

1-Staff-11

Capital Budget vs. Expenditure

Reference: Exhibit 2, Tab 1, Schedule 1, pages 19-20 (Figure 1 & Figure 2)

- a) Please provide a table similar to the Cost-of-Service Chapter 2 Appendices 2-AB comparing the DSP budget to actuals for 2020-2022 and the DSP budget compared to the latest forecasts for 2023 and 2024.
- b) Please provide a list of Alectra Utilities' capital projects for 2023 and their associated year-to-date actual capital expenditures and forecast for the rest of 2023.

Response:

- 1 a) Table 1 below provides a comparison of the DSP budget to actuals for 2021-2022 and the DSP budget to the forecasts for 2023 and
- 2 2024.

3 Table 1 – Capital Expenditures Summary (\$MM)

Category	2020 Actual			2021 Actual			2022 Actual			2023 Forecast			2024 Budget		
	Plan	Actual	Var	Plan	Actual	Var	Plan	Actual	Var	Plan	Actual	Var	Plan	Actual	Var
	\$MM		%	\$MM		%	\$MM		%	\$MM		%	\$MM		%
System Access	66.5	62.9	-5.4%	67.0	67.3	0.4%	63.3	47.5	-25.0%	67.2	65.3	-2.8%	70.2	66.7	-5.0%
System Renewal	139.0	135.6	-2.4%	142.0	136.5	-3.9%	154.0	134.2	-12.9%	156.1	161.5	3.5%	177.3	162.9	-8.1%
System Service	38.0	26.8	-29.5%	36.8	28.4	-22.8%	35.9	24.3	-32.3%	42.3	20.0	-52.7%	37.2	18.9	-49.2%
General Plant	39.4	30.8	-21.8%	34.4	29.7	-13.7%	35.1	35.6	1.4%	30.2	34.8	15.2%	24.6	36.8	49.6%
Total Expenditure	282.9	256.1	-9.5%	280.2	261.9	-6.5%	288.3	241.6	-16.2%	295.8	281.6	-4.8%	309.3	285.3	-7.8%

- 4
- 5 b) Alectra Utilities has included a list of the 2023 capital projects, the month end august actuals, and forecast as Attachment 1.

1-Staff-11

Attachment 1 2023 Projects

Investment Category	C55#	Project Description	Year to date		2023
			Actual	Forecast	
System Access	101887	New Residential Subdivision and Condo Tower Development - Alectra East	4.5	6.7	
System Access	101896	New Institutional/Commercial/Industrial Subdivision Development - Alectra East	1.9	2.7	
System Access	150388	Services (New and Upgrades) - Layouts – Central South	1.7	1.9	
System Access	152364	Eco Park System Expansion	1.7	3.2	
System Access	152404	Customer Initiated Distribution System Expansion (West) James Street South 600A Feeder	1.5	3.1	
System Access	152381	Customer Initiated Distribution System Expansion Projects - West	1.5	0.9	
System Access	150456	Services (New and Upgrades) - Layouts – Hamilton	1.5	1.4	
System Access	151578	Services (New and Upgrades) - Layouts - East South	1.5	2.2	
System Access	150653	Road Authority Projects - West (St. Catharines)	1.3	1.4	
System Access	152255	Road Authority O/H Line Relocation - Duckworth St (Bell Farm to St Vincent)	1.2	1.2	
System Access	151678	New Services - Metering (East)	1.2	1.6	
System Access	150384	Service (new and upgrades) - Commercial, Industrial and Institutional (ICI) Projects - Central South	1.1	1.2	
System Access	150386	Services (new and upgrades) - Commercial, Industrial and Institutional (ICI) Projects - Central North	1.0	1.1	
System Access	150652	New Residential Subdivision and Condo Tower Development - Alectra Central South	1.0	1.2	
System Access	152302	Customer Initiated Distribution System Expansion Projects - Central South	0.9	1.4	
System Access	151675	New Services - Metering (Mississauga)	0.9	1.3	
System Access	101892	New Subdivision Development - Secondary Service Lateral - Alectra East	0.8	1.2	
System Access	150449	Services (New and Upgrades) - Commercial, Industrial and Institutional (ICI) Projects - Hamilton	0.8	0.9	
System Access	152378	Pleasant TS Upgrade - Metering Outside of Station	0.8	1.2	
System Access	101791	Services (New and Upgrades) - Commercial, Industrial and Institutional (ICI) Projects - East South	0.8	0.8	
System Access	150588	New Residential Subdivision and Condo Tower Development - Alectra West	0.8	0.6	
System Access	151718	Renew Meter Equip, Except Expired Meters - Enersource RZ	0.7	1.0	
System Access	151679	New Services Metering (West)	0.7	0.9	
System Access	150630	New Residential Subdivision and Condo Tower Development - Alectra Central North	0.7	1.2	
System Access	101762	Road Authority Projects PS South	0.7	0.9	
System Access	151722	Renew Meter Equip, Except Expired Meters- Horizon RZ	0.7	1.0	
System Access	150259	Barrie TS Upgrade Feeders and Metering	0.7	0.7	
System Access	101764	Road Authority Projects - East North	0.7	1.3	
System Access	151683	Meter Renewal to MC Compliance (expiries)- PowerStream RZ	0.6	1.0	
System Access	152600	Customer Initiated Distribution Expansion - East South - Project Rainbow - Site 1	0.6	0.5	
System Access	151672	New Subdivision Development - Secondary Service Lateral - Alectra Central North	0.6	1.3	
System Access	152482	Customer Initiated Distribution System Expansion Project - Trillium Health Partners	0.5	0.4	
System Access	151686	Meter Renewal to MC Compliance (expiries)- Brampton RZ	0.5	0.5	
System Access	150457	Services (New and Upgrades) - Layouts – St Catharines	0.5	0.6	
System Access	152405	Customer Initiated Distribution System Expansion Projects - South West, Guelph	0.5	0.5	
System Access	152453	Customer Initiated Expansion - Central North	0.5	0.7	
System Access	151806	Brampton Road Authority - Mayfield Road	0.5	0.5	
System Access	151651	New Subdivision Development - Secondary Service Lateral - Alectra West	0.5	0.7	
System Access		Miscellaneous Projects (under \$500K threshold)	3.7	14.5	
System Access Total			42.3	65.3	
System Renewal	101824	Reactive Capital, Alectra East - Distribution Equipment	8.7	10.9	
System Renewal	151074	Reactive Capital, Alectra West - Distribution Equipment	6.3	7.9	
System Renewal	100867	Pole Renewal - East	4.7	6.4	
System Renewal	150352	Voltage Conversion - Central MS, Hamilton	3.8	5.5	
System Renewal	150690	Lines Central-South - Reactive Renewal	3.7	4.2	
System Renewal	151303	Cable and Transformer Replacement Project - (HAM) - Stone Church - Garth - Lincoln M. Alexander	3.3	3.3	
System Renewal	150335	Pole Renewal - West	3.2	4.8	
System Renewal	151089	Pole Renewal - Guelph	2.9	3.3	
System Renewal	150284	Pole Renewal - Central North	2.2	3.8	
System Renewal	152386	Cable Injection Project - (R23) - Kersey Cr area of Richmond Hill	2.1	2.5	
System Renewal	150725	Reactive Renewal - Central North (Lines)	2.1	2.6	
System Renewal	101508	Transformer Renewal - East	2.0	3.7	
System Renewal	100859	Switchgear Renewal - East	1.9	2.4	
System Renewal	151361	Cable Injection Project - (M21) - Cairns Drive area of Markham	1.8	2.0	
System Renewal	151290	Cable Replacement Project - (I3) - Bovaird - Dixie - Queen - Hwy 410, Brampton	1.6	2.1	
System Renewal	152379	Cable Replacement Project - (A10) - Batson Dr, Aurora	1.5	1.9	
System Renewal	151063	Pole Renewal - Central South	1.4	3.1	
System Renewal	101832	Joint Use Pole Removal - Alectra East	1.3	1.7	
System Renewal	150285	Transformer Renewal - Central North	1.2	2.3	
System Renewal	103659	Storm Hardening - Four-Circuit Poles - Alectra East	1.2	2.0	
System Renewal	151318	Cable Injection Project - (I3) -Bovaird - Dixie - Queen - Hwy 410, Brampton	1.1	1.1	
System Renewal	151299	Cable and Transformer Replacement Project - (HAM) - Millen - Barton - Fruitland	1.1	1.9	
System Renewal	151363	Cable Injection Project - (M25) - 14th - McCowan - Steeles - Old Kennedy, Markham	1.1	1.1	
System Renewal	150282	Switchgear Renewal - Central North	1.1	1.9	
System Renewal	151516	Cable Replacement Project - (AREA46)- Millcreek Dr & Erin Mills Pkway, Mississauga	1.0	3.5	
System Renewal	151139	Voltage Conversion - MS-12 Hansen Rd, Brampton	1.0	2.4	
System Renewal	151336	Cable Replacement Project - (BA22) - Sunnidale and Anne, Barrie	1.0	1.7	
System Renewal	151091	Switchgear Renewal - Central South	0.9	1.0	
System Renewal	151408	Cable and Transformer Replacement Project - (AREA24) - Burnhamthorpe & Miss. Road, Mississauga	0.9	2.4	
System Renewal	150336	Transformer Renewal - West	0.9	1.5	
System Renewal	101027	Switch Renewal - East	0.9	1.4	
System Renewal	151913	Cable Replacement Project - (M44) - Cochrane Dr (North) - Scolberg (South), Markham	0.9	1.2	
System Renewal	151901	Cable Replacement Project - (AREA16) - Hemus Square, Mississauga	0.9	1.1	
System Renewal	152490	MS302 Saunders - F1, F3, F4 Feeder Cell Emergency Replacement	0.8	0.8	
System Renewal	101828	Reactive Capital, Alectra East - Recoverable Replacement	0.8	1.2	
System Renewal	151433	Cable Injection - (AREA46) - Glen Erin & Aquitane, Mississauga	0.8	1.5	
System Renewal	151364	Cable Injection Project - (V23) - Hwy 7 - Keele - Langstaff - Jane, Vaughan	0.8	1.1	
System Renewal	152374	230kV Trench Replacement Program	0.8	1.2	
System Renewal	151518	Cable Replacement Project - (AREA24) - Sir John's Homestead & Redstart Dr, Mississauga	0.7	1.3	
System Renewal	151451	Underground Asset Renewal-Alectra Initiated Distribution System Projects-Central South	0.7	1.1	
System Renewal	151895	Cable Replacement- Main Feeder Cable on Cantay Road, Mississauga (AREA 44)	0.7	0.8	
System Renewal	151043	Transformer Renewal - Central South	0.7	1.3	
System Renewal	151911	Cable Replacement Project - (A05) - Golf Links, Aurora	0.7	2.3	
System Renewal	151912	Cable Replacement Project – (V51) – Ashbridge Circle area in Vaughan	0.6	2.4	
System Renewal	151044	Switch Renewal - Central South	0.6	1.0	

System Renewal	151329	Cable Replacement Project - (M21) - Raymerville Dr, Markham	0.6	1.0
System Renewal	101355	Overhead Asset Renewal-Alectra Initiated Distribution System Projects-East	0.6	1.1
System Renewal	151461	Cable Injection Project - (V17) - Jacob Keffer Parkway area of Vaughan	0.6	1.0
System Renewal	150337	Switch Renewal - West	0.6	0.6
System Renewal	151450	Underground Asset Renewal-Alectra Initiated Distribution System Projects-East	0.6	1.7
System Renewal	151010	Switch Renewal - Central North	0.6	0.7
System Renewal	151161	Joint Use Pole Removal - Alectra West	0.5	0.7
System Renewal	150726	Lines Central-South - Recoverable Replacements	0.5	0.5
System Renewal	151162	Recoverable replacement of Distribution Equipment due to accident/vandalism	0.5	0.5
System Renewal	151458	Cable Injection Project - (V31) - Langstaff - Weston - Rutherford - Jane, Vaughan	0.5	0.8
System Renewal	151095	Reactive Equipment Replacement - Southwest	0.5	0.5
System Renewal	151362	Cable Injection Project - (M39) - 16th - Warden - Hwy 7 - Woodbine, Markham	0.5	0.8
System Renewal	150754	Lines Central-North - Recoverable Replacements	0.5	0.5
System Renewal	151065	Vault Cover Renewal - West	0.5	0.9
System Renewal		Miscellaneous Projects (under \$500K threshold)	9.4	35.7
System Renewal Total			95.0	161.5
System Service	150334	Distribution Automation - West	2.4	3.0
System Service	100886	Distribution Automation - East	1.6	2.5
System Service	150408	42M71 Feeder Egress Salvation Rd to Wanless Dr	1.1	2.4
System Service	151892	New build - Extend Vansickle M51 Feeder, St.Catharines	1.0	1.1
System Service	151092	Distribution Automation - Central South	0.9	1.2
System Service	150376	New build - Hamilton South Mountain feeders capacity relief, Hamilton	0.8	2.8
System Service	151104	Distribution Automation - Central North	0.7	0.7
System Service	150507	230kV TS Transformer Primary Bushing Monitoring Enablement-BPD Elimination - 4 TS Transformers-Multi-year initiative-TS	0.6	0.6
System Service	151022	New Three Sector WiMAX Node - MS27 Coventry Central North	0.5	0.5
System Service		Miscellaneous Projects (under \$500K threshold)	2.6	5.3
System Service Total			12.3	20.0
General Plant	151854	Customer Service Strategy-CX Project	3.5	6.6
General Plant	150467	Meter-to-Cash CIS - CC&B V2.8 Upgrade	1.8	2.0
General Plant	152448	EV Charging Stations	1.2	1.2
General Plant	102098	IT End User - Client Computing	1.2	1.3
General Plant	150468	Annual License Growth on meter to cash platforms	1.1	1.1
General Plant	150806	Fleet Central South Vehicle 2-20709 S/bucket	1.0	1.0
General Plant	150738	Facilities West Capital Replacement Investment Support	1.0	1.2
General Plant	150469	ERP Continuous Improvement	0.9	1.1
General Plant	151136	C55 Alectra: Optimization of Business Practices	0.8	1.6
General Plant	150325	Meter-to-Cash CIS CC&B Enhancements	0.6	1.5
General Plant	102157	IT Infrastructure.- Server Refresh	0.6	0.7
General Plant	150396	IT Infrastructure - Wireless LAN Upgrade	0.5	0.5
General Plant		Miscellaneous Projects (under \$500K threshold)	7.1	14.9
General Plant Total			21.5	34.8
Grand Total			171.1	281.6

1-Staff-12

Guidehouse Review

Reference: EB-2022-0013 Exhibit 3, Tab 1, Schedule 1, Page 11

As part of the EB-2022-0013 proceeding, Alectra Utilities engaged Guidehouse, a third-party expert, to review numerous aspects including the utility's process and analytical methods used to develop the Adjusted Capital Plan.

- a) Did Alectra Utilities consult Guidehouse or any other third-party in the update to its Adjusted Capital Plan considering there have been further deferrals to the 2022-2024 budget of \$31.1 million?**
 - i. If no consultation was complete, why did Alectra Utilities feel no consultation was necessary?**
 - ii. If consultation was complete, who performed the review and what were the conclusions made?**

Alectra Utilities noted as part of its EB-2022-0013 evidence that Guidehouse had also reviewed its asset condition assessment. Alectra Utilities has since updated its asset condition assessment to include 2022 data.

- b) Did Guidehouse or any other third-party review the 2022 update to the asset condition assessment?**
 - i. If no consultation was complete, why did Alectra Utilities feel no consultation was necessary?**
 - ii. If consultation was complete, who performed the review and what were the conclusions made?**

Response:

- 1 a) Alectra Utilities reviews and updates its five-year capital plan on an annual basis as part of
- 2 the organization's annual planning process. As part of the 2023 ICM application, Alectra
- 3 Utilities retained Guidehouse to undertake an independent review of the utility's process and
- 4 analytical methods used to develop its capital investment plan given the significant changes
- 5 that occurred since the DSP was completed. Specifically, Alectra Utilities had incorporated
- 6 necessary adjustments to its capital plan as a result of the M-factor decision, the impact of the
- 7 COVID-19 pandemic, supply chain challenges on the cost of materials and services as well
- 8 as the effect of inflation. Guidehouse's assurance review assessed the planning practices,
- 9 including the optimization and prioritization of the capital expenditure plans against industry

1 best practices and the rationale and justification for adjustments to the plan driving additional
2 funding requirements. Guidehouse's independent review found that "Alectra's revised five-
3 year investment plan is appropriate and justified based on the level of rigor applied in its capital
4 planning process and rationale supporting each of the associated business cases in the
5 DSP."¹ Alectra Utilities did not consult Guidehouse or any other third-party to review the capital
6 expenditure forecasts included in this application as no additional significant changes have
7 occurred since the Guidehouse review.

8
9 b) There have been no changes to the methodology, interpretation, or use of the results of the
10 Asset Condition Assessment, and therefore Alectra Utilities did not consult Guidehouse or
11 any other third-party to conduct a review.

12
13 Alectra Utilities undertakes periodic independent reviews when it believes there has been
14 significant changes to warrant a review of its practices.

¹ EB-2022-0013, Exhibit 4, Tab 1, Schedule 1, Attachment 12, p.2.

1-Staff-13

Asset Condition Assessments (DSP and Asset Analytics Platform)

Reference 1: Exhibit 1, Tab 1, Schedule 4, page 4

Reference 2: Exhibit 3, Tab 1, Schedule 1, pages 1-6

Reference 3: Exhibit 3, Tab 1, Schedule 4, page 7

Reference 4: Exhibit 3, Tab 1, Schedule 2, page 16

According to Alectra Utilities, the DSP identified failures of underground direct buried cable and cable accessories as a leading contributor to the declining reliability.

Alectra Utilities noted that it continued to enhance its capital planning tools with the implementation of an Asset Analytics Platform which 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. Alectra Utilities has stated that the enhanced analytics have enabled Alectra Utilities to incorporate the most recent reliability events against up-to-date asset condition information to identify localized emerging issues.

- a) The 2023 and 2024 ICM applications relied heavily on the DSP report. Please explain if the asset analytics platform relies on data sets from the DSP or updated data. How often are the different data sets in the platform updated?**

Response:

- 1 Alectra Utilities' Asset Analytics platform relies on the most recent reliability data. As provided in
2 Exhibit 3, Tab 1, Schedule 4, p.7, lines 6-8, the engineering assessment of cable failures was
3 completed utilizing the most recent reliability results as of year end 2022. The assessment
4 conducted in 2021-2022 was reviewed during the 2022-2023 period and updated with the most
5 recent reliability data.
6
7 Further, both the 2023 and 2024 ICM applications relied on updated asset condition assessment
8 values for cable. At Exhibit 1, Tab 1, Schedule 4, p.5, lines 20-23, Alectra Utilities provided an
9 updated assessment of cable failures based on 2022 data and identified that the data in the 2023
10 ICM application was based on 2021 data. Therefore, the most recent reliability data is relied upon
11 when completing engineering assessments of cable failures.

1-Staff-14

Asset Condition Assessment

Reference 1: Exhibit 1, Tab 1, Schedule 4, Page 5

Reference 2: EB-2022-0013 Responses to OEB Staff Interrogatories, 1-Staff-11

Reference 3: Exhibit 3, Tab 1, Schedule 2, Page 5

Reference 4: Exhibit 3, Tab 1, Schedule 3, Pages 1-2

Asset condition assessments were conducted in 2018, 2020 and 2022. The asset condition assessments have identified that the percentage of the cable population in poor condition increased from 14% to 17% to 21% across the four years.

- a) Please confirm if the asset condition assessment methodology has remained the same between 2020 and 2022.**
 - i. If changes were made to methodology (i.e. testing), please explain what has changed.**
- b) Please provide Alectra Utilities' latest asset condition assessment report.**
 - i. If a full asset condition was not conducted, please provide the latest underground cable condition assessment report.**
 - ii. If the asset condition report does not provide cable testing methodology, please describe what tests are used to determine the condition of the cables along with the weight factor of each test. Please also provide the 'data availability index' of the cable population and the methodology used to determine the score.**
- c) How are cable injection efforts simulated when computing the asset condition assessments?**
- d) The assessment per the application shows that the cable condition will continue to deteriorate despite the ongoing investment in underground cable. Please provide a forecasted timeline of when the deteriorated cables will begin to witness improved statistics.**
- e) Please provide the length of cable and percentage of cable in poor/very poor condition as of 2018, 2020, and 2022 for the Enersource and PowerStream RZs.**

Response:

- 1 a) i) Alectra Utilities has maintained a consistent Asset Condition Assessment methodology for
- 2 the underground cable population from 2020 to 2022.
- 3
- 4 b) i) A full condition assessment was conducted in 2022 that includes underground cables. The
- 5 2022 ACA report is filed in response to AMPCO-10.
- 6

1 b) ii) The ACA process identifies cable segments in need for renewal activity. Alectra Utilities
2 tests cable prior to the rehabilitation of cable in order to verify the eligibility of the cable to be
3 injected and renewed. The ACA stratifies the cable population based on cable type and
4 construction to select the appropriate degradation curve, then calculates the Health Index.
5 All three inputs need to be available to determine the condition of the cable. In the 2022 ACA
6 report, the Data Availability Index ("DAI") is 97%, which reflects the combined availability of
7 the cables' type, construction and age. For each cable segment, if all information is available
8 the cable segment is deemed 100% and zero percent otherwise.

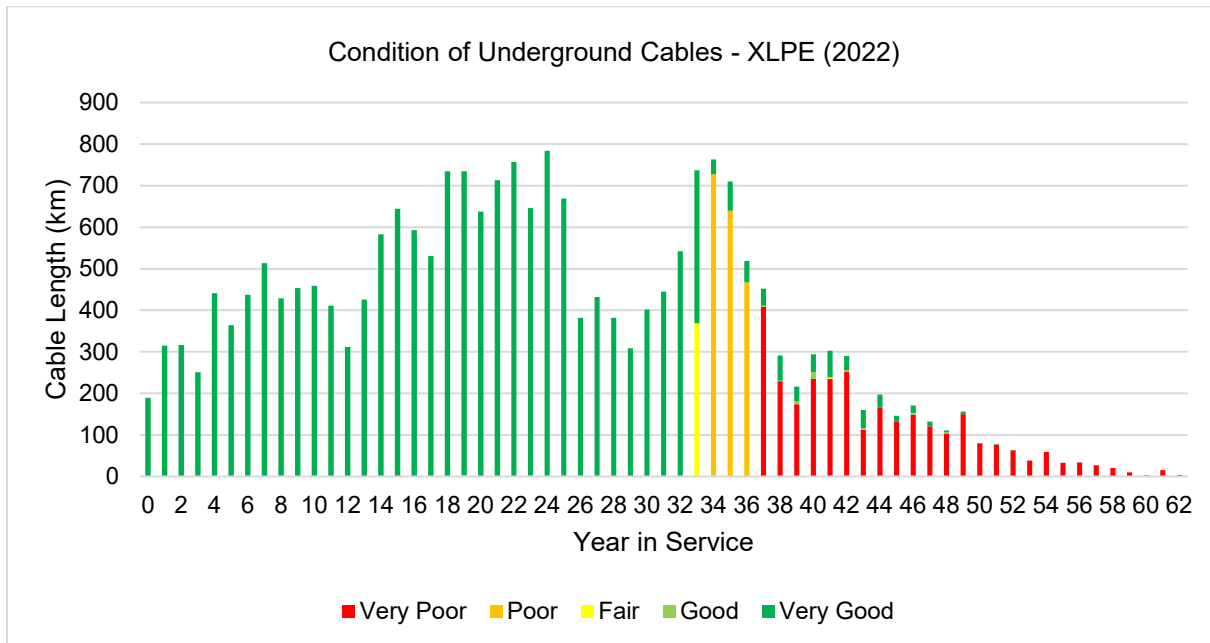
9
10 As provided in the following sections of the evidence, (Exhibit 3, Tab 1, Schedule 2, page 12,
11 lines 7-9; Exhibit 3, Tab 1, Schedule 2, pages 16-17; Exhibit 3, Tab 1, Schedule 2, page 15
12 and 16 Figures 16 and 17) the condition of the asset is one of many components used in
13 Alectra Utilities' analysis. Other components include historical failures, reliability, system
14 configuration and layout, as well as number of customers impacted. Alectra Utilities leverages
15 its Asset Analytics Platform to identify and assess neighbourhoods in need of urgent
16 investment. Further, Figures 16 and 17 provide the correlation between the ACA and
17 reliability data and graphically depicts that locations with poor reliability also have degraded
18 assets.

19
20 c) Alectra Utilities projects that cable injection will extend the useful life of the remediated cable
21 by 20 years from the date the cable injection was completed. Alectra Utilities' projection is
22 informed by the 20-year warranty period provided by the injection fluid manufacturer
23 specifications. Non-TR XLPE cables have a 40-year end of life and cable injection extends
24 the life of injected cables by an additional 20 years.

25
26 d) Based on 2023 funding (base and ICM) levels, the asset population is projected to improve
27 between 2036 to 2037. This projection does not change with the proposed ICM funding in
28 2024; however, the peak of the deteriorated cable population is lower if the 2024 ICM funding
29 is approved.

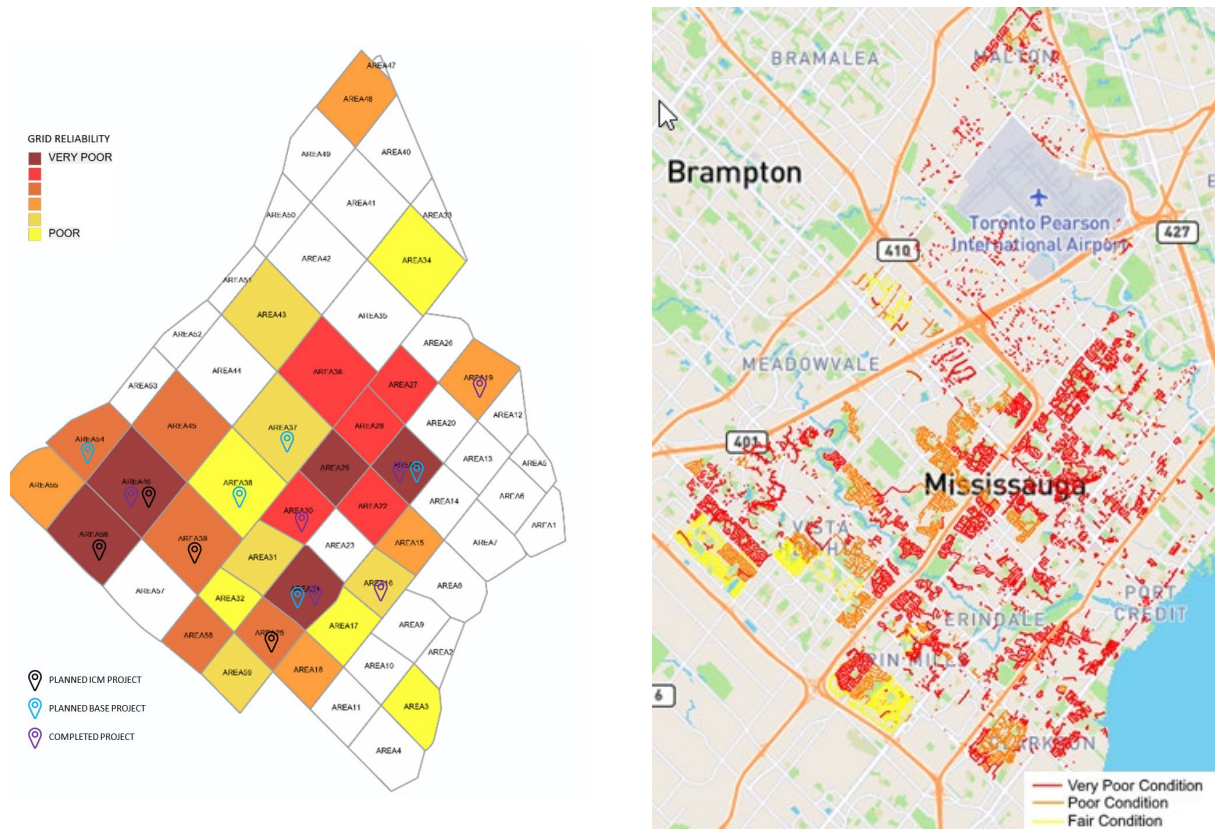
30
31 The pace of cable failures and deterioration in existing or new emerging neighbourhoods has
32 intensified at a rate greater than what was contemplated in the 2020-2024 DSP. Despite

Alectra Utilities' efforts to match the pace of renewal with the rate of cable deterioration, funding constraints have resulted in Alectra Utilities managing an additional 1,593 km of deteriorated underground cable. Figure 15 at Exhibit 3, Tab 1, Schedule 2, page 13, provides the condition of XLPE cables in 2018 compared to 2022. The 2022 graph is reproduced below.



Cables that are currently 33-36 years old have further deteriorated into poor condition. With the 2024 proposed ICM funding, Alectra Utilities will improve reliability in the identified neighbourhoods and reduce the volume of localized hotspots with the highest probability of cable failures. Alectra Utilities has reproduced Figure 16 from its pre-filed evidence below, which shows a map of XLPE cable failures and the condition of XLPE cable in Mississauga.

1 **Figure 16: Maps of XLPE Cable Failures and Condition of XLPE Cables for Mississauga¹**



2 With base funding and the proposed ICM funding, Alectra Utilities intends to “maintain system
3 reliability levels or improve local/feeder level reliability where performance is below average.”²
4 As the population of underground cable continues to age, these investments will mitigate the
5 impact of cable failures and improve reliability for customers. This will in turn allow Alectra
6 Utilities to pace investment in underground cable renewal without constantly ‘fire fighting’,
7 (reactively repairing and rebuilding) moving from one critical area to another based on
8 emerging failures. Ultimately, incremental funding is needed for planned cable renewal and
9 to prudently address deteriorated and failing cable. Doing so will mitigate the risk of higher
10 frequency of failures and outages which is a priority for affected Alectra Utilities customers.
11 (EB-2022-0013, Customer Engagement, Page 30).

¹ Includes projects underway in 2023

² EB-2019-0018, Exhibit 4, Tab 1, Schedule 1, Section 5.4.3, page 393 Table 5.4.3-2 Investment Drives by Category

e) Alectra Utilities has provided the population of very poor and poor (degraded) cables in 2018-2022 for ERZ, PRZ and Alectra Utilities. In 2018, the ERZ and PRZ accounted for 55% of the population of underground cable in poor or very poor condition. The population percentage of deteriorated cable increased to 68% in 2022. This increase highlights the correlation between degraded cables and reliability as provided in Exhibit 1, Tab 1, Schedule 2, page 4, Figure 5, which shows that the majority of customer hours of interruption due to XLPE cable and accessories occurred in the ERZ and PRZ. Of the 1.1 million customer hours of interruption due to XLPE cable failures experienced since 2018, the Enersource and PowerStream RZs account for approximately 722,000 customer hours of interruption, representing 65% of all the XLPE cable outages experienced in Alectra Utilities' service territory.

Table 1 – Population of Cables in Very Poor or Poor Condition

Year	Enersource RZ		PowerStream RZ		Alectra Utilities	
	Very Poor and Poor		Very Poor and Poor		Very Poor and Poor	
	Cable (km)	% of Population	Cable (km)	% of Population	Cable (km)	% of Population
2018	1,027	4.6%	709	3.2%	3,173	14%
2020	1,266	5.6%	1,098	4.8%	3,794	17%
2022	1,586	6.8%	1,661	7.1%	4,797	21%

1-Staff-15

Future Cable Health Condition

Reference 1: EB-2022-0013 Responses to OEB Staff Interrogatories, 1-Staff-11

Reference 2: Exhibit 3, Tab 1, Schedule 2, Page 5

Alectra Utilities noted in the EB-2022-0013 evidence (Reference 1) that if ICM funding is not provided, the percentage of the cable population in poor or very poor condition would rise to 25% by 2025. The OEB approved \$18.1 million in ICM funding for 2023. As part of this proceeding (Reference 2), Alectra Utilities again noted that if ICM funding is not provided, one in four neighbourhoods would be served by cables in poor or very poor condition by 2025.

- a) Please confirm if the statement regarding one in four neighbourhoods made by Alectra Utilities is still true given the approved 2023 ICM funding. Please update the statement as applicable.
- b) Please explain the methodology used (including inputs and outputs) in the analytics platform to forecast cable condition health and outages in future years.
- c) Please quantify the percentage of the cable population in poor or very poor condition by completing the following table:

Table 9 – Percentage of Cables in Poor or Very Poor Condition

% of cables in poor/very poor condition if...		PowerStream RZ	Enersource RZ	Alectra Utilities
2023	Only projects in base rate funding were completed in 2023.			
	Base rate and 2023 ICM projects are completed as per EB-2023-0004 capital plan.			
2024	2023 ICMs projects are completed, but only 2024 base rate projects are completed.			
	2023 and 2024 ICM projects are completed as per EB-2023-0004 capital plan.			
2025	2023 ICMs projects are completed, but only 2024 and 2025 base rate projects are completed.			
	2023 and 2024 ICM projects are completed as per EB-2023-0004 capital plan. Base rate projects are completed in 2025.			

Response:

1 a) After completion of 2023 ICM projects, the projected percentage of deteriorated cable by
2 2025 is reduced from 25% (as noted in the EB-2022-0013 evidence) to 24.1%.
3 Consequently, the statement regarding one in four neighborhoods made remains valid.
4

5 b) The methodology used to forecast cable condition in future years remains the same as in the
6 2023 ICM. Specifically, as provided in EB-2022-0013 in response to 1-Staff-11, Alectra
7 Utilities stated that the forecast of condition health was completed by aging the cables to year
8 2025, and keeping the pace of replacement at levels without the ICM funding. The Asset
9 Condition Asset was then run to determine the health index and population of 'Very Poor' and
10 'Poor' cable. The input in the analysis is 'cable population' and the output is 'cable condition
11 in the future year'.
12

13 Further, as provided in Exhibit 3, Tab 1, Schedule 4, p.11, the estimate of avoided outages is
14 based on engineering assessment applying inputs such as asset condition, reliability,
15 historical comparators, clustering of the failures, number of failures and probability of failure.
16 The number of customers impacted, and the duration of each outage is based on an average
17 of the historical five years.
18

19 c) Table 1 below quantifies the percentage of the cable population in poor or very poor condition
20 under various scenarios. While the overall percentage of cables in 2025 is higher, the
21 percentage with ICM funding is 0.62% lower (i.e., the difference between the 2025
22 percentages for Alectra of 24.1% and 23.48%). This 0.62% translates to approximately 140km
23 of cable, and as stated in Exhibit 1, Tab 1, Schedule 4, Page 8, Line 21, this translates to
24 \$108MM in savings to customers. Overall, the data indicates that without increased funding,
25 the rate of cable deterioration will continue to outpace the rate of renewal.

Table 1 – 1-Staff-11 Part C - Percentage of Cables in Poor or Very Poor Condition

Year	% of cables in poor/very poor condition if...	PRZ	ERZ	Alectra
2023	Only projects in base rate funding were completed in 2023.	20.2%	29.6%	22.9%
	Base rate and 2023 ICM projects are completed as per EB-2023-0004 capital plan.	19.7%	29.0%	22.5%
2024	2023 ICMs projects are completed, but only 2024 base rate projects are completed.	20.1%	30.4%	23.5%
	2023 and 2024 ICM projects are completed as per EB-2023-0004 capital plan.	19.2%	29.4%	22.9%
2025	2023 ICMs projects are completed, but only 2024 and 2025 base rate projects are completed.	19.4%	33.2%	24.1%
	2023 and 2024 ICM projects are completed as per EB-2023-0004 capital plan. Base rate projects are completed in 2025.	18.5%	32.2%	23.48%

1-Staff-16

Cable Injection Projects

Reference: Exhibit 3, Tab 1, Schedule 4, page 8, Table 22

Alectra Utilities provided a list of underground cable replacement and cable injection projects that encompass the 2024 ICM request.

- a) Please complete the tables below with the following information:
 - i. Identify approximately how many years remain to perform cable injection at each neighbourhood before cable replacement is the only option.
- b) If certain cable injection projects have several years remaining before cable replacement is the only option, why can these specific projects not be deferred to future years?

Table 10 – Years Remaining for Cable Injection as a Viable Option

Cable Injection Projects	Project Cost	Years Remaining for Injection
Cairns Drive of Markham (M21)	\$1.7 million	
McNaughton Road Area of Vaughan (V26)	\$1.7 million	
Glen Erin Dr & Bell Harbour Dr in Mississauga (Area 39)	\$1.3 million	
Derry Road & Ninth Line (Area 56)	\$1.5 million	
Sovereign Court Area in Vaughan (V50)	\$1.3 million	
Creditstone Road Area in Vaughan (V24)	\$2.2 million	
8th Line & Highway 11 Area in Bradford (BR5)	\$1.0 million	
Bainbridge Ave (V51)	\$0.6 million	

Response:

- 1 a) b)
- 2 Alectra Utilities has two options to address deteriorated cables; cable replacement or cable
- 3 injection. Cable injection is a lower-cost solution that can extend the life of certain XLPE
- 4 cables, and therefore Alectra Utilities first examines injection for viability. During the

1 examination of cable eligibility for injection, Alectra Utilities reviews multiple factors relevant
2 to determine cable viability for rehabilitation through injection: type of cable (e.g. strand filled
3 cable are not eligible for injection), number of cable failures, condition of the cable, the location
4 of splices and proximity to each other, the number of splices within the cable segment, the
5 location of cable (e.g., under a boulevard, under a sidewalk, under a roadway, under a
6 driveway), neutral corrosion, and the actual field conditions (i.e. the ability to excavate and
7 civil work cost required to replace the cable).

8
9 Most recently, Alectra Utilities has identified through cable testing an increasing number of
10 cable segments initially proposed for cable injections are no longer viable for rehabilitation
11 through injection. Specifically, the list of cable segments which are no longer viable for
12 rehabilitation through injection in the PRZ alone now tallies approximately 23km. For these
13 segments, cable replacement is the only cable renewal solution. The urgency to increase the
14 pace of rehabilitation of underground cable through injection has increased as the window of
15 time available for rehabilitation is closing by the rate of cable deterioration.

16
17 Applying the engineering examination outlined above, Alectra Utilities projects that the viable
18 remaining window for rehabilitation through injection in the proposed cable renewal project
19 listed in Table 10 is 2024.

20
21 Alectra Utilities has provided an updated version of Table 10 below which highlights Alectra
22 Utilities believes the correct year for these projects to be injected is in 2024.

1 **Table 10 – Years Remaining for Cable Injection as a Viable Option**

Cable Injection Projects	Project Cost	Years Remaining for Injection
Cairns Drive of Markham (M21)	\$1.7 million	1 Year (2024)
McNaughton Road Area of Vaughan (V26)	\$1.7 million	
Glen Erin Dr & Bell Harbour Dr in Mississauga (Area 39)	\$1.3 million	
Derry Road & Ninth Line (Area 56)	\$1.5 million	
Sovereign Court Area in Vaughan (V50)	\$1.3 million	
Creditstone Road Area in Vaughan (V24)	\$2.2 million	
8th Line & Highway 11 Area in Bradford (BR5)	\$1.0 million	
Bainbridge Ave (V51)	\$0.6 million	

2

1-Staff-17

Avoided Costs

Reference 1: EB-2022-0013 Alectra Utilities Interrogatory Responses to OEB staff, 1-Staff-4, Attachment 1

Reference 2: Exhibit 1, Tab 1, Schedule 4, page 8

In the EB-2022-0013 proceeding, Alectra Utilities identified that the ICM and ACM requests would avoid approximately \$180 million in future costs after 2027.

In this proceeding, Alectra Utilities identified that the 2024 ICM would avoid \$108 million in future cable renewal expenditures.

- a) Please refile the tables in Reference 1 with the most up-to-date data.**
 - i. Please add a third set of tables when refiling the above that includes the variance in avoided customer hours of interruptions each year for the base scenario and the ICM scenario.**
 - ii. Please explain how the avoided costs and avoided customer hours of interruption are calculated.**

Assuming a similar methodology was used for the 2024 ICM as was provided in Reference 1:

- b) Avoided costs do not begin until 2031. As such, what is the impact on reliability if certain cable injection projects are deferred before 2031?**
- c) Why has Alectra Utilities only considered cable injection until 2027?**
- d) Why are cable renewal costs greater in 2028-2030 in the ICM scenario compared to the base scenario?**

Response:

- 1 a)
- 2 i. Alectra Utilities has provided the updated tables in Attachment 1. Attachment 1 provides the
- 3 length of cable renewal (kms) for the base projects; the length of cable (kms) for the base and
- 4 proposed ICM projects; and the estimated costs per km of replacement. The variance between
- 5 the plans from 2027 onwards, results in a difference of approximately \$108MM.

1 ii. Alectra Utilities derived the \$108MM in avoided future costs utilizing a consistent methodology
2 as presented in the 2020-2024 DSP¹. Alectra Utilities increased the amount of cable injected
3 or replaced in 2024 based on the ICM projects. This results in a long-term projection of costs.
4 This was compared to a plan without the increased investment. The long-term impact of a
5 reduction in investment today cascades year over year, resulting in more cable needing to be
6 replaced in the future at much higher costs. This results in \$108MM lower capital expenditures
7 with the inclusion of the proposed ICM cable renewal investments. Since the OEB approved
8 a lower amount of ICM funding than proposed in the 2023 ICM application, the avoided future
9 costs decreased from \$180MM to \$108MM.

10
11 To calculate the avoided customer hour of interruption (CHI), the proposed length of cable to
12 be replaced or injected is multiplied by the fault rate per km; the product is then multiplied by
13 the average CHI per failure event derived from historical reliability data.

14
15 b) As described in a) ii above, the avoided CHI depends on the amount of cable injected or
16 replaced. As projects are deferred, reliability is expected to worsen as poor and very poor
17 cable continues to deteriorate, resulting in more outages due to cable failure, and an increase
18 in the average number of CHI. Further, timely investment is critical for cable injection projects,
19 as injection is not possible once cables have deteriorated too far, and if that window is missed,
20 then more costly cable replacement will be the only remaining option.

21
22 c) Alectra Utilities has only considered cable injection until 2027 as cables after this time may no
23 longer be eligible candidates for injection.

24
25 i. After 2026, the km of cable remaining to be remediated are paced in years 2027 to 2038 to
26 have a smooth annual increase in investments and assumes that Alectra Utilities will have the
27 funding to plan and execute a larger number of projects. The greater renewal costs from 2028
28 to 2030 are due to smoothing of the pace of investments. However, the variance between the
29 plans from 2027 onwards, is expected to result in avoided future costs of \$108MM.

30

¹ EB-2019-0018 Exhibit 1, Tab 3, Schedule 1, page 5

1-Staff-17

Attachment 1 Avoided Costs

Base Plan			
Year	XLPE cable Replacement (km)	XLPE cable Injection (km)	Total km
2021	57	174	230
2022	35	166	201
2023	44	169	213
2024	49	155	204
2025	41	190	231
2026	50	188	238
2027	97	134	232
2028	190	0	190
2029	280	0	280
2030	440	0	440
2031	722	0	722
2032	847	0	847
2033	907	0	907
2034	927	0	927
2035	922	0	922
2036	905	0	905
2037	884	0	884
2038	855	0	855

Plan with ICM			
Year	XLPE cable Replacement (km)	XLPE cable Injection (km)	Total km
2021	57	174	230
2022	35	166	201
2023	44	169	213
2024	72	272	344
2025	41	190	231
2026	50	188	238
2027	97	134	232
2028	170	0	170
2029	261	0	261
2030	400	0	400
2031	608	0	608
2032	756	0	756
2033	911	0	911
2034	922	0	922
2035	932	0	932
2036	922	0	922
2037	928	0	928
2038	896	0	896

Year	Cost XLPE cable Replacement per km (\$MM)	Cost XLPE cable Injection per km (\$MM)
2021	\$ 0.54	\$ 0.09
2022	\$ 0.55	\$ 0.09
2023	\$ 0.57	\$ 0.09
2024	\$ 0.59	\$ 0.10
2025	\$ 0.61	\$ 0.10
2026	\$ 0.62	\$ 0.10
2027	\$ 0.64	\$ 0.10
2028	\$ 0.65	\$ 0.11
2029	\$ 0.66	\$ 0.11
2030	\$ 0.68	\$ 0.11
2031	\$ 0.69	\$ 0.11
2032	\$ 0.71	\$ 0.12
2033	\$ 0.72	\$ 0.12
2034	\$ 0.74	\$ 0.12
2035	\$ 0.75	\$ 0.12
2036	\$ 0.77	\$ 0.13
2037	\$ 0.79	\$ 0.13
2038	\$ 0.80	\$ 0.13

Base Plan			
Year	XLPE cable Replacement (\$MM)	XLPE cable Injection (\$MM)	Total \$MM
2021	\$ 30	\$ 15	\$ 46
2022	\$ 19	\$ 15	\$ 34
2023	\$ 25	\$ 16	\$ 41
2024	\$ 29	\$ 15	\$ 44
2025	\$ 25	\$ 19	\$ 44
2026	\$ 31	\$ 19	\$ 50
2027	\$ 62	\$ 14	\$ 76
2028	\$ 124	\$ -	\$ 124
2029	\$ 186	\$ -	\$ 186
2030	\$ 299	\$ -	\$ 299
2031	\$ 501	\$ -	\$ 501
2032	\$ 600	\$ -	\$ 600
2033	\$ 656	\$ -	\$ 656
2034	\$ 685	\$ -	\$ 685
2035	\$ 696	\$ -	\$ 696
2036	\$ 698	\$ -	\$ 698
2037	\$ 696	\$ -	\$ 696
2038	\$ 688	\$ -	\$ 688

Plan with ICM			
Year	XLPE cable Replacement (\$MM)	XLPE cable Injection (\$MM)	Total \$MM
2021	\$ 30	\$ 15	\$ 46
2022	\$ 19	\$ 15	\$ 34
2023	\$ 25	\$ 16	\$ 41
2024	\$ 42	\$ 26	\$ 69
2025	\$ 25	\$ 19	\$ 44
2026	\$ 31	\$ 19	\$ 50
2027	\$ 62	\$ 14	\$ 76
2028	\$ 111	\$ -	\$ 111
2029	\$ 174	\$ -	\$ 174
2030	\$ 272	\$ -	\$ 272
2031	\$ 422	\$ -	\$ 422
2032	\$ 535	\$ -	\$ 535
2033	\$ 659	\$ -	\$ 659
2034	\$ 681	\$ -	\$ 681
2035	\$ 704	\$ -	\$ 704
2036	\$ 711	\$ -	\$ 711
2037	\$ 731	\$ -	\$ 731
2038	\$ 721	\$ -	\$ 721

Year	Variance (\$MM)
2021	\$ -
2022	\$ -
2023	\$ -
2024	\$ 24.72
2025	\$ -
2026	\$ -
2027	\$ -
2028	\$ (12.88)
2029	\$ (12.53)
2030	\$ (27.15)
2031	\$ (79.05)
2032	\$ (64.46)
2033	\$ 2.89
2034	\$ (3.70)
2035	\$ 7.55
2036	\$ 13.11
2037	\$ 34.66
2038	\$ 32.99

Variance from 2027 onwards

Sum = \$108.55

1-Staff-18

Reliability Metrics

Reference: Exhibit 1, Tab 1, Schedule 4, pages 6-7

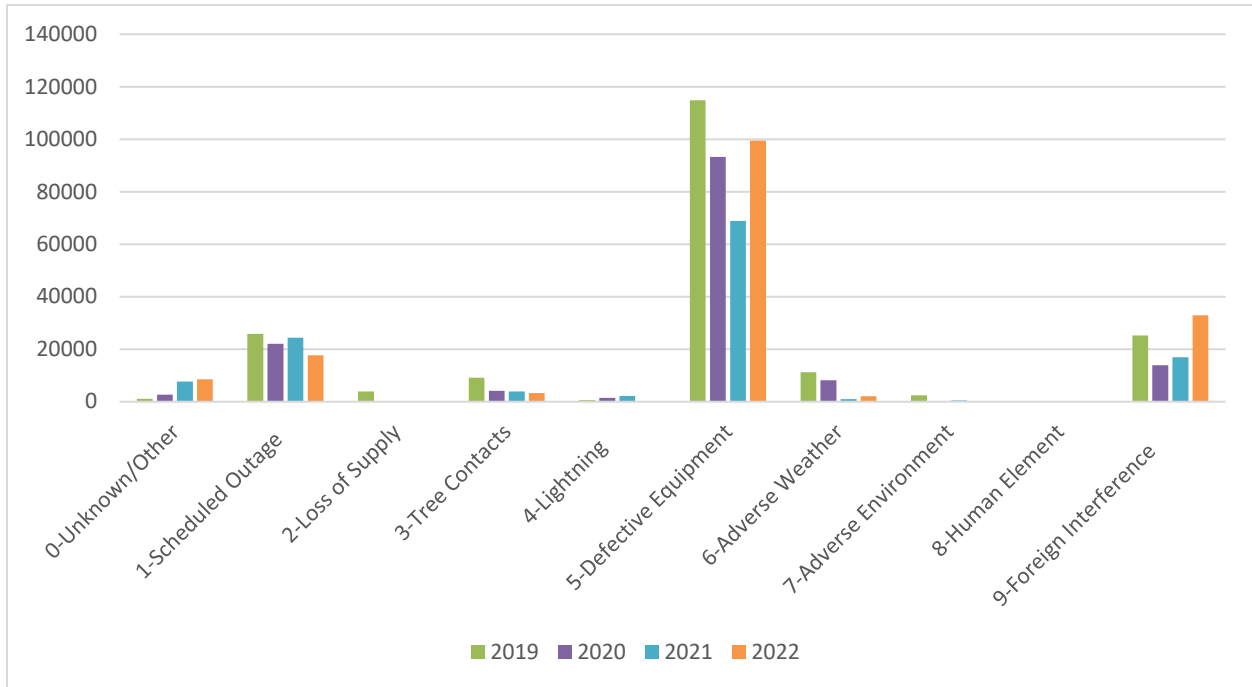
Alectra Utilities provided customer hours of interruption from 2017 to 2022. According to Reference 1, customer hours of interruption pertaining to both defective equipment and 'cables and accessories XLPE' decreased in 2022.

- a) Please provide figures similar to Figure 1 and Figure 2 found in Reference 1 but for the PowerStream RZ and Enersource RZ.**
- b) What is the trend in customer hours of interruption pertaining to 'cables and accessories XLPE' for 2023 compared to 2022 for both Alectra Utilities as a whole and for the two RZs? Please explain the trends.**
- c) Why does Alectra Utilities believe that customer hours of interruption decreased in 2022?**

Response:

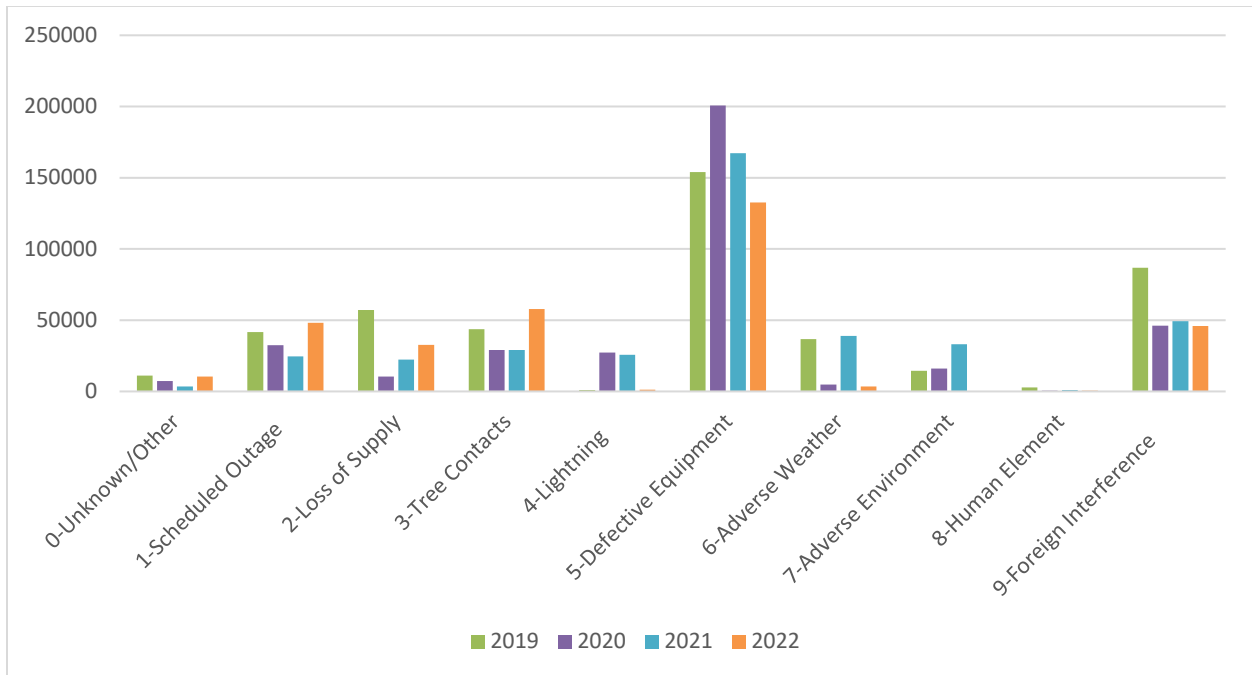
- 1 a) Alectra Utilities has provided figures similar to Figure 1 and Figure 2 found in Reference 1 for
- 2 the PowerStream and Enersource rate zones. For both rate zones, defective equipment
- 3 continues to be the leading cause of outages, and direct-buried underground cable and
- 4 accessories continues to be the most significant driver of equipment failures.

1 **Figure 1 – 2019-2022 Customer Hours of Interruption by Cause Code Excl. MEDs ERZ**



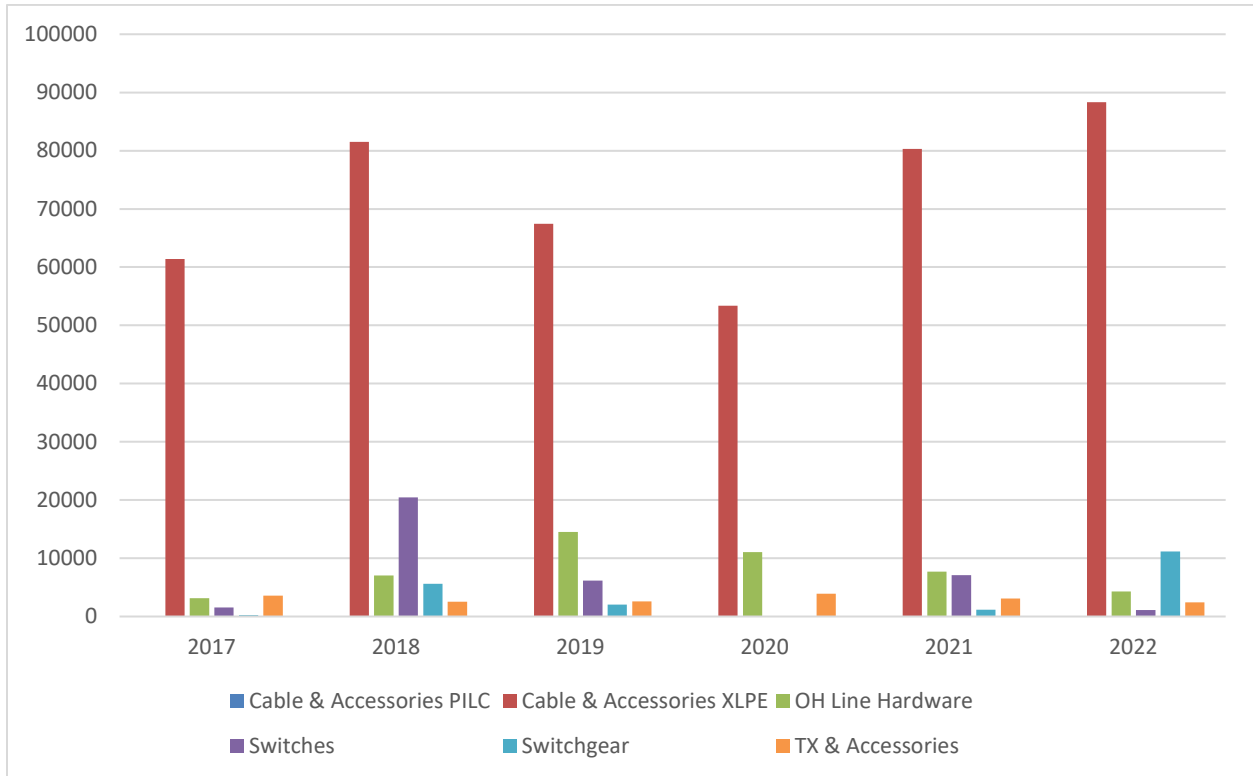
2
3

4 **Figure 2 – 2019-2022 Customer Hours of Interruption by Cause Code Excl. MEDs PRZ**

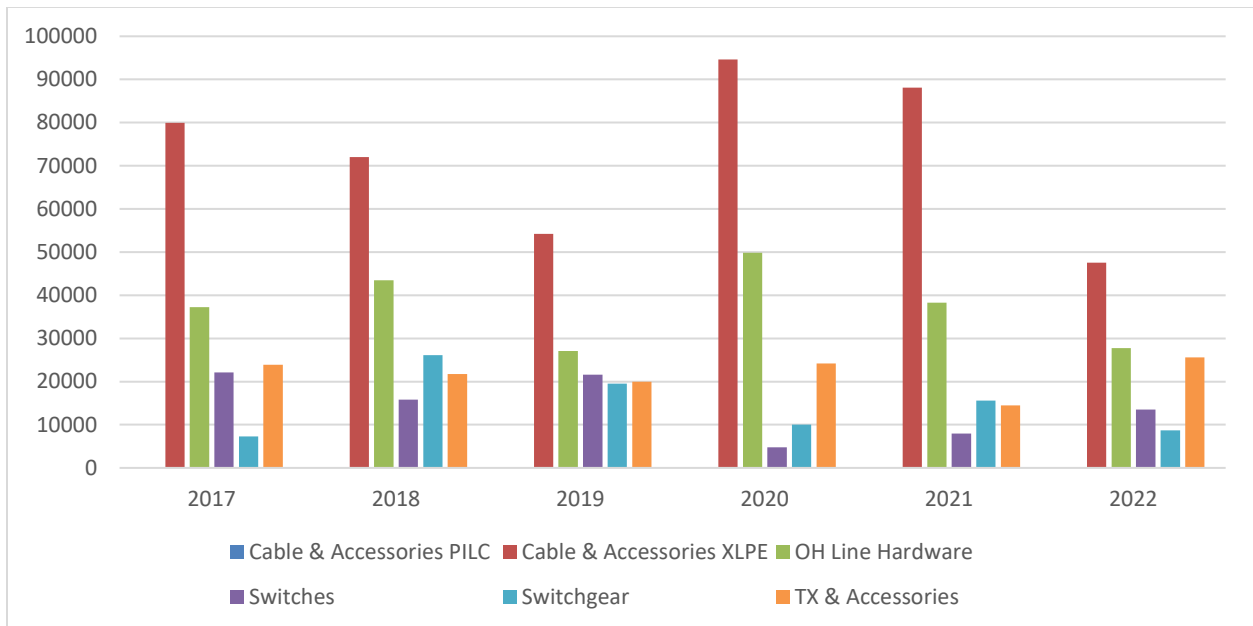


5

1 **Figure 3 - 2017-2022 Customer Hours of Interruption Defective Equipment: Asset Type ERZ**



2
3
4 **Figure 4 - 2017-2022 Customer Hours of Interruption Defective Equipment: Asset Type PRZ**



1 b) Based on Year-to-date August 2023 results, the overall customer hours of interruption is
2 trending lower in 2023 compared to 2022. Specifically, the mild summer has resulted in lower
3 XLPE cable failures in the Enersource and Horizon rate zones. However, customer hours of
4 interruption in the Guelph, Brampton and PowerStream rate zones are trending higher than
5 2022. A number of factors may contribute to the increase including: the physical system
6 layout, lack of automation, more first-time cable faults in a new area (lack of historical stress).
7 In the PowerStream rate zone, customer hours of interruption at the end of August is 88% of
8 the year end 2022 value.

9
10 c) Potential drivers for the reduction in customer hours of interruption in 2022 are:

- 11 a) harmonization to the approach to cable replacement and use of the Asset Analytics
- 12 platform;
- 13 b) increased cable injection and replacement in 2020 and 2021,
- 14 c) increased proliferation of distribution automation; and
- 15 d) cooler peak/average temperatures in 2022.

1-Staff-19

Performance Based Regulation (PBR)

Reference: Exhibit 2, Tab 1, Schedule 1, page 24

Alectra Utilities explained PBR in its application as follows:

Performance-based Based Regulation (“PBR”) distribution rates are set based on a cost-of-service review. Subsequently, rates are adjusted based on changes to the input price index and the productivity and stretch factors set by the OEB. This is applicable for all Alectra Utilities’ RZs which are under Price Cap IR for the purpose of setting electricity distribution rates. PBR decouples the price (the distribution rate) that a distributor charges for its service from its cost, and therefore, the regulated utility will be responsible for making its investments within the constraints of the price cap, and subject to service standards set by the OEB.

- a) Please confirm if Alectra Utilities is justifying its investments by using PBR?**
- b) If yes, please explain how this reconciles with the request for ICM funding at the same time.**

Response:

- 1 Alectra Utilities prudently manages its capital investments within its approved rates funding
- 2 envelope, continually balancing expenditures based on identified business and system needs and
- 3 the priorities of its customers. Alectra Utilities also has capital investment needs for the
- 4 PowerStream and Enersource rate zones that are not funded through existing distribution rates
- 5 and has requested ICM funding for cable renewal investments in these rate zones.
- 6
- 7 Alectra Utilities has provided its justification for the prudence of the investments in Exhibit 3, Tab
- 8 1, Schedule 4. Specifically, the proposed ICM investments are driven by deteriorating asset
- 9 condition, specifically, an increase in cable failures in localized “hotspots.”
- 10 Further, in Alectra Utilities’ 2023 ICM Decision, the OEB stated that “...the 2023 cable programs
- 11 in the PowerStream RZ and Enersource RZ to be prudent. The cable projects selected for
- 12 remediation represent prudent investment in capital for cable injection and cable replacement

- 1 based upon the current condition of the cable assets in both RZs. The cable programs should
- 2 help to ensure the reliability and quality of service.”¹

¹ Ibid., p.16

1-Staff-20

Customer Engagement Survey

Reference 1: Exhibit 3, Tab 1, Schedule 3, page 1

Reference 2: Exhibit 1, Tab 1, Schedule 4, pages 8-9

Reference 3: EB-2022-0013, Customer Engagement Overview, page 5

Alectra Utilities engaged Innovative Research Group (Innovative) in 2022 to seek customer input on proposed 2023 and 2024 ICM investments in the PowerStream and Enersource RZs as part of Alectra Utilities' 2023 ICM Application.

Alectra Utilities submitted the results of the ICM engagement survey as part of its 2023 application which Alectra Utilities believes showed that customers want Alectra Utilities to invest more in renewing deteriorated underground cables.

Table 11 – Customers Preference for Cable Replacement

Rate Zone & Rate Class Breakdown <i>% Choosing each option n-size for sample sizes where n>50</i>	Enersource			PowerStream		
	Residential	GS<50kw	GS>50kw + Large Use	Residential	GS<50kw	GS>50kw + Large
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 the 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%)

Total percentages of customers that want the same level of current planned investment in replacement to be maintained and those that don't know are close to 50% in both RZs. This class of customers will be impacted by the increases that will come with the chosen option.

- a) Has there been subsequent follow-up engagement efforts to ensure that at least, those under the category of "Don't know" were enlightened of the impending project and possible impacts?**
- b) If the response to part A is 'Yes', please provide further details.**
- c) Alectra Utilities customers were not privy to the 3.4% IRM rate increase of 2023 and the probable 4.5% IRM rate increase in 2024 when the survey was conducted. Given that these rate increases are greater than IRM increases of the past, why does Alectra Utilities believe that customer preferences may not have changed, thereby warranting a new survey?**

Response:

a) and b) As provided in Exhibit 1, Tab 1, Schedule 4, pp.8-9, each proposed ICM project in this application was included in the 2023 ICM application¹ and formed part of the customer engagement survey undertaken by Innovative in 2022. As a result, impacted customers were aware of the projects, the impact on reliability and bill impacts. All of the planned projects in both years were identified and planned on the same basis, to address the same issue: deteriorating underground distribution cable in various communities in the PowerStream and Enersource rate zones. The results from the 2022 customer engagement survey remain valid given that the investment options and outcomes to address the challenges posed by deteriorating underground cable are consistent with the 2023 ICM application.

Further, the 2022 customer engagement workbook was tested in series of online one-on-one interviews with residential 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. The diagnostic questions indicate that residential customers felt comfortable with the content. For instance, pp. 37-38 of Appendix 1.0-ICM Report (Appendix 1.0 was part of Customer Engagement Report filed as Attachment 11 in the 2023 ICM Application), showed that 85%

¹ The ICM projects in this application were identified in the 2023 ICM application as either a 2023 or 2024 ICM project.

1 to 86% of residential customers had a favourable impression of the workbook and 81% of
2 residential customers felt that the workbook had just the right amount of information.

3
4 c) As identified on p. 21 of the ICM Report, customers were informed about the annual rate
5 increases based on the OEB's Price Cap Formula and presented with the estimated IRM
6 increases over the 2023 to 2026 period based on the most recently approved Price Cap
7 Adjustment at that time. Customers were also informed that actual impacts may differ from
8 the estimates included in the customer engagement workbook, based on subsequent Price
9 Cap Adjustments determined by the OEB.