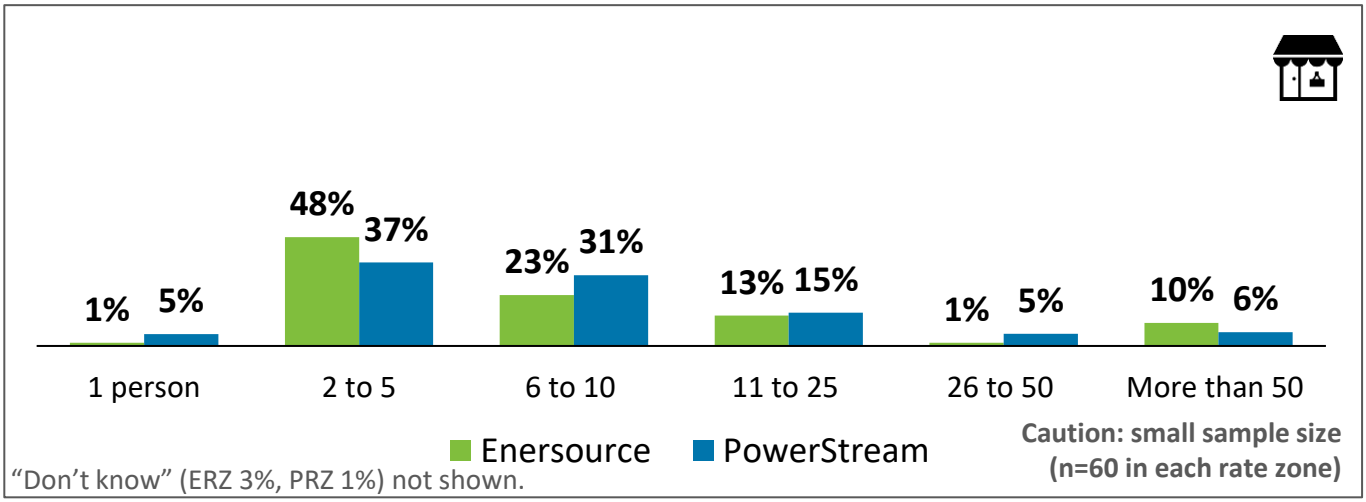
Q Which of the following best describes the sector in which your business operates?





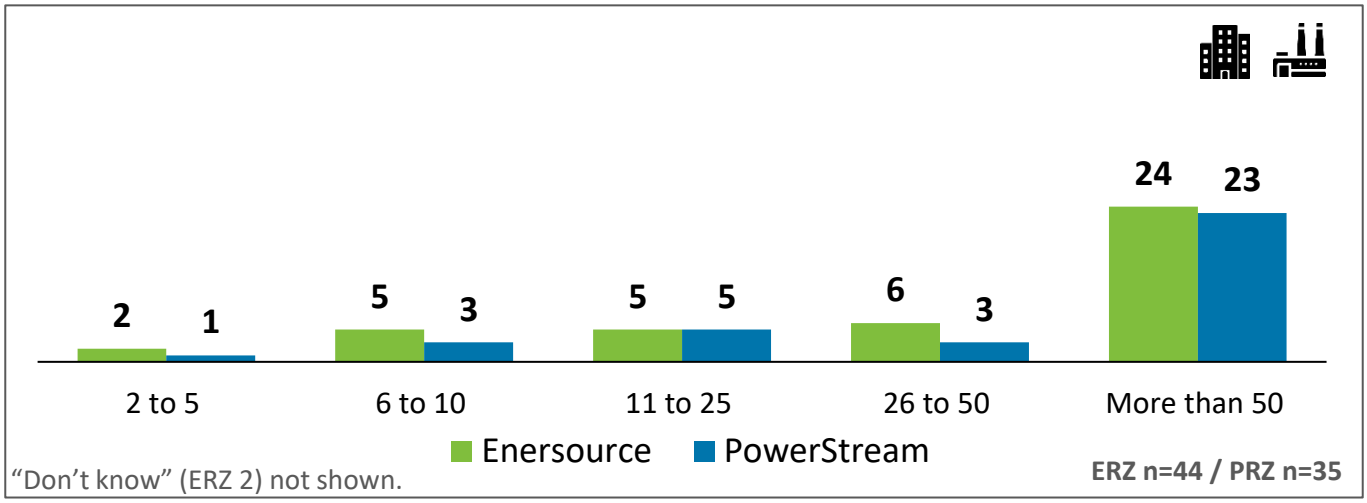
Firmographics
Employees

Q Including yourself, how many people work at your organization?



Caution: small sample size (n=60 in each rate zone)

"Don't know" (ERZ 3%, PRZ 1%) not shown.

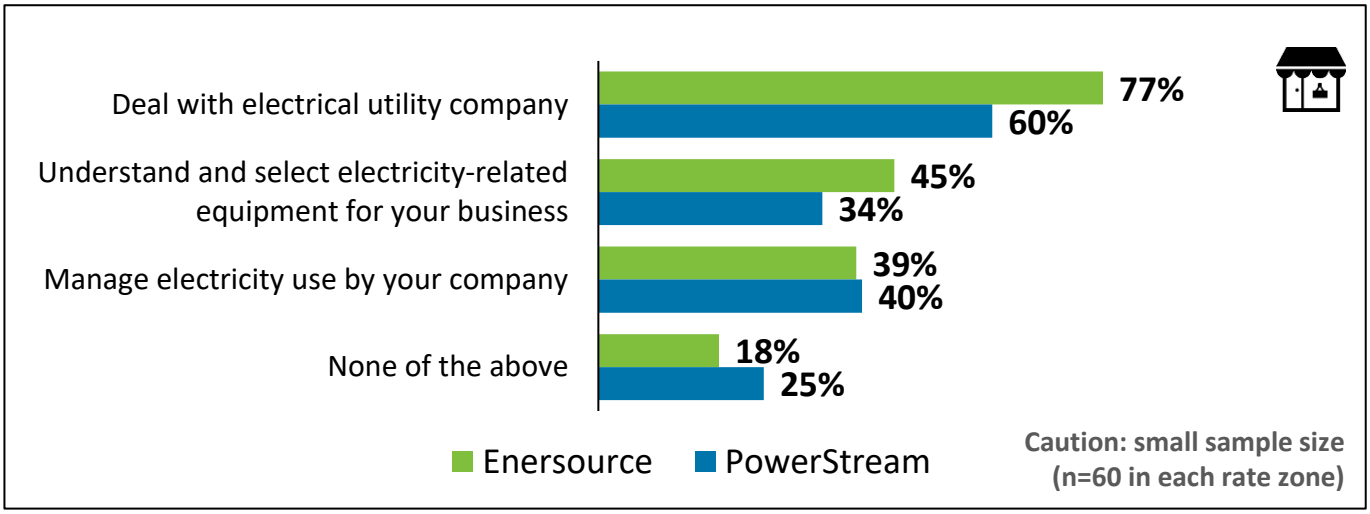


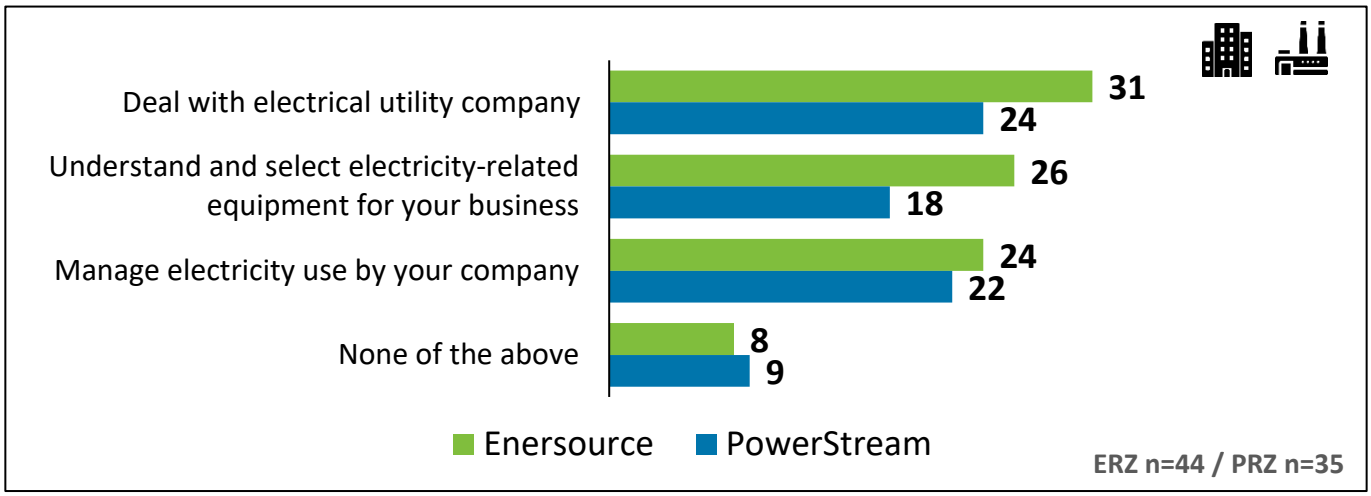
"Don't know" (ERZ 2) not shown.

ERZ n=44 / PRZ n=35

Firmographics
Responsibility

Q Do you personally do any of the following things in your organization?
[Multiple responses allowed]



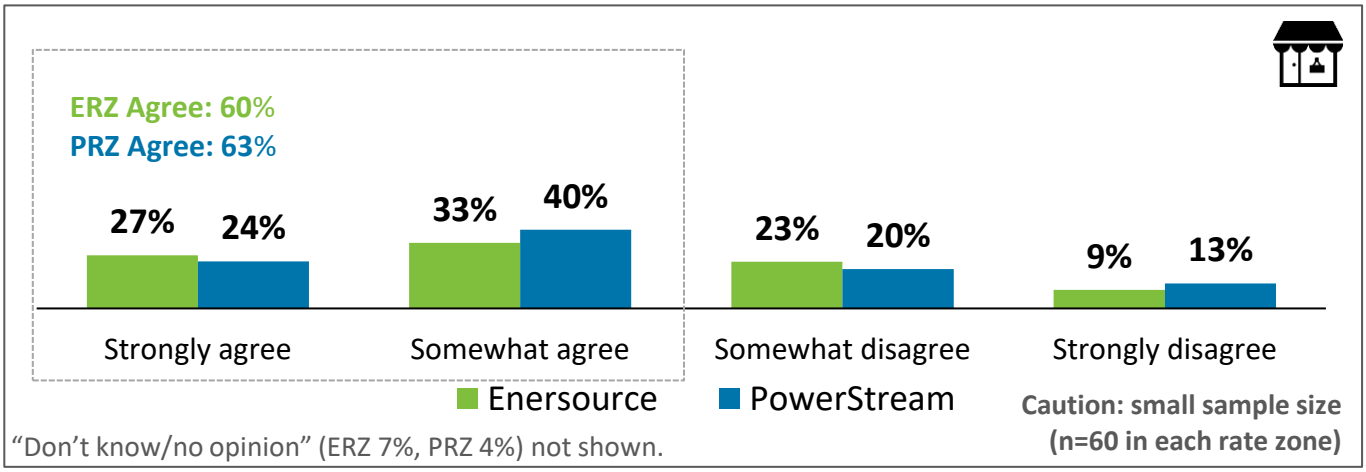


Environmental Controls

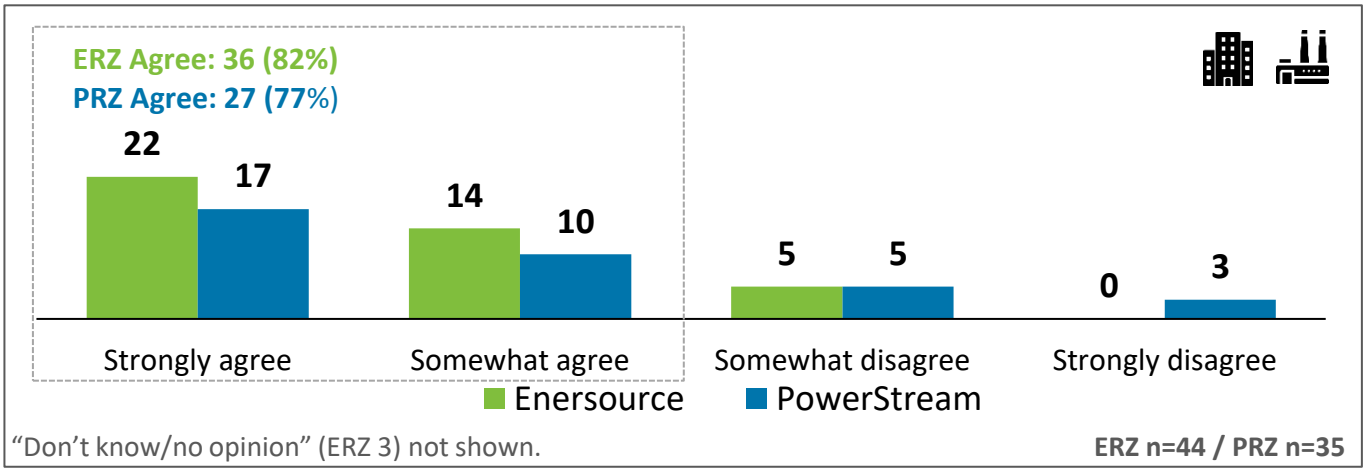
Impact of Electricity Bill

Now we would like to shift the focus, and ask you some general questions about the electricity system in Ontario. To what extent do you agree or disagree with the following statements?

Q The cost of my organization's electricity bill has a major impact on the bottom line of my organization and results in some important spending priorities and investments being put off.



"Don't know/no opinion" (ERZ 7%, PRZ 4%) not shown.



"Don't know/no opinion" (ERZ 3) not shown.

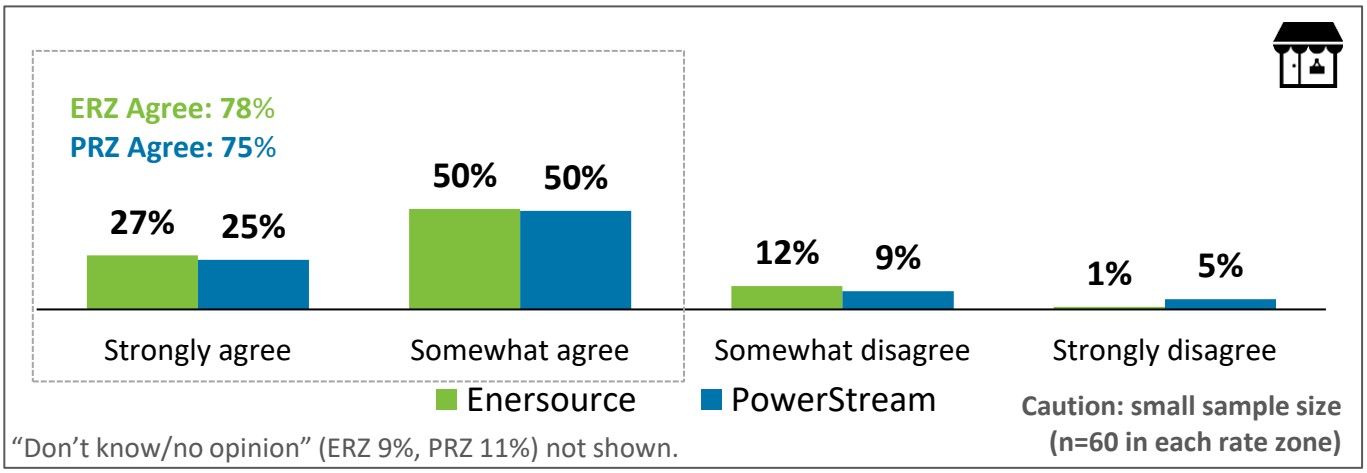
ERZ n=44 / PRZ n=35

Environmental Controls

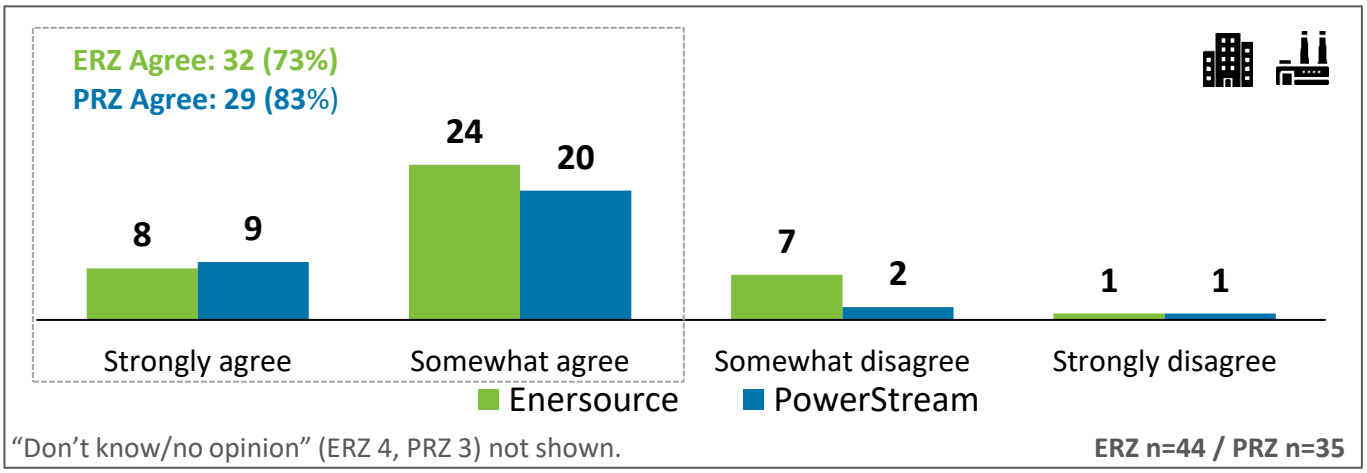
Impact of Electricity Bill

Now we would like to shift the focus, and ask you some general questions about the electricity system in Ontario. To what extent do you agree or disagree with the following statements?

Q Customers are well served by the electricity system in Ontario.



"Don't know/no opinion" (ERZ 9%, PRZ 11%) not shown.



"Don't know/no opinion" (ERZ 4, PRZ 3) not shown.

ERZ n=44 / PRZ n=35

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2022 Customer Engagement

Needs and Priority Outcomes Report

alectra utilities

April 2022

STRICTLY PRIVILEGED AND CONFIDENTIAL

Introduction

Alectra Utilities' 2022 Needs and Priority Outcomes Customer Engagement

Innovative Research Group Inc. (INNOVATIVE) was engaged by Alectra Utilities Corporation (Alectra Utilities) to assist in meeting Alectra Utilities' customer engagement commitments under the Renewed Regulatory Framework for Electricity Distributors. The information contained within this report are the result of a series of customer engagement workbooks.

Each response from within this report was collected using a unique survey URL which was sent directly to customers via Alectra Utilities. Each workbook was customized to the individual customers' rate zone and rate class.

Setting the Context

Alectra Utilities is in the early stages of preparing for a rate rebasing application to the Ontario Energy Board (OEB). The results of this survey will provide early insight as to the priority outcomes for customers, both overall and with regard to reliability specifically. In addition, Alectra Utilities is assessing the need for a rate adjustment for increased investment to address cable renewal in two of its rate zones: the former Enersource and Powerstream service territories. The results gathered from questions related to the ICM portion of the rate application are detailed in separate report. This report details the results of the questions pertaining to customer needs and priority outcomes. See slide 3 for additional details about the survey.

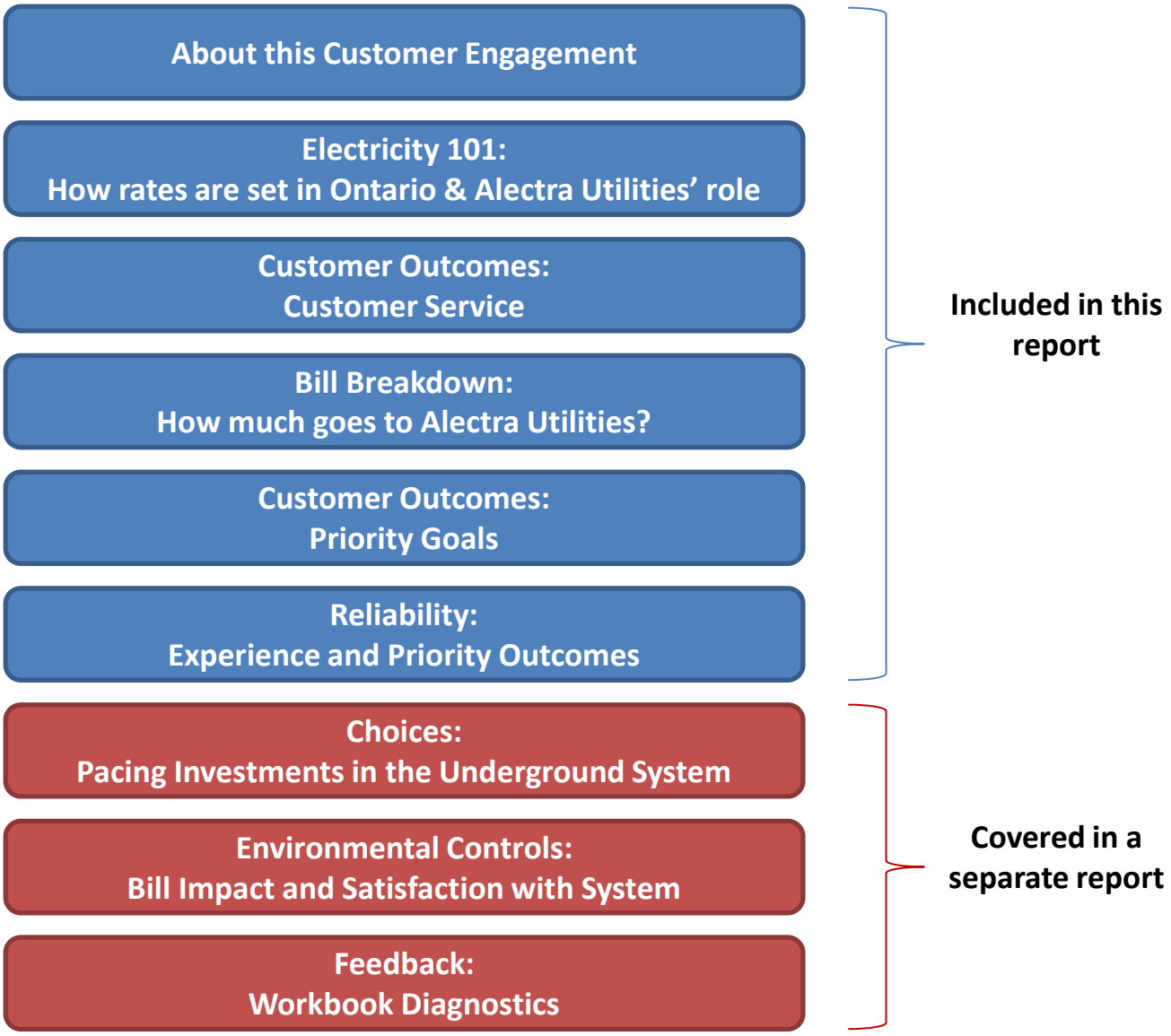
Interpreting the Results

This report covers the findings of an online workbook distributed to customers who have provided email addresses to Alectra Utilities. Analysis conducted by INNOVATIVE in 2019, comparing usage rates between customers with emails and customers without emails, showed that customers with emails are very similar to customers without emails.

For the Residential and GS<50kW rate classes, responses were weighted by consumption to ensure the responses were representative of the broader customer base. Due to the sample size in the higher volume rate classes (GS>50kW) and Large Use, those rate classes have been weighted by region only.

About this Report

This report presents the results of a subset of questions within a larger customer engagement survey. An outline of the entire survey is shown below, with the questions pertaining to customer needs and priority outcomes shown in blue.



Sample Validation
Email Coverage

In four out of five rate zones, Alectra Utilities has email addresses on file for at least half of customers across all rate classes. Coverage is slightly lower in the Guelph Hydro rate zone for the lower volume rate classes.

Enersource Coverage

More than half of Enersource residential customers have email addresses on file. Email coverage is even higher among business customers, ranging from 83% of GS<50 customers to 100% of Large Use customers.

Customers in the Enersource rate zone account for **19%** of Alectra Utilities' total customer base.

Rate Class	Full Population	Email Coverage	
Residential	185,198 records	100,877 records	**54%**
GS<50	19,152 records	15,852 records	**83%**
GS>50	4,061 records	3,720 records	**92%**
Large Use	9 records	9 records	**100%**

Hydro One Brampton Coverage

More than half of Hydro One Brampton residential customers have email addresses on file. Email coverage is marginally lower among GS<50 customers, but higher among higher volume customers.

Customers in the Hydro One Brampton rate zone account for **16%** of Alectra Utilities' total customer base.

Rate Class	Full Population	Email Coverage	
Residential	158,012 records	88,103 records	**56%**
GS<50	9,817 records	5,161 records	**53%**
GS>50	1,738 records	1,141 records	**66%**
Large Use	5 records	5 records	**100%**

Sample Validation
Email Coverage

Horizon Coverage

Almost two-thirds of Horizon residential customers have email addresses on file. Email coverage is even higher among business customers, ranging from 68% of GS<50 customers to 100% of Large Use customers.

Customers in the Horizon rate zone account for **24%** of Alectra Utilities' total customer base.

Rate Class	Full Population	Email Coverage	
Residential	231,805 records	145,702 records	**63%**
GS<50	19,248 records	12,998 records	**68%**
GS>50	2,102 records	1,820 records	**87%**
Large Use	9 records	9 records	**100%**

PowerStream Coverage

More than half of PowerStream residential customers have email addresses on file. Email coverage is even higher among business customers, ranging from 71% of GS<50 customers to 100% of Large Use customers.

Customers in the PowerStream rate zone account for **36%** of Alectra Utilities' total customer base.

Rate Class	Full Population	Email Coverage	
Residential	342,946 records	205,509 records	**60%**
GS<50	33,352 records	23,844 records	**71%**
GS>50	5,224 records	4,390 records	**84%**
Large Use	2 records	2 records	**100%**

Guelph Hydro Coverage

Fewer than half of Guelph Hydro residential customers have email addresses on file. Email coverage is significantly higher among GS>50 customers, and hits 100% among Large Use customers.

Customers in the Guelph Hydro rate zone account for **5%** of Alectra Utilities' total customer base.

Rate Class	Full Population	Email Coverage	
Residential	52,137 records	22,478 records	**43%**
GS<50	4,276 records	1,790 records	**42%**
GS>50	586 records	370 records	**63%**
Large Use	4 records	4 records	**100%**

Methodology
Online Workbook

Field Dates & Workbook Delivery

For Residential and GS<50kW customers, quartiles were established according to actual consumption data. Batches of increasingly targeted invitations were sent to these customers by Alectra Utilities until the sample quotas were filled (see tables below). For GS>50kW and Large Use customers, Alectra Utilities sent invitations to all customers for whom they have an email address on file, with the goal of getting as many completes as possible. In an effort to increase response rates, customers were contacted via reminder emails and follow-up phone calls. Customers had an opportunity to complete the workbook between March 10th and April 5th, 2022.

Each customer received a unique URL to take them to a workbook customized to their rate zone and rate class.

Sample Weighting: Residential Customers

The Residential online workbook sample has been weighted by region and consumption quartiles in order to be representative of customers across the entire Alectra Utilities service territory.

RESIDENTIAL: Unweighted

Consumption Quartile	Enersource	Brampton	Horizon	Power-Stream	Guelph	Total
Low	307	137	144	288	191	1067
Medium-low	279	141	163	318	177	1078
Medium-high	297	205	143	312	149	1106
High	352	130	147	282	180	1091
TOTAL	**1235**	**613**	**597**	**1200**	**697**	**4342**
Distribution	28%	14%	14%	28%	16%	100%

RESIDENTIAL: Weighted

Consumption Quartile	Enersource	Brampton	Horizon	Power-Stream	Guelph	Total
Low	167	143	209	309	47	875
Medium-low	167	143	209	309	47	875
Medium-high	167	143	209	309	47	875
High	167	143	209	309	47	875
TOTAL	**668**	**572**	**836**	**1236**	**188**	**3500**
Distribution	19%	16%	24%	35%	5%	100%

Note: *Throughout this report, graphs and tables may not always total 100% due to rounding values rather than any error in data. Sums are added before rounding numbers.*

Methodology
Online Workbook

Sample Weighting: GS<50kW Customers

The GS<50kW online workbook sample has been weighted by region and consumption quartiles in order to be representative of customers across the entire Alectra Utilities service territory.

GS<50kW: Unweighted

Consumption Quartile	Enersource	Brampton	Horizon	Power-Stream	Guelph	Total
Low	19	7	14	45	4	89
Medium-low	16	9	15	36	6	82
Medium-high	15	3	12	22	8	60
High	18	7	23	36	3	87
TOTAL	**68**	**26**	**64**	**139**	**21**	**318**
Distribution	21%	8%	20%	44%	7%	100%

GS<50kW: Weighted*

Consumption Quartile	Enersource	Brampton	Horizon	Power-Stream	Guelph	Total
Low	11	6	11	19	2	50
Medium-low	11	6	11	19	2	50
Medium-high	11	6	11	19	2	50
High	11	6	11	19	2	50
TOTAL	**45**	**23**	**45**	**78**	**10**	**200**
Distribution	22%	11%	22%	39%	5%	100%

*** Note**: Due to the statistical weighting, the numbers in each cell have been rounded to the nearest whole number. Totals for each column were calculated based on the full number to two decimal points.

Methodology
Online Workbook

Sample Weighting: GS>50kW and Large Use Customers

The GS>50kW and Large Use Customers online workbook sample has been weighted by region only in order to be representative of customers across the entire Alectra Utilities service territory.

GS>50kW and Large Use Customers: Unweighted

Rate Class	Enersource	Brampton	Horizon	Power-Stream	Guelph	Total
GS>50kW	46	23	20	37	5	131
Large Use	3	1	2	2	1	9
TOTAL	**49**	**24**	**22**	**39**	**6**	**140**
Distribution	35%	17%	16%	28%	4%	100%

***NOTE**: Results within each rate zone are shown as unweighted frequencies. Due to small sample sizes, these results should be interpreted with caution.*

GS>50kW and Large Use Customers: Weighted

Rate Class	Enersource	Brampton	Horizon	Power-Stream	Guelph	Total
GS>50kW	41	18	21	53	6	140
Large Use†	<1	<1	<1	<1	<1	<1
TOTAL	**41**	**18**	**22**	**53**	**6**	**140**
Distribution	30%	13%	15%	38%	4%	100%

† ***NOTE**: Weighted figures for Large Use cells are reduced to less than one as a result of weights that reflect the small proportion of these customers.*

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Residential Customers

Online Workbook Results

About this Customer Engagement

Welcome to Alectra Utilities' future planning survey!

Alectra Utilities' planners need to know what matters to you. Alectra Utilities is preparing to update its long term investment plan. This plan will determine the investments Alectra Utilities makes in equipment and infrastructure, the services it provides, and the rates you pay.

Today Alectra Utilities needs to ask you about three things:

1. **Your experience with Alectra Utilities and how they can do better**.
2. **What outcomes matter most to you.**
3. **[ERZ/PRZ ONLY:] A reliability issue Alectra Utilities feels is important to address before the next update of its long term plan.***

This survey will take approximately 15 minutes to complete and can be done so at your convenience. Once you begin, your progress will be saved, and you can return to the customer engagement at any time.

All individual responses will be kept confidential. Innovative Research Group (INNOVATIVE), an independent research company, has been hired to gather your feedback. Click on the link at the bottom of the page to learn more about INNOVATIVE's privacy policy.

Those who complete the questions that follow will be invited to enter a draw to win one of ten (10) $500 cash prizes.

If you are reading this on a smaller mobile device, you may want to consider accessing the survey from a tablet, desktop computer or laptop instead so that it is easier for you to read.

To complete each page, please scroll to the bottom, completing any questions as you come to them, and click "next" to move to the next page.

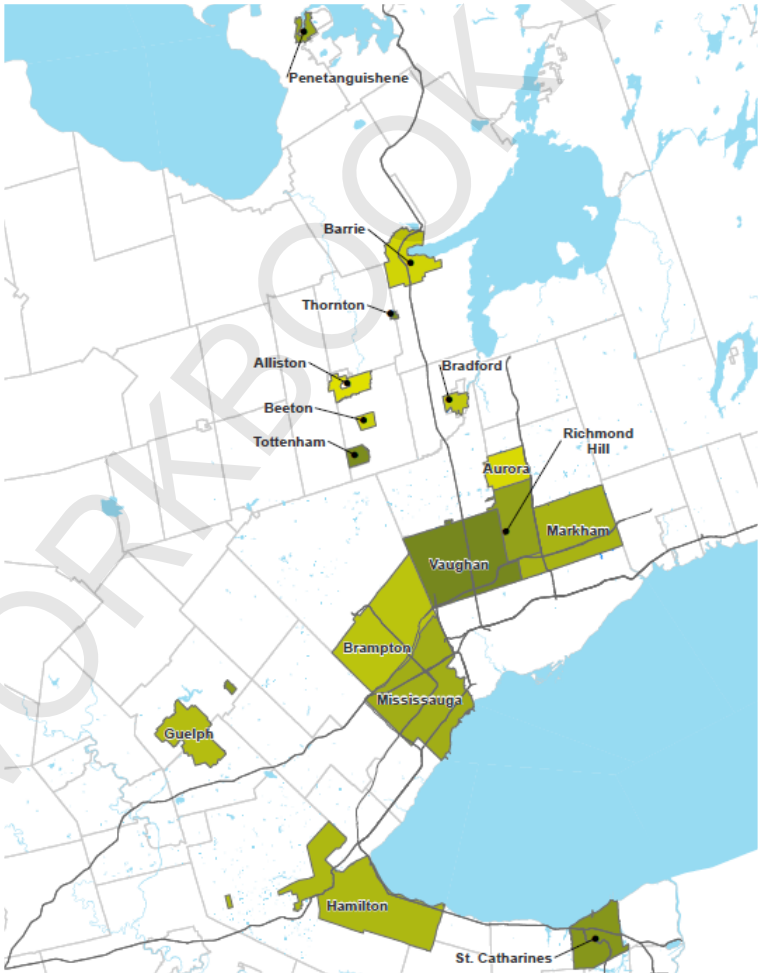
** The results of this series of questions are detailed in a separate "ICM" report.*

Who is Alectra Utilities?

Who is Alectra Utilities?

Alectra Utilities Corporation serves approximately one million homes and businesses across a 1,900 square kilometre service territory, comprising 17 communities including Alliston, Aurora, Barrie, Beeton, Brampton, Bradford West Gwillimbury, Guelph, Hamilton, Markham, Mississauga, Penetanguishene, Richmond Hill, Rockwood, St. Catharines, Thornton, Tottenham and Vaughan. Alectra Utilities is the union of five leading Ontario utilities – Enersource, Horizon Utilities, Brampton Hydro, PowerStream and Guelph Hydro.

Guelph Hydro Electric Systems Inc. + hydro one Brampton + horizon UTILITIES Looking beyond + enersource + PowerStream = alectra utilities



Alectra Utilities provides services to customers in all of these areas. However, customer rates are based on the cost of serving only the area that you live in.

Electricity 101

How are electricity distribution rates set in Ontario?

The electricity industry in Ontario is regulated by the Ontario Energy Board (OEB). The OEB sets electricity rates in Ontario.

- Electricity distributors are funded by the distribution rates paid by their customers. Periodically, distributors are required to file rate applications with the OEB to justify the amount of funding they need to safely and reliably distribute electricity to their customers.
- The OEB requires electricity distributors, such as Alectra Utilities, to consider customers' needs, outcomes and preferences as it develops its business plan and distribution system plan, as well as make spending and investment decisions.
- Customers will have at least three opportunities to provide input into Alectra Utilities' long term planning process:

1. Provide Input
Provide initial input to planners through this workbook on their needs and priorities. Planners will consider these views as they develop their initial update to Alectra Utilities' plans. This is the primary way the views collected in this workbook will be used.

2. Provide Feedback
Provide feedback on Alectra Utilities' draft plan when it is developed.

3. Formal Hearing
Participate in the formal hearing process of the OEB as it reviews Alectra Utilities' plan.

- Alectra Utilities will also consider the views of customers received through regular customer contact and conduct research on specific topics as needed.
- In addition, if a need emerges between major planning cycles, the OEB permits utilities to make a specific application for additional funding for a rate increase. **[ONLY IF ERZ OR PRZ:]** In this community, Alectra Utilities has identified a need for additional funding to deal with growing reliability issues related to underground cables. Later in this workbook, you will be asked for your views on this issue.*

** The results of this series of questions are detailed in a separate "ICM" report.*

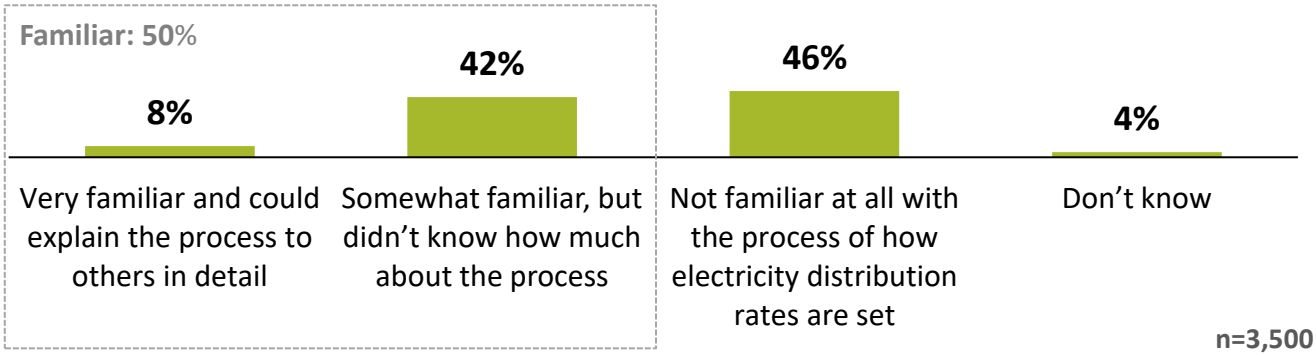
Electricity 101

Familiarity With Ontario's Electricity Distribution Rates

Residential

Q Before this survey, how familiar were you with how electricity distribution rates are set in Ontario?

alectra utilities



	Rate Zone Breakdown					LEAP Qualification		
	ERZ	BRZ	HRZ	PRZ	GRZ	Yes	No <$52K	No >$52K
Very familiar	8%	13%	6%	7%	5%	12%	8%	7%
Somewhat familiar	42%	41%	38%	45%	46%	33%	42%	42%
Not familiar at all	46%	42%	54%	44%	47%	49%	44%	48%
Don't know	5%	4%	2%	4%	2%	6%	6%	2%
Familiar (Very + Somewhat)	**49%**	**54%**	**44%**	**52%**	**51%**	**45%**	**50%**	**50%**

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Electricity 101

Residential

What Is Alectra Utilities' Role In Ontario's Electricity System?

What is Alectra Utilities' role in Ontario's electricity system?

Ontario's electricity system is owned and operated by public, private and municipal corporations across the province. It is made up of three key components: **generation**, **transmission** and **distribution**.

Generation

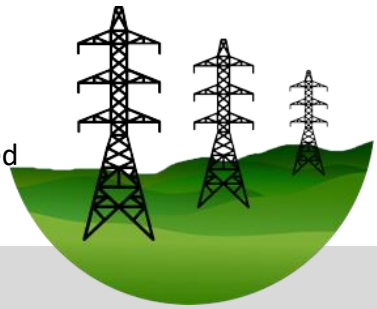
Where electricity comes from

Ontario gets its electricity from a mix of energy sources. About half comes from nuclear power. The remainder comes from a mix of hydroelectric, natural gas, wind and solar.

Transmission

How electricity travels across Ontario

Once electricity is generated, it must be transported to urban and rural areas across the province. This happens by way of high voltage transmission lines that serve as highways for electricity. The province has more than 30,000 kilometres of transmission lines, most of which is owned and operated by Hydro One.

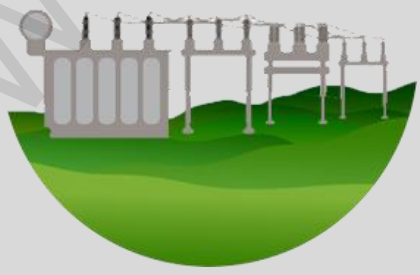


Local Distribution

How electricity is delivered to the end-consumer

Alectra Utilities is responsible for the last step of the journey: distributing electricity to customers through its distribution system.

- Alectra Utilities manages all aspects of the electricity distribution business throughout 17 communities in Ontario and is regulated by the Ontario Energy Board (OEB).
- Across Alectra Utilities' service territory, there are 16,400 km of overhead powerlines and 22,140 km of primary underground cable.
- Alectra Utilities is entirely funded through the rates its customers pay and does <u>not</u> receive taxpayer money to fund its operations or its investments in the distribution system.

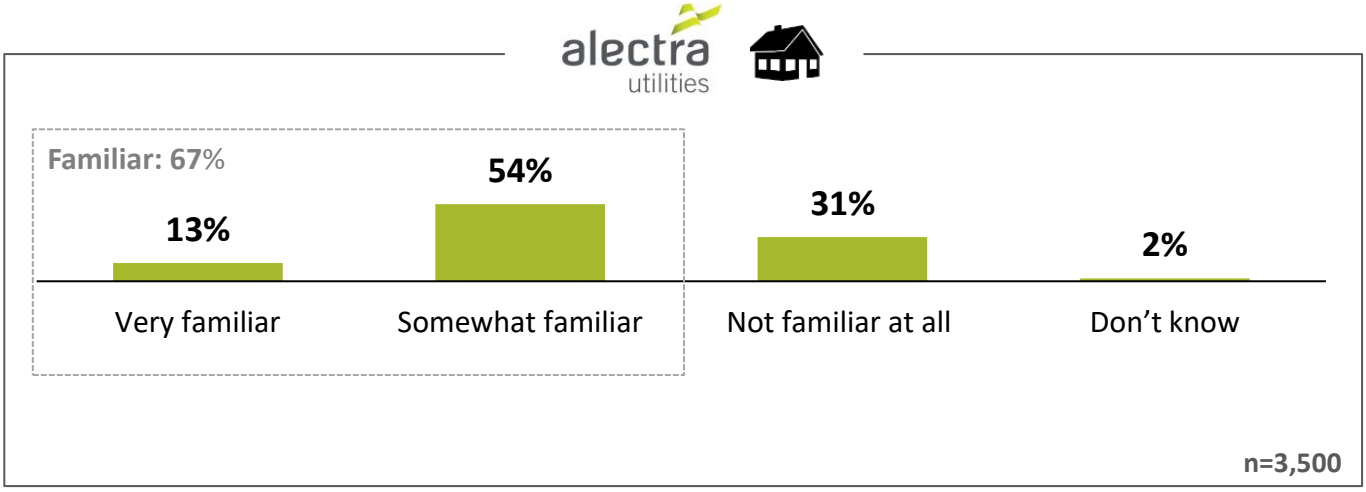


Electricity 101

Familiarity With Alectra Utilities

Residential

Q How familiar are you with Alectra Utilities, which operates the electricity distribution system in your community?



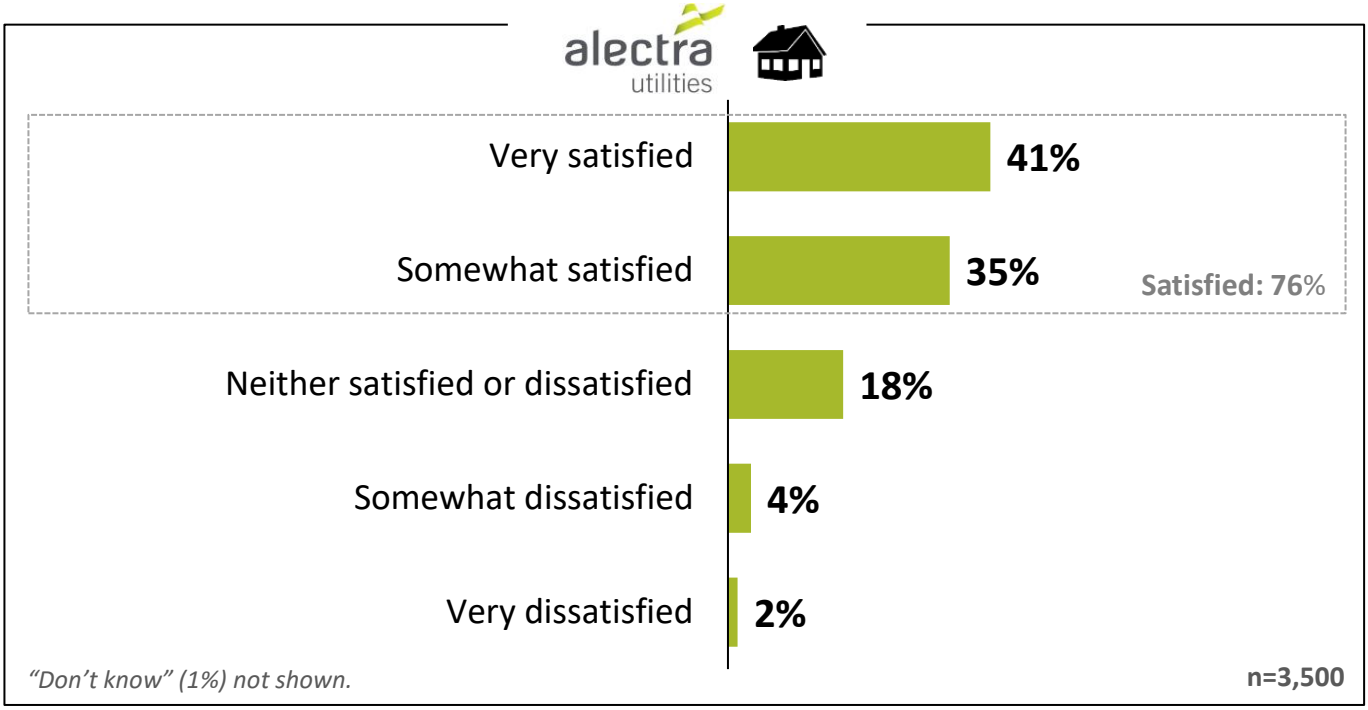
	Rate Zone Breakdown					LEAP Qualification		
	ERZ	BRZ	HRZ	PRZ	GRZ	Yes	No <$52K	No >$52K
Very familiar	14%	16%	13%	11%	7%	18%	12%	12%
Somewhat familiar	54%	51%	52%	56%	60%	46%	54%	56%
Not familiar at all	29%	29%	33%	31%	32%	33%	31%	31%
Don't know	3%	3%	2%	2%	1%	3%	4%	1%
Familiar (Very + Somewhat)	**68%**	**68%**	**65%**	**67%**	**67%**	**64%**	**65%**	**68%**

Electricity 101

Satisfaction With Alectra Utilities' Services

Residential

Q Generally, how satisfied or dissatisfied are you with the services you receive from Alectra Utilities?



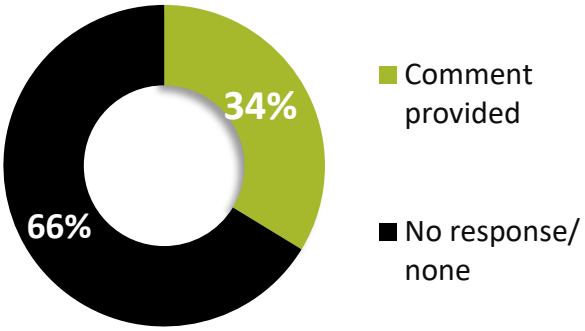
	Rate Zone Breakdown					LEAP Qualification		
	ERZ	BRZ	HRZ	PRZ	GRZ	Yes	No <$52K	No >$52K
Very satisfied	44%	46%	41%	38%	38%	47%	46%	41%
Somewhat satisfied	35%	31%	33%	38%	35%	30%	32%	36%
Neither satisfied nor dissatisfied	15%	16%	19%	19%	22%	13%	17%	19%
Somewhat dissatisfied	3%	4%	4%	3%	5%	5%	3%	3%
Very dissatisfied	1%	1%	3%	1%	1%	3%	1%	1%
Don't know	1%	1%	<1%	1%	1%	1%	<1%	<1%
Satisfied (Very + Somewhat)	**80%**	**78%**	**74%**	**76%**	**72%**	**77%**	**78%**	**76%**
Dissatisfied (Very + Somewhat)	**4%**	**5%**	**7%**	**4%**	**5%**	**9%**	**4%**	**5%**

Electricity 101

How Alectra Utilities Can Improve Services To Customers

Residential

Q Is there anything in particular you would like Alectra Utilities to do to improve its services to you? [OPEN]



Responses	%
Lower rates	13.2%
Improve billing/more information on bills	3.8%
Positive - general	3.3%
Improve service consistency/fewer outages	2.8%
Extend/change off-peak hours	1.4%
More/improve outage information	1.4%
Info on infrastructure updates/infrastructure investment	1.3%
Better phone communication/customer service	1.2%
Focus on renewable/green energy/more information on renewables	1.1%
Improve online tools/mobile app	1.1%
More information/education on energy saving measures	1.0%
Provide incentives	0.4%
Offer installation for EVs/prepare infrastructure for future EV demand	0.4%
Other	1.3%
No response/none	66.3%

Customer Outcomes

Customer Service

Customer Service

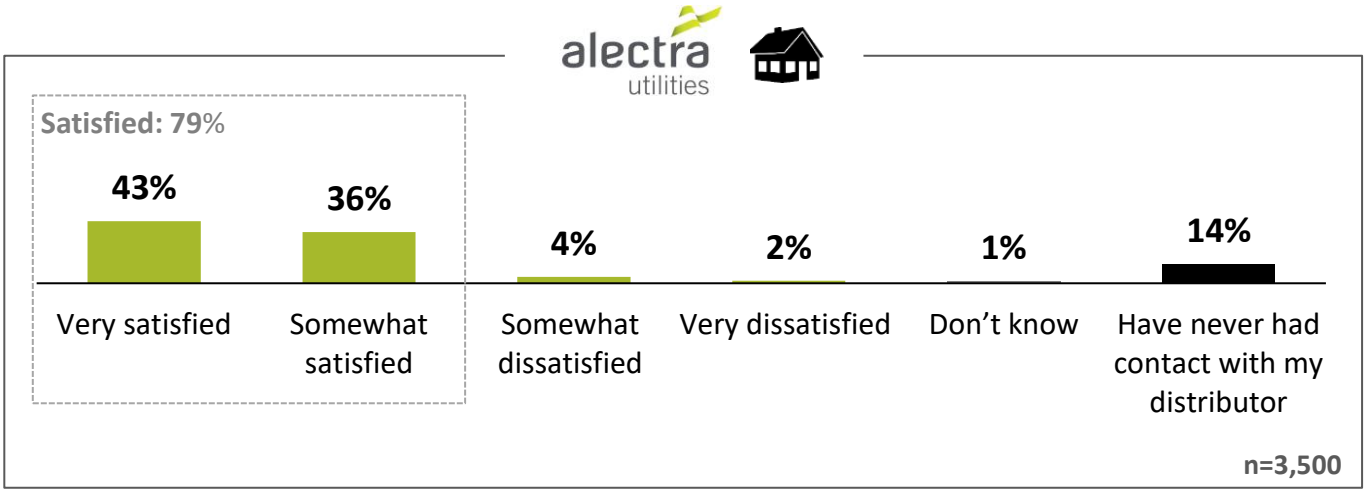
There are many ways that customers interact with Alectra Utilities. The diagram below is based on a review of previous customer feedback and intended to help you recall various ways you may have interacted with Alectra Utilities. Please review and then answer the questions below to help Alectra Utilities ensure they have fully captured customer needs.

Customer Outcomes

Satisfaction With Alectra Utilities' Customer Service

Residential

Q Thinking about all the contacts you may have had with Alectra Utilities since becoming a customer, how satisfied are you with the customer service you have received from Alectra Utilities?



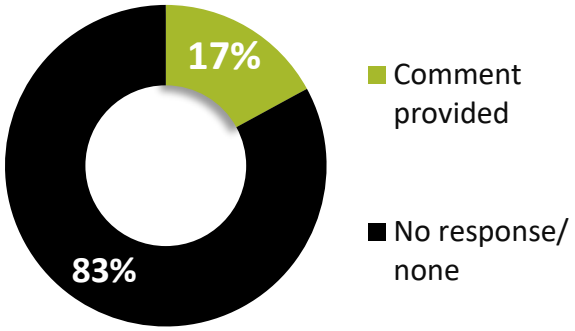
	Rate Zone Breakdown					LEAP Qualification		
	ERZ	BRZ	HRZ	PRZ	GRZ	Yes	No <$52K	No >$52K
Very satisfied	42%	50%	46%	40%	41%	47%	47%	44%
Somewhat satisfied	36%	32%	32%	41%	33%	31%	32%	36%
Somewhat dissatisfied	4%	3%	5%	5%	4%	8%	5%	4%
Very dissatisfied	1%	2%	3%	1%	2%	2%	1%	2%
Don't know	2%	1%	1%	2%	1%	0%	2%	1%
Never had contact with my distributor	15%	12%	14%	12%	19%	11%	13%	13%
Satisfied (Very + Somewhat)	**78%**	**81%**	**78%**	**80%**	**74%**	**79%**	**79%**	**80%**
Dissatisfied (Very + Somewhat)	**5%**	**5%**	**8%**	**5%**	**6%**	**10%**	**6%**	**5%**

Customer Outcomes

Residential

How Alectra Utilities Can Do A Better Job Meeting Needs

Q Thinking about all the contacts you may have had with Alectra Utilities, do you have any specific suggestions about how Alectra Utilities could do a better job of meeting your needs?



Responses	%
Positive - general	3.2%
Improve communication/customer service	2.9%
Better/improve billing	2.3%
Lower rates	2.2%
Mobile app/online tools/live customer service chat	1.5%
Improve phone service	1.4%
Outage reporting/notify about neighborhood work	0.9%
Provide more information/education	0.5%
Encourage energy saving alternatives/conservation programs	0.5%
Improve infrastructure	0.4%
Has not had contact	0.1%
Reduce outages/improve service consistency	0.1%
Other	1.0%
No response/none	82.9%

Rates 101

Residential

How Much Of My Electricity Bill Goes To Alectra Utilities?

Rates 101

How much of my electricity bill goes to Alectra Utilities?

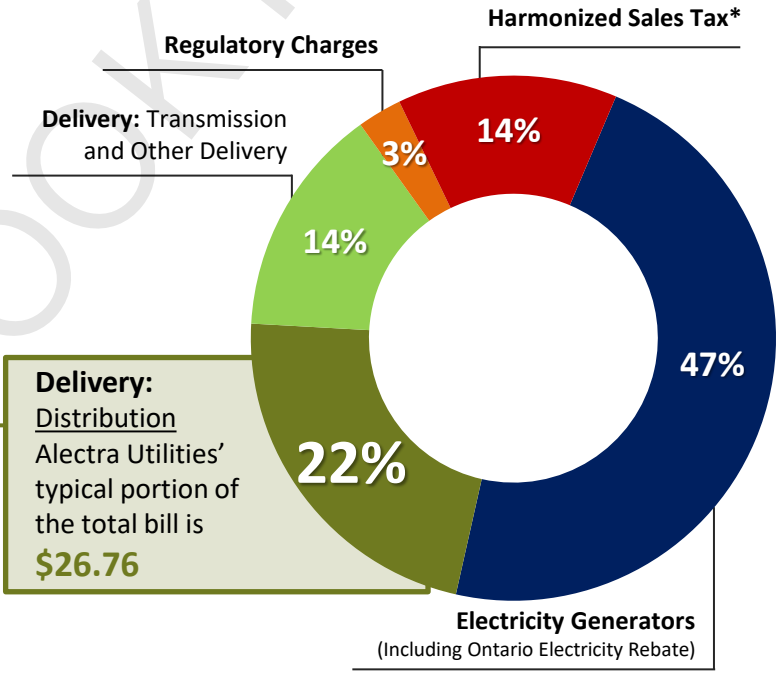
- Every item and charge on your bill is mandated by the provincial government or regulated by the Ontario Energy Board (OEB), the provincial energy regulator.
- While **Alectra Utilities** is responsible for collecting payment for the entire electricity bill – as well as water charges for many of its communities – Alectra Utilities retains only a portion of the electricity delivery charge. The electricity delivery charge also includes Hydro One transmission costs and system losses.
- Distribution makes up about 22% of the typical residential customer's bill.
- The rest of your bill is passed onto provincial transmission companies, power generation companies, the provincial government and regulatory agencies.

Alectra Utilities Sample Monthly Bill
(Based on monthly usage of 750 kWh)

Account Number:
000 000 000 000 0000

Meter Number:
00000000

Your Electricity Charges	
Electricity	
Off-Peak @ 8.2 ¢/kWh	39.36
Mid-Peak @ 11.3 ¢/kWh	15.26
On-Peak @ 17 ¢/kWh	22.95
Delivery	43.77
Regulatory Charges	3.28
Total Electricity Charges	$124.62
HST	16.20
Ontario Electricity Rebate	($21.18)
Total Amount	$119.63



Note: Graph may not total 100% due to rounding.

* HST is calculated before applying the Ontario Electricity Rebate and is therefore above 13%.

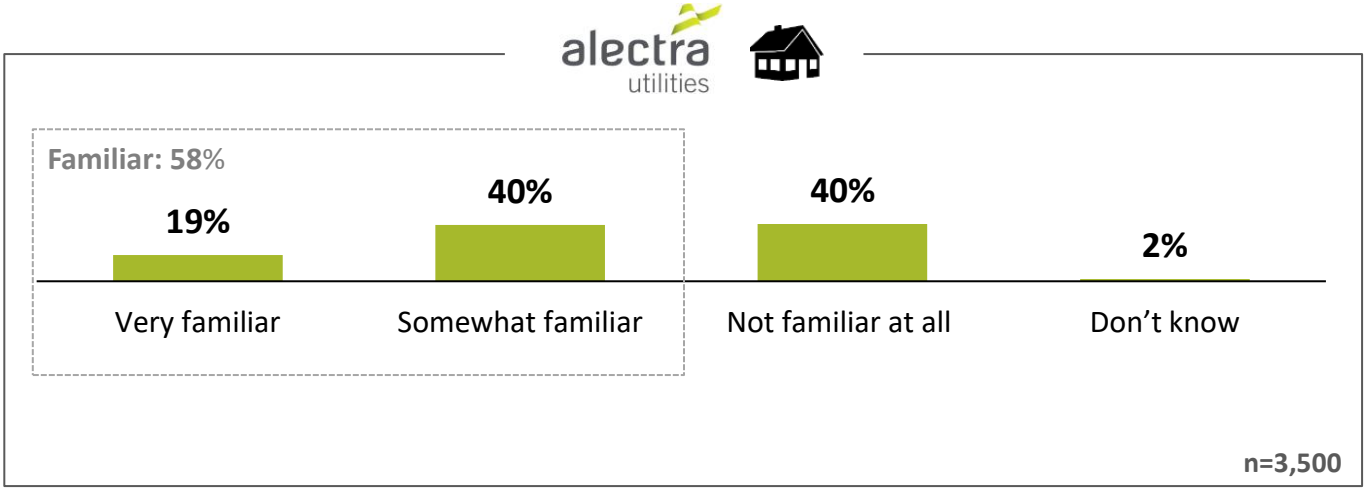
Note: Sample bills were customized for each rate zone and rate class. The above represents a sample residential bill in the Enersource rate zone.

Rates 101

Residential

Familiarity With Percentage Of Bill Remitted To Alectra Utilities

Q Before this survey, how familiar were you with the amount of your electricity bill that went to Alectra Utilities?



	Rate Zone Breakdown					LEAP Qualification		
	ERZ	BRZ	HRZ	PRZ	GRZ	Yes	No <$52K	No >$52K
Very familiar	20%	24%	15%	19%	13%	26%	19%	18%
Somewhat familiar	38%	41%	36%	43%	36%	36%	41%	38%
Not familiar at all	40%	34%	48%	37%	49%	36%	37%	43%
Don't know	2%	1%	2%	2%	1%	2%	3%	1%
Familiar (Very + Somewhat)	**58%**	**65%**	**50%**	**61%**	**50%**	**62%**	**60%**	**56%**

Customer Outcomes

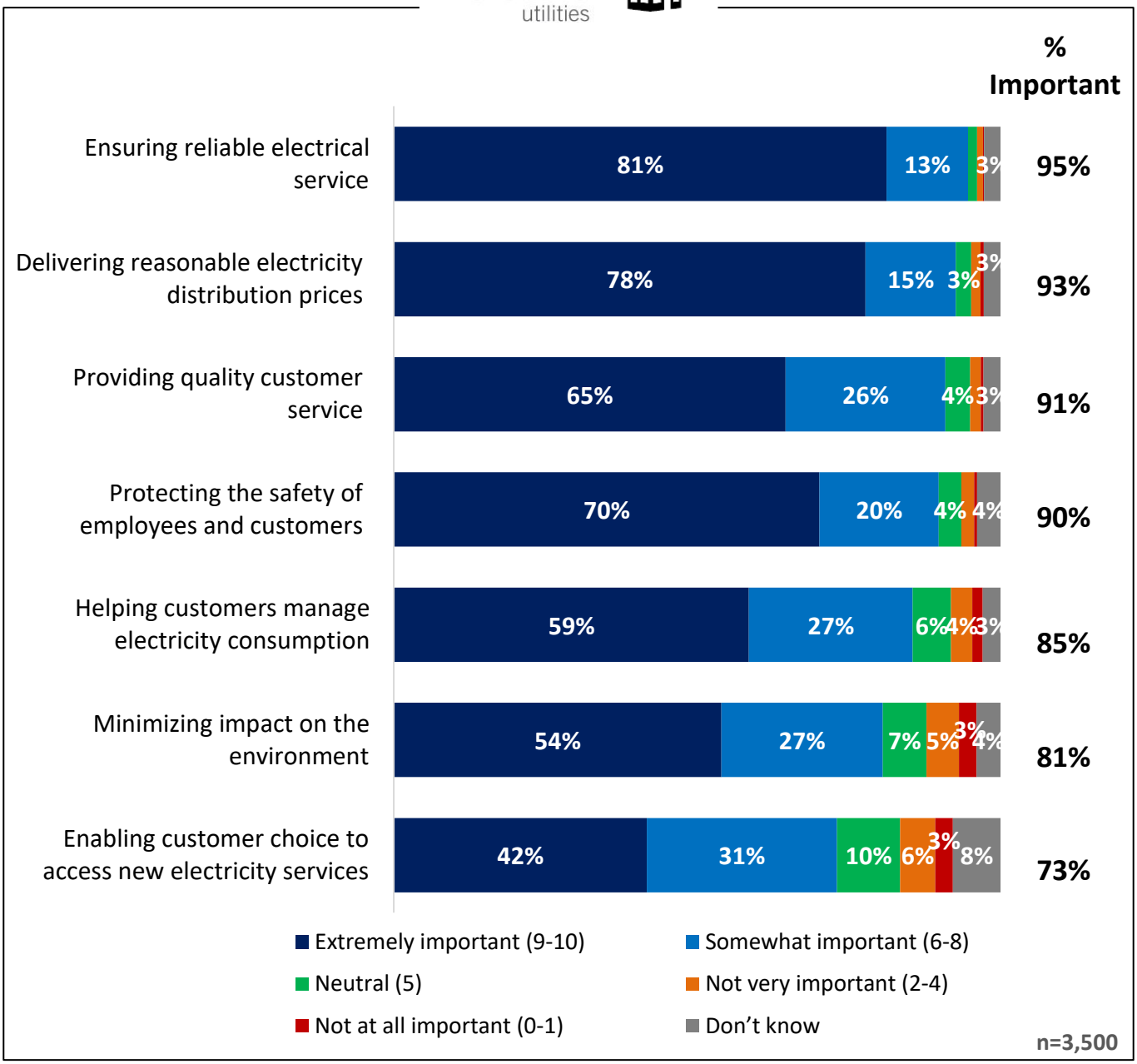
Importance Of Potential Alectra Utilities' Priorities

Residential

Now let's talk about outcomes. Alectra Utilities talks to customers to better understand how it should set spending priorities with the money customers pay for service.

In recent conversations with customers, a number of possible goals were identified as potential priorities for Alectra Utilities. Below you will find a list of these potential priorities.

Q How important are each of these potential Alectra Utilities priorities to you as a customer?



Note: Data labels are removed where 2% or less.

Customer Outcomes

Importance Of Potential Alectra Utilities' Priorities

Residential

Q How important are each of these potential Alectra Utilities priorities to you as a customer?

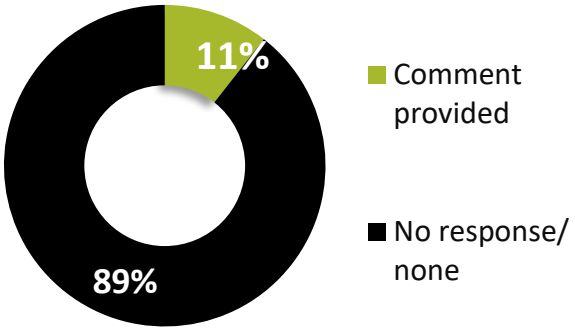
	Rate Zone Breakdown					LEAP Qualification		
Average Score	**ERZ**	**BRZ**	**HRZ**	**PRZ**	**GRZ**	**Yes**	**No <$52K**	**No >$52K**
Ensuring reliable electrical service	9.4	9.2	9.5	9.3	9.4	9.1	9.1	9.4
Delivering reasonable electricity distribution prices	9.2	8.9	9.3	9.2	9.3	8.8	9.1	9.2
Providing quality customer service	8.8	8.8	8.9	8.7	8.7	8.6	8.9	8.7
Protecting the safety of employees and customers	9.0	8.8	9.1	8.9	9.0	8.7	8.9	9.0
Helping customers manage electricity consumption	8.4	8.5	8.4	8.3	8.3	8.4	8.5	8.3
Minimizing impact on the environment	8.1	8.1	8.3	8.0	8.4	8.2	8.2	8.0
Enabling customer choice to access new electricity services	7.8	8.0	7.5	7.6	7.6	7.7	7.7	7.6

Customer Outcomes

Residential

Other Important Priorities Alectra Utilities Should Focus On

Q Are there any other important priorities that Alectra Utilities should be focusing on that weren't included in the list above? [OPEN]



Responses	%
Lower rates/reduce costs/find alternative income source	3.0%
Focus on sustainability/reduction/green technology	1.7%
All the above	0.8%
More education/information on energy saving/cost saving	0.8%
Improve customer service/incentive programs	0.7%
Electric vehicle charging stations/prepare infrastructure for more EVs	0.6%
Change/extend off-peak hours	0.5%
Improve online tools/web billing	0.4%
Infrastructure updates/burying lines	0.4%
Consistency of service	0.3%
Outage reporting system	0.2%
Other	1.1%
No response/none	89.4%

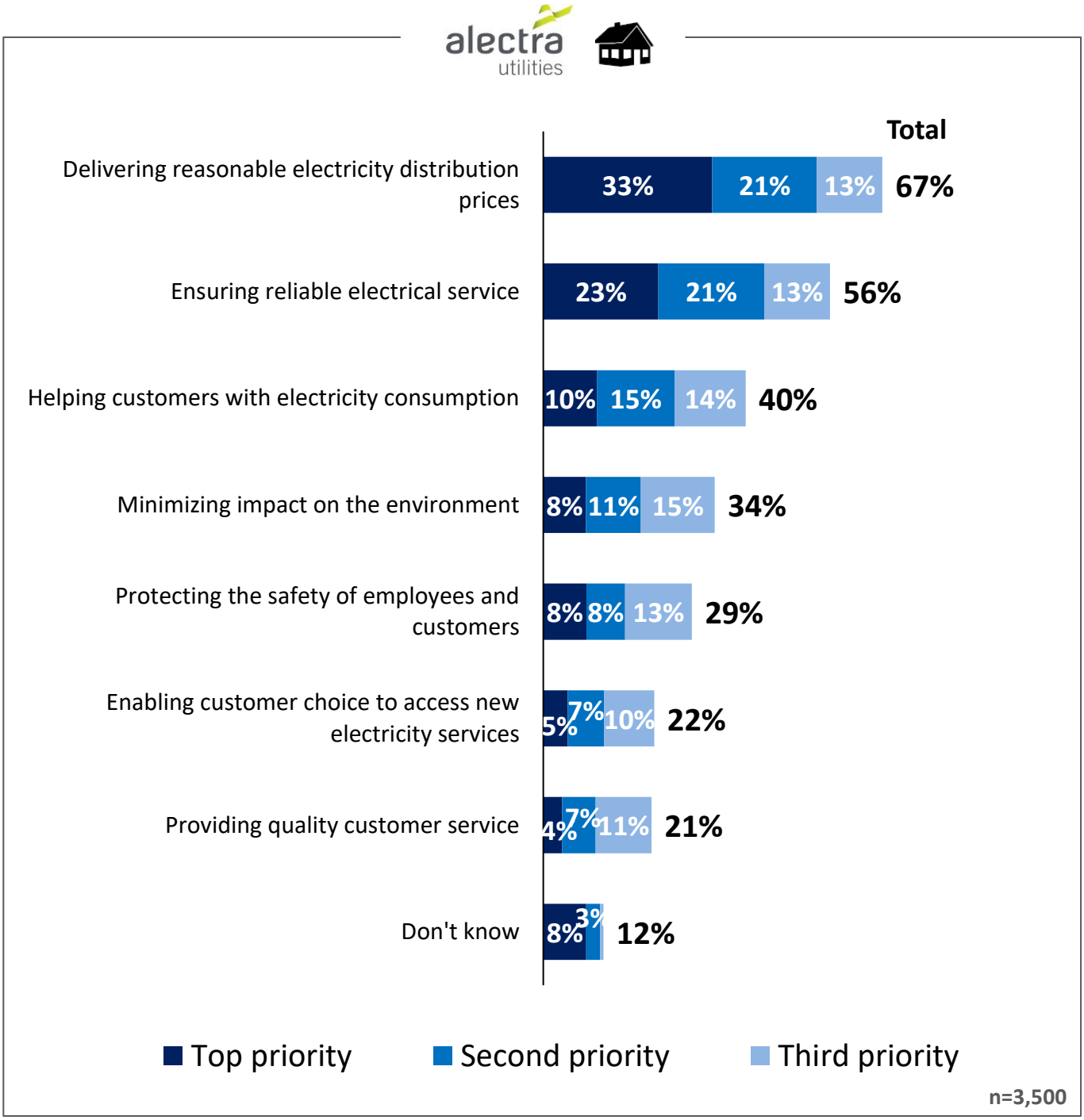
Customer Outcomes

Ranking Alectra Utilities' Priorities

Residential

Sometimes Alectra Utilities has to choose between goals that have a similar level of priority. When that happens, planners need to understand what matters most to you.

Q Thinking again about the things Alectra Utilities should be focusing on, please rank your top 3 priorities.



Note: 'No response' not shown. Respondents who say 'Don't know' do not get asked for further priorities. Data labels are removed where 2% or less.

Customer Outcomes

Ranking Alectra Utilities' Priorities

Residential

Q Thinking again about the things Alectra Utilities should be focusing on, please rank your top 3 priorities.

	Rate Zone Breakdown					LEAP Qualification		
% Total Top 3 Choice	**ERZ**	**BRZ**	**HRZ**	**PRZ**	**GRZ**	**Yes**	**No <$52K**	**No >$52K**
Delivering reasonable electricity distribution prices	66%	62%	69%	66%	69%	59%	62%	69%
Ensuring reliable electrical service	57%	47%	57%	59%	62%	38%	48%	63%
Helping customers manage electricity consumption	41%	46%	35%	41%	35%	42%	38%	39%
Minimizing impact on the environment	33%	30%	40%	30%	47%	30%	33%	36%
Protecting the safety of employees and customers	27%	28%	34%	27%	32%	26%	28%	29%
Enabling customer choice to access new electricity services	23%	23%	22%	21%	19%	18%	21%	24%
Providing quality customer service	21%	25%	20%	20%	18%	23%	20%	21%

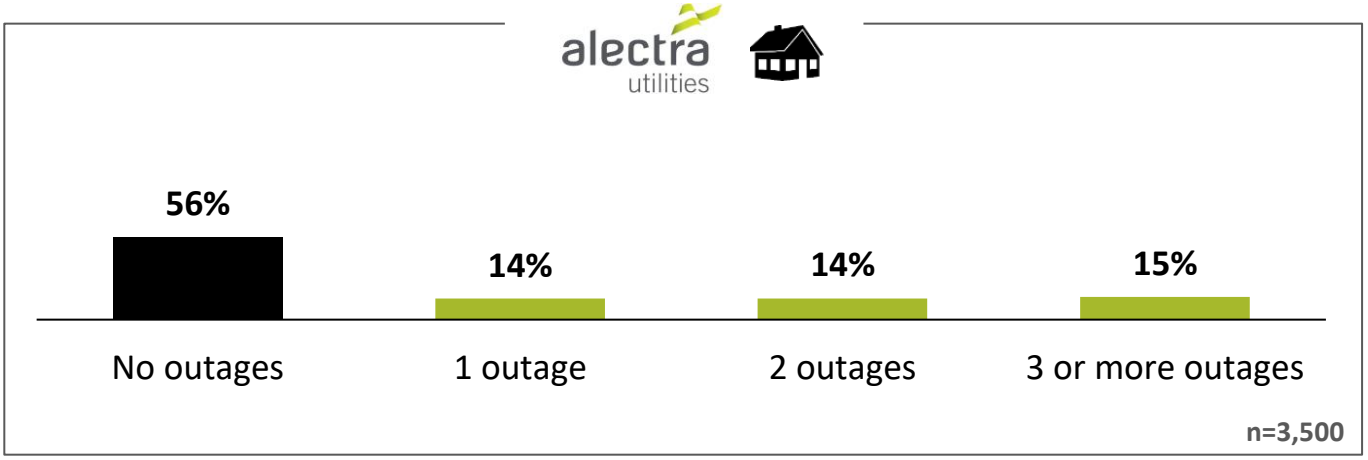
Customer Outcomes

Number of Outages Experienced

Residential

Now let's focus a little deeper on reliability.

Q Have you experienced any power outages at home in the past 12 months which lasted longer than one minute? If so, approximately how many power outages did you experience?



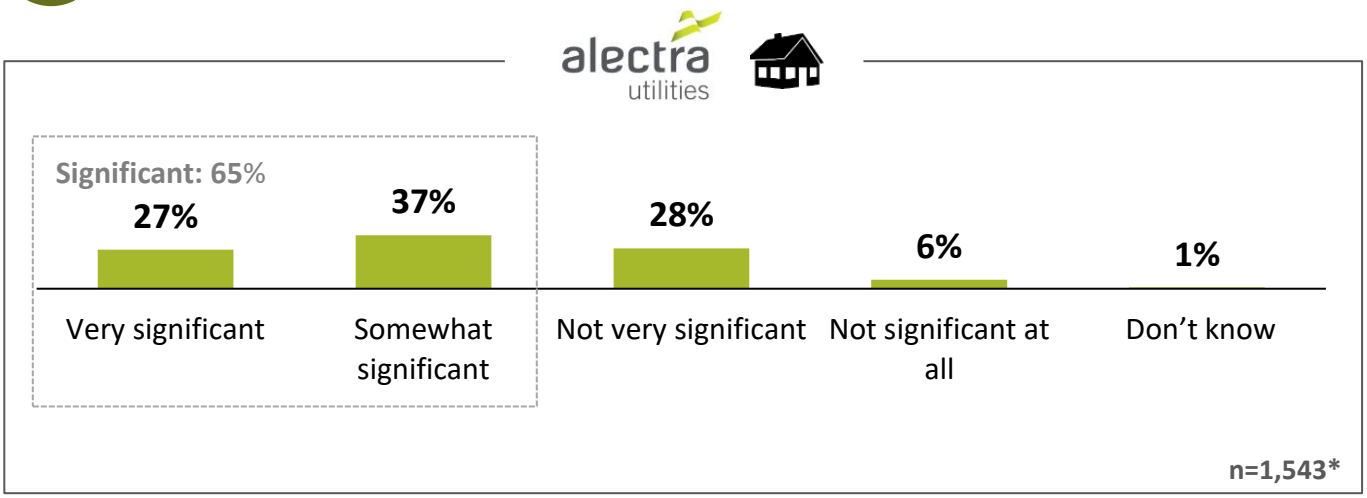
	Rate Zone Breakdown					LEAP Qualification		
	ERZ	BRZ	HRZ	PRZ	GRZ	Yes	No <$52K	No >$52K
No outages	58%	66%	46%	56%	62%	63%	61%	54%
1 outage	14%	11%	16%	15%	17%	13%	12%	16%
2 outages	14%	10%	17%	16%	10%	11%	15%	14%
3 or more outages	14%	13%	21%	14%	10%	12%	12%	16%

Customer Outcomes

Impact of Outages

Residential

Q How significant are these disruptions in your home?



*** Note**: Impact of outages asked only of those who have experienced at least one outage.

	Rate Zone Breakdown					LEAP Qualification		
	ERZ	BRZ	HRZ	PRZ	GRZ	Yes	No <$52K	No >$52K
Very significant	25%	38%	29%	25%	18%	29%	24%	27%
Somewhat significant	39%	30%	40%	37%	36%	34%	39%	38%
Not very significant	28%	28%	25%	29%	38%	30%	31%	28%
Not significant at all	7%	4%	4%	8%	8%	6%	5%	7%
Don't know	1%	1%	1%	1%	-	1%	1%	<1%
Significant (Very + Somewhat)	**64%**	**67%**	**69%**	**62%**	**54%**	**62%**	**64%**	**65%**
Not Significant (Very + Not at all)	**35%**	**32%**	**30%**	**37%**	**46%**	**36%**	**35%**	**35%**

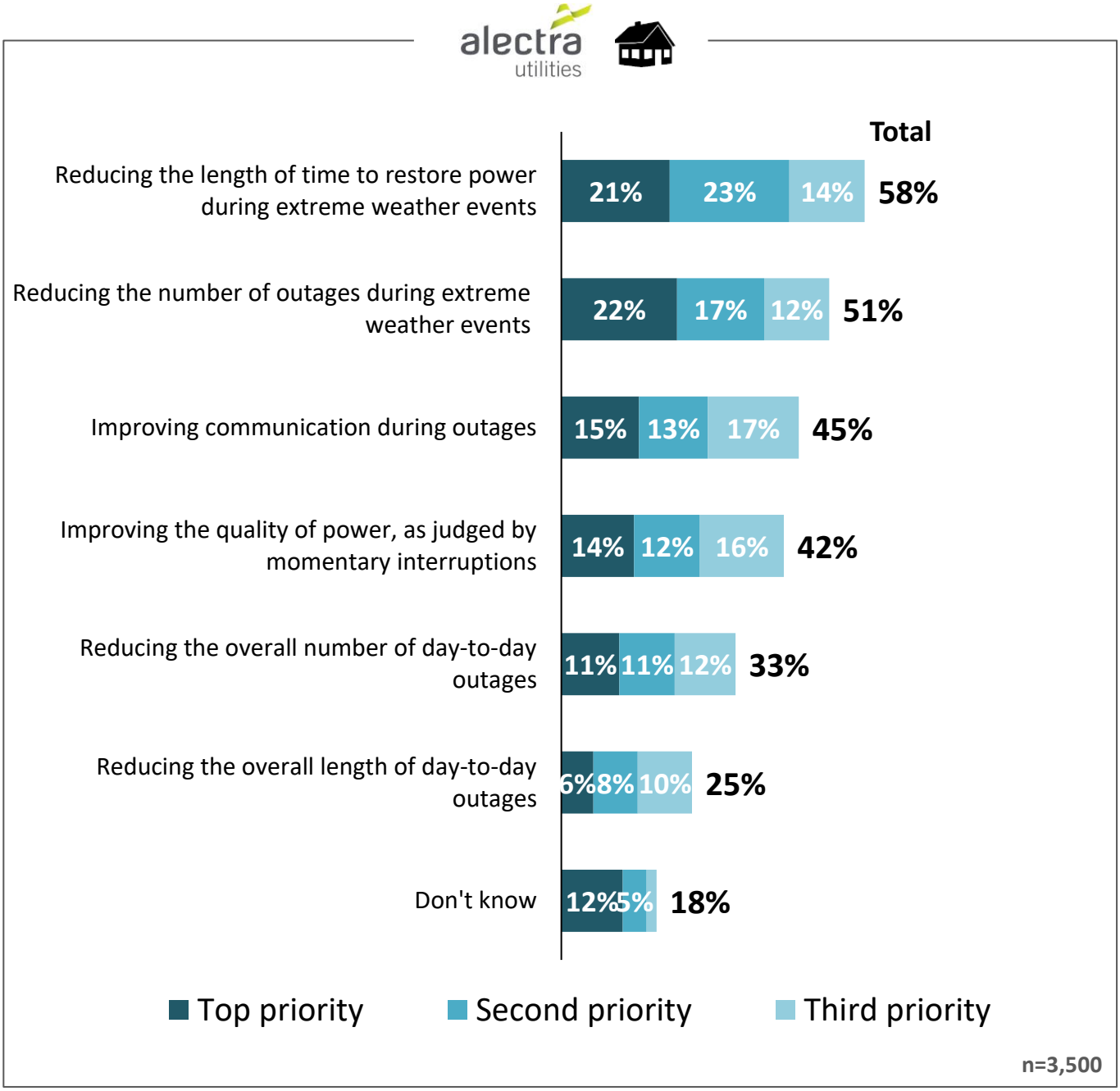
Customer Outcomes

Ranking Reliability Outcomes

Residential

When it comes to reliability, there are different outcomes Alectra Utilities can focus on. They can focus on the number of outages or the length of outages. They can focus on day-to-day reliability or preparedness for extreme weather events. They can focus on power quality or communicating with customers during outages. Different priorities require a different mix of investments.

Q Thinking about your own personal needs at home, please look at the following outcomes and rank the three that matter most to you.



Note: 'No response' not shown. Respondents who say 'Don't know' do not get asked for further priorities. Data labels are removed where 2% or less.

Customer Outcomes

Ranking Reliability Outcomes

Residential

Q Thinking about your own personal needs at home, please look at the following outcomes and rank the three that matter most to you.

	Rate Zone Breakdown					LEAP Qualification		
% Total Top 3 Choice	**ERZ**	**BRZ**	**HRZ**	**PRZ**	**GRZ**	**Yes**	**No <$52K**	**No >$52K**
Reducing the length of time to restore power during extreme weather events	58%	53%	60%	58%	57%	48%	53%	60%
Reducing the number of outages during extreme weather events	50%	47%	50%	54%	47%	43%	45%	54%
Improving communication during outages	45%	46%	50%	42%	40%	40%	42%	47%
Improving the quality of power, as judged by momentary interruptions	47%	41%	42%	39%	47%	39%	44%	41%
Reducing the overall number of day-to-day outages	32%	30%	37%	33%	35%	30%	29%	36%
Reducing the overall length of day-to-day outages	25%	22%	26%	25%	26%	21%	23%	27%

INNOVATIVE RESEARCH GROUP

Residential Customers

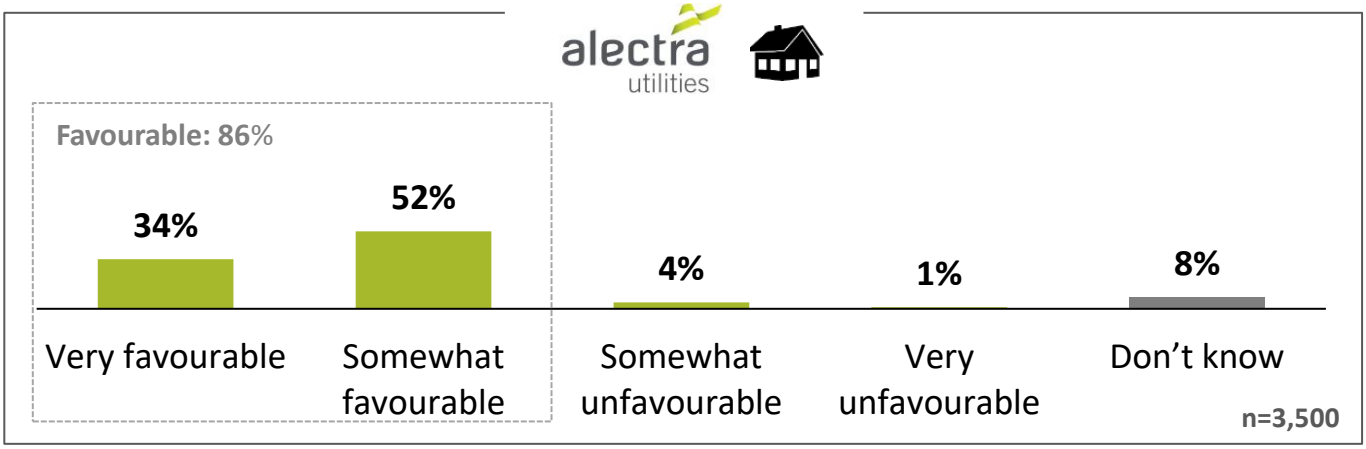
Workbook Diagnostics

Workbook Diagnostics

Workbook Impression

Residential

Q Overall, do you have a favourable or unfavourable impression of the customer engagement you just completed?



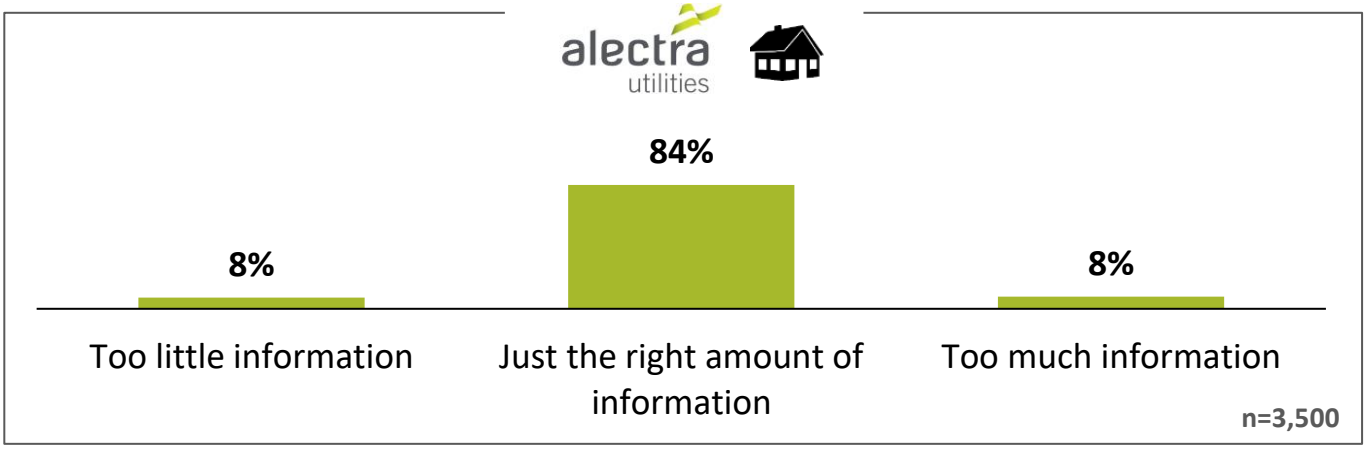
	Rate Zone Breakdown					LEAP Qualification		
	ERZ	BRZ	HRZ	PRZ	GRZ	Yes	No <$52K	No >$52K
Very favourable	33%	40%	34%	31%	35%	34%	34%	36%
Somewhat favourable	52%	46%	53%	55%	50%	48%	51%	54%
Somewhat unfavourable	5%	4%	3%	5%	6%	4%	5%	3%
Very unfavourable	2%	1%	1%	1%	1%	2%	1%	<1%
Don't know	8%	9%	8%	8%	9%	12%	8%	6%
Favourable (Very + Somewhat)	**85%**	**86%**	**87%**	**86%**	**84%**	**81%**	**85%**	**90%**
Unfavourable (Very + Somewhat)	**7%**	**5%**	**5%**	**6%**	**7%**	**7%**	**7%**	**4%**

Workbook Diagnostics

Amount Of Information

Residential

Q In this customer engagement, do you feel that Alectra Utilities provided too much information, not enough, or just the right amount?



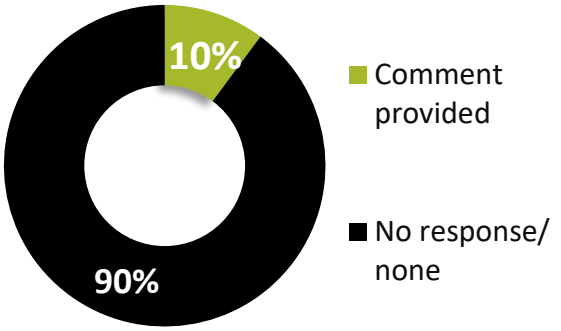
	Rate Zone Breakdown					LEAP Qualification		
	ERZ	BRZ	HRZ	PRZ	GRZ	Yes	No <$52K	No >$52K
Too little information	7%	9%	6%	9%	6%	14%	10%	6%
Just the right amount of information	81%	86%	89%	80%	89%	76%	81%	87%
Too much information	12%	5%	5%	11%	5%	10%	10%	8%

Workbook Diagnostics

Content Missing From Engagement

Residential

Q Was there any content missing that you would have liked to have seen included in this customer engagement? (OPEN)



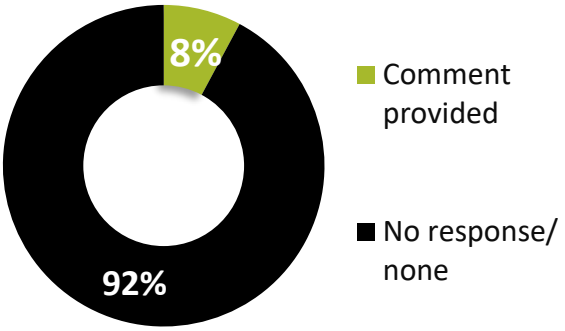
Responses	%
Lower rates	1.7%
Focus on green/renewable energy	1.4%
Comments on format/content	1.4%
More information about rate increases	1.0%
More financial information on Alectra/profit information	1.0%
Information on infrastructure updates	0.6%
Improve billing options/more information on bill	0.5%
Improve customer service/point of contact	0.3%
More information/interest about EVs	0.3%
Outage information	0.3%
Better website/online tools	0.3%
Specific neighborhood breakdowns	0.2%
Other	1.2%
No response/none	89.8%

Workbook Diagnostics

Outstanding Questions

Residential

Q Is there anything that you would still like answered?



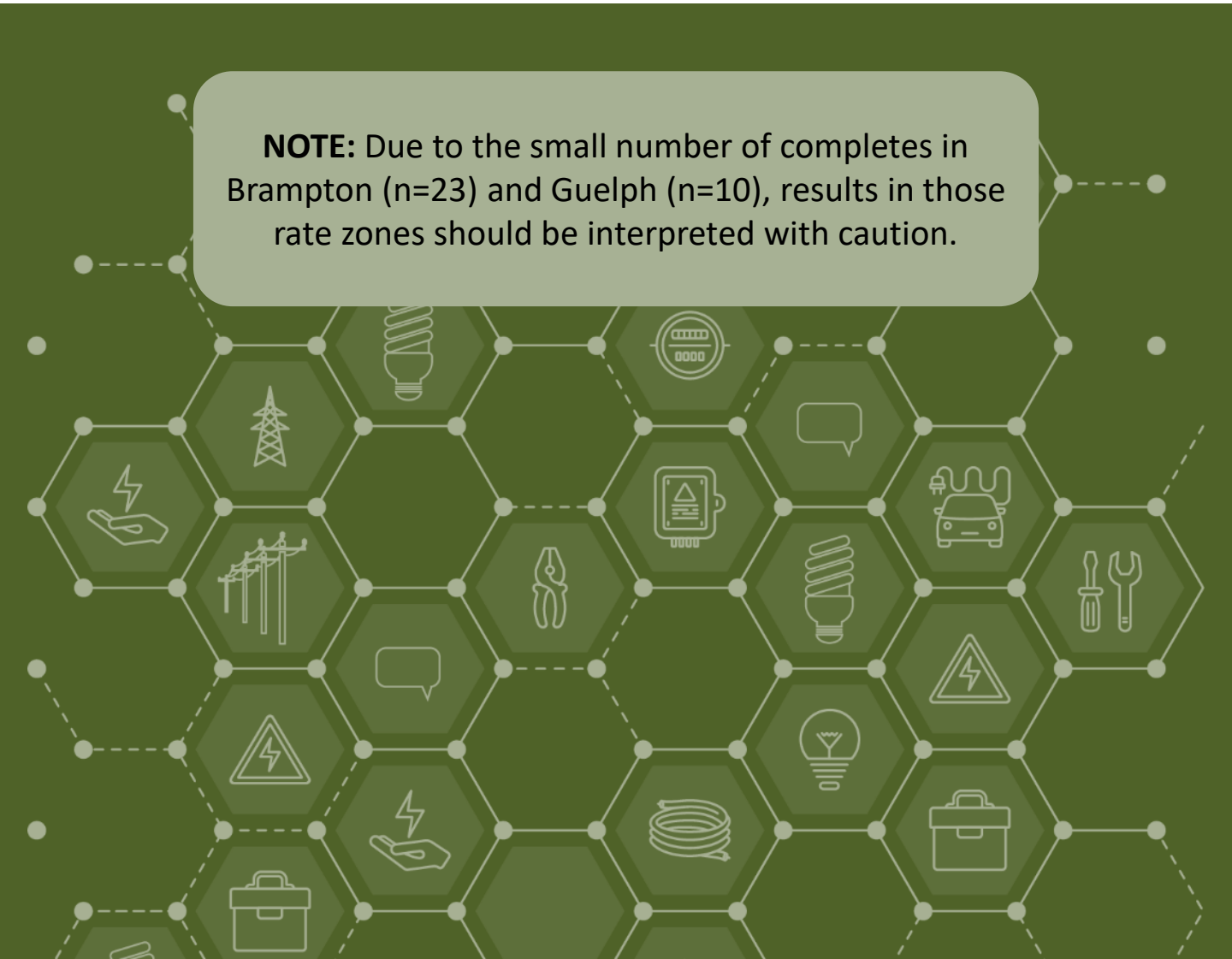
Responses	%
Lower rates/costs	2.5%
Green/renewable energy technology	1.1%
Improve billing/breakdown information on bill	0.6%
More information on survey and results	0.5%
Update infrastructure	0.5%
Change/update time-of-use	0.4%
Alectra's approach towards EVs	0.4%
More/better outage information	0.2%
More financial information on Alectra/profit information	0.1%
Improve phone services	0.1%
Improve online tools	0.1%
Other	1.5%
No response/none	92.2%

INNOVATIVE RESEARCH GROUP

Small Business Customers

Online Workbook Results

NOTE: Due to the small number of completes in Brampton (n=23) and Guelph (n=10), results in those rate zones should be interpreted with caution.



About this Customer Engagement

Small Business

Welcome to Alectra Utilities' future planning survey!

Alectra Utilities' planners need to know what matters to you. Alectra Utilities is preparing to update its long term investment plan. This plan will determine the investments Alectra Utilities makes in equipment and infrastructure, the services it provides, and the rates you pay.

Today Alectra Utilities needs to ask you about three things:

1. **Your experience with Alectra Utilities and how they can do better**.
2. **What outcomes matter most to your organization.**
3. **[ERZ/PRZ ONLY:] A reliability issue Alectra Utilities feels is important to address before the next update of its long term plan.***

This survey will take approximately 15 minutes to complete and can be done so at your convenience. Once you begin, your progress will be saved, and you can return to the customer engagement at any time.

All individual responses will be kept confidential. Innovative Research Group (INNOVATIVE), an independent research company, has been hired to gather your feedback. Click on the link at the bottom of the page to learn more about INNOVATIVE's privacy policy.

In appreciation for your time, Alectra Utilities will add another $20 charitable donation to one of the local charities supported by the AlectraCARES Community Support Program. The more customers like you who complete this survey, the greater the donation pool. The contributions will be allocated based on your preferences in the final question.

If you are reading this on a smaller mobile device, you may want to consider accessing the survey from a tablet, desktop computer or laptop instead so that it is easier for you to read.

To complete each page, please scroll to the bottom, completing any questions as you come to them, and click "next" to move to the next page.

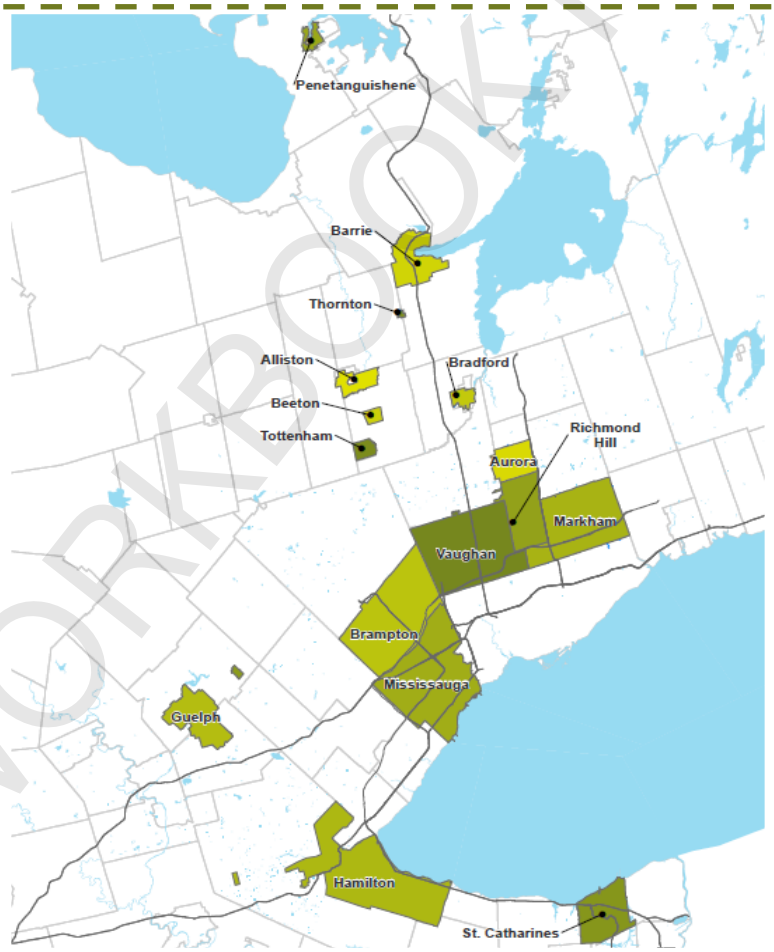
** The results of this series of questions are detailed in a separate "ICM" report.*

Who is Alectra Utilities?

Who is Alectra Utilities?

Alectra Utilities Corporation serves approximately one million homes and businesses across a 1,900 square kilometre service territory, comprising 17 communities including Alliston, Aurora, Barrie, Beeton, Brampton, Bradford West Gwillimbury, Guelph, Hamilton, Markham, Mississauga, Penetanguishene, Richmond Hill, Rockwood, St. Catharines, Thornton, Tottenham and Vaughan. Alectra Utilities is the union of five leading Ontario utilities – Enersource, Horizon Utilities, Brampton Hydro, PowerStream and Guelph Hydro.

Guelph Hydro Electric Systems Inc. | hydro one Brampton | horizon UTILITIES Looking beyond | enersource | PowerStream = alectra utilities



Alectra Utilities provides services to customers in all of these areas. However, customer rates are based on the cost of serving only the area(s) in which your organization operates.

Electricity 101

How are electricity distribution rates set in Ontario?

The electricity industry in Ontario is regulated by the Ontario Energy Board (OEB). The OEB sets electricity rates in Ontario.

- Electricity distributors are funded by the distribution rates paid by their customers. Periodically, distributors are required to file rate applications with the OEB to justify the amount of funding they need to safely and reliably distribute electricity to their customers.
- The OEB requires electricity distributors, such as Alectra Utilities, to consider customers' needs, outcomes and preferences as it develops its business plan and distribution system plan, as well as make spending and investment decisions.
- Customers will have at least three opportunities to provide input into Alectra Utilities' long term planning process:

1. Provide Input
Provide initial input to planners through this workbook on their needs and priorities. Planners will consider these views as they develop their initial update to Alectra Utilities' plans. This is the primary way the views collected in this workbook will be used.

2. Provide Feedback
Provide feedback on Alectra Utilities' draft plan when it is developed.

3. Formal Hearing
Participate in the formal hearing process of the OEB as it reviews Alectra Utilities' plan.

- Alectra Utilities will also consider the views of customers received through regular customer contact and conduct research on specific topics as needed.
- In addition, if a need emerges between major planning cycles, the OEB permits utilities to make a specific application for additional funding for a rate increase. **[ONLY IF ERZ OR PRZ:]** In this community, Alectra Utilities has identified a need for additional funding to deal with growing reliability issues related to underground cables. Later in this workbook, you will be asked for your views on this issue. *

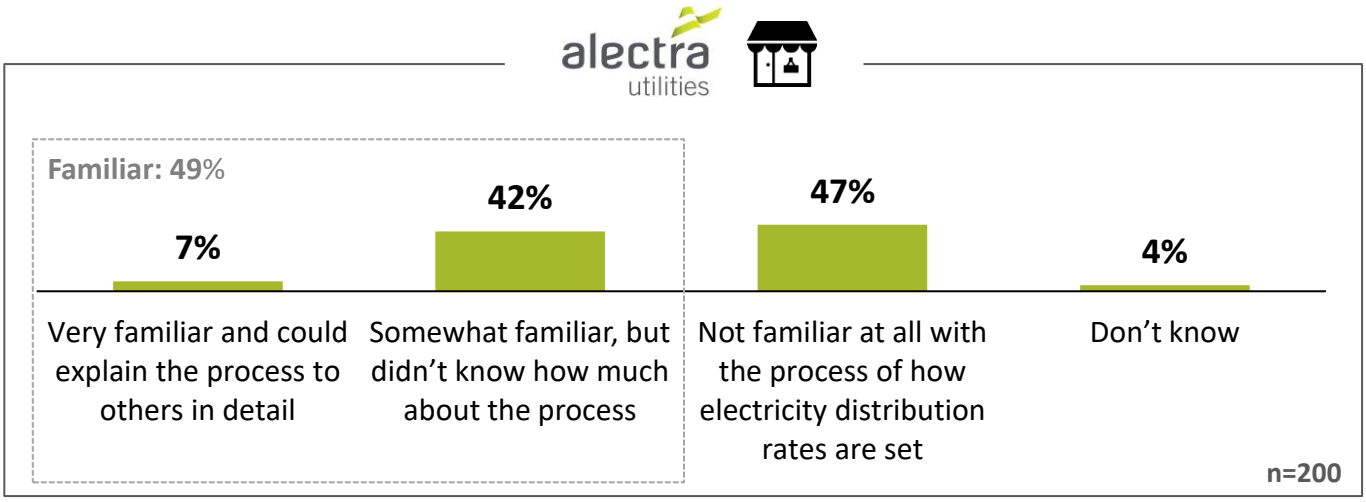
** The results of this series of questions are detailed in a separate "ICM" report.*

Electricity 101

Small Business

Familiarity With Ontario's Electricity Distribution Rates

Q Before this survey, how familiar were you with how electricity distribution rates are set in Ontario?



Rate Zone Breakdown

	ERZ	BRZ	HRZ	PRZ	GRZ
Very familiar	7%	-	13%	4%	16%
Somewhat familiar	39%	50%	45%	39%	49%
Not familiar at all	51%	44%	42%	49%	35%
Don't know	3%	6%	-	8%	-
Familiar (Very + Somewhat)	**46%**	**50%**	**58%**	**43%**	**65%**

Electricity 101

Small Business

What Is Alectra Utilities' Role In Ontario's Electricity System?

What is Alectra Utilities' role in Ontario's electricity system?

Ontario's electricity system is owned and operated by public, private and municipal corporations across the province. It is made up of three key components: **generation**, **transmission** and **distribution**.

Generation

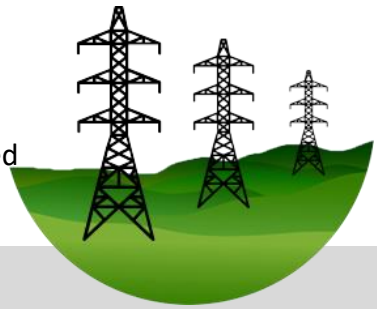
Where electricity comes from

Ontario gets its electricity from a mix of energy sources. About half comes from nuclear power. The remainder comes from a mix of hydroelectric, natural gas, wind and solar.

Transmission

How electricity travels across Ontario

Once electricity is generated, it must be transported to urban and rural areas across the province. This happens by way of high voltage transmission lines that serve as highways for electricity. The province has more than 30,000 kilometres of transmission lines, most of which is owned and operated by Hydro One.

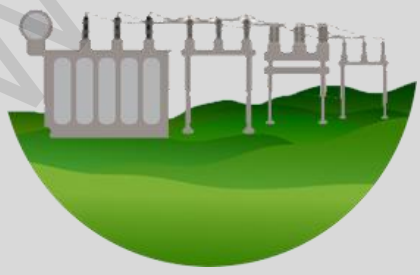


Local Distribution

How electricity is delivered to the end-consumer

Alectra Utilities is responsible for the last step of the journey: distributing electricity to customers through its distribution system.

- Alectra Utilities manages all aspects of the electricity distribution business throughout 17 communities in Ontario and is regulated by the Ontario Energy Board (OEB).
- Across Alectra Utilities' service territory, there are 16,400 km of overhead powerlines and 22,140 km of primary underground cable.
- Alectra Utilities is entirely funded through the rates its customers pay and does <u>not</u> receive taxpayer money to fund its operations or its investments in the distribution system.

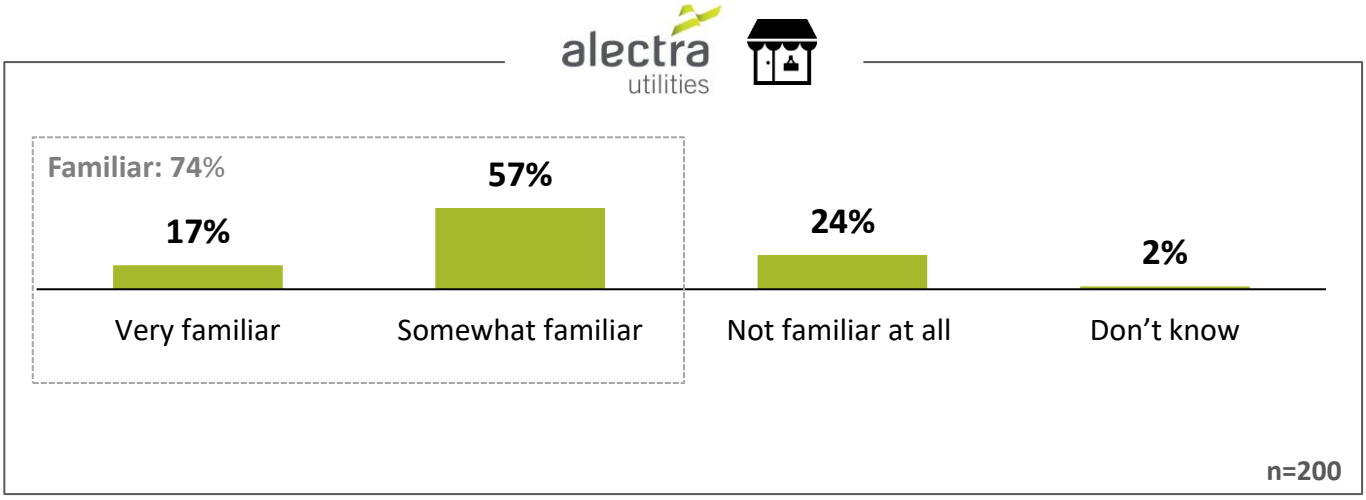


Electricity 101

Familiarity With Alectra Utilities

Small Business

Q How familiar are you with Alectra Utilities, which operates the electricity distribution system in your community?



Rate Zone Breakdown

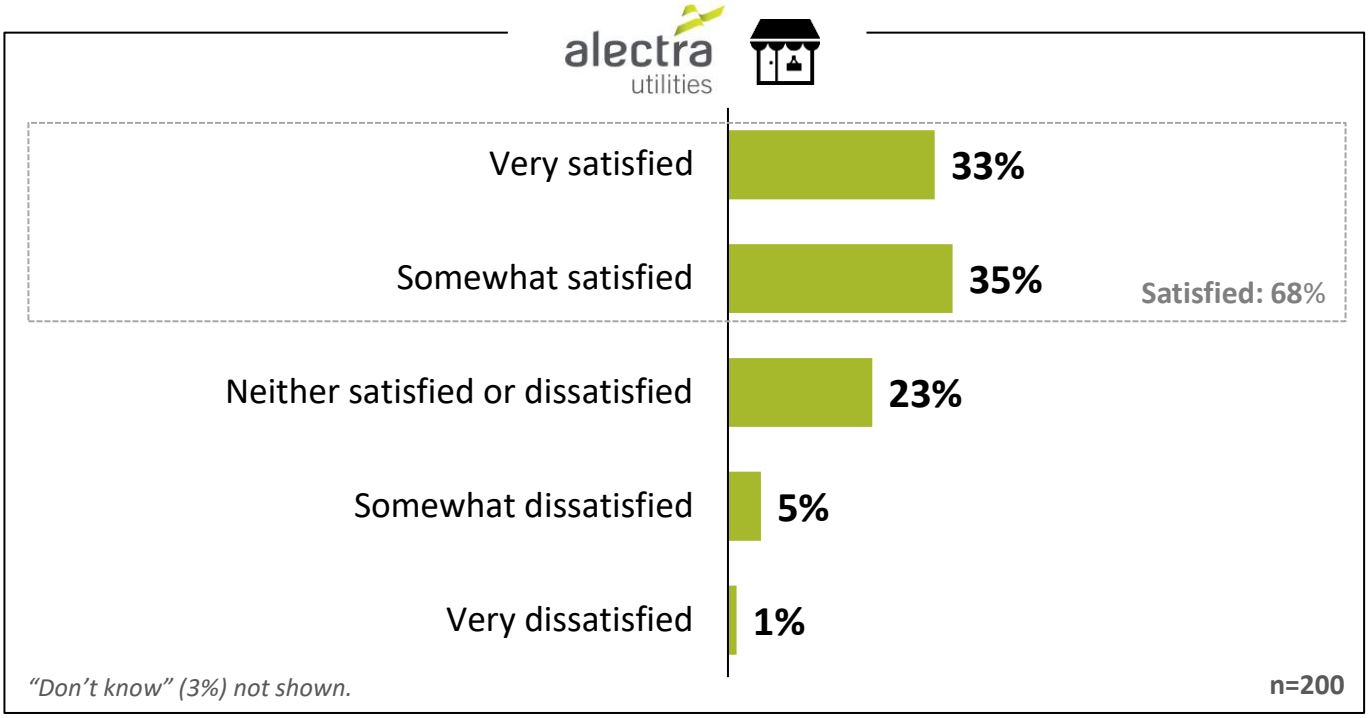
	ERZ	BRZ	HRZ	PRZ	GRZ
Very familiar	16%	10%	21%	17%	11%
Somewhat familiar	50%	76%	64%	50%	61%
Not familiar at all	33%	14%	14%	27%	27%
Don't know	-	-	-	5%	-
Familiar (Very + Somewhat)	**67%**	**86%**	**86%**	**67%**	**73%**

Electricity 101

Satisfaction With Alectra Utilities' Services

Small Business

Q Generally, how satisfied or dissatisfied are you with the services your organization receives from Alectra Utilities?



Rate Zone Breakdown

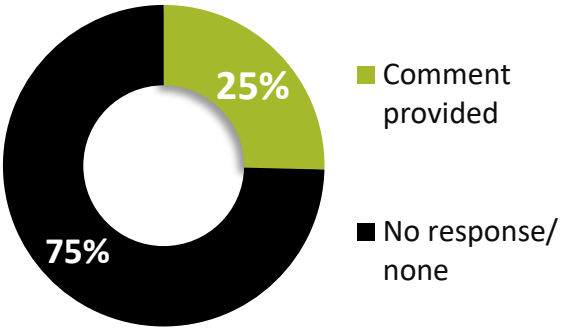
	ERZ	BRZ	HRZ	PRZ	GRZ
Very satisfied	34%	33%	36%	29%	41%
Somewhat satisfied	35%	44%	28%	37%	41%
Neither satisfied nor dissatisfied	26%	21%	22%	24%	11%
Somewhat dissatisfied	4%	3%	10%	4%	-
Very dissatisfied	-	-	1%	2%	7%
Don't know	2%	-	4%	4%	-
Satisfied (Very + Somewhat)	**69%**	**76%**	**63%**	**66%**	**81%**
Dissatisfied (Very + Somewhat)	**4%**	**3%**	**12%**	**6%**	**7%**

Electricity 101

How Alectra Utilities Can Improve Services To Customers

Small Business

Q Is there anything in particular you would like Alectra Utilities to do to improve its services to your organization? [OPEN]



Responses	%
Lower rates	8.1%
Improve billing/more information on bills	4.5%
Better phone communication/customer service	4.1%
More/improve outage information	2.4%
Improve service consistency/fewer outages	1.2%
Focus on renewable/green energy/more information on renewables	1.0%
Information on infrastructure updates/infrastructure investment	1.0%
Positive - general	0.9%
More information/education on energy saving measures	0.8%
Offer installation for EVs/prepare infrastructure for future EV demand	0.4%
Improve online tools/mobile app	0.3%
Other	0.9%
No response/none	74.6%

Customer Outcomes

Customer Service

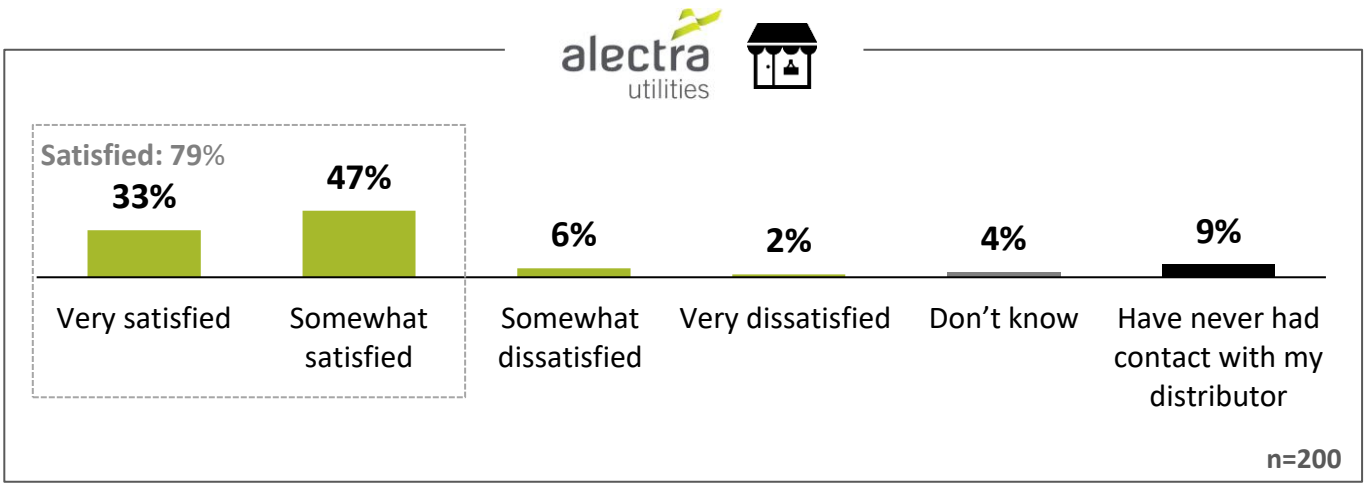
There are many ways that customers interact with Alectra Utilities. The diagram below is based on a review of previous customer feedback and intended to help you recall various ways you may have interacted with Alectra Utilities. Please review and then answer the questions below to help Alectra Utilities ensure they have fully captured customer needs.

Customer Outcomes

Small Business

Satisfaction With Alectra Utilities' Customer Service

Q Thinking about all the contacts your organization may have had with Alectra Utilities since becoming a customer, how satisfied are you with the customer service you have received from Alectra Utilities?



Rate Zone Breakdown

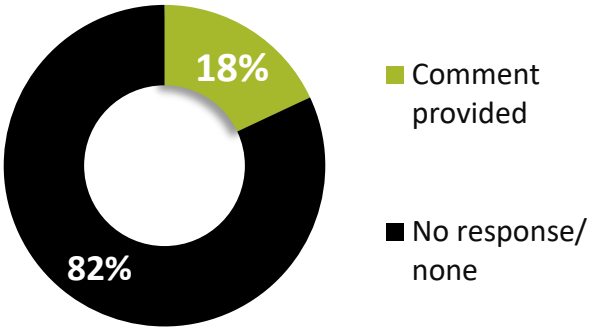
	ERZ	BRZ	HRZ	PRZ	GRZ
Very satisfied	33%	35%	38%	30%	26%
Somewhat satisfied	41%	50%	41%	51%	51%
Somewhat dissatisfied	5%	4%	11%	5%	3%
Very dissatisfied		-	2%	3%	4%
Don't know	9%	-	2%	3%	-
Have never had contact	13%	11%	5%	7%	16%
Satisfied (Very + Somewhat)	**74%**	**85%**	**80%**	**81%**	**77%**
Dissatisfied (Very + Somewhat)	**5%**	**4%**	**13%**	**9%**	**7%**

Customer Outcomes

Small Business

How Alectra Utilities Can Do A Better Job Meeting Needs

Q Thinking about all the contacts your organization may have had with Alectra Utilities, do you have any specific suggestions about how Alectra Utilities could do a better job of meeting your needs?



Responses	%
Improve communication/customer service	4.3%
Positive - general	2.9%
Improve phone service	2.8%
Better/improve billing	2.0%
Lower rates	1.4%
Mobile app/online tools/live customer service chat	1.3%
Outage reporting/notify about neighborhood work	1.2%
Has not had contact	0.5%
Improve infrastructure	0.3%
Reduce outages/improve service consistency	0.2%
Other	1.1%
No response/none	82.0%

Rates 101

Small Business

How Much Of My Electricity Bill Goes To Alectra Utilities?

Rates 101

How much of my electricity bill goes to Alectra Utilities?

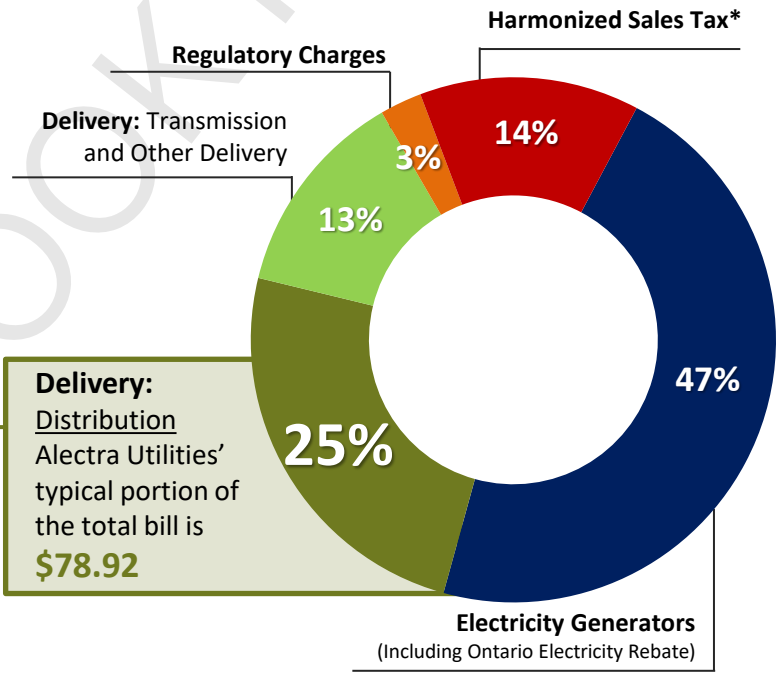
- Every item and charge on your bill is mandated by the provincial government or regulated by the Ontario Energy Board (OEB), the provincial energy regulator.
- While **Alectra Utilities** is responsible for collecting payment for the entire electricity bill – as well as water charges for many of its communities – Alectra Utilities retains only a portion of the electricity delivery charge. The electricity delivery charge also includes Hydro One transmission costs and system losses.
- Distribution makes up about 25% of the typical small business customer's bill.
- The rest of your bill is passed onto provincial transmission companies, power generation companies, the provincial government and regulatory agencies.

Alectra Utilities Sample Monthly Bill
(Based on monthly usage of 2,000 kWh)

Account Number:
000 000 000 000 0000

Meter Number:
00000000

Your Electricity Charges	
Electricity	
Off-Peak @ 8.2 ¢/kWh	104.96
Mid-Peak @ 11.3 ¢/kWh	40.68
On-Peak @ 17 ¢/kWh	61.20
Delivery	120.34
Regulatory Charges	8.33
Total Electricity Charges	**$335.51**
HST	43.62
Ontario Electricity Rebate	**($57.04)**
Total Amount	**$322.09**



Note: Graph may not total 100% due to rounding.

* HST is calculated before applying the Ontario Electricity Rebate and is therefore above 13%.

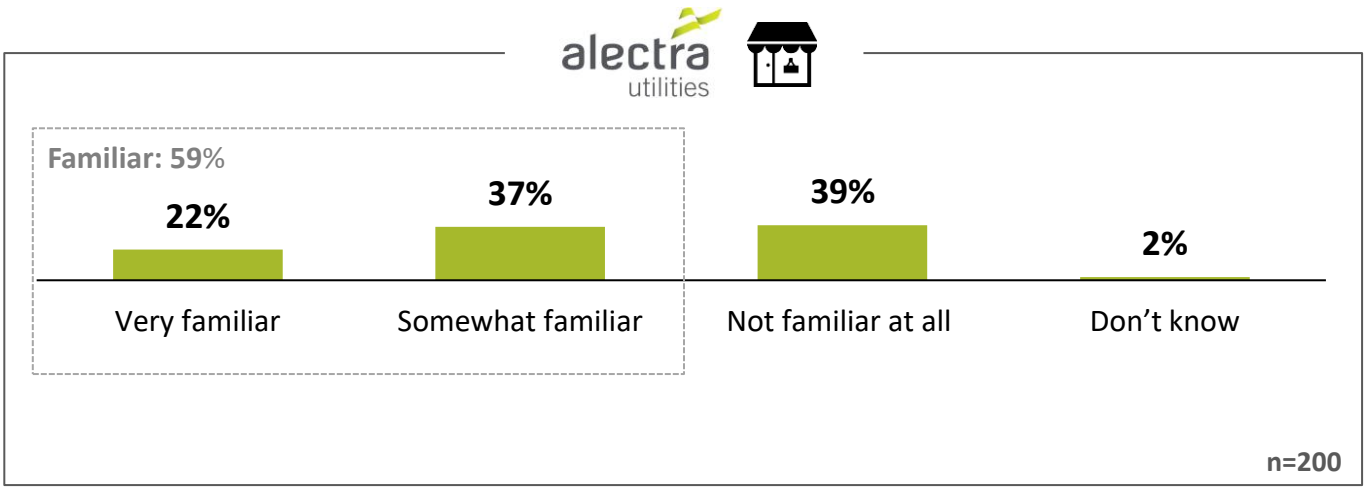
Note: Sample bills were customized for each rate zone and rate class. The above represents a sample small business bill in the Enersource rate zone.

Rates 101

Small Business

Familiarity With Percentage Of Bill Remitted To Alectra Utilities

Q Before this survey, how familiar were you with the amount of your organization's electricity bill that went to Alectra Utilities?



Rate Zone Breakdown

	ERZ	BRZ	HRZ	PRZ	GRZ
Very familiar	19%	25%	22%	23%	8%
Somewhat familiar	35%	52%	31%	38%	44%
Not familiar at all	46%	20%	43%	36%	45%
Don't know	-	3%	3%	3%	3%
Familiar (Very + Somewhat)	**54%**	**77%**	**53%**	**61%**	**52%**

Customer Outcomes

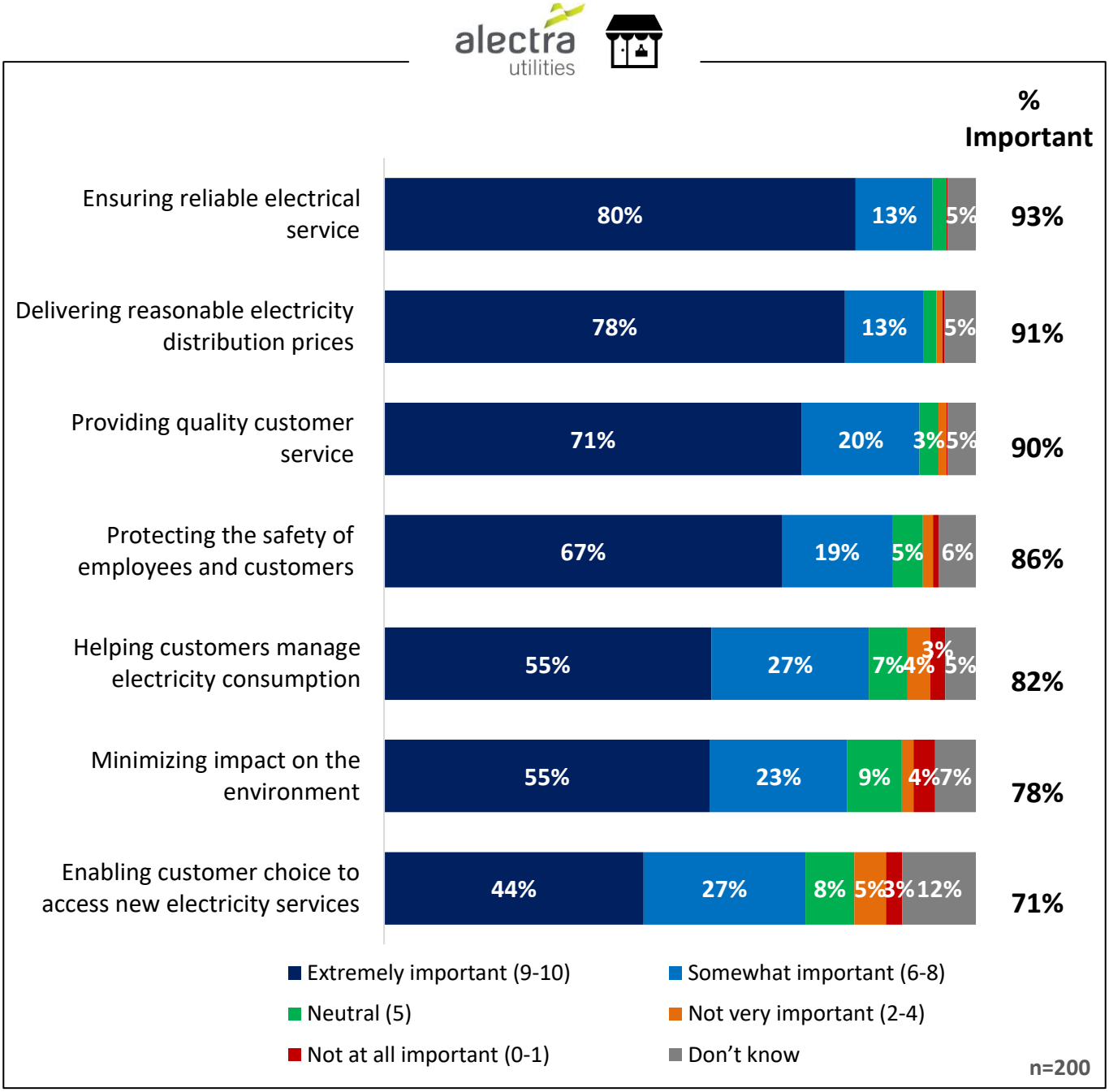
Importance Of Potential Alectra Utilities' Priorities

Small Business

Now let's talk about outcomes. Alectra Utilities talks to customers to better understand how it should set spending priorities with the money customers pay for service.

In recent conversations with customers, a number of possible goals were identified as potential priorities for Alectra Utilities. Below you will find a list of these potential priorities.

Q How important are each of these potential Alectra Utilities priorities to your organization as a customer?



NOTE: Data labels are removed where 2% or less.

Customer Outcomes

Small Business

Importance Of Potential Alectra Utilities' Priorities

Q How important are each of these potential Alectra Utilities priorities to your organization as a customer?

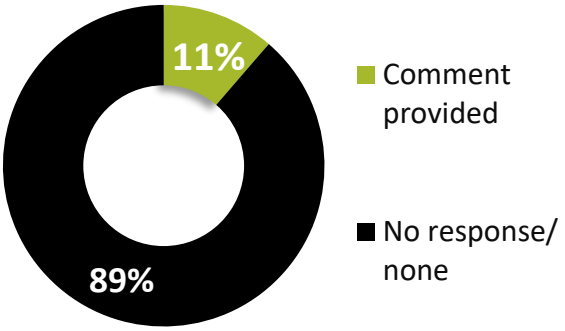
Average Score	Rate Zone Breakdown				
	ERZ	BRZ	HRZ	PRZ	GRZ
Ensuring reliable electrical service	9.5	9.4	9.4	9.3	9.0
Delivering reasonable electricity distribution prices	9.2	9.4	9.2	9.4	8.6
Providing quality customer service	9.2	8.7	9.3	8.9	8.2
Protecting the safety of employees and customers	9.2	8.7	8.7	9.0	8.6
Helping customers manage electricity consumption	8.3	8.4	8.3	8.4	7.6
Minimizing impact on the environment	8.0	8.2	8.1	8.2	8.5
Enabling customer choice to access new electricity services	7.7	7.8	7.9	7.8	8.2

Customer Outcomes

Small Business

Other Important Priorities Alectra Utilities Should Focus On

Q Are there any other important priorities that Alectra Utilities should be focusing on that weren't included in the list above? [OPEN]



Responses	%
Lower rates/reduce costs/find alternative income source	4.5%
All the above	1.2%
More education/information on energy saving/cost saving	1.1%
Focus on sustainability/reduction/green technology	1.0%
Improve customer service/incentive programs	1.0%
Electric vehicle charging stations/prepare infrastructure for more EVs	0.8%
Consistency of service	0.5%
Improve online tools/web billing	0.4%
Other	0.8%
No response/none	88.7%

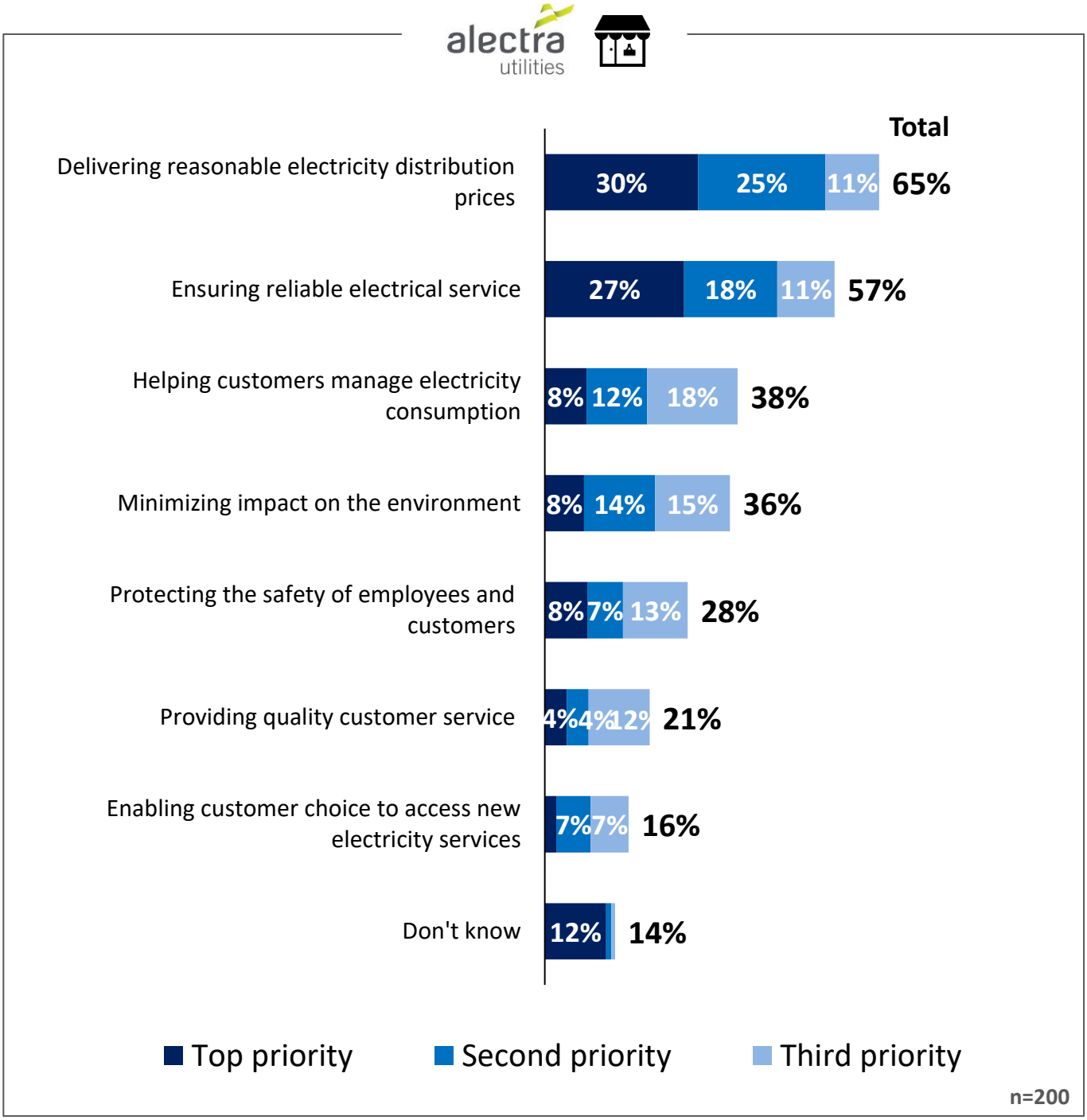
Customer Outcomes

Ranking Alectra Utilities' Priorities

Small Business

Sometimes Alectra Utilities has to choose between goals that have a similar level of priority. When that happens, planners need to understand what matters most to your organization.

Q Thinking again about the things Alectra Utilities should be focusing on, please rank your top 3 priorities.



Note: 'No response' not shown. Respondents who say 'Don't know' do not get asked for further priorities.
Data labels are removed where 2% or less.

Customer Outcomes

Ranking Alectra Utilities' Priorities

Small Business

Q Thinking again about the things Alectra Utilities should be focusing on, please rank your top 3 priorities.

	Rate Zone Breakdown				
% Total Top 3 Choice	**ERZ**	**BRZ**	**HRZ**	**PRZ**	**GRZ**
Delivering reasonable electricity distribution prices	66%	67%	58%	67%	83%
Ensuring reliable electrical service	65%	56%	60%	49%	70%
Helping customers manage electricity consumption	29%	39%	36%	44%	33%
Minimizing impact on the environment	24%	46%	41%	35%	54%
Protecting the safety of employees and customers	33%	32%	30%	25%	6%
Providing quality customer service	28%	15%	23%	16%	25%
Enabling customer choice to access new electricity services	7%	22%	16%	19%	28%

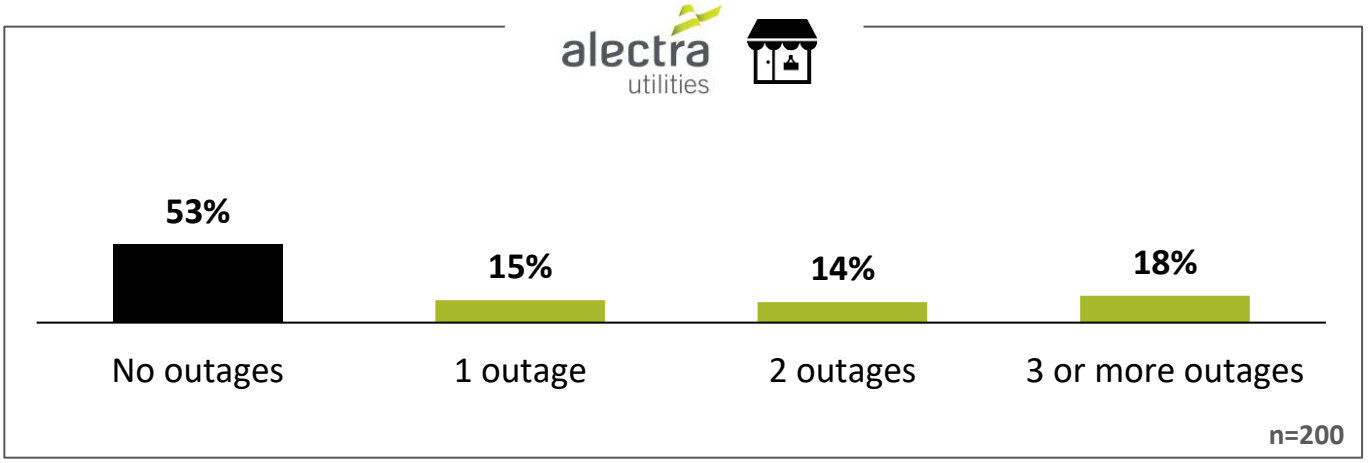
Customer Outcomes

Number of Outages Experienced

Small Business

Now let's focus a little deeper on reliability.

Q Have you experienced any power outages at your organization in the past 12 months which lasted longer than one minute? If so, approximately how many power outages did you experience?



Rate Zone Breakdown

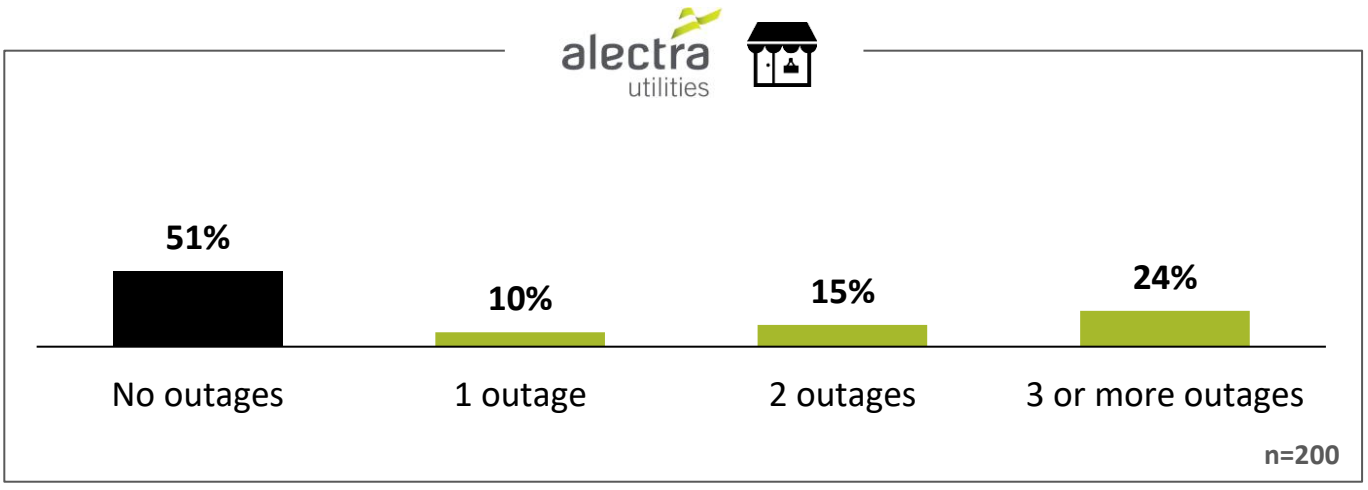
	ERZ	BRZ	HRZ	PRZ	GRZ
No outages	54%	45%	40%	62%	55%
1 outage	16%	13%	13%	16%	15%
2 outages	17%	20%	14%	9%	21%
3 or more outages	13%	22%	33%	13%	9%

Customer Outcomes

Number of Momentary Outages Experienced

Small Business

Q Have you experienced any momentary outages of less than a minute and/or power quality issues (such as voltage surges and sags) at your organization in the past 12 months? If so, approximately how many momentary outages and/or power quality issues did you experience?



Rate Zone Breakdown

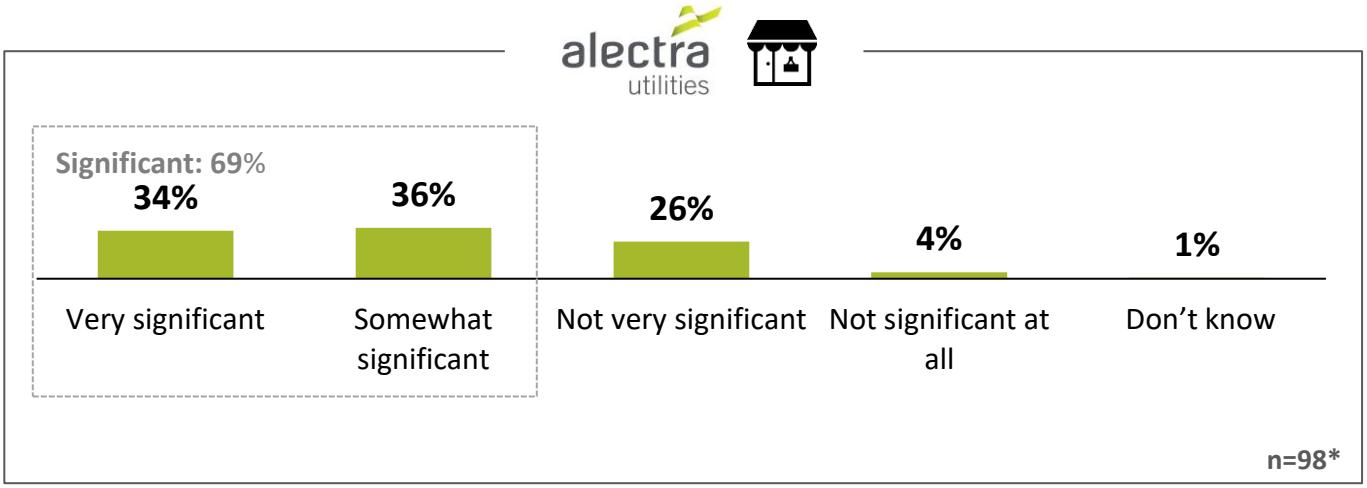
	ERZ	BRZ	HRZ	PRZ	GRZ
No outages	51%	49%	42%	59%	39%
1 outage	13%	9%	8%	10%	4%
2 outages	16%	10%	19%	14%	10%
3 or more outages	20%	32%	31%	18%	47%

Customer Outcomes

Impact of Momentary Outages

Small Business

Q How significant are these momentary disruptions in your organization?



*** Note**: Impact of outages asked only of those who have experienced at least one momentary outage.

Rate Zone Breakdown

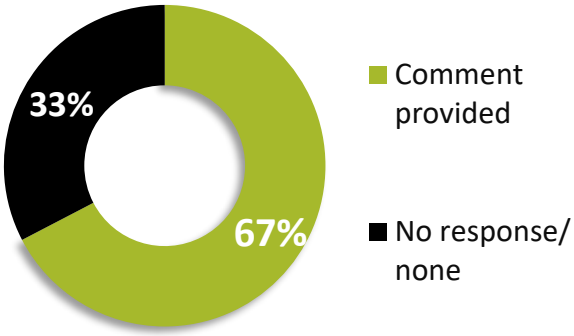
	ERZ	BRZ	HRZ	PRZ	GRZ
Very significant	40%	43%	36%	29%	12%
Somewhat significant	27%	52%	33%	38%	36%
Not very significant	27%	-	30%	29%	36%
Not significant at all	3%	5%	2%	4%	17%
Don't know	3%	-	-	-	-
Significant (Very + Somewhat)	**67%**	**95%**	**68%**	**66%**	**47%**
Not Significant (Very + Somewhat)	**30%**	**5%**	**32%**	**34%**	**53%**

Customer Outcomes

Impacts Of Momentary Disruptions

Small Business

Q Please tell us what sort of impacts these momentary disruptions have on your business. [OPEN]



Responses	%
Technology unavailable/Point of Sale systems down	29.9%
Caused equipment malfunction/loss	11.7%
Production halted/unable to conduct business	8.6%
Minor inconvenience	7.5%
Requires the use of backup power	3.7%
Financial impact	2.5%
Safety concerns	1.3%
Other	2.1%
No response/none	32.6%

Note: Only asked of those who were impacted by momentary outages (n=98)

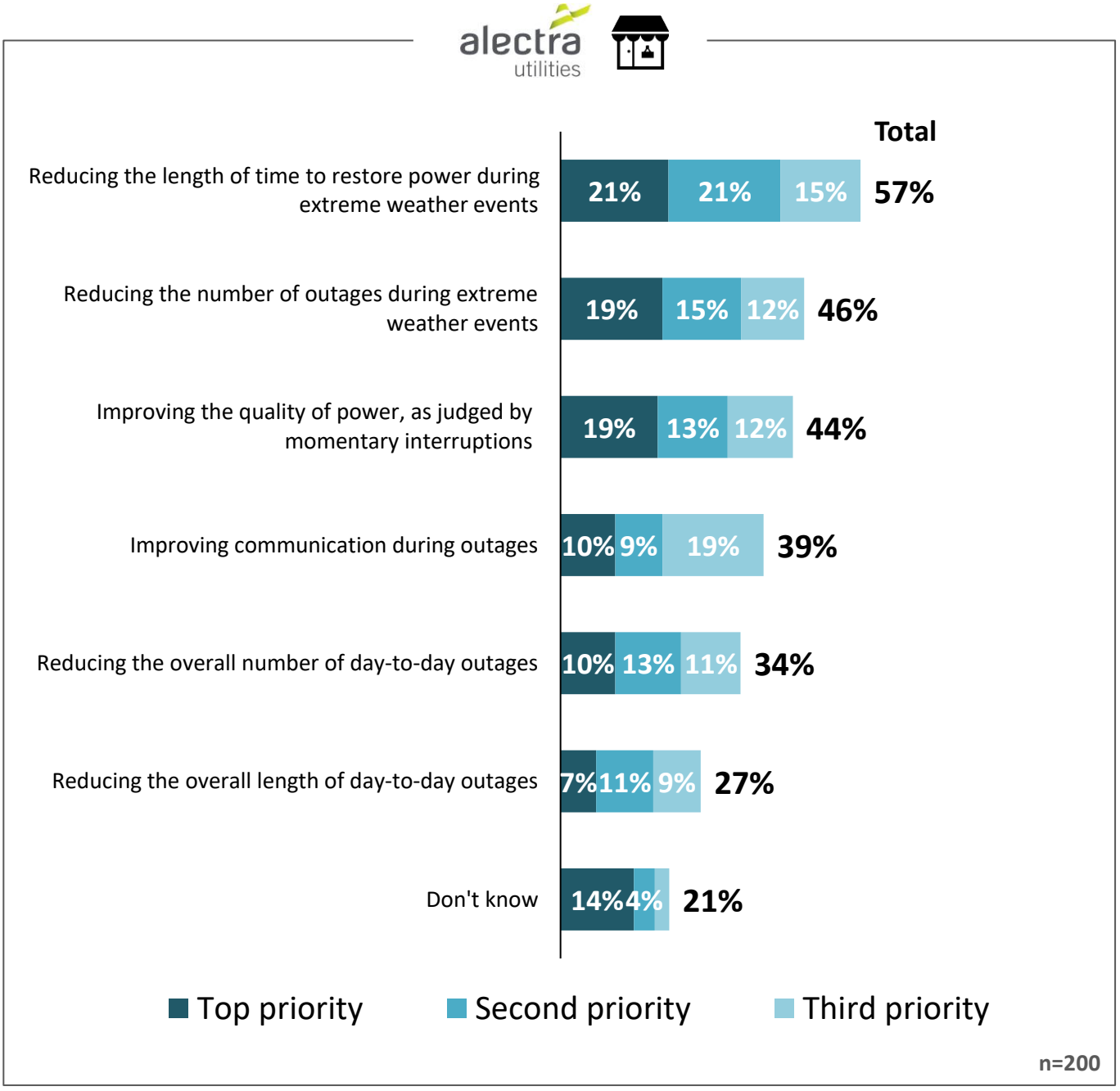
Customer Outcomes

Ranking Reliability Outcomes

Small Business

When it comes to reliability, there are different outcomes Alectra Utilities can focus on. They can focus on the number of outages or the length of outages. They can focus on day-to-day reliability or preparedness for extreme weather events. They can focus on power quality or communicating with customers during outages. Different priorities require a different mix of investments.

Q Thinking about your organization's needs, please look at the following outcomes and rank the three that matter most.



Note: 'No response' not shown. Respondents who say 'Don't know' do not get asked for further priorities. Data labels are removed where 2% or less.

Customer Outcomes

Ranking Reliability Outcomes

Small Business

Q Thinking about your organization's needs, please look at the following outcomes and rank the three that matter most.

	Rate Zone Breakdown				
% Total Top 3 Choice	**ERZ**	**BRZ**	**HRZ**	**PRZ**	**GRZ**
Reducing the length of time to restore power during extreme weather events	53%	67%	54%	56%	74%
Reducing the number of outages during extreme weather events	42%	42%	42%	49%	73%
Improving the quality of power, as judged by momentary interruptions	38%	64%	45%	41%	48%
Improving communication during outages	37%	44%	39%	38%	36%
Reducing the overall number of day-to-day outages	36%	28%	39%	32%	41%
Reducing the overall length of day-to-day outages	32%	29%	32%	20%	22%

INNOVATIVE RESEARCH GROUP

Small Business Customers

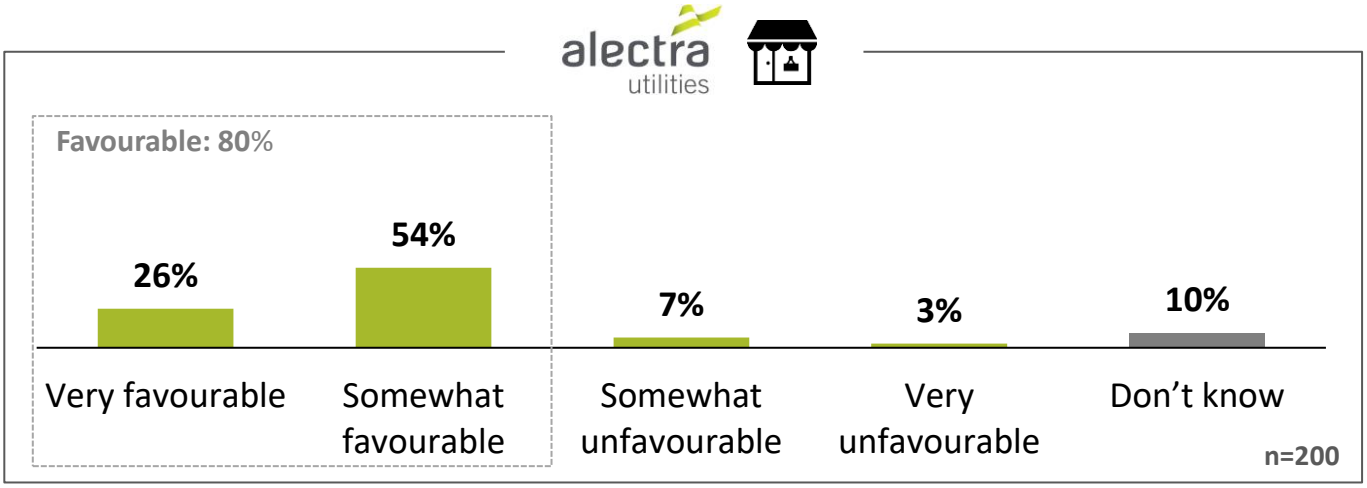
Workbook Diagnostics

Workbook Diagnostics

Workbook Impression

Small Business

Q Overall, do you have a favourable or unfavourable impression of the customer engagement you just completed?



Rate Zone Breakdown

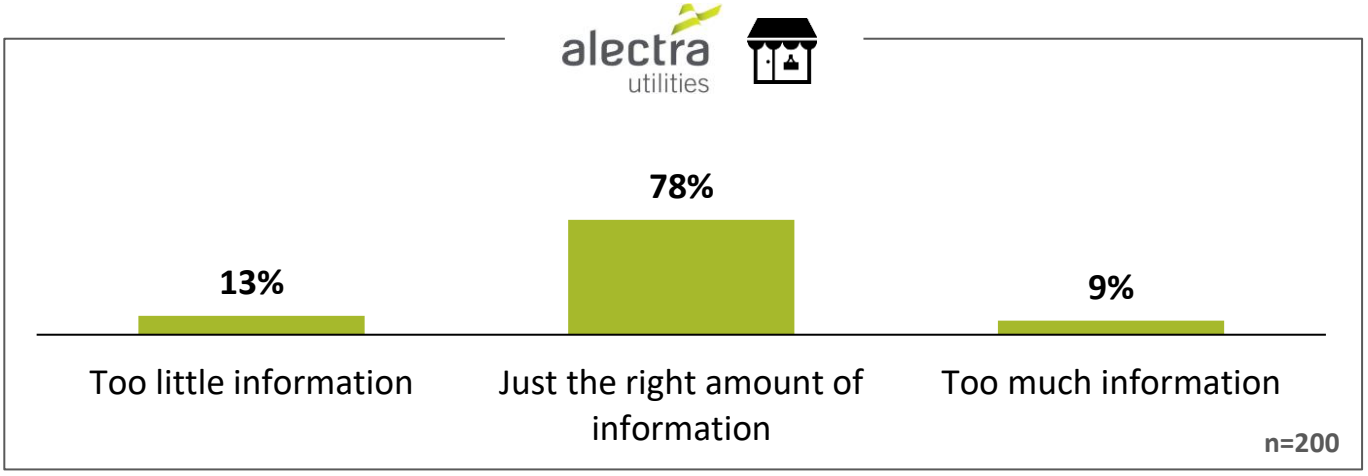
	ERZ	BRZ	HRZ	PRZ	GRZ
Very favourable	28%	38%	32%	19%	28%
Somewhat favourable	43%	48%	50%	63%	65%
Somewhat unfavourable	9%	-	5%	9%	3%
Very unfavourable	5%	3%	6%	1%	-
Don't know	16%	12%	7%	8%	4%
Favourable (Very + Somewhat)	**71%**	**85%**	**83%**	**82%**	**93%**
Unfavourable (Very + Somewhat)	**13%**	**3%**	**11%**	**10%**	**3%**

Workbook Diagnostics

Amount Of Information

Small Business

Q In this customer engagement, do you feel that Alectra Utilities provided too much information, not enough, or just the right amount?



Rate Zone Breakdown

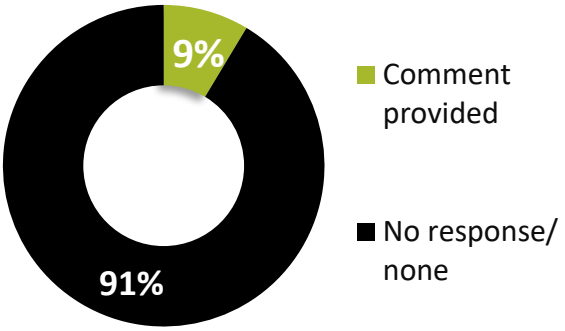
	ERZ	BRZ	HRZ	PRZ	GRZ
Too little information	15%	6%	22%	10%	3%
Just the right amount of information	71%	91%	73%	79%	90%
Too much information	14%	3%	5%	12%	7%

Workbook Diagnostics

Content Missing From Engagement

Small Business

Q Was there any content missing that you would have liked to have seen included in this customer engagement? (OPEN)



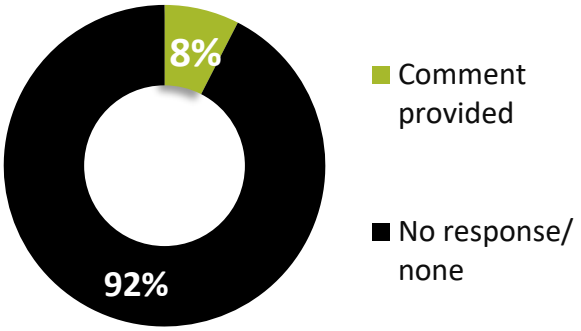
Responses	%
More information about rate increases	1.3%
More financial information on Alectra/profit information	1.2%
Specific neighborhood breakdowns	0.7%
Comments on format/content	0.7%
Improve billing options/more information on bill	0.5%
Improve customer service/point of contact	0.4%
Lower rates	0.4%
Focus on green/renewable energy	0.4%
More information/interest about EVs	0.3%
Better website/online tools	0.3%
Other	2.5%
No response/none	91.4%

Workbook Diagnostics

Outstanding Questions

Small Business

Q Is there anything that you would still like answered?



Responses	%
Lower rates/costs	1.9%
More information on survey and results	1.4%
Green/renewable energy tech	1.0%
Update infrastructure	0.7%
Change/update time-of-use	0.3%
Improve billing/breakdown information on bill	0.2%
Improve phone services	0.2%
Info on Alectra/profit information	0.2%
Other	1.6%
No response/none	92.5%

INNOVATIVE RESEARCH GROUP

Medium & Large Business Customers

Online Workbook Results

About this Customer Engagement

Medium & Large Business

Welcome to Alectra Utilities' future planning survey!

Alectra Utilities' planners need to know what matters to you. Alectra Utilities is preparing to update its long term investment plan. This plan will determine the investments Alectra Utilities makes in equipment and infrastructure, the services it provides, and the rates you pay.

Today Alectra Utilities needs to ask you about three things:

1. **Your experience with Alectra Utilities and how they can do better**.
2. **What outcomes matter most to your organization.**
3. **[ERZ/PRZ ONLY:] A reliability issue Alectra Utilities feels is important to address before the next update of its long term plan.***

This survey will take approximately 15 minutes to complete and can be done so at your convenience. Once you begin, your progress will be saved, and you can return to the customer engagement at any time.

All individual responses will be kept confidential. Innovative Research Group (INNOVATIVE), an independent research company, has been hired to gather your feedback. Click on the link at the bottom of the page to learn more about INNOVATIVE's privacy policy.

In appreciation for your time, Alectra Utilities will add another $20 charitable donation to one of the local charities supported by the AlectraCARES Community Support Program. The more customers like you who complete this survey, the greater the donation pool. The contributions will be allocated based on your preferences in the final question.

If you are reading this on a smaller mobile device, you may want to consider accessing the survey from a tablet, desktop computer or laptop instead so that it is easier for you to read.

To complete each page, please scroll to the bottom, completing any questions as you come to them, and click "next" to move to the next page.

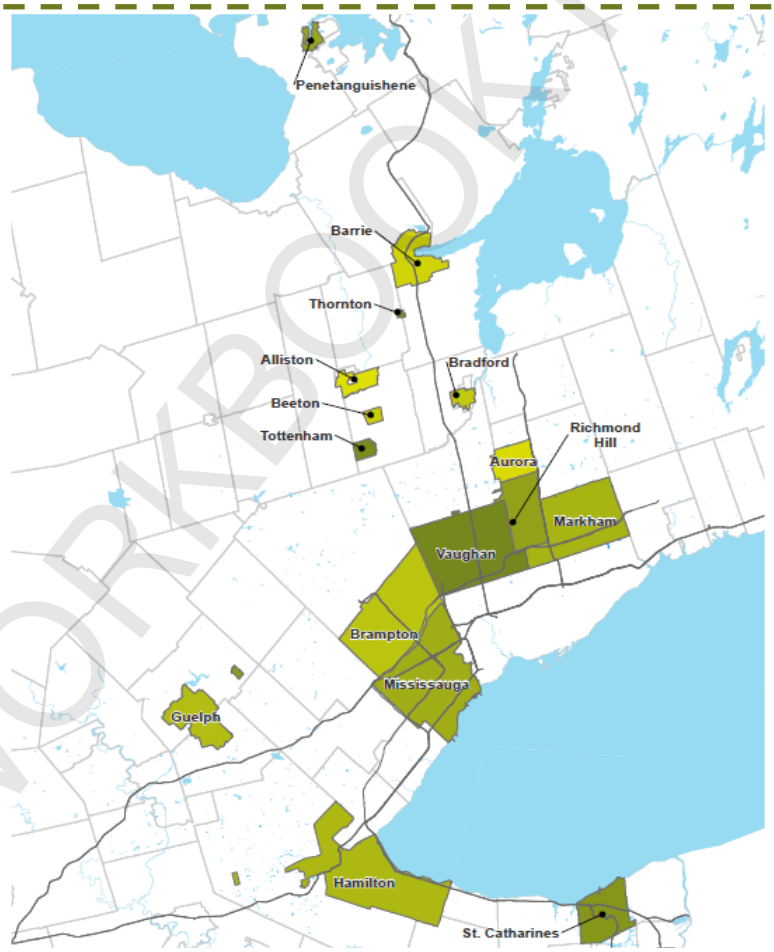
** The results of this series of questions are detailed in a separate "ICM" report.*

Who is Alectra Utilities?

Who is Alectra Utilities?

Alectra Utilities Corporation serves approximately one million homes and businesses across a 1,900 square kilometre service territory, comprising 17 communities including Alliston, Aurora, Barrie, Beeton, Brampton, Bradford West Gwillimbury, Guelph, Hamilton, Markham, Mississauga, Penetanguishene, Richmond Hill, Rockwood, St. Catharines, Thornton, Tottenham and Vaughan. Alectra Utilities is the union of five leading Ontario utilities – Enersource, Horizon Utilities, Brampton Hydro, PowerStream and Guelph Hydro.

Guelph Hydro Electric Systems Inc. | hydro one Brampton | horizon UTILITIES Looking beyond | enersource | PowerStream = alectra utilities



Alectra Utilities provides services to customers in all of these areas. However, customer rates are based on the cost of serving only the area(s) in which your organization operates.

Electricity 101

Medium & Large Business

How Are Electricity Distribution Rates Set In Ontario?

How are electricity distribution rates set in Ontario?

The electricity industry in Ontario is regulated by the Ontario Energy Board (OEB). The OEB sets electricity rates in Ontario.

- Electricity distributors are funded by the distribution rates paid by their customers. Periodically, distributors are required to file rate applications with the OEB to justify the amount of funding they need to safely and reliably distribute electricity to their customers.
- The OEB requires electricity distributors, such as Alectra Utilities, to consider customers' needs, outcomes and preferences as it develops its business plan and distribution system plan, as well as make spending and investment decisions.
- Customers will have at least three opportunities to provide input into Alectra Utilities' long term planning process:

1. **Provide Input**
   Provide initial input to planners through this workbook on their needs and priorities. Planners will consider these views as they develop their initial update to Alectra Utilities' plans. This is the primary way the views collected in this workbook will be used.
2. **Provide Feedback**
   Provide feedback on Alectra Utilities' draft plan when it is developed.
3. **Formal Hearing**
   Participate in the formal hearing process of the OEB as it reviews Alectra Utilities' plan.

- Alectra Utilities will also consider the views of customers received through regular customer contact and conduct research on specific topics as needed.
- In addition, if a need emerges between major planning cycles, the OEB permits utilities to make a specific application for additional funding for a rate increase. **[ONLY IF ERZ OR PRZ:]** In this community, Alectra Utilities has identified a need for additional funding to deal with growing reliability issues related to underground cables. Later in this workbook, you will be asked for your views on this issue.*

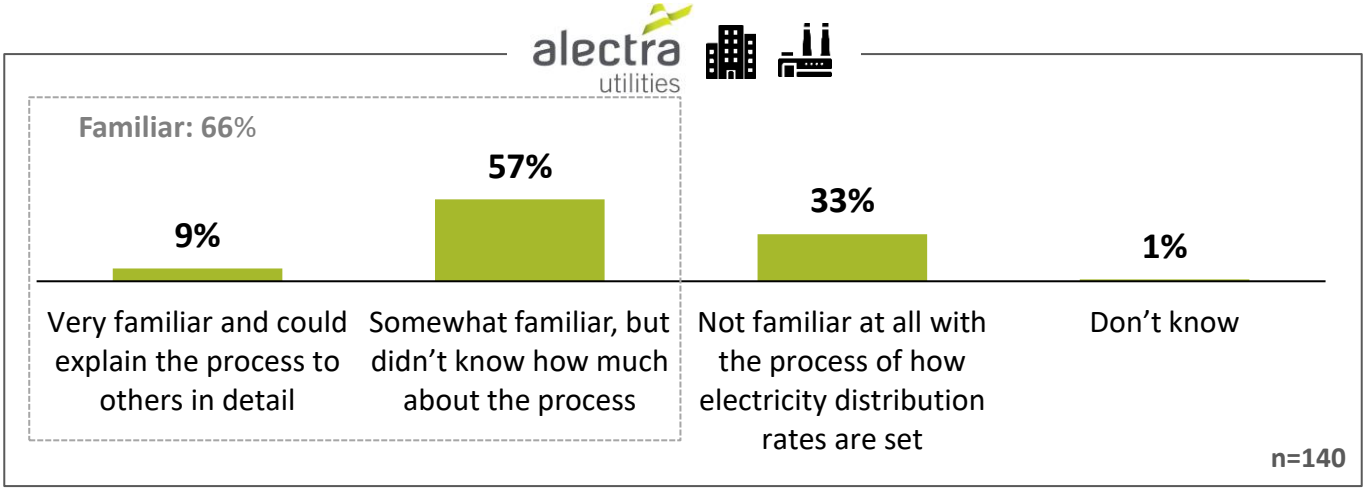
** The results of this series of questions are detailed in a separate "ICM" report.*

Electricity 101

Medium & Large Business

Familiarity With Ontario's Electricity Distribution Rates

Q Before this survey, how familiar were you with how electricity distribution rates are set in Ontario?



Rate Zone Breakdown

	ERZ	BRZ*	HRZ	PRZ	GRZ*
Very familiar	5	2	2	3	-
Somewhat familiar	26	14	12	23	5
Not familiar at all	17	8	7	13	1
Don't know	1	-	1	-	-
Familiar (Very + Somewhat)	**31**	**16**	**14**	**26**	**5**

** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Electricity 101

Medium & Large Business

What Is Alectra Utilities' Role In Ontario's Electricity System?

Electricity 101

What is Alectra Utilities' role in Ontario's electricity system?

Ontario's electricity system is owned and operated by public, private and municipal corporations across the province. It is made up of three key components: **generation**, **transmission** and **distribution**.

Generation

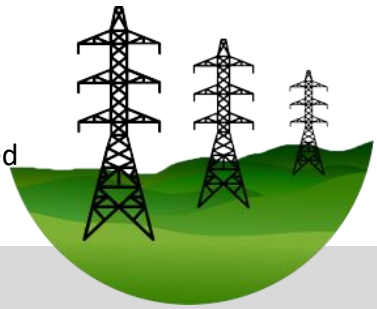
Where electricity comes from

Ontario gets its electricity from a mix of energy sources. About half comes from nuclear power. The remainder comes from a mix of hydroelectric, natural gas, wind and solar.

Transmission

How electricity travels across Ontario

Once electricity is generated, it must be transported to urban and rural areas across the province. This happens by way of high voltage transmission lines that serve as highways for electricity. The province has more than 30,000 kilometres of transmission lines, most of which is owned and operated by Hydro One.

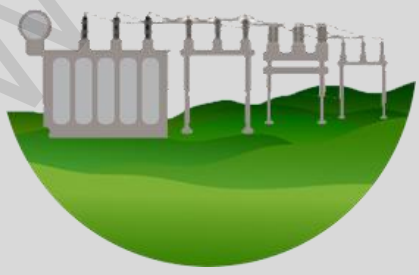


Local Distribution

How electricity is delivered to the end-consumer

Alectra Utilities is responsible for the last step of the journey: distributing electricity to customers through its distribution system.

- Alectra Utilities manages all aspects of the electricity distribution business throughout 17 communities in Ontario and is regulated by the Ontario Energy Board (OEB).
- Across Alectra Utilities' service territory, there are 16,400 km of overhead powerlines and 22,140 km of primary underground cable.
- Alectra Utilities is entirely funded through the rates its customers pay and does not receive taxpayer money to fund its operations or its investments in the distribution system.

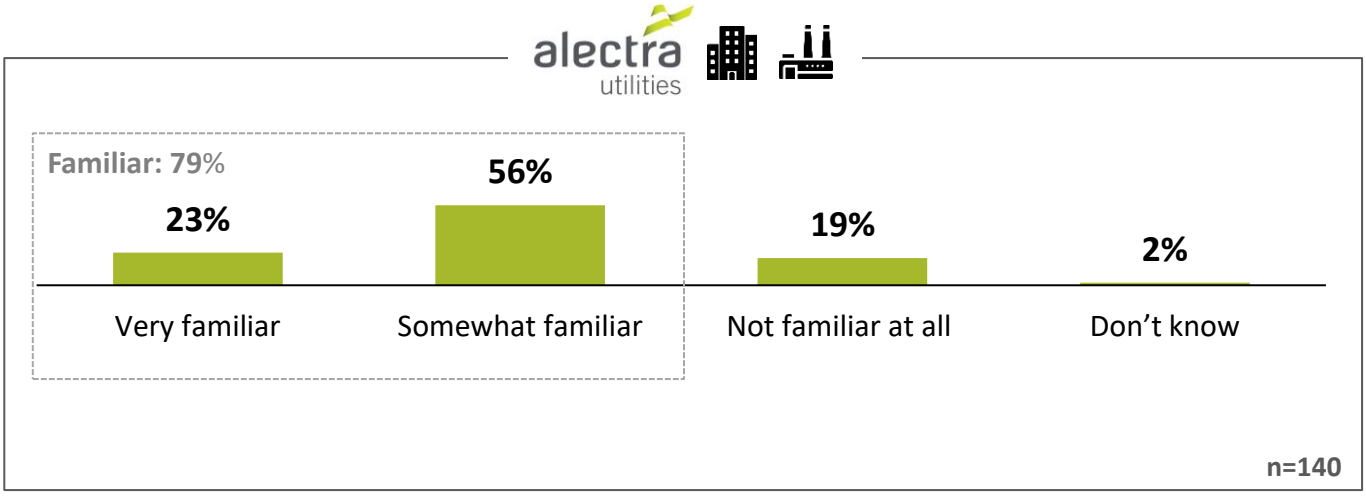


Electricity 101

Familiarity With Alectra Utilities

Medium & Large Business

Q How familiar are you with Alectra Utilities, which operates the electricity distribution system in your community?



Rate Zone Breakdown

	ERZ	BRZ*	HRZ	PRZ	GRZ*
Very familiar	12	6	7	9	2
Somewhat familiar	26	15	12	21	3
Not familiar at all	9	3	2	9	1
Don't know	2	-	1	-	-
Familiar (Very + Somewhat)	**38**	**21**	**19**	**30**	**5**

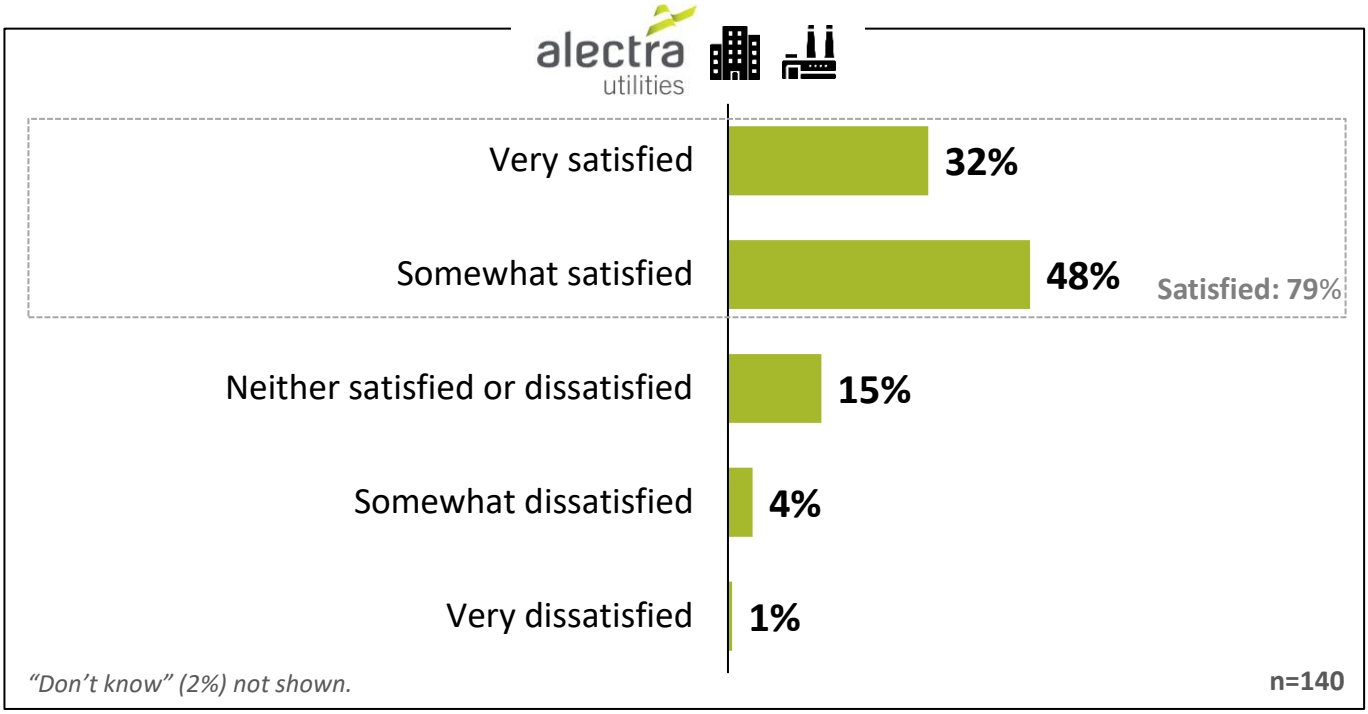
* ***NOTE***: *Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Electricity 101

Satisfaction With Alectra Utilities' Services

Medium & Large Business

Q Generally, how satisfied or dissatisfied are you with the services your organization receives from Alectra Utilities?



Rate Zone Breakdown

	ERZ	BRZ*	HRZ	PRZ	GRZ*
Very satisfied	12	5	6	15	2
Somewhat satisfied	25	10	16	16	4
Neither satisfied nor dissatisfied	8	8	-	5	-
Somewhat dissatisfied	2	1	-	2	-
Very dissatisfied	1	-	-	-	-
Don't know	1	-	-	1	-
Satisfied (Very + Somewhat)	**37**	**15**	**22**	**31**	**6**
Dissatisfied (Very + Somewhat)	**3**	**1**	**-**	**2**	**-**

INNOVATIVE RESEARCH GROUP

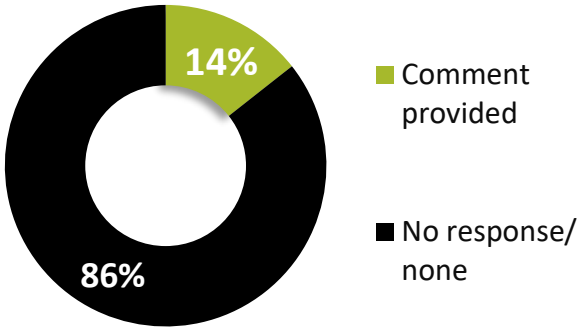
** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Electricity 101

Medium & Large Business

How Alectra Utilities Can Improve Services To Customers

Q Is there anything in particular you would like Alectra Utilities to do to improve its services to your organization? [OPEN]



Responses	%
Lower rates	3.7%
Improve service consistency/fewer outages	3.2%
Improve billing/more information on bills	1.7%
Information on infrastructure updates/infrastructure investment	1.7%
More/improve outage information	0.6%
Better phone communication/customer service	0.6%
Positive - general	0.6%
Other	2.2%
No response/none	85.6%

Customer Outcomes

Customer Service

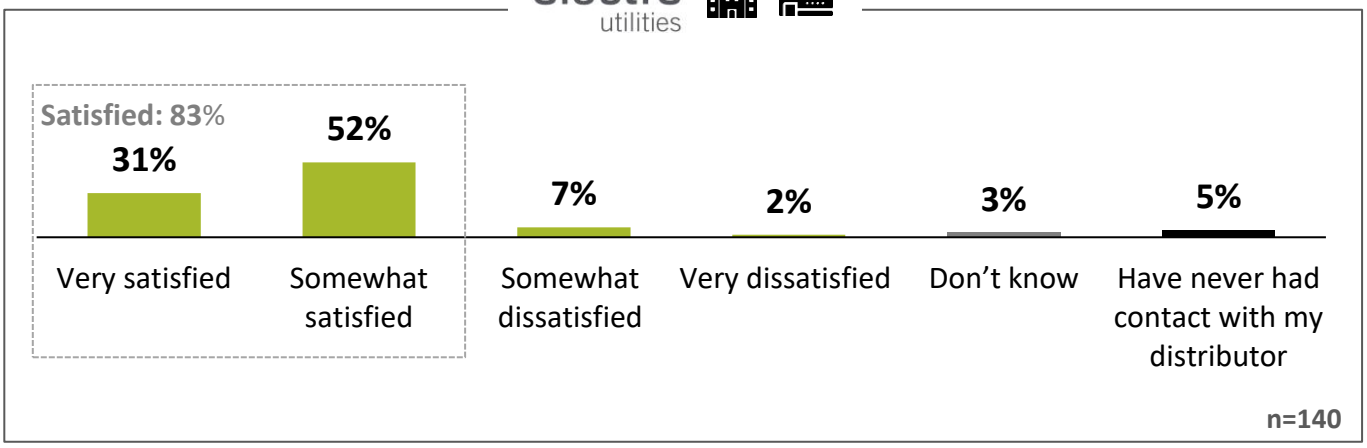
There are many ways that customers interact with Alectra Utilities. The diagram below is based on a review of previous customer feedback and intended to help you recall various ways you may have interacted with Alectra Utilities. Please review and then answer the questions below to help Alectra Utilities ensure they have fully captured customer needs.

Customer Outcomes

Medium & Large Business

Satisfaction With Alectra Utilities' Customer Service

Q Thinking about all the contacts your organization may have had with Alectra Utilities since becoming a customer, how satisfied are you with the customer service you have received from Alectra Utilities?



Rate Zone Breakdown

	ERZ	BRZ*	HRZ	PRZ	GRZ*
Very satisfied	16	5	5	14	1
Somewhat satisfied	25	14	13	20	4
Somewhat dissatisfied	2	2	2	2	1
Very dissatisfied	1	-	-	1	-
Don't know	1	3	-	1	-
Have never had contact	4	-	2	1	-
Satisfied (Very + Somewhat)	**41**	**19**	**18**	**34**	**5**
Dissatisfied (Very + Somewhat)	**3**	**2**	**2**	**3**	**1**

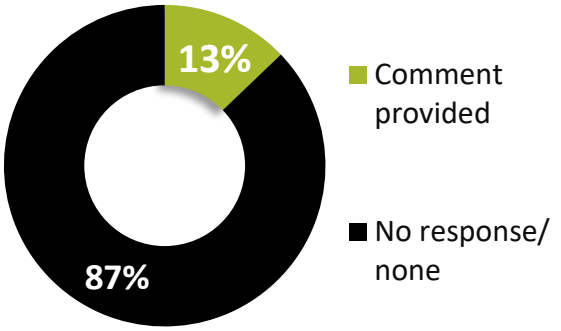
** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Customer Outcomes

Medium & Large Business

How Alectra Utilities Can Do A Better Job Meeting Needs

Q Thinking about all the contacts your organization may have had with Alectra Utilities, do you have any specific suggestions about how Alectra Utilities could do a better job of meeting your needs?



Responses	%
Better/improve billing	2.3%
Improve infrastructure/service consistency	2.3%
Improve communication/customer service	2.2%
Improve phone service	1.4%
Lower rates	1.0%
Encourage energy saving alternatives/conservation programs	0.8%
Outage reporting/notify about neighborhood work	0.6%
Positive - general	0.5%
Other	1.7%
No response/none	87.1%

Rates 101

Medium & Large Business

How Much Of My Electricity Bill Goes To Alectra Utilities?

Rates 101

How much of my electricity bill goes to Alectra Utilities?

- Every item and charge on your bill is mandated by the provincial government or regulated by the Ontario Energy Board (OEB), the provincial energy regulator.
- While **Alectra Utilities** is responsible for collecting payment for the entire electricity bill – as well as water charges for many of its communities – Alectra Utilities retains only a portion of the electricity delivery charge. The electricity delivery charge also includes Hydro One transmission costs and system losses.
- Distribution makes up about 8% of the typical mid-sized or commercial/ industrial customer's bill.
- The rest of your bill is passed onto provincial transmission companies, power generation companies, the provincial government and regulatory agencies.

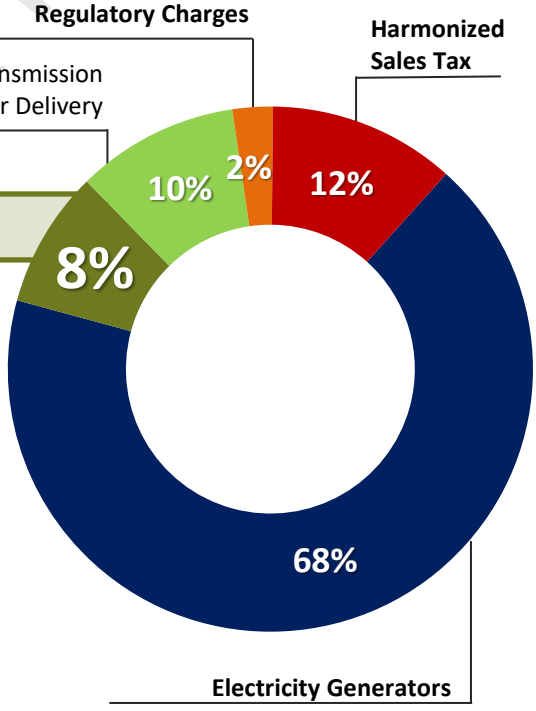
Alectra Utilities Sample Monthly Bill
(Based on 230 kW monthly demand)

Account Number:
000 000 000 000 0000

Meter Number:
00000000

Your Electricity Charges	
Electricity	10,981.60
Delivery	2,999.57
Regulatory Charges	404.29
Total Electricity Charges	**$14,385.46**
HST	1,870.11
Total Amount	**$16,255.57**

Delivery:
Distribution
Alectra Utilities typical portion of the total bill is
$1,373.26



Note: Graph may not total 100% due to rounding.

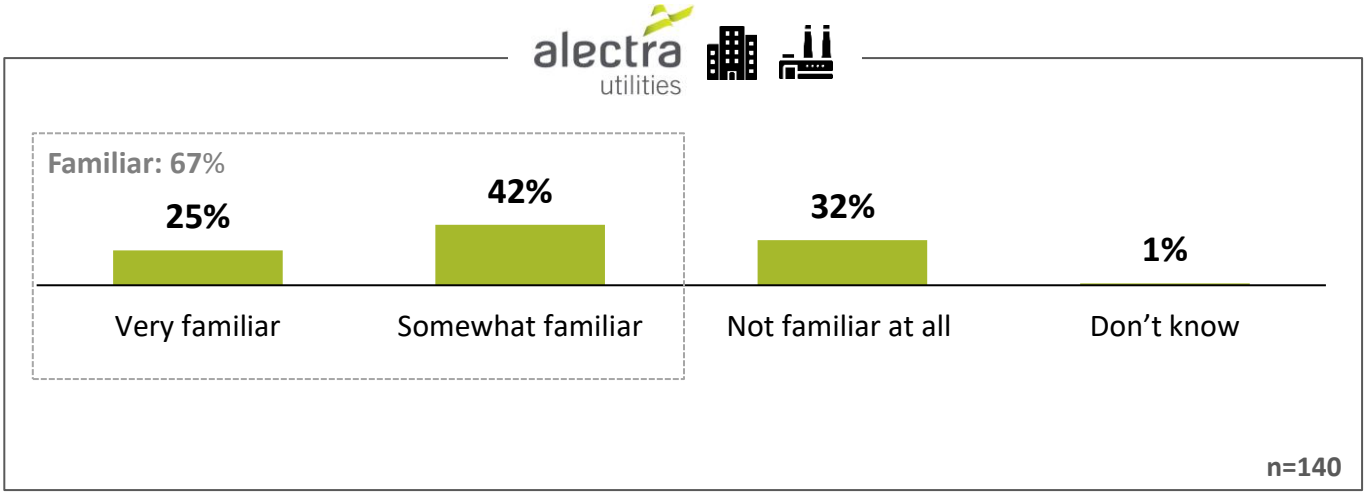
Note: Sample bills were customized for each rate zone and rate class. The above represents a sample mid-sized business or commercial/industrial customer's bill in the Enersource rate zone.

Rates 101

Medium & Large Business

Familiarity With Percentage Of Bill Remitted To Alectra Utilities

Q Before this survey, how familiar were you with the amount of your organization's electricity bill that went to Alectra Utilities?



Rate Zone Breakdown

	ERZ	BRZ*	HRZ	PRZ	GRZ*
Very familiar	12	4	2	12	3
Somewhat familiar	18	10	11	19	2
Not familiar at all	17	10	8	8	1
Don't know	2	-	1	-	-
Familiar (Very + Somewhat)	**30**	**14**	**13**	**31**	**5**

** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Customer Outcomes

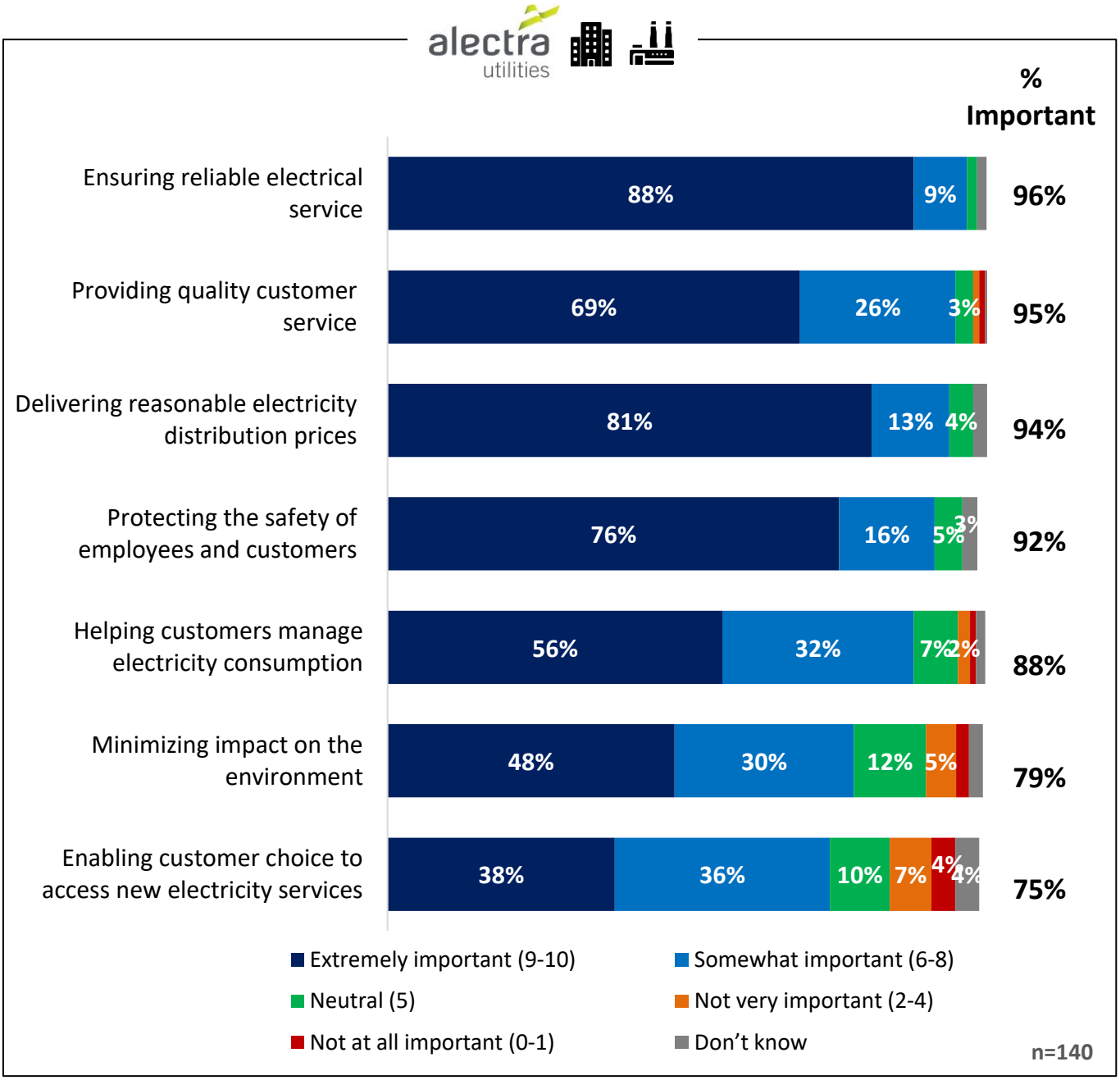
Medium & Large Business

Importance Of Potential Alectra Utilities' Priorities

Now let's talk about outcomes. Alectra Utilities talks to customers to better understand how it should set spending priorities with the money customers pay for service.

In recent conversations with customers, a number of possible goals were identified as potential priorities for Alectra Utilities. Below you will find a list of these potential priorities.

Q How important are each of these potential Alectra Utilities priorities to your organization as a customer?



NOTE: Data labels are removed where 2% or less.

Customer Outcomes

Medium & Large Business

Importance Of Potential Alectra Utilities' Priorities

Q How important are each of these potential Alectra Utilities priorities to your organization as a customer?

Average Score	Rate Zone Breakdown				
	ERZ	BRZ*	HRZ	PRZ	GRZ*
Ensuring reliable electrical service	9.4	9.4	9.5	9.8	8.8
Providing quality customer service	8.8	8.2	8.6	9.5	8.3
Delivering reasonable electricity distribution prices	9.2	9.0	9.0	9.6	8.7
Protecting the safety of employees and customers	9.0	9.2	8.9	9.5	9.0
Helping customers manage electricity consumption	7.9	8.1	8.1	8.8	7.7
Minimizing impact on the environment	7.5	7.8	7.9	8.1	7.3
Enabling customer choice to access new electricity services	7.1	7.6	7.1	7.4	6.7

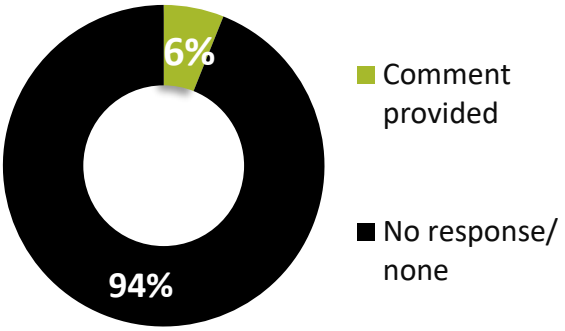
** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Customer Outcomes

Medium & Large Business

Other Important Priorities Alectra Utilities Should Focus On

Q Are there any other important priorities that Alectra Utilities should be focusing on that weren't included in the list above? [OPEN]



Responses	%
All the above	1.0%
Focus on sustainability/reduction/green technology	0.8%
Consistency of service	0.6%
Lower rates/reduce costs/find alternative income source	0.5%
More education/information on energy saving/cost saving	0.5%
Other	2.5%
No response/none	93.9%

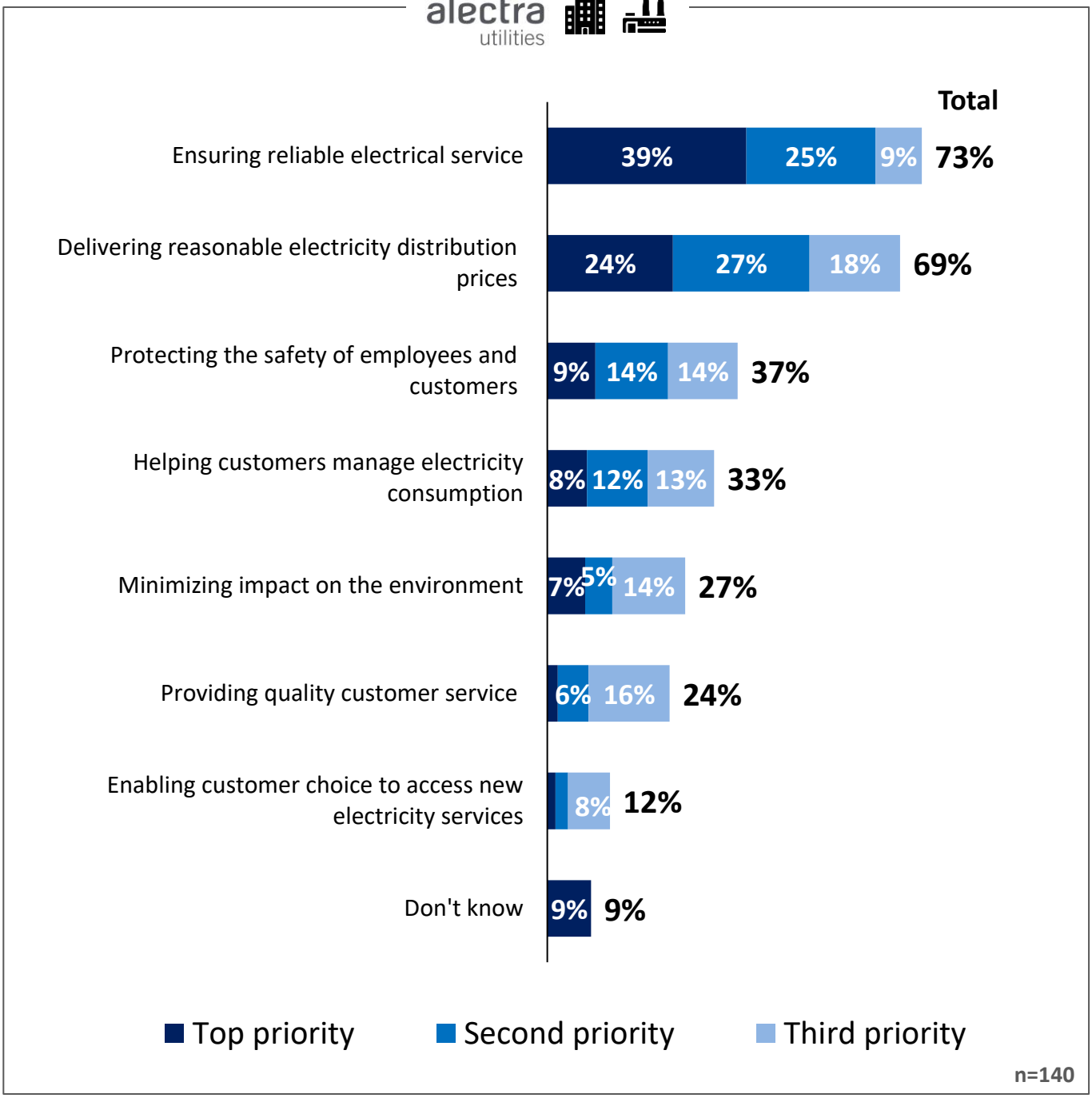
Customer Outcomes

Ranking Alectra Utilities' Priorities

Medium & Large Business

Sometimes Alectra Utilities has to choose between goals that have a similar level of priority. When that happens, planners need to understand what matters most to your organization.

Q Thinking again about the things Alectra Utilities should be focusing on, please rank your top 3 priorities.



Note: 'No response' not shown. Respondents who say 'Don't know' do not get asked for further priorities. Data labels are removed where 2% or less.

Customer Outcomes

Ranking Alectra Utilities' Priorities

Medium & Large Business

Q Thinking again about the things Alectra Utilities should be focusing on, please rank your top 3 priorities.

Total Top 3 Choice	Rate Zone Breakdown				
	ERZ	BRZ*	HRZ	PRZ	GRZ*
Ensuring reliable electrical service	73%	71%	77%	77%	67%
Delivering reasonable electricity distribution prices	69%	71%	59%	69%	67%
Protecting the safety of employees and customers	35%	38%	36%	38%	83%
Helping customers manage electricity consumption	29%	38%	27%	36%	17%
Minimizing impact on the environment	18%	25%	27%	33%	17%
Providing quality customer service	27%	25%	32%	21%	33%
Enabling customer choice to access new electricity services	12%	8%	14%	10%	17%

** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

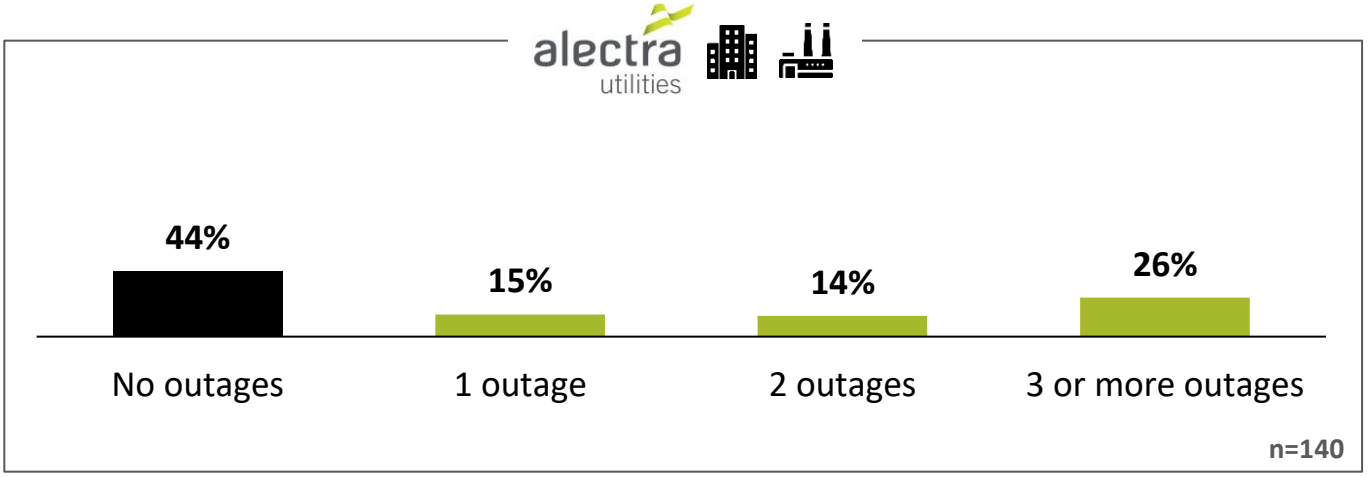
Customer Outcomes

Number of Outages Experienced

Medium & Large Business

Now let's focus a little deeper on reliability.

Q Have you experienced any power outages at your organization in the past 12 months which lasted longer than one minute? If so, approximately how many power outages did you experience?



Rate Zone Breakdown

	ERZ	BRZ*	HRZ	PRZ	GRZ*
No outages	19	11	8	20	3
1 outage	9	2	5	4	1
2 outages	8	7	1	5	-
3 or more outages	13	4	8	10	2

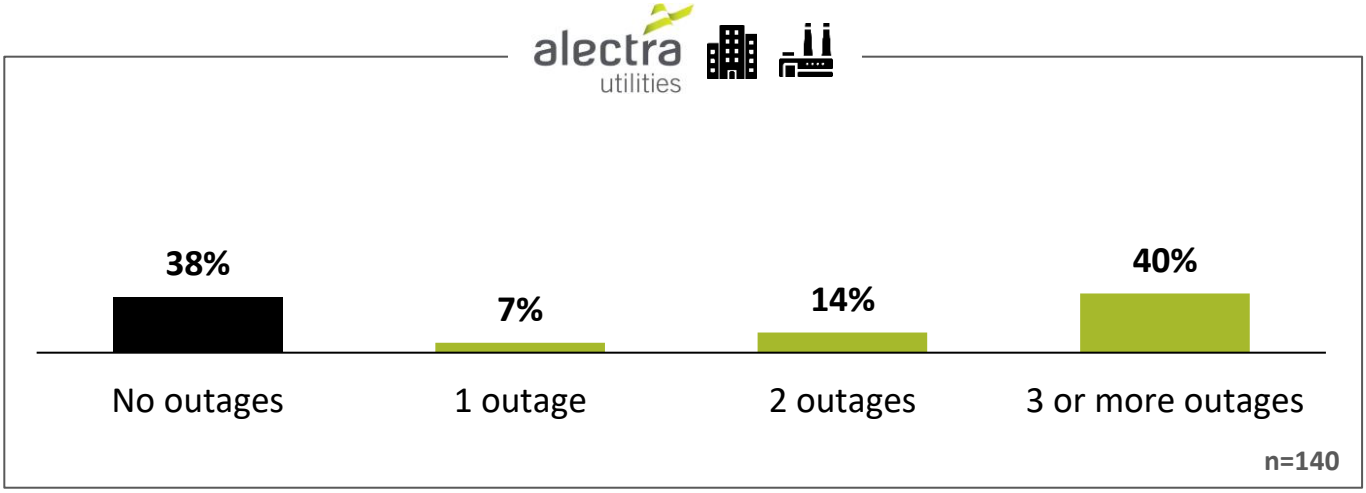
** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Customer Outcomes

Medium & Large Business

Number of Momentary Outages Experienced

Q Have you experienced any momentary outages of less than a minute and/or power quality issues (such as voltage surges and sags) at your organization in the past 12 months? If so, approximately how many momentary outages and/or power quality issues did you experience?



Rate Zone Breakdown

	ERZ	BRZ*	HRZ	PRZ	GRZ*
No outages	14	7	10	16	3
1 outage	4	3	-	2	1
2 outages	6	3	1	8	-
3 or more outages	25	11	11	13	2

INNOVATIVE RESEARCH GROUP

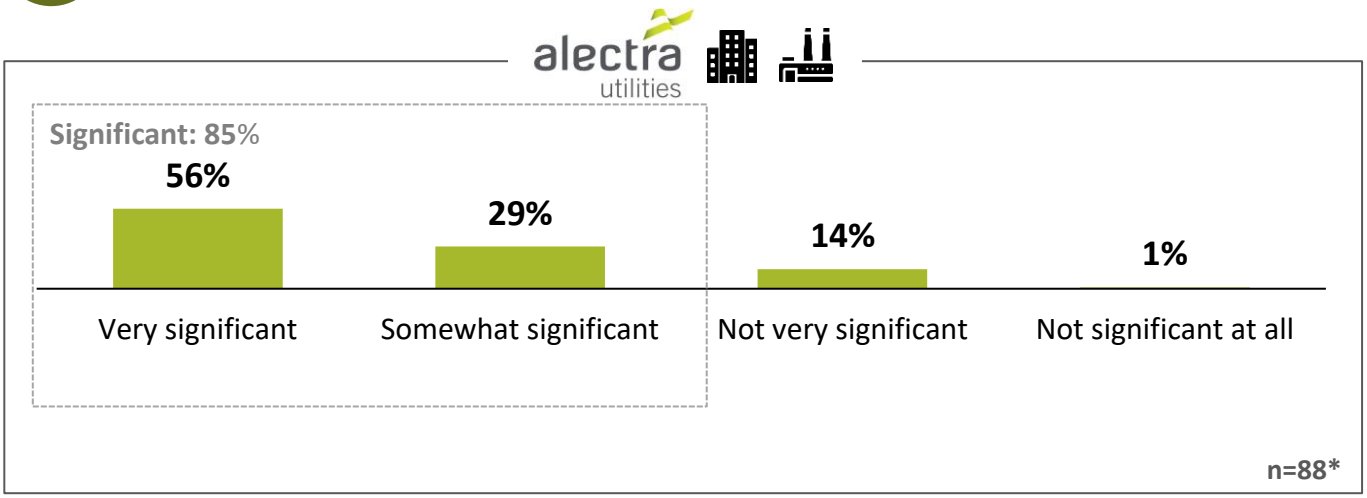
** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Customer Outcomes

Impact of Momentary Outages

Medium & Large Business

Q How significant are these momentary disruptions in your organization?



*** Note**: Impact of outages asked only of those who have experienced at least one momentary outage.

Rate Zone Breakdown

	ERZ	BRZ*	HRZ	PRZ	GRZ*
Very significant	23	12	8	9	2
Somewhat significant	7	3	3	11	1
Not very significant	5	1	1	4	-
Not significant at all	-	1	-	-	-
Significant (Very + Somewhat)	**30**	**15**	**11**	**20**	**3**
Not Significant (Very + Somewhat)	**5**	**2**	**1**	**4**	**-**

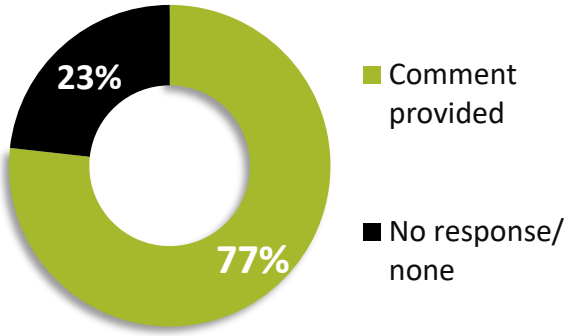
** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Customer Outcomes

Impacts Of Momentary Disruptions

Medium & Large Business

Q Please tell us what sort of impacts these momentary disruptions have on your business. [OPEN]



Responses	%
Production halted/unable to conduct business	25.5%
Caused equipment malfunction/loss	19.2%
Technology unavailable/Point of Sale systems down	11.3%
Financial impact	7.3%
Requires the use of backup power	5.2%
Minor inconvenience	3.3%
Safety concerns	2.6%
Other	2.5%
No response/none	23.2%

Note: Only asked of those who were impacted by momentary outages (n=88)

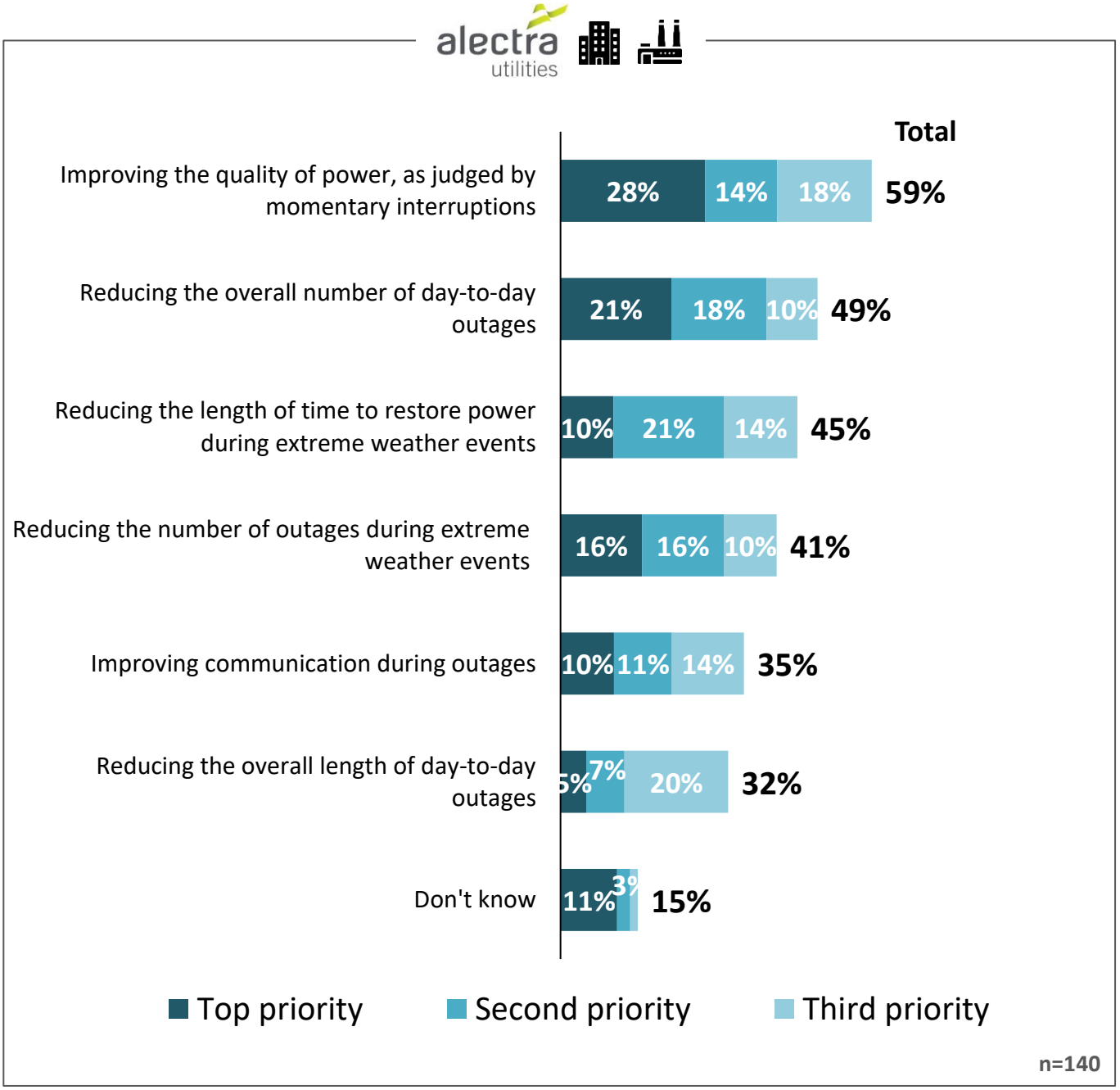
Customer Outcomes

Ranking Reliability Outcomes

Medium & Large Business

When it comes to reliability, there are different outcomes Alectra Utilities can focus on. They can focus on the number of outages or the length of outages. They can focus on day-to-day reliability or preparedness for extreme weather events. They can focus on power quality or communicating with customers during outages. Different priorities require a different mix of investments.

Q Thinking about your organization's needs, please look at the following outcomes and rank the three that matter most.



Note: 'No response' not shown. Respondents who say 'Don't know' do not get asked for further priorities. Data labels are removed where 2% or less.

Customer Outcomes

Ranking Reliability Outcomes

Medium & Large Business

Q Thinking about your organization's needs, please look at the following outcomes and rank the three that matter most.

Total Top 3 Choice	Rate Zone Breakdown				
	ERZ	BRZ*	HRZ	PRZ	GRZ*
Improving the quality of power, as judged by momentary interruptions	61%	71%	59%	56%	83%
Reducing the overall number of day-to-day outages	49%	58%	55%	44%	67%
Reducing the length of time to restore power during extreme weather events	37%	29%	50%	49%	50%
Reducing the number of outages during extreme weather events	39%	42%	50%	46%	17%
Improving communication during outages	35%	38%	27%	38%	50%
Reducing the overall length of day-to-day outages	31%	25%	27%	38%	-

** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

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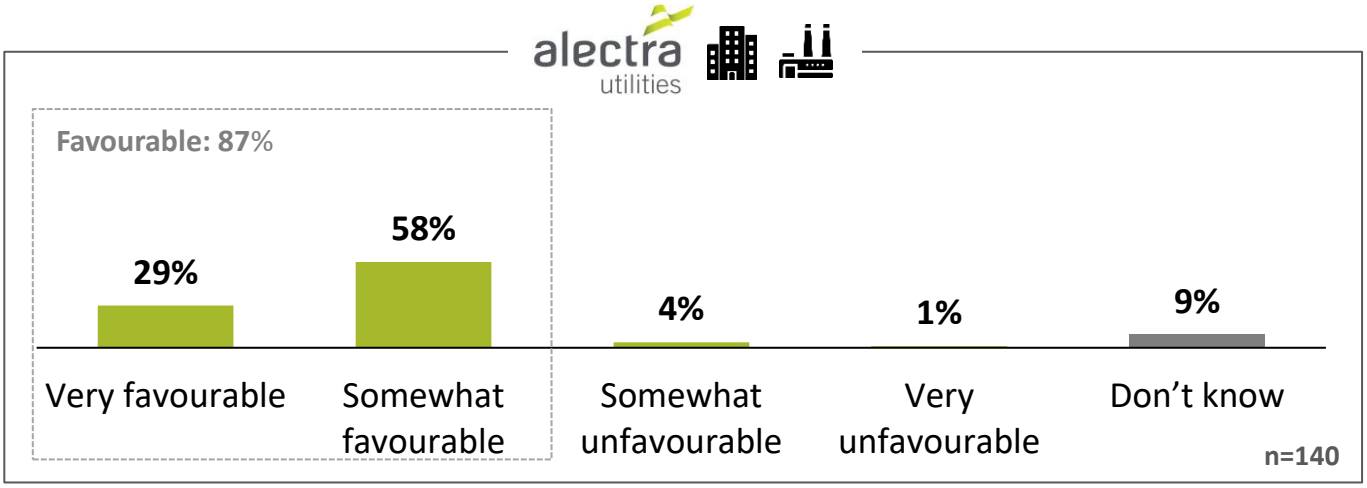
Medium & Large Business Customers

Workbook Diagnostics

Workbook Diagnostics Medium & Large Business

Workbook Impression

Q Overall, do you have a favourable or unfavourable impression of the customer engagement you just completed?



Rate Zone Breakdown

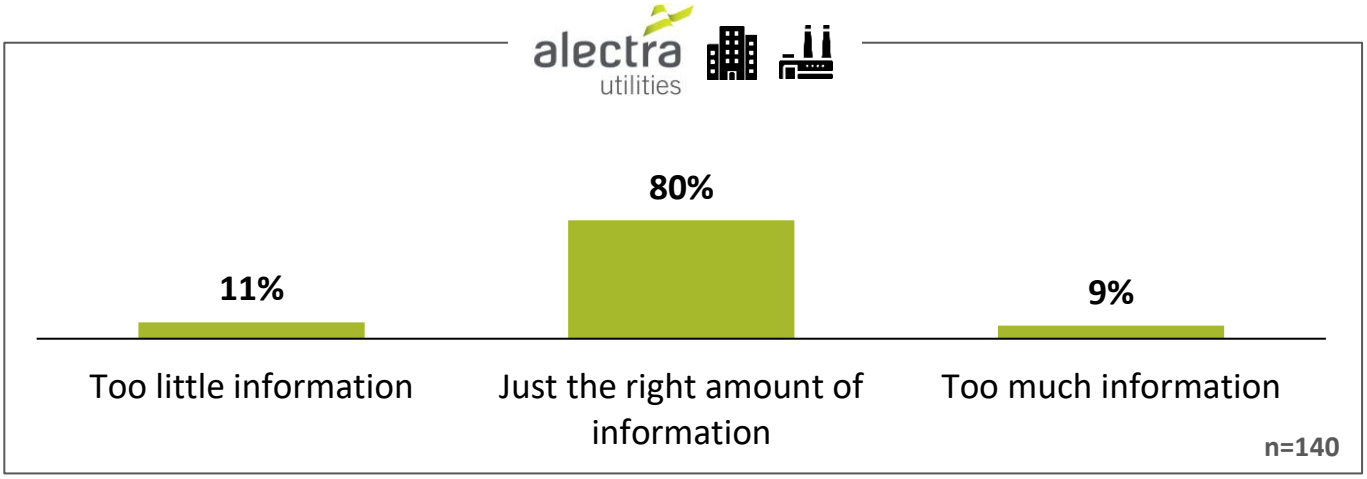
	ERZ	BRZ*	HRZ	PRZ	GRZ*
Very favourable	16	5	4	13	1
Somewhat favourable	25	17	14	22	5
Somewhat unfavourable	2	1	1	1	-
Very unfavourable	-	-	-	1	-
Don't know	6	1	3	2	-
Favourable (Very + Somewhat)	**41**	**22**	**18**	**35**	**6**
Unfavourable (Very + Somewhat)	**2**	**1**	**1**	**2**	**-**

** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Workbook Diagnostics Medium & Large Business

Amount Of Information

Q In this customer engagement, do you feel that Alectra Utilities provided too much information, not enough, or just the right amount?



Rate Zone Breakdown

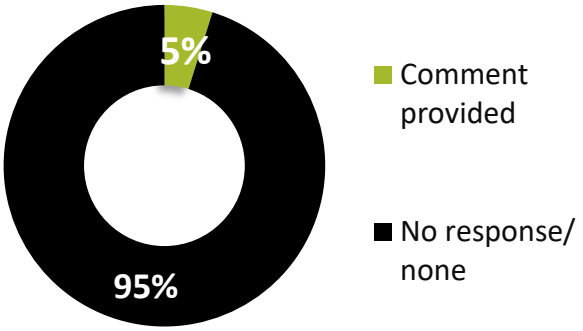
	ERZ	BRZ*	HRZ	PRZ	GRZ*
Too little information	4	1	3	6	2
Just the right amount of information	38	22	18	30	4
Too much information	7	1	1	3	-

** **NOTE**: Due to the small sample sizes in Brampton and Guelph, results should be interpreted with caution*

Workbook Diagnostics Medium & Large Business

Content Missing From Engagement

Q Was there any content missing that you would have liked to have seen included in this customer engagement? (OPEN)

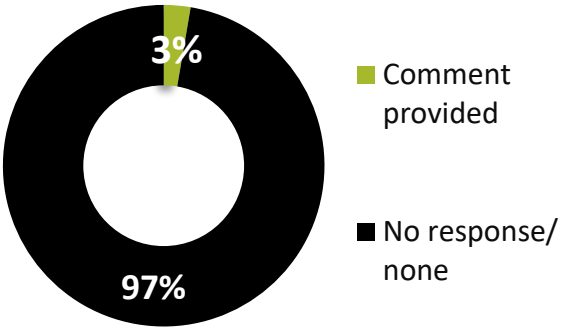


Responses	%
Lower rates	1.0%
Improve customer service/point of contact	1.0%
Information on infrastructure updates	0.9%
Comments on format/content	0.6%
Outage information	0.6%
Other	0.6%
No response/none	95.2%

Workbook Diagnostics Medium & Large Business

Outstanding Questions

Q Is there anything that you would still like answered?



Responses	%
More/better outage information	0.9%
Update infrastructure	0.6%
Improve billing/breakdown information on bill	0.5%
Other	0.6%
No response/none	97.3%

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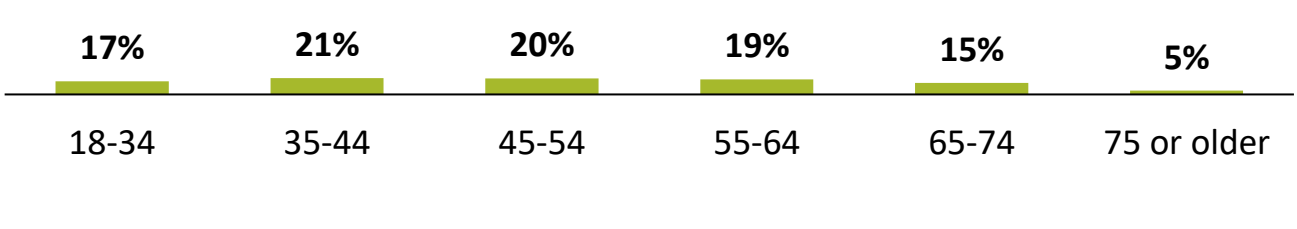
APPENDIX:

Respondent Profiles & Environmental Controls

Demographic Breakdown

Age and Gender

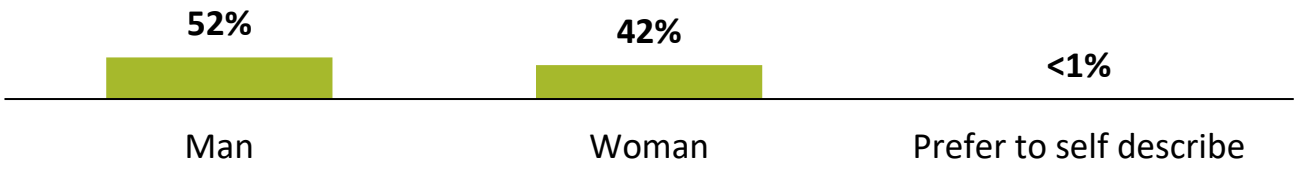
Q Age



Prefer not to say: 3%

n=3,500

Q Gender



Prefer not to say: 5%

n=3,500

Demographic Breakdown

LEAP Qualification

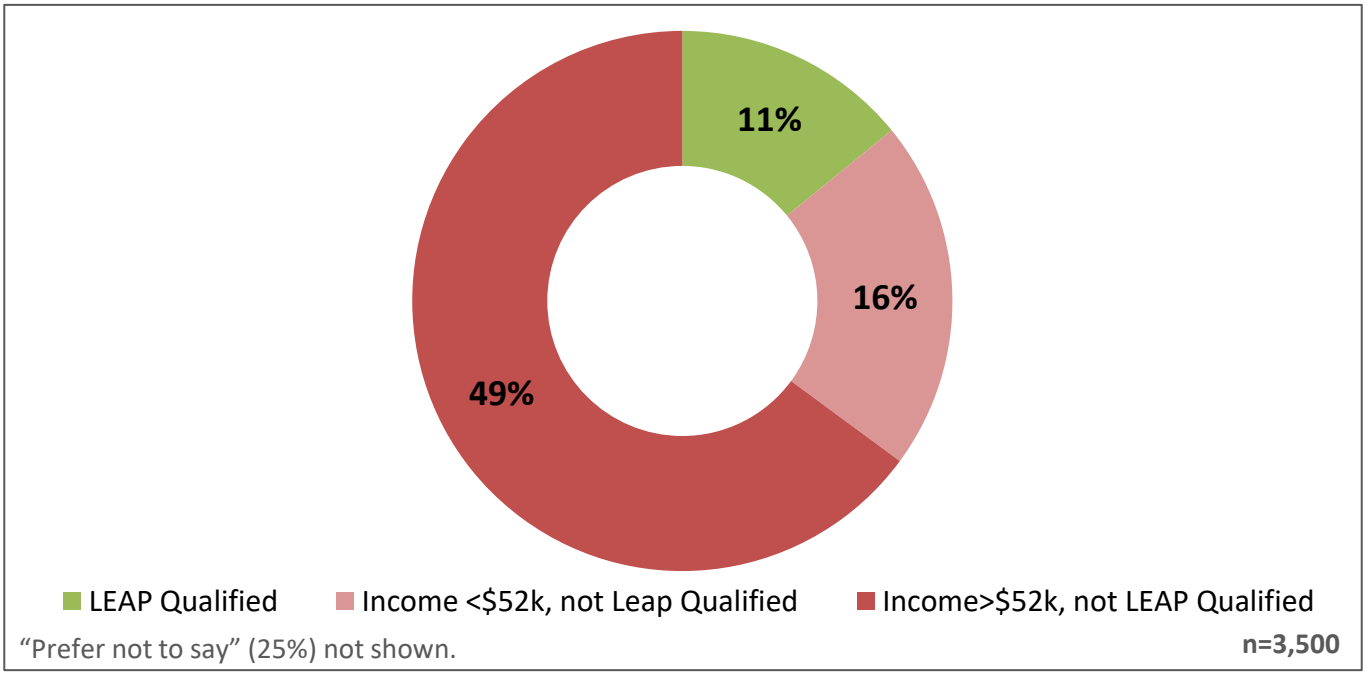
Residential

Q LEAP Eligibility Criteria

Household after tax income ($)	Household Size 1	2	3	4	5	6	7+	Prefer not to say
Less than $28,000	18%	6%	4%	3%	5%	6%	6%	1%
$28,000 to less than $39,000	11%	7%	6%	6%	8%	5%	9%	1%
$39,000 to less than $48,000	8%	6%	5%	8%	6%	6%	11%	2%
$48,000 to less than $52,000	8%	8%	7%	7%	7%	9%	5%	-
$52,000 or more	37%	50%	53%	53%	55%	51%	58%	7%
Prefer not to say	18%	24%	24%	23%	21%	23%	12%	89%

Note: LEAP Eligibility Criteria table totals 100%

Q LEAP Qualification (calculated based on household size and income)



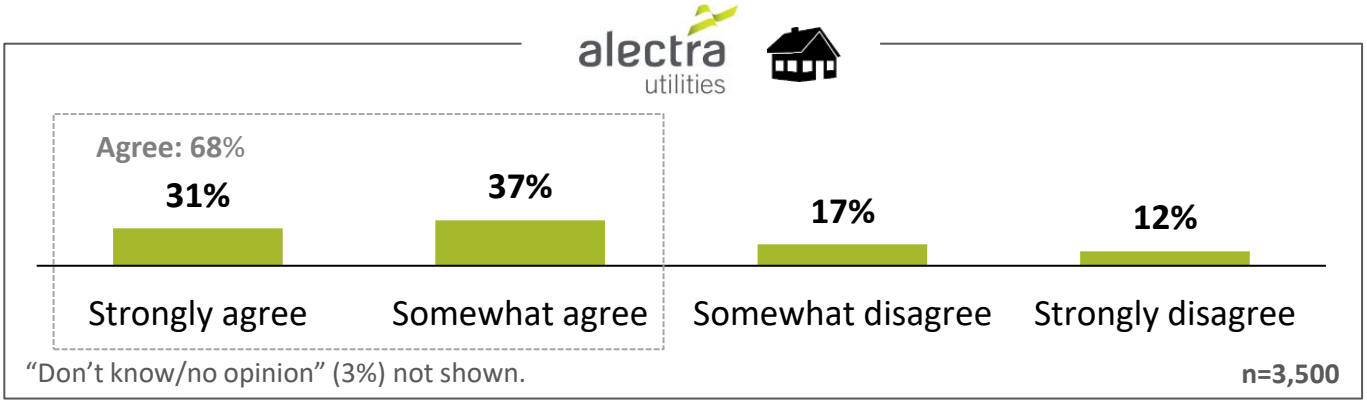
"Prefer not to say" (25%) not shown.

n=3,500

Environmental Controls

Now we would like to shift the focus, and ask you some general questions about the electricity system in Ontario. To what extent do you agree or disagree with the following statements?

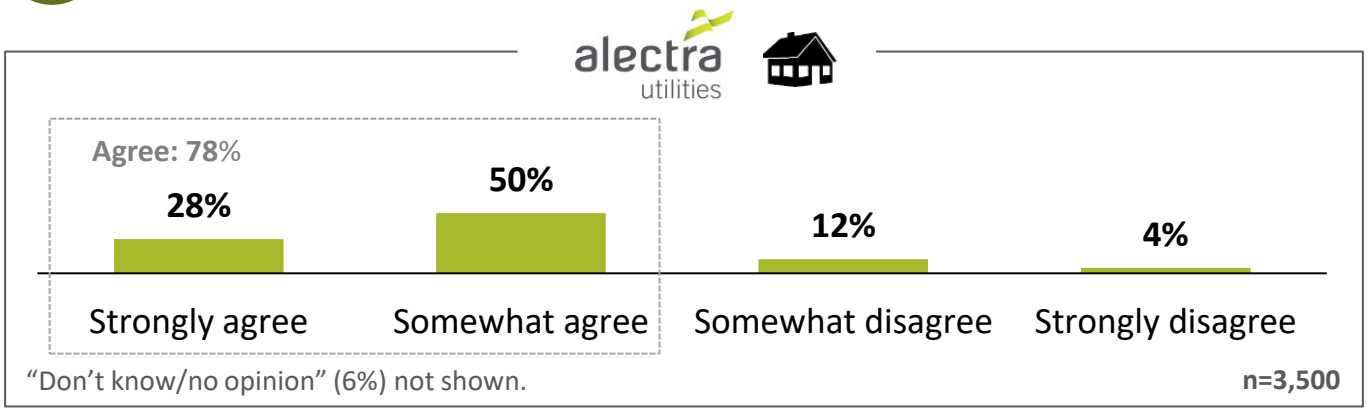
Q The cost of my electricity bill has a major impact on my finances and requires I do without some other important priorities.



"Don't know/no opinion" (3%) not shown.

n=3,500

Q Customers are well served by the electricity system in Ontario.



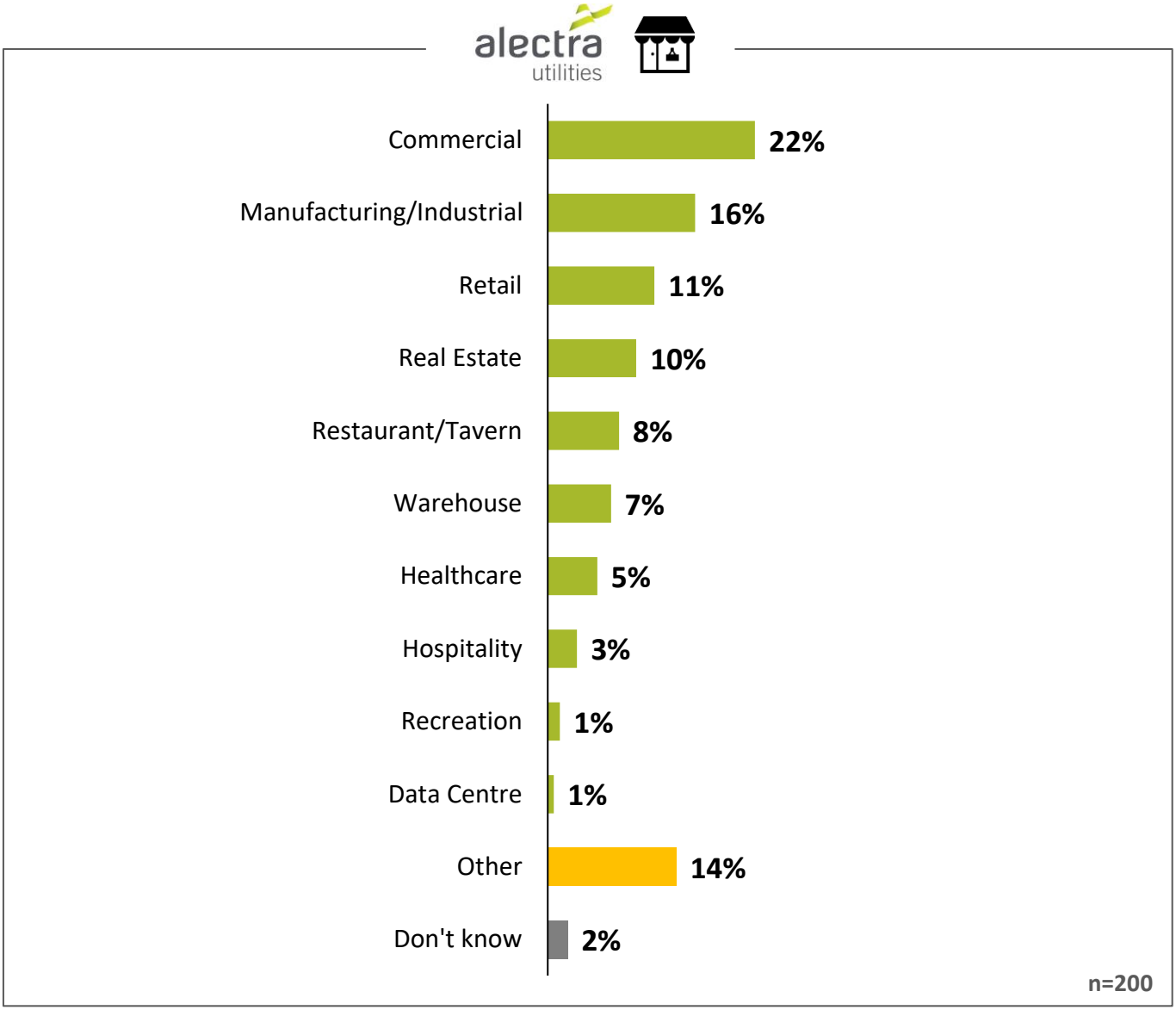
"Don't know/no opinion" (6%) not shown.

n=3,500

Firmographic Breakdown

Sector

Q Which of the following best describes the sector in which your business operates?

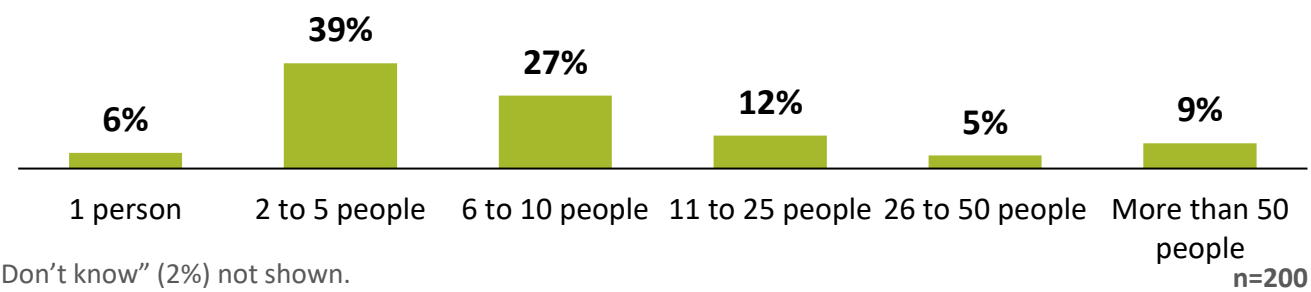


Firmographic Breakdown

About Your Organization

Small Business

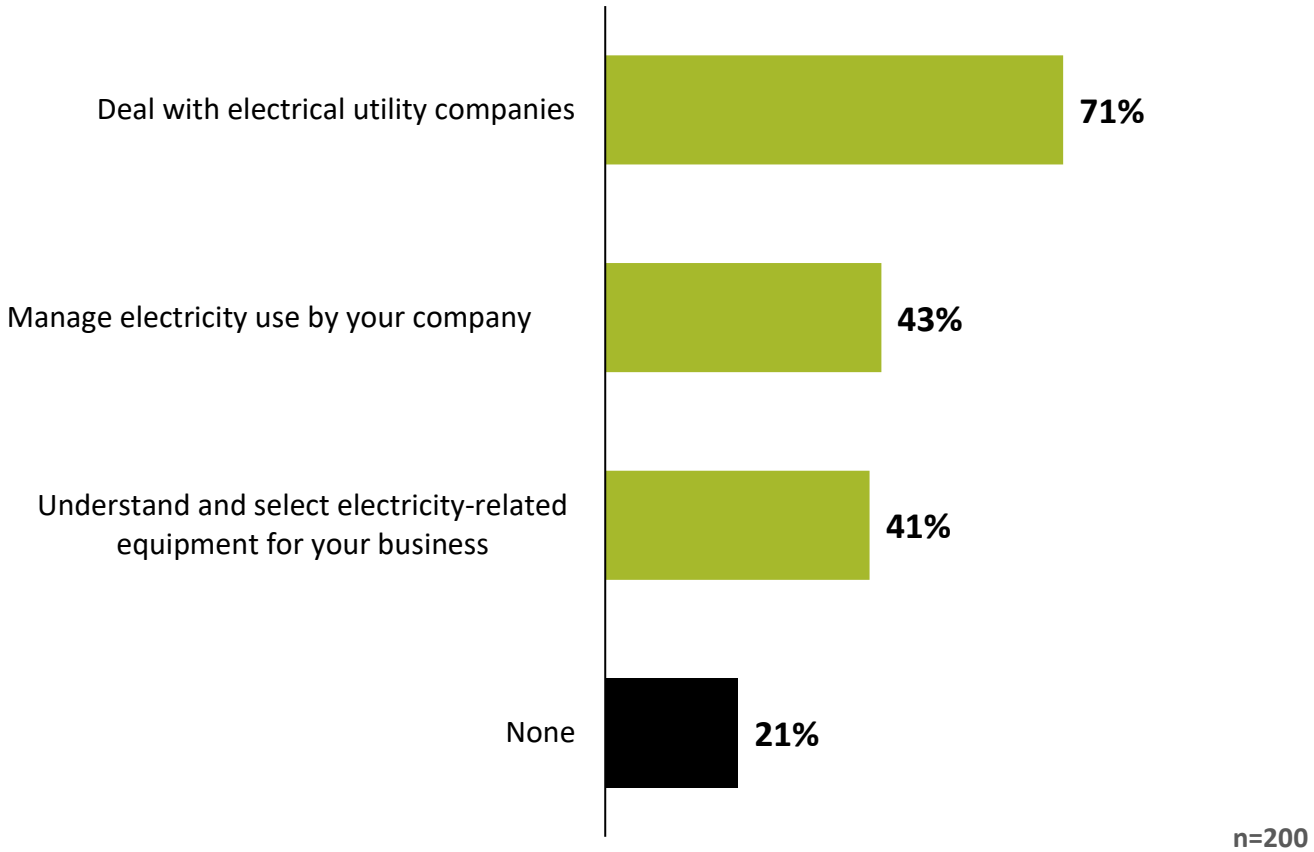
Q Including yourself, how many people work at your organization?



"Don't know" (2%) not shown.

n=200

Q Do you personally do any of the following things in your organization?
Please check all that apply.

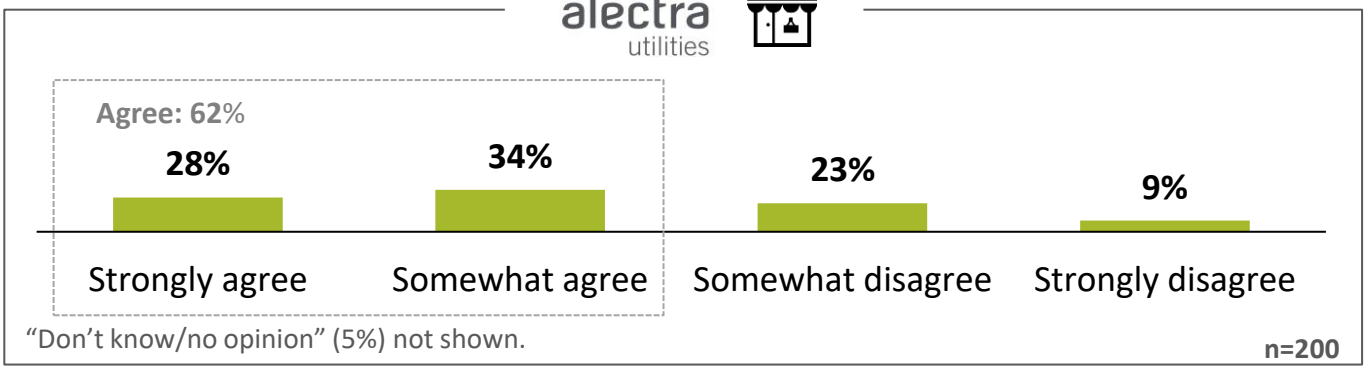


n=200

Environmental Controls

Now we would like to shift the focus, and ask you some general questions about the electricity system in Ontario. To what extent do you agree or disagree with the following statements?

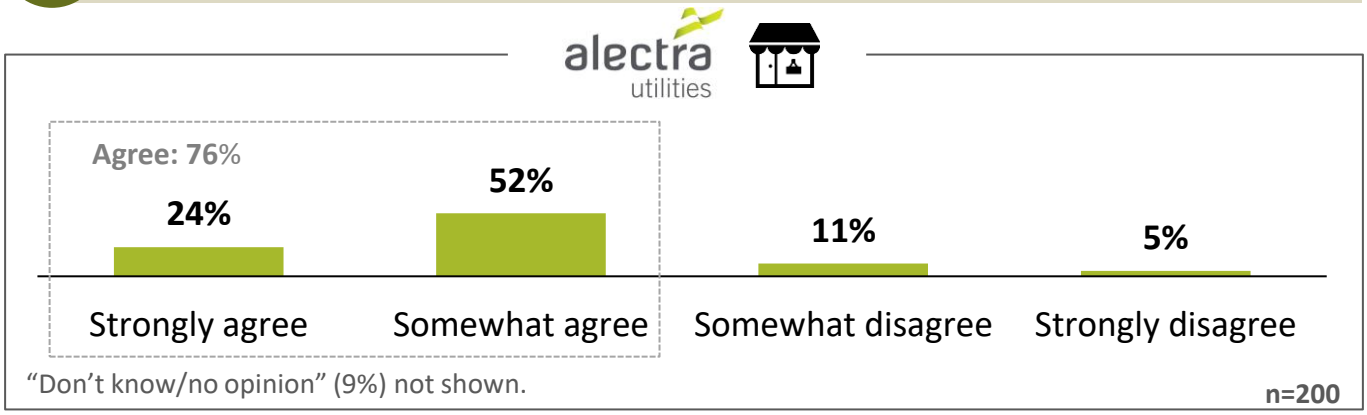
Q The cost of my organization's electricity bill has a major impact on the bottom line of my organization and results in some important spending priorities and investments being put off.



"Don't know/no opinion" (5%) not shown.

n=200

Q Customers are well served by the electricity system in Ontario.



"Don't know/no opinion" (9%) not shown.

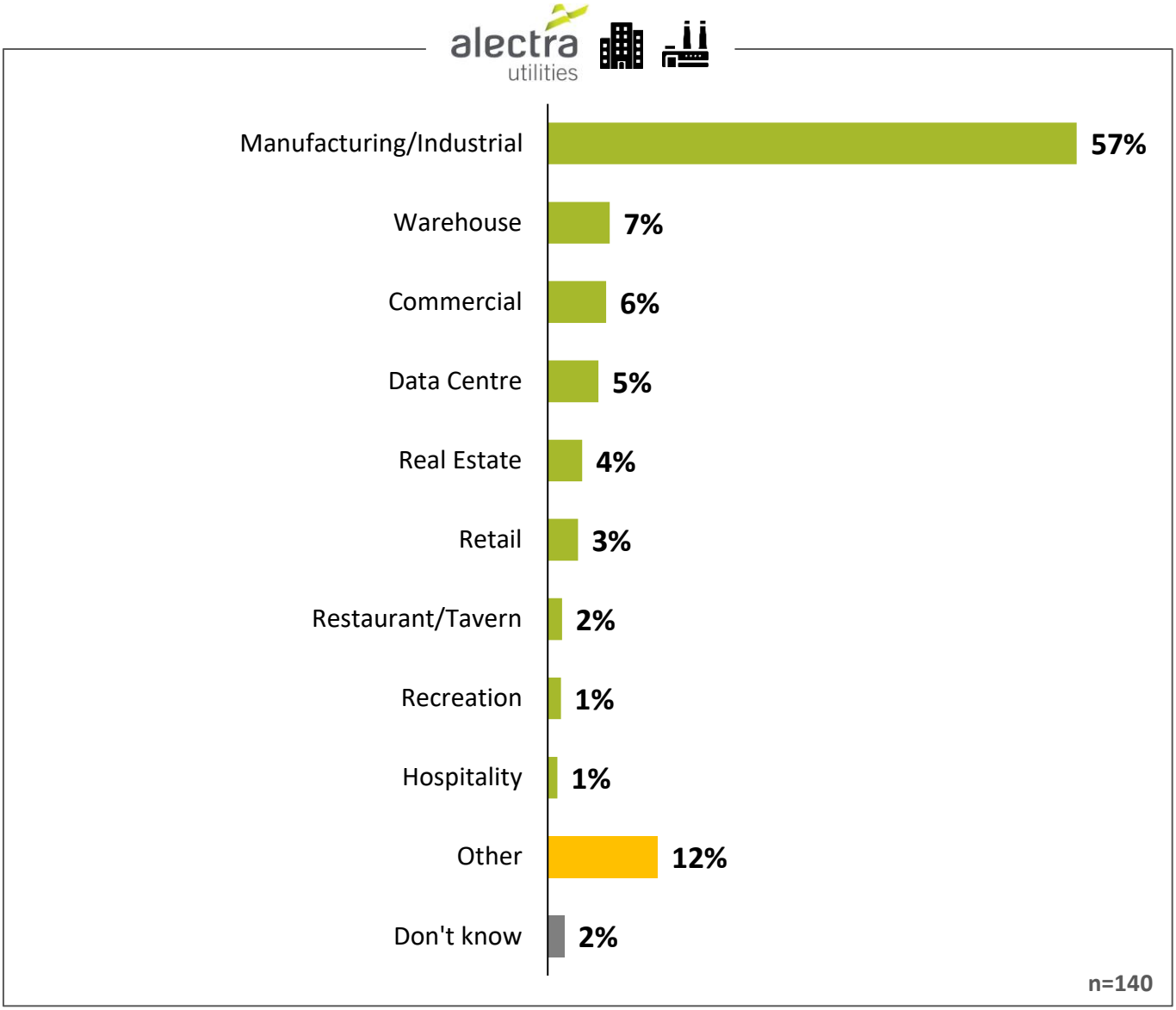
n=200

Firmographic Breakdown

Sector

Medium & Large Business

Q Which of the following best describes the sector in which your business operates?

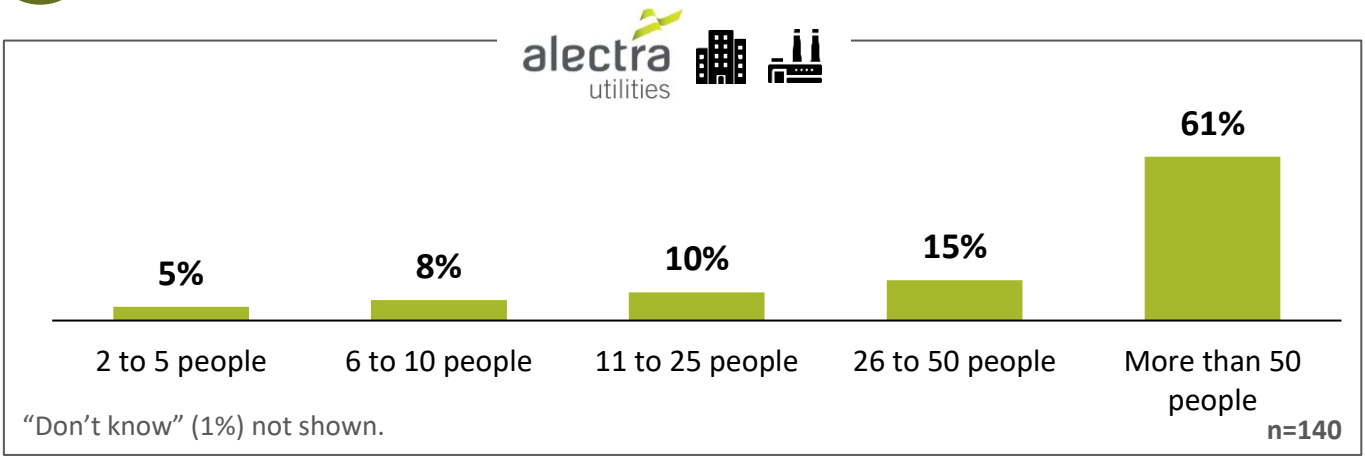


Firmographic Breakdown

About Your Organization

Medium & Large Business

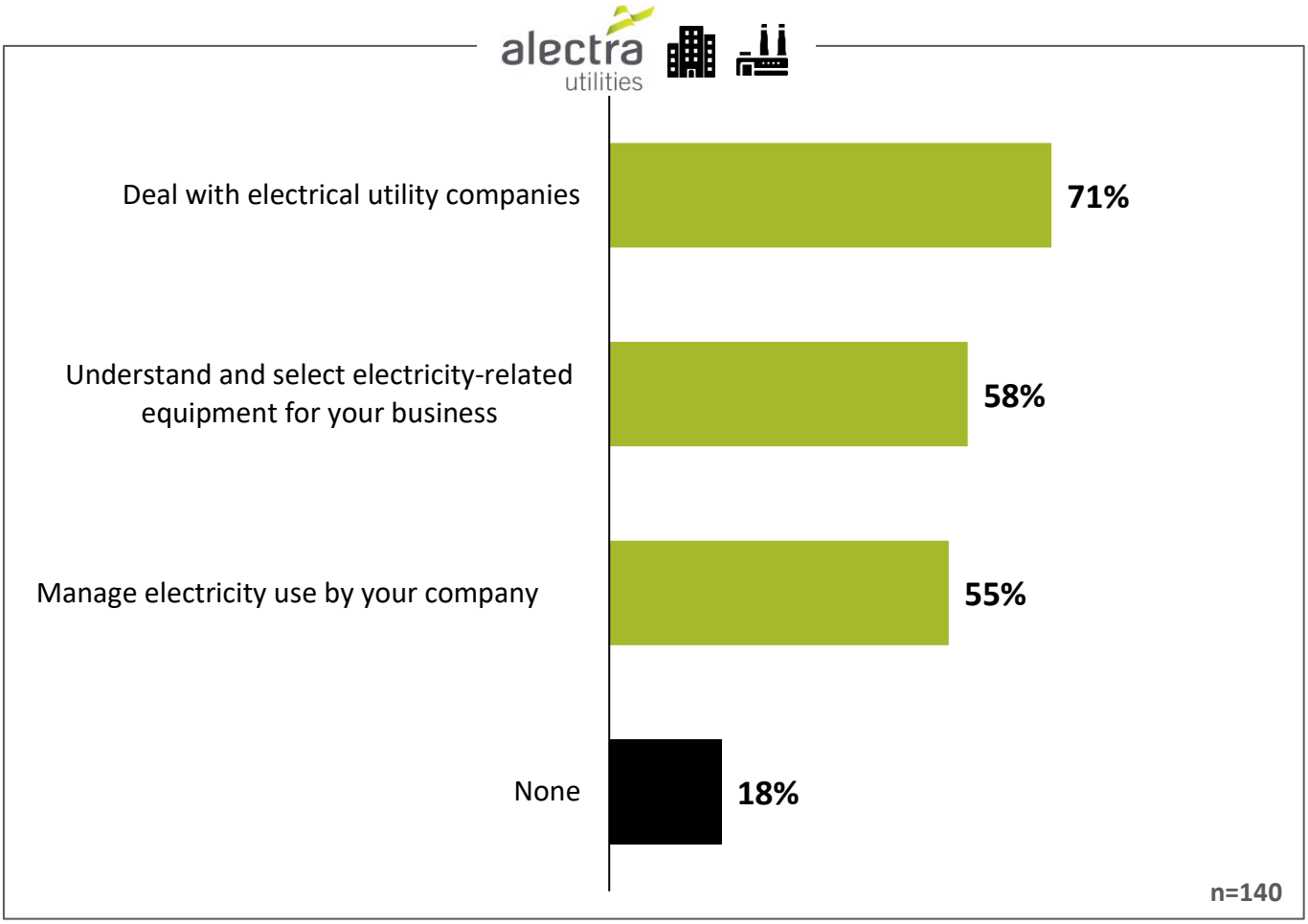
Q Including yourself, how many people work at your organization?



"Don't know" (1%) not shown.

n=140

Q Do you personally do any of the following things in your organization?
Please check all that apply.



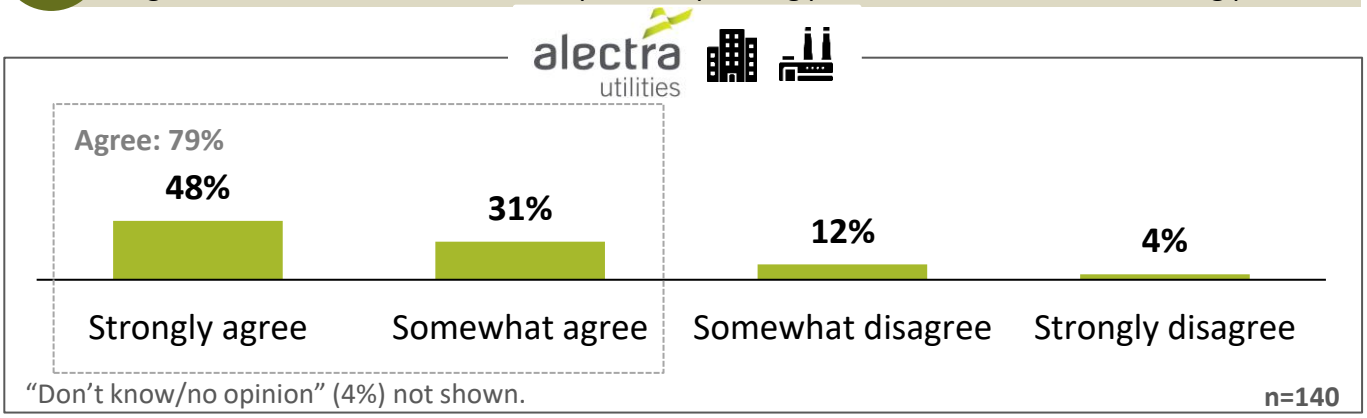
n=140

Environmental Controls

Medium & Large Business

Now we would like to shift the focus, and ask you some general questions about the electricity system in Ontario. To what extent do you agree or disagree with the following statements?

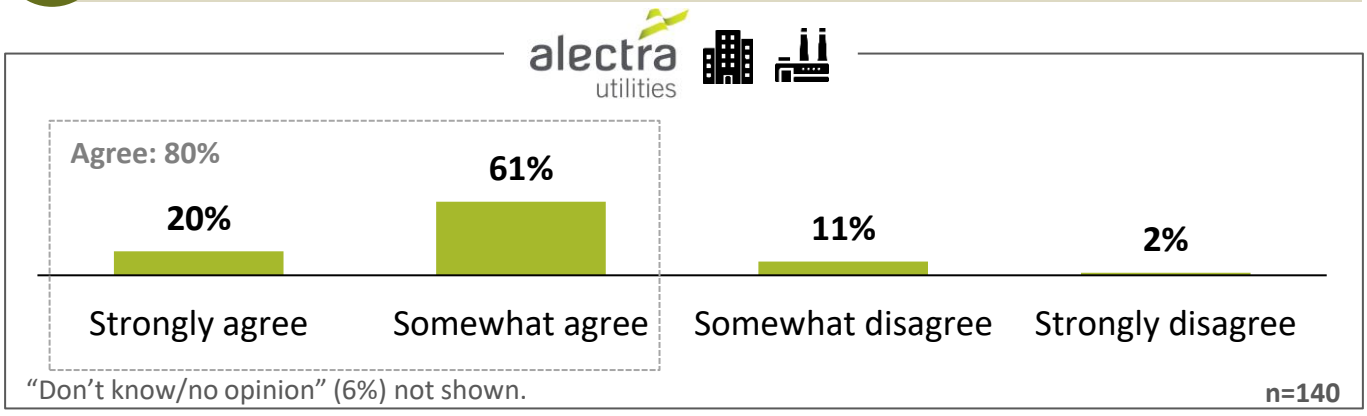
Q The cost of my organization's electricity bill has a major impact on the bottom line of my organization and results in some important spending priorities and investments being put off.



"Don't know/no opinion" (4%) not shown.

n=140

Q Customers are well served by the electricity system in Ontario.



"Don't know/no opinion" (6%) not shown.

n=140

ATTACHMENT 12
GUIDEHOUSE ASSURANCE REVIEW

Guidehouse

Alectra Utilities 2020 to 2024 Adjusted Capital Plan

Assurance Review

Prepared for:

alectra utilities

May 2022

Submitted by:

Guidehouse Canada Ltd.
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Toronto, ON M5X 1B1

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May 6, 2022

Subject: Alectra Utilities 2020 to 2024 Adjusted Capital Plan Assurance Review

Mr. Bassindale:

On behalf of Guidehouse Canada Ltd. (Guidehouse), we are pleased to submit the attached report presenting the findings and conclusions of our review of Alectra Utilities ("Alectra") five-year investment plan that will be used to support a forthcoming rate application before the Ontario Energy Board ("OEB") under the Incremental Capital Module funding mechanism ("ICM").

Guidehouse's assurance review assesses the processes and analytical methods Alectra applied to develop its most recent Distribution System Plan (DSP) and evaluates actual capital investments for 2020 and 2021, forecast investments for 2022, and an adjusted five-year capital investment plan for the years 2023 and 2024.[1] The DSP documents the approach and rationale Alectra used to prepare a five-year investment plan across the four investment categories as outlined in Chapter 5 of the Ontario Energy Board's (OEB) filing requirements for rate applications submitted by electricity distributors in Ontario.[2]

Our review addresses the following questions.

1. Is Alectra's DSP and adjusted five-year investment plan consistent with the guidelines and objectives set forth in Chapter 5 of the OEB's Filing Requirements for Electricity Distribution Rate Applications?
2. Are the planning practices, methods and tools employed by Alectra to develop and prioritize capital expenditures in the DSP consistent with industry best practices?
3. What additional investments are needed and justified for funding approval under the OEB's ICM rate application mechanism?

The assessment includes an evaluation of Alectra's responsiveness and compliance with Sections 5.2, 5.3, and 5.4 of the OEB's Chapter 5 filing requirements for rate regulated electricity distribution utilities in Ontario. The findings and conclusions from our review is based on our independent assessment of Alectra's DSP submitted in its rate application to the OEB in May 2019 covering the rate period 2020 through 2024, and subsequent adjustments to the capital investment plan for years 2023 through 2024.[3]

[1] Alectra's DSP was submitted to the OEB to support an Incentive Rate (IRM) rate application on May 28, 2019 (EB-2019-0018). The current plan includes actual investments for 2020 and 2021, forecast investments for 2022, and adjusted investments for 2023 and 2024.

[2] Filing Requirements or Electricity Distribution Rate Applications - 2018 Edition for 2019 Rate Applications, July 12, 2018.

[3] In its January 30, 2020 Partial Order under EB-2019-0018, the OEB directed Alectra to resubmit its application as an Incremental Capital Module rate application. On April 19, 2020, Alectra notified the OEB that it would not seek funding in 2020 under an ICM rate application and that the 2020 rate order be made final. On April 23, 2020, the OEB submitted its final Order which accepted Alectra's request and approved interim 2020 rates approved in February 2020 as final. Guidehouse understands Alectra will submit an ICM rate application seeking authorization to accelerate spending for cable and accessory equipment in 2022.

1.1 Summary Assessment

From our review of the documents referenced above and discussions with Alectra distribution staff, Guidehouse concludes that Alectra has met or exceeded the OEB's filing requirements set forth in Chapter 5 for electricity distributors. This finding is based on Guidehouse's assessment of Alectra's investment plan as outlined in Sections 5.1 through 5.4 and certain sections of Appendices A through H of its DSP for the four categories that electricity distributors are required to address for the assignment of capital projects in rate applications: (1) System Access; (2) System Renewal; (3) System Service; and (4) General Plant. Guidehouse believes that Alectra's revised five-year investment plan is appropriate and justified based on the level of rigor applied in its capital planning processes and rationale supporting each of the associated business cases in the DSP.

Our assessment recognizes that there are distinct differences among the five legacy electric utilities that now comprise Alectra's electric distribution system.[4]These differences include highly variable load density and growth, a range of delivery voltages, a mix of station and circuit design and configuration, and reliability performance that varies by region. More common among the five operating areas is the presence of large quantities of deteriorated assets, particularly for underground cable and associated equipment. Alectra provided evidence that risk of failure for deteriorated assets is expected to substantially increase over the next five years absent proactive replacement or upgrade of equipment in poor or very poor condition. Accordingly, over 50 percent of total proposed investments is for renewal replacements. Guidehouse concurs that the analysis Alectra presented in its DSP justified, at the time, the proposed amount and percentage of capital investments assigned to renewal replacements.

Since the time the DSP was prepared and submitted to the OEB, Alectra has encountered conditions and circumstances that supports a $97.9 million downward adjustment to its original five-year investment plan.[5] Foremost among these is a reduction in investments due to Covid-19 related impacts. Further, to maintain spending within current authorized base rates, Alectra has significantly reduced investments by approximately $58 million over five years for System Renewal; mostly underground cable injection and replacement.

Guidehouse's review of the DSP and asset condition indicates the reduced investments for renewal replacements will accelerate and increase the volume of deteriorated underground assets, resulting in degraded reliability and unacceptable levels of service to customers located in areas most susceptible to prolonged and repeat interruptions. Our assessment confirms that Alectra's proposal to accelerate investments for underground cable is consistent with good utility practice, Chapter 5 DSP requirements and in conformance with the OEB's September 2019 Order.

Accordingly, Guidehouse concludes that Alectra's DSP provides the OEB, its customers and other stakeholders with sufficient information to make a determination that the Company's revised five-year investment plan fully complies with Chapter 5 objectives and requirements for ICM rate applications; namely, electricity distributors must demonstrate that its DSP should fully addresses the following topics.

[4] Alectra has created five operating areas comprising the five legacy utilities: East, Central-South, Central-North, West and Southwest.

[5] Alectra current investment plan for the years 2020 through 2024 includes a net reduction of approximately $100 million from the prior $1,457 million IRM funding request.

- Asset related performance and the approach used to determine the level of investment required to meet performance targets as outlined in Chapter 5
- Approach to lifecycle asset management planning and the management of assets related operational and financial risk
- Plan for capital-related expenditures over a five-year forecast period and the justification of these expenditures
- Planned investments related to accommodating the connection of renewable energy generation (REG)
- Planned investments for the development and implementation of technology to support grid modernization and expenditures as required by provincial legislation[6]

Guidehouse's assurance review and assessment of Alectra's DSP fully is structured to determine whether the DSP complies with OEB Chapter 5 filing requirements, including its request to obtain approval to accelerate investments for underground cable and accessories via the OEB's Incremental Capital Module rate mechanism.

1.2 Assurance Review Process

Guidehouse's assurance review addresses the processes documented in the DSP and analytical methods Alectra applied to prepare a five-year capital plan across the four investment categories outlined in Chapter 5. It includes an assessment of the processes and methods applied to determine project need and the level of investment proposed for each of the OEB's four investment categories. Our assessment focuses on the level of rigor and consistency Alectra applied to determine investment needs across five operating areas based on the following criteria.

1. Assessment of Alectra's planning and budgeting processes, and how its approach to identify investments required to address at-risk assets is appropriate and consistent with industry best practices.
2. Comprehensiveness of technical analysis and justification of specific investments, including the quantification of benefits, where applicable.
3. Value and incremental impact of the proposed investment relative to a clearly defined baseline (e.g., do nothing case).
4. Prioritization, optimization and selection of investments within each investment category (i.e., how does Alectra determine which assets need to be replaced or upgraded to achieve performance targets?) .
5. Level of detail and cost breakdown of proposed investments with supporting evidence and analytics during project review and selection process.
6. Evaluation of adjustments made to the original investment plan, options considered, and robustness of analysis supporting the need for incremental investment under an ICM rate application.

Guidehouse reviewed both the DSP and worksheets Alectra prepared to develop an adjusted five-year capital plan to support its findings and conclusions and opinion of the reasonableness of proposed investments. We also interviewed Alectra's management and project owners on specific details and findings presented in the DSP and adjusted five-year investment plan. Our findings are also informed by our experience and knowledge of leading electric utility engineering,

[6] Grid modernization includes investing in innovative solutions that make systems more efficient, reliable and cost effective; and more prepared for technological changes, such as electric vehicles and distributed energy resources, and to provide greater customer choice.

operations, asset management and capital planning practices in North America, and the level of effort and approach Alectra applied to identify assets at greatest risk of failure and impact to its customers. Our review includes an assessment of the impact of reduced spending levels across the OEB's four investment categories, and why accelerating investments for underground distribution assets is justified.

1.3 Distribution System Plan (Compliance)

Per Chapter 5 requirements, the DSP presents in detail the methods, assumptions and data Alectra applied to support and justify adjustments to the investment plan for the years 2023 and 2024. Guidehouse's review of the DSP indicates Alectra meets this requirement by affirmatively demonstrating that it has provided or outlined in sufficient detail:

- The process followed to proactively incorporate customer preferences and input into the capital planning process. These include customer surveys and outreach via community meetings to ensure that proposed investments address customers' preferences and expectations regarding their impact on area residences, communities and businesses;
- The value and benefits Alectra expects to achieve over the rate application period via effective approaches asset management and capacity planning;
- Specific details on the vintage and condition of major asset classes as a basis to justify proposed renewal investments, by year, during the five-year rate application interval;
- Documented enhancements to asset management processes, tools and methods that Alectra has implemented, post-merger, to support asset condition assessments and need for upgrades or replacement;
- Informed targeting of asset replacements, including the timing and location of underground based on predicted levels of performance (e.g., based on prior outages) and risk exposure (e.g., customers interrupted);
- A rationale and analysis supporting project need for capacity expansion, local infrastructure project such as the light rail transit projects, deteriorating asset support the capital investments needed to meet reliability, performance and capacity targets;
- Efficient utilization of assets to minimize investments needed to meet capacity deficiencies, including effective coordination with Hydro One and regional planning organizations[7] (e.g., enhanced tie transfers, voltage conversions and demand management); which have deferred the need to add new or upgrade existing stations;
- Balancing of capital projects among the four investment categories via an optimization approach using industry leading tools (e.g., Copperleaf C55); and
- Identifying grid modernization investments, distributed energy resources**,** and foundational technologies and systems to reduce costs and improve efficiency.

Guidehouse Conclusion: *Alectra's DSP and proposed adjustments outlined in the current Plan meet OEB's Chapter 5 filing requirements, as it presents in detail how each project or investment optimally meets performance targets while balancing risk over the five-year investment plan. It documents performance targets over several categories and how each investment contributes to achieving each of these targets. Further, the acceleration of cable and equipment replacements and upgrades is justified based on the rigorous condition and impact analysis Alectra conducted*

[7] Alectra actively participates and contributes to the IESO's Regional Planning Process, including development of the Integrated Regional Resource Plan ("IRRP") and Hydro One Transmission Regional Infrastructure Plans ("RIP"). Alectra's role and participation in regional planning processes focuses on seven of the IESO's 21 planning areas located within its service territories.

to support the additional investments. Guidehouse did not identify any material deficiencies or omissions in the DSP or current investment plan with respect to Chapter 5 requirements.

1.4 Customer Engagement

Consistent with OEB requirements, Alectra has proactively sought input from its customers to inform its capital planning strategy and project selection process, achieved via direct outreach and customer survey instruments. The customer engagement process and surveys are prepared by a third-party firm (Innovative Research) with expertise in customer surveys. The survey used to inform the DSP spending plan covers a range of topics related to electric reliability, customer service, rates and costs, among other topics. Alectra's customer outreach offered customers the opportunity to voice their concerns in public meetings. Alectra conducted initial and follow-up surveys to ensure all topics were fully addressed. The results of the survey indicated customers are most concerned with reliability (including major storm impacts) and electricity price.

Importantly, customer feedback from these surveys was incorporated into Alectra's project selection process, and adjustments were made to the proposed investment plan to reflect customer concerns or requests – $17.5 million was reduced in the DSP. For example, Alectra reduced proposed investments in capacity expansion and renewable energy pilots and increased investment in underground infrastructure as reflected in its DSP. Ultimately, the process resulted in agreement among customers surveyed supporting Alectra's proposed spending levels outlined in the 2018 DSP. A follow up survey completed in April 2022 confirmed among all customer groups that ensuring reliable electric service was their highest priority.[8] The survey group also indicated that accelerated spending for cable investments is warranted, as highlighted in the following excerpt from page 8 of the report.

> *"In both the Enersource and PowerStream rate zones, a majority of customers in all rate classes would like to see at least some increase in investment in cable injection. A plurality chose the most accelerated investment option."*

Guidehouse Conclusion: *Guidehouse views Alectra's customer engagement processes and efforts to solicit feedback to inform its capital planning and project selection process to be consistent with or exceeding industry practices, and affirmatively addresses OEB customer engagement requirements outlined in Chapter 5.4 (a).*

1.5 Asset Management

In the Introduction section of the DSP, Alectra states that its "Asset Management Framework sets the foundation for the DSP and all planned capital investments through five guiding principles: Customer, Financial, Operational, Regulatory, and Organizational." Following these and related corporate objectives, Alectra, beginning in 2017, adopted best practices from its legacy utilities to harmonize its approach to Asset Management, thus, ensuring that asset management practices and policies are uniformly applied to each of the five operating areas.[9] The objective of Alectra's AM approach, applied in the DSP, is to quantify and manage risk for its distribution and station assets in a manner that results in the efficient use of these assets while meeting performance and reliability targets.

[8] Alectra Utilities 2022 ICM Application Customer Engagement Overview, prepared by Innovative Research Group Inc., April 2022.

[9] The harmonization of asset management practices is succinctly described in the following statement on page 9 of Appendix D of the DSP: "The harmonization process included the alignment of all computational models' inputs, nomenclature and methodology."

Alectra's asset management framework is structured to align with four primary strategic goals and objectives, summarized in below excerpt from Table 5.3.1 – 1, with a proposed five-year spending designed to achieve these goals.

1. Optimize operations and lifecycle management and related processes regarding asset renewal to maintain reliability and customer service levels.
2. Invest in and leverage emerging technologies to enable operations, maintain reliability, integrate conservation and demand management and distributed generation activities.
3. Proactively enhance customer engagement and levels of service through levering various channels/technologies.
4. Maintain and continue to improve upon our strong safety record.

From its assurance review, Guidehouse has determined that Alectra's adjusted five-year investment plan and incremental investments for underground assets is based on asset management principles that achieves these objectives, while complying with OEB requirements set forth in Chapter 5. Additional detail on the results of our evaluation are outlined in sections that follow.

Guidehouse is aware of the distinct differences in Alectra's five operating areas and legacy utilities practices, both in terms of distribution system configuration and asset condition. Further, Alectra's distribution system operates over a range of delivery voltages, from 4kV up to 44kV, with some areas predominantly served by overhead lines and others mostly served by underground cable. Further, electricity demand in greenfield development sections of Brampton and Vaughan is increasing while more established areas such as Mississauga are encountering redevelopment; other areas that have been built out absent redevelopment are seeing minimum load growth. Similar to distribution circuits, Alectra owns and operates Transmission Stations (TS) and Municipal Stations (MS) that vary significantly among the five operating areas with respect to rated capacity, design and delivery voltages.

Alectra has transitioned from pre-merger asset management practices that varied among the five legacy utilities to one that incorporates best practices from each; for example, legacy practices for maintenance, inspection and data management differed among each organization. The process Alectra now follows to manage its assets and support proposed investments is well documented, with responsibilities and sequential steps outlined in its AM process. Importantly, Alectra's AM processes have been adopted by all regions, thereby ensuring the project selection is consistent among all asset classes across the entire service territory. One of these enhancements is the use of a single data repository in Alectra's Assets Analytics Platform for recording asset data, key attributes and inspection results.

Alectra has introduced common design and planning standards to the extent practicable given the distinct differences in its distribution assets. Because the harmonization and transition to consistent asset management policies and practices is relatively new, Guidehouse expects the accuracy and level of detail in data collected will continue to improve over time, particularly for entries related to asset condition and health.

Alectra's AM policies and practices are described in detail in the DSP and their adoption has produced a five-year capital investment plan that is based on sound AM principles and practices. Coupled with leading industry tools used to identify the optimal level of spending to meet performance targets and address risk, Alectra applied AM practices to produce a capital investment plan that is consistent with OEB Chapter 5 requirements for cost-effective investment choices. For example, Alectra's applied asset management principles and ACA results to defer

infrastructure replacements that could be justified based solely on of age (i.e., equipment age exceeds expected end of life criteria); yet remains in service beyond predicted end of life due to favorable condition assessments or performance that justified continued use of older, but reliable equipment. In addition, Alectra is proposing technology enhancements, including real-time monitoring of major equipment such as station transformers and breakers, which provide critical operational data to control room operators to detect abnormal conditions prior to failure.

Guidehouse Conclusion: *Alectra's Asset Management practices and project evaluation methodology is consistent with leading industry practices and conforms to OEB requirements outlined in Chapter 5.3. Alectra quantifies the degree to which proposed investments reduces risk and provides value to customers over the life of the asset. Alectra has made good progress ensuring that AM policies and practices consistently applied across all regions; particularly with respect to asset condition assessment and project selection processes. Alectra recognizes that transitioning to common design and AM practices has produced gaps in data records and legacy design standards and configurations that will need to be addressed over time. For example, there is a significant 4kV in some regions, whereas 27kV is dominant in other areas. Further, Alectra's current planning guidelines include reserving capacity on up to three feeder ties to enable station transformer back-up from adjacent stations during outages or maintenance, which Guidehouse views as an effective capacity practice. Guidehouse is aware that feeder ties do not exist in all locations and may not be cost-effective to create due to limited load growth or presence of mobile transformers*.

1.6 Asset Condition Assessment (ACA)

The determination of asset health via ACA is a key element of Alectra's asset management processes. The DSP documents in detail the methods and level of rigor Alectra currently applies to assess and determine the condition and health of its distribution and station assets.[10] Alectra's uses an analytical approach to quantify asset condition as measured by Health Indices (HI) for 11 distribution categories, with asset condition scaled via designations ranging from very poor to very good.

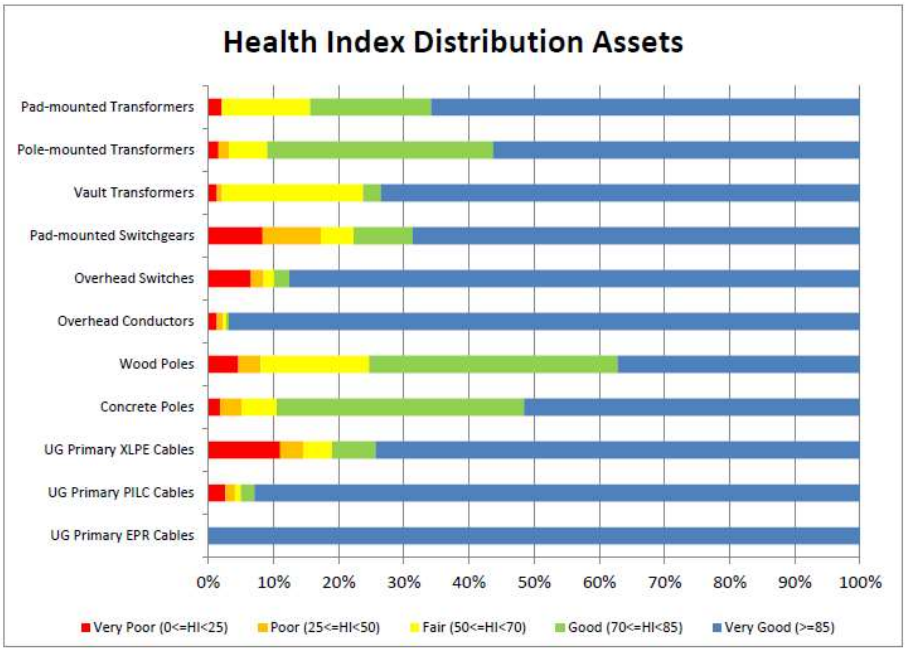
The methodology Alectra uses to derive asset health indices is based on a formulaic approach: HI's are derived based on the product of weighted inspection scores (or percentage scores when more detailed inspection data is available)[11] and a conduction multiplier; the latter limits the maximum HI score to reflect safety, obsolescence or field/measurement results. The criteria Alectra applies to determine deterioration levels is based on detailed inspection reports, known risk factors (e.g., defective components), historical performance and expert judgement from staff qualified to assess equipment condition or obsolescence. It is from these processes and HI results that Guidehouse has determined that accelerating the replacement or upgrading of underground assets is required.

The results of Alectra's 2018 asset condition assessments as determined by the HI processes described above appears in Figure 5.2.3. - 1 of the DSP, presented below.[12]

[10] Terms for Distribution and Stations are intended to refer to equipment located beyond the station fence and within the station, respectively.

[11] The level of deterioration and overall condition is scored on a range of 0 [imminent failure] to 5 [excellent condition] .

[12] Similar asset health designations were prepared for station power transformers, switchgear and circuit breakers.



Alectra's ACA confirms a correlation between age and condition for several asset categories. For example, direct buried cross-linked polyethylene extruded (XLPE-DB) installed in the 1960's and early 1970's is well-known throughout the electric utility industry to be prone to failure due to treeing caused by contaminants embedded in cable insulation during original fabrication. Alectra has a significant amount of XLPE-DB on its distribution system and has identified and documented areas with high concentrations of deteriorated cable, along with line sections most susceptible to failure. Similarly, older station switchgear and padmount switchgear installed on underground feeders have experienced higher failures rates – older station switchgear also has greater arc flash hazard potential as well. A study conducted by Kinetrics, a firm with expertise in ACA and distribution engineering,[13] confirms that a significant amount of equipment in certain categories is at or beyond expected lives.

ACA data is now collected and analyzed via Alectra's Assets Analytics Platform for each region. The transition from Microsoft Excel to Alteryx is preferred as it provides consistent checks for data entries (e.g., asset inspections) and ease of access for analytical studies. Alectra recognizes the quantity and quality of data such as those obtained from inspection reports varied among the five legacy utilities and expects the accuracy of ACA processes will improve over time as improved and consistent data is collected. There are recommended improvements in the Kinetrics report such as DAI and development of failure curves based on failure rates (versus depreciation schedules) that will improve the ACA process.

Guidehouse Conclusion: *Alectra's ACA methodology and formulaic determination of asset Health Indices is consistent with or exceeds current utility practices. The data and analyses used to determine asset condition is sufficiently rigorous to justify the quantity of replacement or upgrade of at-risk assets over the five-year investment period. The acceleration of investing in underground equipment is necessary to sustain replacement of deteriorated cable and accessories in sufficient quantities to reduce the percentage in very poor or poor condition and to avoid degradation of reliability performance. These incremental investments, if approved, will*

[13] Twenty-year "Asset Depreciation Study for the Ontario Energy Board, Kinectrics Inc. Report No: K-418033-RA-001-R000 July 8, 2010" (Appendix J of DSP). Kinetrics also provided a detailed summary of Alectra's ACA methodology and results, along with its opinion that Alectra methodology is consistent with good utility practice, in Appendices D and E of the DSP.

produce an adjusted five-year investment plan that is still below amounts included in the DSP. The addition of charts or tables highlighting the net change in percentage of assets in poor or very poor condition resulting from the proposed spend plan for Renewal replacements would further clarify how these investments would reduce the amount of deteriorated assets.

1.7 Risk Management

Alectra's DSP and adjusted five-year capital plan centers on managing risk so as to produce the most favorable outcomes based on a range of risk factors: i.e., reliability, safety, security, cost, environmental, and rates. The DSP outlines how Alectra aligned proposed investments to balance spending among the OEB's four investment categories to avoid increasing risk to unacceptable levels for each of the assigned risk factors. The investment selection process incorporates results from a risk matrix that includes the assignment of numerical values ranging from low to high for each risk factor. The process that Alectra applied to assign scores for each level within the risk matrix is clearly delineated in Table 5.4.1. – 1 (Attachment A), which was developed using input from a mix of stakeholders across Alectra's distribution organization; thus, ensuring assigned values is prepared with input from a cross-section of the utility covering planning, operations, economics/rates, regulatory, customer service, and human resources (e.g., minimum work crew requirements and availability[14]), among others.

Alectra's risk management approach is structured to ensure that proposed spending in each of OEB's four investment categories is balanced and distributed so as to manage risk across all categories to within acceptable levels. For example, in Table 5.4.1. - 1, Alectra determined that acceptable risk scores should not exceed 1000 to 1500 for certain risk categories. These assignments ensures that the adjusted five-year capital investment plan incorporates constraints imposed by risk factor limits. The process establishes minimum or maximum risk thresholds or drivers for six planning categories that are incorporated into the C55 model; i.e., spend levels are optimized in C55 for each of the four investment categories subject to risk-based constraints or limits. Alectra's project selection and optimization process also recognizes mandatory investments for customer connections, highway relocations and other non-discretionary projects.

The results of Alectra's risk management process results in an annual capital spend plan that meets Alectra's risk profile and performance targets at least cost. Notably, deteriorated assets and their impact on reliability is a key driver for managing risk, with over 50 percent of proposed investment targeted to System Renewal, which underscores the degree to which asset condition and increased likelihood of failure contribute to the overall risk profile and extent to which mitigation is achieved via asset replacement or upgrade.

Guidehouse Conclusion: *Alectra's risk management process thoroughly captures key risk factors and incorporates these factors into its capital planning process. The integration of risk management into the capital budgeting process minimizes the likelihood of unacceptable risk exposure across several components to Alectra's distribution system, its employees and customers. The level of capital spend Alectra proposes for each of OEB's four investment categories is set to manage risk and produce desired performance outcomes at lowest cost. Additional details on Guidehouse's assessment of Alectra's project selection and budgeting process is discussed in the Five-Year Capital Plan.*

[14] Alectra's risk assessment process seeks to achieve work force efficiency by identifying projects needed to best utilize work crews based on the minimum and maximum number of available hours.

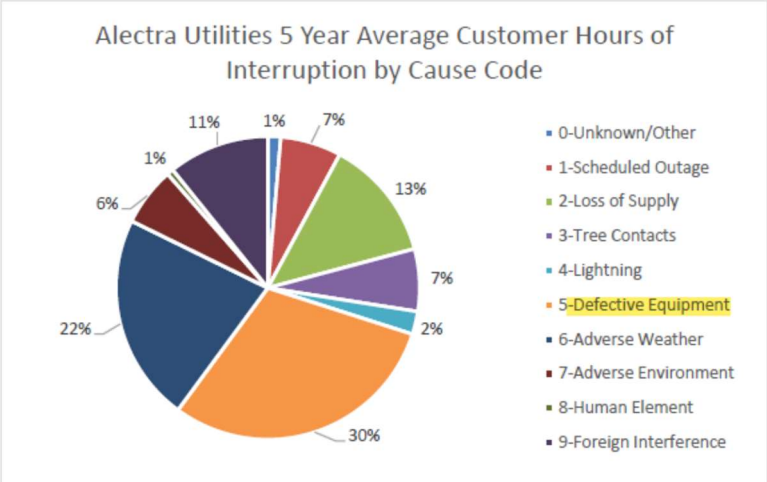
1.8 Performance Measurement and Continuous Improvement

Alectra's DSP presents in detail past performance as measured by industry-accepted reliability indices, unit costs and delivery efficiency, including how certain metrics vary by region. Specific targets over the five-year investment plan are documented, including how performance targets will be achieved to address the challenges associated with an electric delivery system whose condition continues to deteriorate for critical asset classes such as underground cable, while subjected to increasingly severe weather events. Alectra expects to meet performance targets at lowest cost via proactive asset management and cost control, achieved through harmonization of critical AM processes and efficiencies gained from consolidation of the legacy utilities. Reliability metrics will be met by targeting investments to assets at greatest risk of failure combined with the consequence of failure.

The DSP lists performance targets for reliability, customer satisfaction, unit costs, projects completed, work efficiency and percent of cable in poor or very poor condition, among others. The targets set are based on historical patterns where data exists and new measures on a forward-looking bases, with values established based on proposed expenditures in the five-year investment plan. The performance target for SAIDI (excluding Major Event Days), is presented in Table 5.2.3 – 6 of the DSP and presented below. The .98 value was set to improve performance and address a decline in reliability performance as measured by IEEE P1366 metrics, which increased 8 percent annually over the prior five years.

Measure Category	2020-2024 Performance Measure	5-Year Historical Performance	Target (2020-2024)
Operational	SAIDI – Excluding MEDs	0.98 hours	Maintain

Figure 5.2.3 – 4 from the DSP, presented below, illustrates that defective equipment is the leading cause of customer outage hours (similar charts show similar patterns for number of interruptions), followed by adverse weather and loss of supply.[15] The majority of these interruptions, over 75 percent, is due to cable or padmount switchgear failure, with most of the remainder caused by overhead line failures. Alectra's effort to target System Renewal investments on vulnerable underground equipment and overhead lines will help achieve performance targets at lowest possible cost.



[15] For example, interruption caused by failure of HONI transmission lines or station equipment.

Guidehouse Conclusion: *Alectra's DSP documents in detail historical performance measurements and proposed targets for each of the metrics outlined in section 5.2.3 of Chapter 5, and how these metrics are derived and tracked. The DSP also provides evidence that Alectra's use of rigorous asset condition and risk evaluation methods, when combined with analytics to determine optimum investment, produces a five-year investment plan will help Alectra achieve performance targets at lowest life-cycle cost. However, although the additional investment under the OEB's ICM funding mechanism is needed to avoid degradation in reliability, performance and customer satisfaction, it is unlikely that Alectra will achieve the same performance levels if the original DSP five-year investment plan was approved*

1.9 Renewable Energy Generation

Section 5.3.4 of Alectra's DSP addresses renewable energy generation or REGs, with the quantity, capacity rating, location and type summarized in tables and charts for both small medium and larger REGs. The DSP lists remaining REG interconnection capacity, by station, for both spinning and inverter based REGs. Alectra lists stations that currently are constrained (12), and actions the company undertake to mitigate these constraints; mostly reverse power or thermal violations.

The amount of new REG capacity projected for installation on Alectra's distribution system over the next five years is projected to be low compared to historical levels due to changes in Feed-in Tariff ("FIT") and Alectra's predominantly urban system that limits rooftop solar. Table 5.3.4. – 2 projects about 75 MW of cumulative new REG capacity by 2024, a fraction of Alectra's peak demand of over 5,000 MW – total connected REG as of 2018 was about 150 MW. Hence, REG impacts and the need to mitigate potential hosting capacity constraints and station limits (i.e., DESN transformer limits and fault duty constraints) to accommodate new REGs is modest. Hence, the number of projects and proposed investments targeted to REG is thus low over the five-year DSP.

Notwithstanding the nominal REG capacity forecast, Alectra proposes to assess the role and value of REG (and demand response and energy efficiency as part of a DER strategy) in its planning processes. Several pilot initiatives are proposed, including the potential for DER to defer or eliminate the need for station capacity upgrades.

Guidehouse Conclusion: *Alectra has identified areas where hosting capacity limits or other operating constraints limit the amount of new REG absent system upgrades and has proposed appropriate mitigation and projects to enable increasing amounts of REGs. Alectra recognizes the potential for REG to defer capacity investments and has proposed pilot projects to determine the conditions under which REG may be a cost-effective alternative.*

1.10 Capital Planning Processes and Optimization

Alectra follows a structured approach using rigorous analytics to determine the level of investments required to achieve strategic objectives, meet performance targets and mitigate risk. The DSP describes in detail Alectra's capital planning process and documents the activities Alectra uses justify the magnitude and timing of proposed investments for programs and projects for which it seeks funding approval. Project "owners" are assigned to specific investment categories and are responsible for preparing business plans and documentation need to ensure proposed projects address risk or produce high value for money. Information for all ongoing and proposed capital projects resides in a common repository within the Copperleaf C55 capital management system. The use of a single system to enter and track information relating to project costs and benefits is a critical feature of Alectra's capital planning process, as the assumptions

and methods used to determine project value and need are consistently applied, thereby avoiding potential biases associated with processes based on judgement or inconsistent project evaluation methods.

Copperleaf's C55 suite of investment planning modules is used by Alectra to manage capital projects and to produce an optimized investment portfolio over five years, subject to the constraints outlined in the risk management section.[16] The C55 multi-variate optimization software is an industry leading tool used by electric utilities throughout the United States and Canada, including other electricity distributors in Ontario that have submitted rate applications before the OEB. The need for such a tool and structured approach to investment planning is underscored by the large number of projects in Alectra's capital portfolio – over 1000 in the DSP. One of the key features of C55 is its ability to evaluate and rank dissimilar projects, including those in each of Alectra's four investment categories, on a common economic scale.

The C55 suite includes a Value Framework module, which is used to quantify project benefits across a wide range of economic, performance and risk avoidance categories. The DSP presents in detail the assumptions and rationale Alectra used to support proposed investments, with descriptive details and data highlighted for many of these projects. The capital planning process prioritizes investments subject to funding constraints, including mandatory investments for customer connection requests, municipal relocation or highway projects, equipment failures and projects required per provincial or regulatory requirements. Alectra's optimization process produced an investment plan that is distributed equally over time, with modest annual increases over the five-year plan.

Guidehouse Conclusion: *Guidehouse's review of Alectra's capital planning process and its application of C55, confirms that Alectra applied an appropriate level of rigor to support the assumptions and values used to support the prioritization and selection of capital projects and programs. Alectra's capital budgeting process and its use of C55 justifies the adjusted five-year capital plan. Our assessment of Alectra's capital plan for each of the OEB's investment categories is addressed in further detail below.*

1.11 Five-Year Investment Plan

Alectra's DSP and ten-year investment horizon – five historical and five forward-looking – spanned the years 2015 through 2020 of approved spend (2018 through 2020 was budgeted) and the years 2020 through 2024 in its original IR rate request. Table 5.2.1 – 4, presented below, shows Alectra's proposed investment plan at the time the DSP was submitted for each of the OEB's Chapter 5 investment categories. The original 2020 through 2024 DSP investment plan was $1,457 MM, with modest increases in investment over the five-year plan for System Access and System Renewal.

DSP Five-Year Investment Plan

Investment Category ($MM)	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
System Access	66.5	66.9	63.2	67.1	70.2	333.9
System Renewal	139.0	142.0	154.0	156.1	177.2	768.3
System Service	38.0	36.9	36.0	42.4	37.2	190.5
General Plant	39.4	34.4	35.1	30.2	24.7	163.8
Total	**282.9**	**280.2**	**288.3**	**295.8**	**309.3**	**1,456.5**

[16] Also referred to as Alectra's Capital Investment Portfolio application.

Since Alectra notified the OEB in April 2020 that it would withdraw its pending IR rate application, it has adjusted its five-year base investment plan. The current plan includes actual investments for 2020 and 2021, forecasted investments for 2022, and adjusted investments for 2023 and 2024. The five-year total has been adjusted downward to reflect lower growth due to Covid 19 impacts, and further downward adjustments for renewal replacements and rebuilds; mostly cable replacement and injection, and rear lot conversions. These reductions are partially offset by increased costs of mandatory overhead replacements, and higher costs for material and labor (approximately 4 percent) in years 2022 through 2024 due to inflation. The revised five-year total is now $1,359 MM[17], presented below, which includes a $52.3 million funding request that Alectra proposes to file with the OEB under its incremental rate application mechanism.[18]

Adjusted Five-Year Investment Plan

Investment Category ($MM)	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
System Access	63.0	67.4	64.8	69.2	68.3	332.7
System Renewal	135.5	136.5	125.4	150.1	162.9	710.4
System Service	26.8	28.4	27.2	24.4	22.0	128.8
General Plant	30.8	29.6	41.9	44.1	40.3	186.7
Total	**256.1**	**261.9**	**259.3**	**287.8**	**293.5**	**1,358.6**

Guidehouse's assurance review assesses the adequacy of Alectra's current investment plan based on the processes and rationale outlined in the DSP and applied to justify adjustments to the investment plan for years 2023 and 2024, and the need to accelerate by $52.3 million for underground equipment. Our review is summarized below for each of the four DSP investment categories. For each category, tables listing proposed adjustments to the investment plan by major subcategories are presented for the years 2020 through 2024. An assessment of the impact of changes in proposed investment on performance metrics is provided based on Guidehouse's assessment of Alectra's DSP as applied to major investment categories.

1. System Access

The majority of Alectra's investments for System Access – over 80 percent - is for mandatory projects such as new customer connections, metering, highway relocations and customer-initiated distribution projects; up to 50 percent of proposed investment is for new connections in some years. The remaining 20 percent is mostly for meter replacements. Although Guidehouse did not independently review Alectra's load forecast, the DSP provides details on how the forecast were developed and the factors driving load growth in certain areas versus flat projections in other regions. Outlying areas with growth opportunities such as Brampton and Vaughn are expected to increase at modest levels while built-out areas such as Mississauga will see growth related to downtown redevelopment.

Adjusted System Access Investment Plan ($MM)	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
Network Metering	17.0	14.3	12.9	12.4	12.7	69.3
Customer Connections	33.8	39.4	36.8	39.1	39.8	188.9
Road Authority & Transit Projects	12.4	13.5	13.8	16.5	15.7	71.9
Transmitter Related Upgrades	(0.2)	0.2	1.3	1.2	0.1	2.6
Total	**63.0**	**67.4**	**64.8**	**69.2**	**68.3**	**332.7**

[17] Values entered for years 2020 and 2021 are actual spending amounts, while those entered for 2022 are forecast, and 2023 and 2024 are adjusted investment plans.

[18] Proposed incremental investments for cable includes $25.4 in 2023 and $26.9 million in 2024.

Just over twenty percent of annual spend is for road authority projects and a slightly lower percentage for network metering, each of which represent mandatory investment (e.g., network meter investment is based on projections for new connections; whereas road authority projects are based on information provided by municipal and provincial entities). The amounts assigned for transmitter related upgrades is low, less than one percent, due to the relatively small number projects that require Alectra capital contributions.

The following table presents the net change in proposed investment documented in the DSP for System Access versus Alectra's current plan by major subcategory. The total five-year adjusted five-year investment plan is mostly unchanged, with increased investments for customer connections offset by decreased investments for roadway projects from 2022 through 2024. The increase in investments for network metering and new customer connections is primarily due to continued residential and commercial growth in sections of Alectra's service territories while the decrease in Road Authority projects reflects a decrease in roadway construction due to Covid impacts. A portion of the increase in network metering costs is related to system upgrade requirements discovered during harmonization. Guidehouse agrees with the need for these adjustments and concludes that the minor reduction in net investments will not materially impact reliability, performance or customer satisfaction.

Investment Plan Adjustments ($MM) System Access	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
Network Metering	2.2	0.0	2.7	0.8	0.5	6.2
Customer Connections	2.4	6.3	2.0	2.8	2.1	15.6
Road Authority & Transit Projects	(7.3)	(3.8)	(4.4)	(2.7)	(4.6)	(22.8)
Transmitter Related Upgrades	(0.8)	(2.0)	1.3	1.2	0.1	(0.2)
Total	**(3.5)**	**0.5**	**1.6**	**2.1**	**(1.9)**	**(1.2)**

Note: Increased investment appears as a positive adjustment; decreases in brackets

Conclusion: *The level of investment Alectra proposes for System Access is appropriate given recent changes to its load forecast and downward adjustments for pending or ongoing road and highway projects obtained from transportation authorities, and scheduling commitments for installation or new or replacement network meters. The of amounts listed for the years 2022 through 2024 align with these adjustments and revised forecasts. Guidehouse also recognizes that Alectra has elected to shift investment among System Access categories to accommodate delays of new roadway projects or changes in the load forecast, and to account for unanticipated economic impacts or other factors that impact investment levels. The amounts budgeted are expected to cover total investments across all categories, collectively, absent additional major adjustments.*

2. System Renewal

Over 50 percent of Alectra's proposed five-year capital investment plan is for renewal replacements, with annual investment amounts increasing over the five-year investment plan as documented in the table below. Guidehouse's review and assessment confirms that Alectra has assigned an appropriate and justifiable amount of capital funds to System Renewal, as distribution assets will unacceptably deteriorate beyond current levels and therefore, must be proactively addressed to avoid degraded reliability to its customers.

Guidehouse's finding is supported both by customer survey results and the detailed analysis Alectra conducted to identify those assets at highest risk of failure (some asset categories are in good condition and require minimal spend). Alectra's analysis recognizes and confirms that asset replacements are targeted to areas of greatest need on its distribution system rather than system wide. The use of C55 project optimization models incorporates risk exposure across several categories to prioritize projects and to

balance investment versus risk over each set of assets. Guidehouse concludes that Alectra's approach to determine required investment levels for System Renewal is consistent with leading asset management practices.

Adjusted System Renewal Investment Plan ($MM)	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
Overhead Asset Renewal	32.8	39.8	36.7	39.7	46.8	195.8
Underground Asset Renewal	61.5	55.6	55.3	75.9	80.6	328.9
Reactive Capital	22.5	26.8	21.1	21.8	22.3	114.5
Rear Lot Conversion	2.4	0.1	1.1	0.5	1.0	5.1
Substation Renewal	10.5	7.3	4.8	5.0	4.7	32.3
Transformer Renewal	5.8	6.9	6.4	7.2	7.5	33.8
Other System Renewal	0.0	0.0	0.0	0.0	0.0	**0.0**
Total	**135.5**	**136.5**	**125.4**	**150.1**	**162.9**	**710.4**

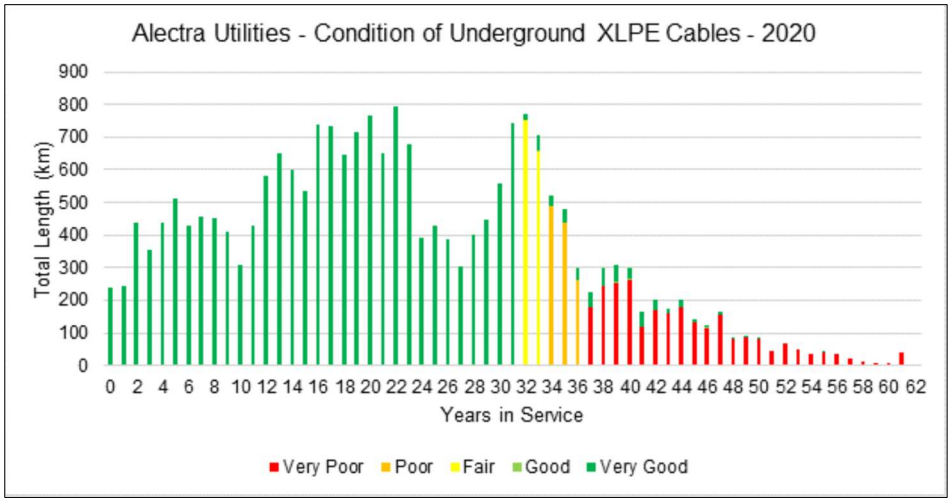
Approximately 60 percent of Alectra's distribution system is located underground (or ground-mounted in the case of transformers and switchgear), with a substantial percentage, up to 17% or higher, determined to be in poor or very poor condition. Accordingly, just under 50 percent of total spend for System Renewals is for underground assets. Approximately 40 percent of annual spend on cable is for silicone injection on cable sections identified as eligible for replacement[19] - cable injection is a proven, low-cost option to extend cable life (by up to 20 years or longer per warranty provision). Alectra's proposed five-year investment plan is structured to replace or upgrade at risk cable and accessories on a sustainable basis to meet performance targets and to avoid degraded reliability and interruptions to customers served in areas where cable condition is poor. Notably, customers confirm in a recent survey their support of Alectra's proposed investment plan for the replacement of deteriorated underground cable and equipment.

For overhead lines, at risk poles and obsolete conductor (e.g., number 6 wire size) is targeted for replacement based on safety and reliability criteria. For example, Alectra proposes to install new poles on the opposite side of roadways where existing poles incapable of supporting four sets of primary conductor, often with communication lines built underneath, during majors storms – pole failures on these circuits can and have caused significant interruption to a large number of customers (Figure A05 - 1 from the DSP is highlighted below). Approximately $22 million is assigned annually to reactive replacements, which essentially is a mandatory spend category used to replace or repair (via corrective maintenance) of failed equipment.

[19] Cables suitable for silicone injection include those with relatively few in-line splices and are less than 35 years in age.

Approximately $11 million, on average, is assigned annually for converting lower voltage distribution assets (4kV) to operate at higher voltage to improve asset utilization and performance, such as reduced losses and capacity. Alectra has been converting low voltage assets, including the elimination of older stations, on an ongoing basis, consistent with common utility practices. The selection of stations and lines for conversion is based on a combination of factors, including reliability, load growth, asset condition and equipment obsolescence. The amount of spending targeted to voltage conversions has decreased due to shifting of funds to higher priority renewal projects, including station equipment where voltage conversions eventually will need to be completed. The delay in undertaking voltage conversion projects due to reduced spending likely will increase total costs over the long term.

The following chart derived from the 2020 lists assets in several categories that are well beyond expected end-of-life, but not targeted for replacement due to favorable performance or condition assessments. This practice confirms that Alectra has properly targeted investments to equipment based on actual deterioration and a value analysis quantified via C55 modeling. Alectra has identified areas where cable has failed repeatedly – often these are locations where soil or environmental factors lead to insulation breakdown – and proposes to accelerate investments to proactively address at-risk cable in areas most vulnerable to repeat or prolonged outages.



The following table presents the net change in proposed investment in the DSP versus the current plan for System Renewal by major subcategory. Total five-year investments is reduced by approximately $58 million, with significant reductions in underground (cable) replacement and injection between 2021 and 2024. The lower investment is partially offset by increases for overhead assets in 2023 and 2024 to comply with Municipal and Regional Government requirements to remove redundant overhead lines in conjunction with ongoing high-speed communication system upgrades. The cost of reactive capital has and is expected to be higher than DSP levels due to an increase in equipment failures caused by reduced investments for renewal replacements resulting from the denial of Alectra's prior M-Factor application. The increase in other System Renewal investments of $9 million over five years is for lower cost projects that fall below the OEB's materiality threshold.

Investment Plan Adjustments ($MM) System Renewal	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
Overhead Asset Renewal	(1.5)	5.0	(2.6)	8.8	9.2	18.9
Reactive Capital	3.7	7.6	1.5	1.8	1.9	16.5
Rear Lot conversion	(2.4)	(1.1)	(0.1)	(3.7)	(7.5)	(14.8)
Substation Renewal	(2.3)	2.9	2.0	1.8	(0.8)	3.6
Transformer Renewal	0.3	0.6	(0.6)	(0.2)	(0.3)	(0.2)
Underground Asset Renewal	0.4	(18.9)	(26.9)	(12.6)	(14.9)	(72.9)
Other System Renewal	(1.7)	(1.7)	(1.8)	(1.9)	(1.9)	(9.0)
Total	**(3.5)**	**(5.5)**	**(28.6)**	**(6.0)**	**(14.3)**	**(57.9)**

The reduction in investment for rear lot conversions is not expected to materially degrade reliability over the next two to three years. In contrast to rear lot deferrals, Guidehouse finds that downward adjustments cable will materially impact reliability and customer satisfaction, as cable is expected to continue to deteriorate to unacceptable levels as discussed in prior sections on asset management and condition assessment. The amount of cable that will be assigned as in poor or very poor condition is likely to increase. As such, Guidehouse anticipates that reliability will likely decline absent accelerated investment, as proposed, under the OEB's ICM rate mechanism.

Guidehouse Conclusion: *The methods Alectra applies to identify required investment for System Renewal is based on a thorough and consistently applied condition assessment methodology and analytics that balances cost versus risk. Alectra's methodology, which identifies those assets with greatest risk and consequence of failure, justifies the projects it selects for replacement or upgrade. The level of proposed investments aligns with Alectra performance targets, particularly for reliability, which is expected to degrade absent proposed investments for asset renewal as outlined in both the DSP and Alectra's most recent capital plan.*[20] *Based on its Assurance Review, Guidehouse concludes Alectra's current investment plan for System Renewal is inadequate. The deferral of renewal investments is not sustainable as lines and equipment will deteriorate at increasing higher rates. Hence, the acceleration of investment of $52.3 million for cable and accessories is essential to enable Alectra to achieve a sustainable level of replacements without jeopardizing reliability in sections of its system where cable failures are highest, and customers are at risk of repeat and lengthy interruptions.*

3. System Service

Alectra's annual investment plan for System Service is approximately $25 million, which includes up to ten million annually, on average, for supervisory control (SCADA), automation, and communications and control systems. Notably, on average, about two to three million is for station capacity upgrades, a relatively low amount of investment that Alectra is able to achieve via efficient use of existing assets in lieu of new capacity. Alectra demonstrated that it is able to cost-effectively defer several station capacity additions or upgrades by expanding or adding new distribution circuits along with new feeder ties points to increase available transformer back-up capacity to and from adjacent stations. This approach is consistent with good industry and asset management practices. About $10 million, on average, is assigned to distribution line upgrades to increase transfer capability between stations and enable capacity deferral; and to increase utilization of existing lines via load balancing and line segment transfers.

[20] The DSP projected that reliability would worsen by up to 50% over the next five years under a partial funding scenario for renewal replacements and upgrades.

Adjusted System Service Investment Plan ($MM)	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
SCADA & Automation	3.4	9.0	4.7	2.4	2.8	22.3
Capacity (Lines)	11.2	7.0	11.2	12.2	11.7	53.3
Capacity (Stations)	0.7	5.3	2.6	0.7	0.8	10.1
System Control, Communications & Performance	5.5	4.2	5.9	6.1	4.0	25.7
Safety & Security	5.6	2.6	1.6	1.6	1.4	12.8
Distributed Energy Resources (DER) Integration	0.4	0.3	1.2	1.4	1.3	4.6
Total	**26.8**	**28.4**	**27.2**	**24.4**	**22.0**	**128.8**

As noted, effective coordination with the IESO, Hydro One and other regional planning entities, along with recent reductions in major industrial load, has led to the deferral of major station investments – a $10 million downward adjustment in station capacity is included in the above table.[21] Further, Alectra is using technology to enhance performance via real-time monitoring of major equipment (such as station transformers), which provides critical operational data to distribution system operators that enable them to help detect abnormal conditions before failure, and to improve visualization and monitoring, and prospectively, control of distribution energy resources; processes that will enable greater amounts of renewable and other non-conventional resources, and ensure compliance with the regional Long-Term Energy Plan.

Guidehouse is aware of the low forecast for new distributed generation capacity over the next five years, which results in less than $1 million allocated annually for DER integration. All proposed funding is for pilot projects designed to assess the capability of DER to defer capacity investments (e.g., via non-wires alternatives) – some investments deferred in 2020 and 2021 due to Covid have been moved to 2023 and 2024. However, no investments are proposed to expand the distribution system to accommodate REG. Proposed investments include the development of a DER Control Platform (i.e., Distributed Energy Resource Management System of DERMS), a foundational investment designed to enhance visualization, management and control functionality that will be needed if Alectra is to rely on DER and storage as a source of firm capacity to defer both TS/MS stations and distribution capacity additions.

Alectra's investment plan for System Service investments includes upgrading SCADA and automation technologies, such as the installation of automated tie transfers of feeder ties to improve reliability and asset utilization. Investment in SCADA and automation via tie transfers has been demonstrated by electric utilities throughout North America as a cost-effective approach to improve reliability and efficient use of distribution assets.[22] However, the improvement in reliability achieved by automation does not diminish the need for renewal upgrades, as outages will continue to occur and increase more frequently as equipment further deteriorates.

The following table presents the net change to the DSP Investment Plan for System Service from the current plan by major subcategory. Total five-year investment has been reduced by approximately $62 million. Virtually all reductions are for distribution and station capacity investments during the years 2020 through 2024. Some reductions in capacity related investment has been redirected to support critical System Renewal replacements, and Alectra has accepted a modest increase in capacity-related risk. However, because demand forecasts and major load additions have declined since the issuance of DSP, Guidehouse does not expect these adjustments will materially affect

[21] For example, deferring the need for additional capacity at Barrie TS from 2022 to 2026.

[22] Amounts assigned to automation and that appear in the table assume a funding request from Natural Resource Canada for Alectra's Smart Grid program is approved. If funding is not approved, the investment will increase and investments in other projects will need to decrease.

Alectra's ability to serve customer electricity demand, nor negatively impact reliability, performance or customer satisfaction.

Investment Plan Adjustments ($MM) System Service	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
SCADA & Automation	0.0	5.4	1.0	(1.4)	(1.9)	3.2
Capacity (Lines)	(9.9)	(17.0)	(12.7)	(14.2)	(3.1)	(57.0)
Capacity (Stations)	(0.1)	4.6	1.8	(4.5)	(11.2)	(9.4)
System Control, Communications & Performance	(1.1)	(1.6)	1.2	2.0	1.2	1.7
Safety & Security	0.2	0.6	(0.4)	(0.4)	(0.6)	(0.6)
Distributed Energy Resources (DER) Integration	(0.3)	(0.4)	0.3	0.5	0.4	0.5
Total	**(11.2)**	**(8.5)**	**(8.8)**	**(18.0)**	**(15.2)**	**(61.7)**

Guidehouse Conclusion: *Alectra approach and planning criteria for capacity investments is consistent with good utility practices as it provide for the most efficient use of assets. Further, Alectra's current investment plan for System Service is appropriate and justified as the reductions align with lower forecasts for peak demand over the five-year investment period. Absent unexpected growth or other significant changes, Guidehouse does not expect the downward adjustments in investment will materially impact performance or reliability, or other performance targets.*

4. General Plant

Alectra's General Plant programs describes in details the company's non-electric delivery assets, physical facilities, tools and fleet investments, technology initiatives and specific programs that are underway or proposed for the five-year capital plan. It also outlines plans to significantly enhance information technology systems to support its modernization programs, data management, and business processes, with over 50 percent of the total budget assigned to IT and operational technology (OT) software.

Adjusted General Plant Investment Plan ($MM)	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
Facilities Management	7.4	2.6	3.4	4.3	5.9	23.6
Information Technology	13.8	13.8	29.3	29.4	21.8	108.1
Fleet Renewal	8.1	6.6	7.3	7.7	10.6	40.3
Connection and Cost Recovery Agreements	0.0	5.5	0.4	0.6	0.0	6.5
Other General Plant	1.5	1.1	1.5	2.1	2.0	8.2
Total	**30.8**	**29.6**	**41.9**	**44.1**	**40.3**	**186.7**

The proposed five-year investment plan for General Plant reflects a shift in investment, with increased between 2022 and 2024, mostly Covid-related to adjustments in Information Technology. Several ongoing or proposed IT upgrades or enhancements have been delayed or deferred due to remote work locations for Alectra employees, and logistics challenges associated with vendor software provision and support.

While Guidehouse did not conduct an independent assessment of individual IT programs and projects, we reviewed major investment categories and the rationale supporting these investment. We observed that Alectra has prepared a comprehensive IT plan that outlines in detail the numerous software systems and hardware that are needed to efficiently support its work force and financial and operational obligations of a modernized electric power enterprise. For example, the transition to an Enterprise Resource Management ("ERP") and associated work planning and scheduling systems, cyber security enhancements, operational support systems are consistent with good utility practice. It also introduces new IT initiatives, in addition to replacing or upgrading obsolete systems such as those where vendor support of older versions is no longer available.

Several of these initiatives increase productivity and efficiency that improve work quality and reduce internal and contractor labor costs. They also align with Alectra's asset management harmonization initiatives, as enhanced IT/OT systems, consistently applied, are foundational technologies that are needed to realize the performance, organizational, financial, regulatory and customer-related objectives outlined in the Chapter 5; and enable the OEB to affirm that Alectra's DSP fully addresses requirements outlined in its *Handbook to Utility Rate Applications*.

The following table presents the net change in investments outlined in the DSP for General Plant versus the adjusted plan by major subcategories. The total five-year adjusted investment plan has increased by approximately $23 million, with most increases for IT hardware and software between 2022 and 2024. As noted, the net increase in IT-related investments is due to a range of factors including Covid-related delays, increased costs associated with equipping employees with hardware and software to enable them to work remotely, increased cyber security-related requirements, enhanced operational support systems, and new foundational IT systems designed to improve operational technology functionality and work force efficiency. The increase in years 2022 through 2024 also reflects the higher cost of hardware and software due to inflation.

Investment Plan Adjustments ($MM) General Plant	Actual 2020	Actual 2021	Forecast 2022	Budget 2023	Budget 2024	Total
Facilities Management	3.2	0.0	0.5	(0.3)	2.4	5.8
Information Technology	(1.3)	(4.4)	9.5	17.1	13.4	34.3
Fleet Renewal	(0.8)	(2.9)	(2.6)	(2.6)	0.4	(8.5)
Connection and Cost Recovery Agreements	(8.7)	3.9	0.4	0.1	0.0	(4.3)
Other General Plant	(1.0)	(1.4)	(1.0)	(0.4)	(0.6)	(4.4)
Total	**(8.6)**	**(4.8)**	**6.8**	**13.9**	**15.6**	**22.9**

Guidehouse Conclusion: *Alectra's General Plant program as presented in the DSP describes in detail the company's non-electric delivery assets, physical facilities, tools and fleet investments grid modernization, technology initiatives and specific programs that are underway or proposed during the rate period. The DSP specifically describes how foundational IT and OT systems will improve reliability, efficiency and customer-oriented measures to enhance system performance, organizational efficiency, regulatory costs and customer service. These systems including post-DSP additions and adjustments, will produce savings both for capital investments and operational expense and are needed to achieve benefits via harmonization of the merger of the legacy electric utility systems across Alectra's service territories. Reduced investments for Fleet Renewal is warranted as it reflects Alectra's decision to lease vehicles due to supply chain issues related to Covid 19.*

Attachment A

Copperleaf C55 Risk Matrix

Consequence Aide	None	Impact 150	Impact 500	Impact 1,500	Impact 4,500	Impact 7,500	Impact 12,500	Impact 30,000
COMPLIANCE	None: no corporate or legal requirements	**Threat:** Non-compliance resulting in receipt of an administrative order OR Non-compliance with a law or regulation resulting in a financial penalty of $150K or more	**Threat**: Corporate/Other: Corporate or other requirements (including contractual issues) where obligations would be approximately $500K. OR Non-compliance with a law or regulation resulting in a financial penalty of $500K or more	**Threat:** Municipal: Regulated (local level through Municipal by-laws) OR Non-compliance with a law or regulation resulting in a financial penalty of $1M or more	**Threat:** Non-compliance with a law or regulation resulting in a financial penalty of $3M or more	**Threat:** Federal/Provincial: Regulated (including OEB, CSA) OR Non-compliance resulting in work shut-down	**Threat:** Non-compliance resulting in a criminal conviction	**Threat:** Non-compliance resulting in suspension of license
DISTRIBUTION SYSTEM CAPACITY	**Threat:** Able to supply load without exceeding planning limits.	n/a	**Threat:** Can supply all load but temporarily exceeding planning limits	**Threat:** Can supply all load but there is sustained operation exceeding planning limits	**Threat:** Can supply all load but exceeding thermal limits	N/A	**Threat:** Unable to service a new load	N/A
SAFETY	No risk of incidents	**Threat:** Impact of event can be absorbed through routine activity Reportable incidents. Opportunity: Small operational improvements can be managed through routine activity	**Threat:** Risk of injury requiring medical attention	**Threat:** Non-life threatening Injuries requiring hospitalization	**Threat:** Impact of event required actions greater than routine activity. Reportable incident with serious but non-life threatening injuries **Opportunity:** Operational improvement provides minor or incremental improvement to day to day operations	**Threat:** A significant event which cannot be managed under routine activity Life threatening injuries **Opportunity:** Operational improvement provides sustained improvements to day-to-day operations	**Threat:** A critical event with a long recovery period which stretches plans to the limit and requires significant management effort to endure Life threatening injuries with long-term health implications **Opportunity:** Operational improvements provides significant improvements to day-to-day operations	**Threat:** A disaster with the potential to lead to the collapse of the organization Any loss of life and/or multiple serious long term health implications as a result of our actions **Opportunity:** Operational improvement provides a major innovative approach or significant rethink in terms of service delivery or operational improvement
ENIVRONMENTAL	No noticeable impacts with minor clean-up implications	Known impacts contained to the worksite such as fugitive emissions, minor spills with short term (< 1 year) clean-up implications	Known impacts contained to the worksite such as fugitive emissions, minor spills with medium term (up to 2 years) clean-up implications	Impacts with medium term (2 to 5 years) cleanup implications that are contained to the worksite.	Impacts are long term (>5 years) and are not contained on the worksite resulting in potential loss of flora, fauna and/or fish habitat. Impact significant enough to gain attention in provincial news media.	N/A	Impacts cause long term (> 20 years) damage to a water body, an environmentally/culturally sensitive receptor resulting in actual loss of flora, fauna or fish habitat. Impact significant enough to gain attention in national news media.	N/A
FINANCIAL	**Threat/Opportunity:** Immaterial financial impact	**Threat/Opportunity:** Financial impact of an event up to $300,000	**Threat/Opportunity:** Financial impact of an event $300,000 to $1,000,000	**Threat/Opportunity:** Financial impact of an event $1,000,000 to $3,000,000	**Threat/Opportunity:** Financial impact of an event $3,000,000 to $5,000,000	**Threat/Opportunity:** Financial impact of an event $5,000,000 to $10,000,000	**Threat/Opportunity:** Financial impact of an event $10,000,000 to $15,000,000	**Threat/Opportunity:** Financial impact an event over $15,000,000
REPUTATIONAL	Immaterial consequence	**Threat:** Some public embarrassment OR Minor effect on overall staff morale/public attitudes.	**Threat:** Short term local adverse media coverage	**Threat:** Negative press in more than one media **Opportunity:** Positive press in more than one media	**Threat:** Short-term negative media focus and /or significant concerns raised by one stakeholder **Opportunity:** Short-term positive media focus and/or significant recognition from one stakeholder	**Threat:** Long-term negative media focus and/or sustained concerns raised by more than one stakeholder **Opportunity:** Long –term positive media focus and/or sustained recognition raised by more than one stakeholder	**Threat:** Long-term negative and/or sustained concerns raised by more than one stakeholder. Indications of Stakeholders loss of confidence **Opportunity:** Long-term positive media focus and/or sustained recognition from more than one stakeholder, indicating stronger long term support	**Threat:** Stakeholders lose confidence in the organization in the long-term, permanent withdrawal of support by several key stakeholders **Opportunity:** Sustained recognition from the majority of stakeholders, long-term commitment for additional support
IT CAPACITY	Lack of capacity (or currency) of a system has no expected impact on Alectra's workforce.	Lack of capacity (or currency) of system that impacts significantly (e.g. >10% average decrease in productivity) for more than 10	Lack of capacity (or currency) of system that impacts significantly (e.g. >10% average decrease in productivity) for more than 50	Lack of capacity (or currency) of system that impacts significantly (e.g. >10% average decrease in productivity) for more than 150	Lack of capacity (or currency) of system that impacts significantly (e.g. >10% average decrease in productivity) for more than 450	Lack of capacity (or currency) of system that impacts significantly (e.g. >10% average decrease in productivity) for more than 750	Lack of capacity (or currency) of an Enterprise wide system that impacts significantly (e.g. >10% average decrease in productivity)	N/A