1-Staff-1

Asset Analytics Platform
Reference 1: Exhibit 1, Tab 1, Schedule 4, page 4
Reference 2: Exhibit 3, Tab 1, Schedule 2, page 18
Reference 3: Exhibit 3, Tab 1, Schedule 2, page 14

Since the last DSP in 2020, Alectra Utilities has implemented an Asset Analytics Platform. The Asset Analytics Platform moves towards predictive analysis, reliability-driven maintenance, and machine learning. The Asset Analytics Platform also combines large data sets to establish a cross-sectional relationship to identify localized issues. The Asset Analytics Platform was used to help Alectra Utilities focus on the underground cable renewal investments that yield the greatest value.

a) **Please explain in detail how the Asset Analytics Platform uses predictive analysis and machine learning to identify localized issues.**
b) **Please provide the data points used as inputs and the resultant outputs for the Asset Analytics Platform.**
c) **Did the Asset Analytics Platform compare all of Alectra Utilities' assets and maintenance programs?**
d) **How is "greatest value" defined by the Asset Analytics Platform?**
e) **Please confirm if the Asset Analytics Platform only helps prioritize investments based on the greatest value but does not analyze whether a project is required to be completed from an engineering standpoint.**
f) **Please confirm the need for the project is still based on an engineering assessment as described in reference 2.**
g) **How has the new Analytics program improved the accuracy of predicting asset health?**

Alectra Utilities has established "an asset condition metric" to ensure that the population of cables that are in 'poor' and 'very poor' condition is limited to 14%. This metric represents the health of the cable population at the start of the DSP period.

h) Why was the start of the DSP period, where 14% of the cable population was assessed as in poor or very poor condition, chosen as a suitable asset condition metric limitation?

Response:

a) Alectra Utilities continues to implement predictive analytics capabilities by leveraging the data science and data analytic capabilities of the Asset Analytics Platform together with the full engineering assessment process explained on Page 18 of the Exhibit 3, Tab 1, Schedule 2. Alectra Utilities' engineers currently utilize the Asset Analytics Platform to connect multiple data sources to retrieve substantial data sets in an automated manner, perform computations, combine other assessments, and visualize results. By doing so, the engineers extract and utilize the most up to date data sets for engineering assessments. As summarized below, this functionality has enabled Alectra Utilities' engineers to combine outputs from the Asset Analytics Platform and engineering assessments to perform predictive analysis.

One use case of the system implemented at Alectra, was to identify and visualize locations of tree contacts from reliability data and assess the impact. As a result, engineers have determined and prioritized tree trimming schedules to address reliability hot spots prior to tree contact outages occurring.

In the context of underground cables, Alectra Utilities' engineers currently utilize the system to correlate asset condition information and reliability failures to identify reliability hotspots, and emerging areas to propose appropriate sustainment solutions. The predictive projection is based on the premise that, without intervention, these hotspots will continue to experience declining reliability. Alectra Utilities will enhance the asset analytics by codifying the predictive projection performed currently by engineers to further reduce the time to actionable solutions.

b) The inputs to the Asset Analytics Platform are dependent on the analysis or calculation being performed. For example, to determine the cable segment condition (Health Index as an output), the following inputs are considered:

i. Cable segment Type (XLPE, PILC, EPR)

ii. Cable segment construction (Direct buried, in-duct)
iii. Cable segment age

In determining a cable hotspot that requires intervention, the study would include the following inputs:

i. Cable segment condition (output of assessing cable segment condition)
ii. Number of historical failures on the segment
iii. Cable routing path
iv. Map of area and streets

c) The Asset Analytics Platform is used in computing the asset condition assessment, which is further used to identify reliability hotspots by combining condition information with reliability information. Engineers propose projects based on the needs assessment. CopperLeaf is the system that compares different projects and optimizes the investment portfolio.

Regarding maintenance programs, the Asset Analytics Platform is used in identifying reliability hotspots due to tree contacts.

d) In the context of the referenced material, "greatest value" refers to the projects that are identified as hotspots using the asset condition, reliability data and evaluated using the engineering assessment. The projects are then entered and scored in CopperLeaf based on Alectra Utilities' value framework[1] for optimization as part of the capital portfolio.

e) The Asset Analytics Platform identifies the need for the project from an engineering standpoint since it correlates the condition of cables with the historical outages (i.e., customers' historical experience in the area). In other words, all identified areas are driven by need. After the area has been identified, engineers investigate the details of the area to determine the appropriate sustainment solution.

[1] EB-2019-0018/Exhibit4/Tab1/Schedule1/Page334

f) Yes, the needs for the project are a result of identification from the Asset Analytics Platform and the engineering assessment conducted by engineers, as described on Page 18 of Exhibit 3, Tab 1, Schedule 2.

g) The Asst Analytics Platform connects to the data sources without the need of duplicating the data and has the ability to match substantial volumes of records from different assessments (e.g., correlating condition and reliability outages on cable segments). The system maintains accuracy throughout the assessments being performed since it reads from the source data without duplication. Moreover, it allows scalability and sharing between engineers while maintaining data quality. Engineers can do more complex assessments by building on top of existing assessments, as discussed in part b.

h) Reliability is a lagging indicator of physical and functional deterioration leading to increasing failures. Asset condition is a leading indicator for expected failures. Alectra Utilities' 2020-2024 DSP aims to maintain reliability at the five-year historical level and improve reliability for identified areas experiencing below-average reliability performance (EB-2019-0018, Exhibit 4, Tab 1, Schedule 1, Page 109). Therefore, the deteriorated cable population needs to be maintained at 14% to maintain reliability.

1-Staff-2

Reliability Performance
Reference 1: Exhibit 1, Tab 1, Schedule 4, page 6-7, figures 1 & 2
Reference 2: Exhibit 2, Tab 1, Schedule 1, page 8
Reference 3: Exhibit 2, Tab 1, Schedule 1, page 16

Alectra Utilities has provided customer-hours of interruptions by cause code from 2019 to 2021. Defective equipment makes up the majority of customer hours of interruption from 2019 to 2021. There was a 10% increase in defective equipment customer-hours of interruption over the 2019 to 2021 period. In addition, Alectra Utilities has provided customer-hours of interruption per asset type from 2017 to 2021. XLPE Cables and accessories make up the majority of defective equipment customer-hours of interruption. Alectra Utilities states that "[s]ince 2017, the highest number of interruptions (66%) occurred in the PowerStream and Enersource RZs."

a) **Please provide similar figures to reference 1 for each rate zone. Please also provide the SAIDI related to defective equipment and cables by rate zone for 2017 to 2021.**
b) **Please provide the same information provided in part 'a' but for the number of customer interruptions and SAIFI.**
c) **Please provide the investments in underground cables (cable injection and cable replacement) for the PowerStream and Enersource rate zones from 2017 to 2021.**
d) **Please clarify whether the "66% of interruptions" that occurred in the PowerStream and Enersource RZs refers to the number of interruptions, the customers interrupted or customer-hours of interruptions.**

In references 2 and 3, Alectra Utilities stated that the ICM investment within the PowerStream rate zone would avoid approximately 300 cable-related outages over two years, each of which would cause an outage to an average of 330 customers for two hours. The ICM investment within the Enersource rate zone would avoid 150 outages over two years, each of which would cause an outage to an average of 530 customers for one hour.

e) **Please provide the total forecasted customer-hours of interruption and number of customer interruptions for 2022, 2023, and 2024 and add them to Figures 1 and 2 of reference 1.**

f) Please provide the assumptions used in forecasting the outages that would be avoided.

Response:

a) Alectra Utilities has provided Customer Hours of Interruption by Cause Code for each rate zone in Figures 1 to 5 below. Please note that the scales are different for each graph as the range of values for the Customer Hours of Interruption vary across the rate zones.

Figure 1: Customer Hours of Interruption by Cause Code for BRZ

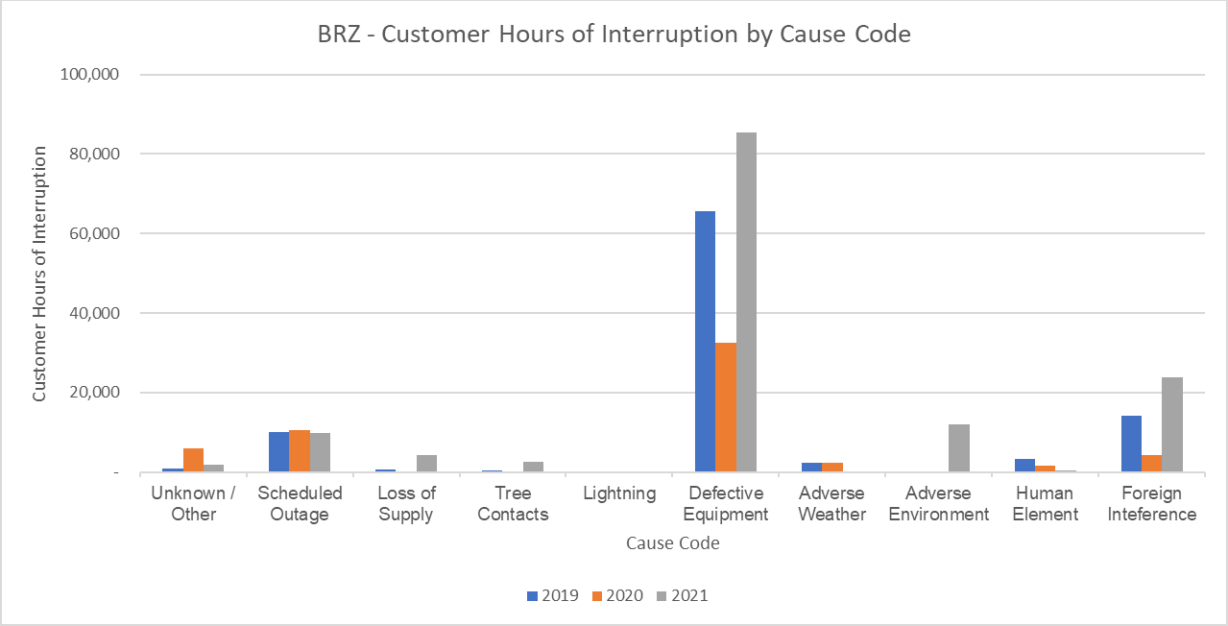


Figure 2: Customer Hours of Interruption by Asset Type for BRZ

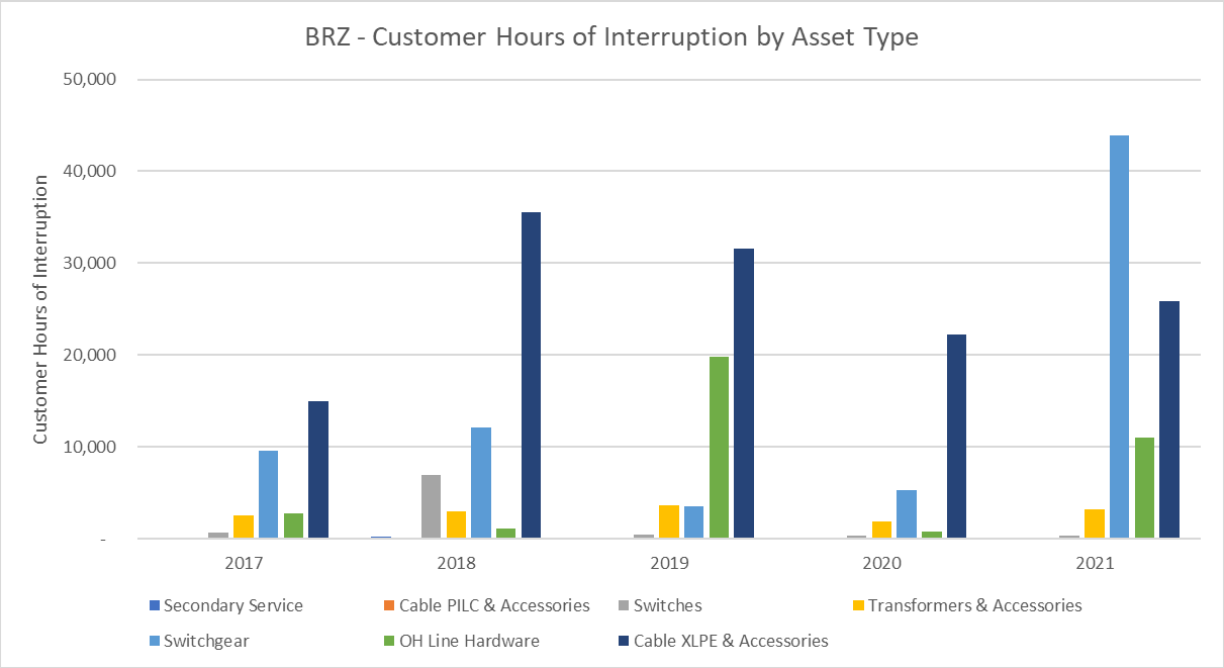


Figure 3: Customer Hours of Interruption by Cause Code for ERZ

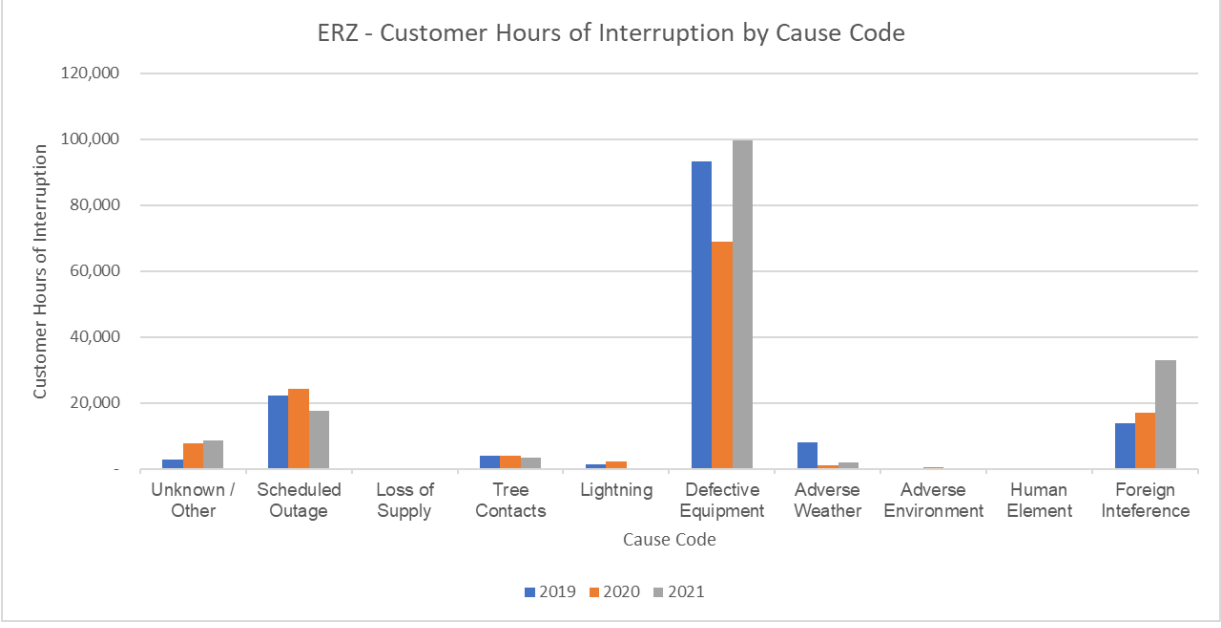


Figure 4: Customer Hours of Interruption by Asset Type for ERZ

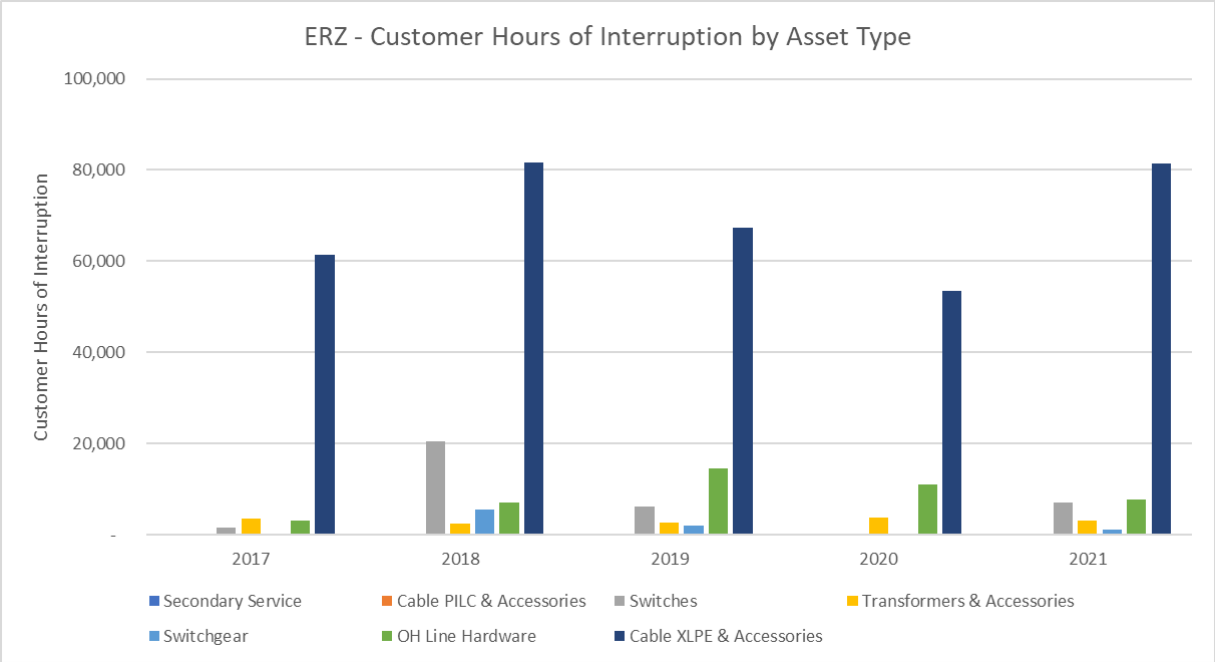


Figure 5: Customer Hours of Interruption by Cause Code for GRZ

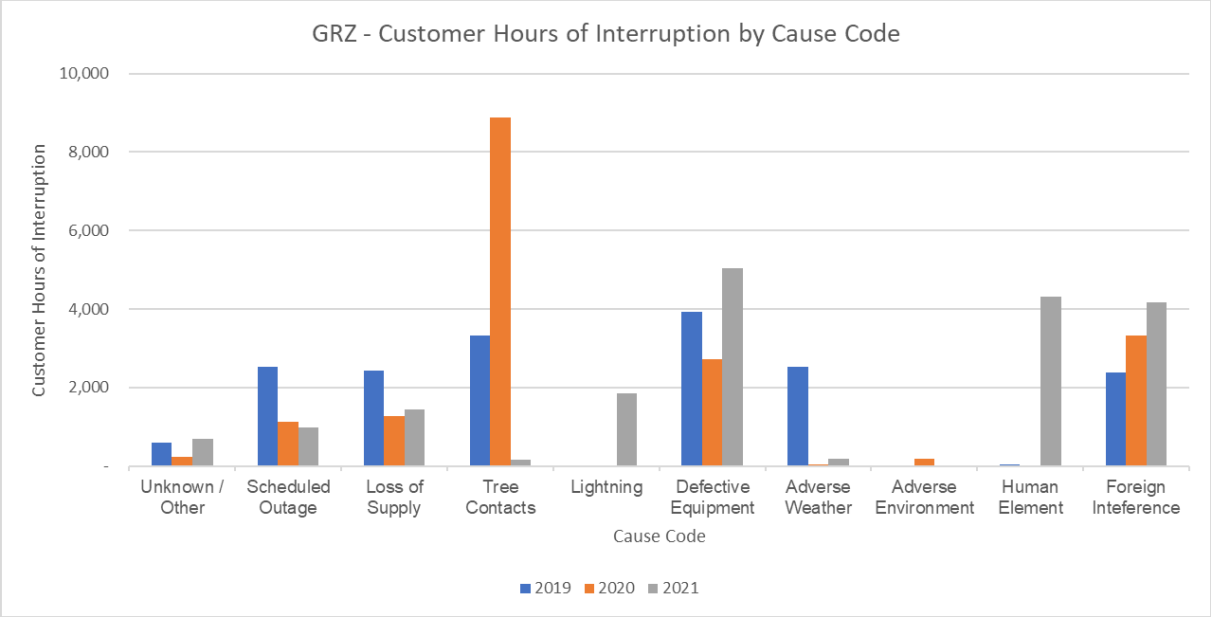


Figure 6: Customer Hours of Interruption by Asset Type for GRZ

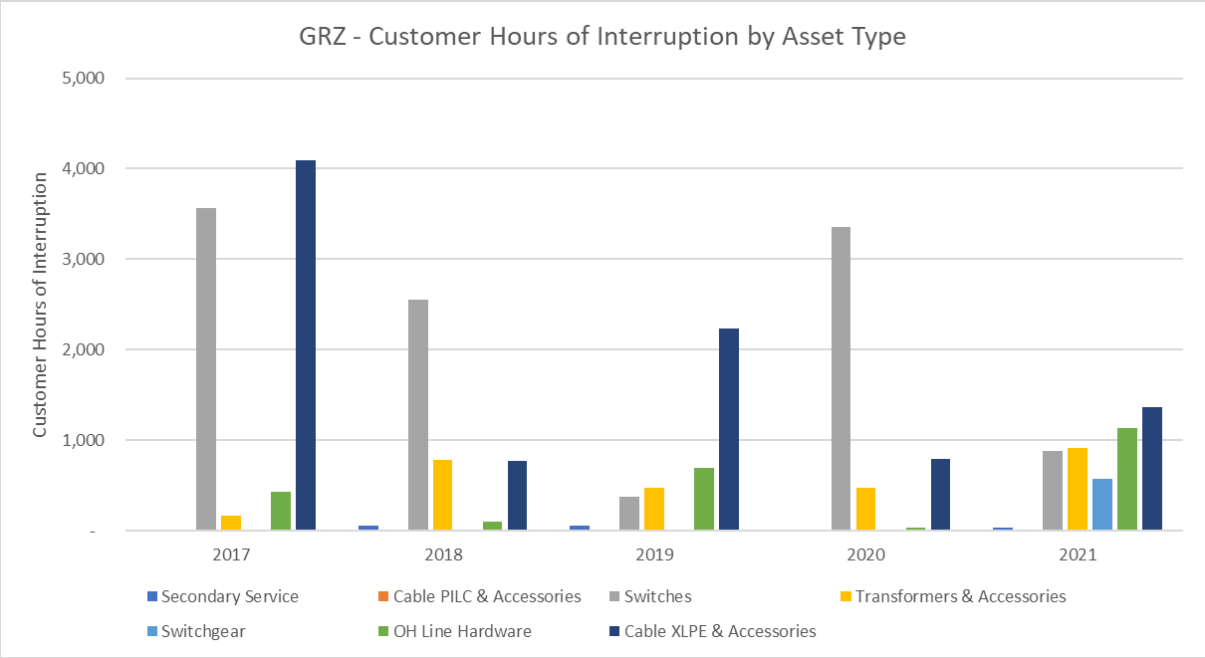


Figure 7: Customer Hours of Interruption by Cause Code for HRZ

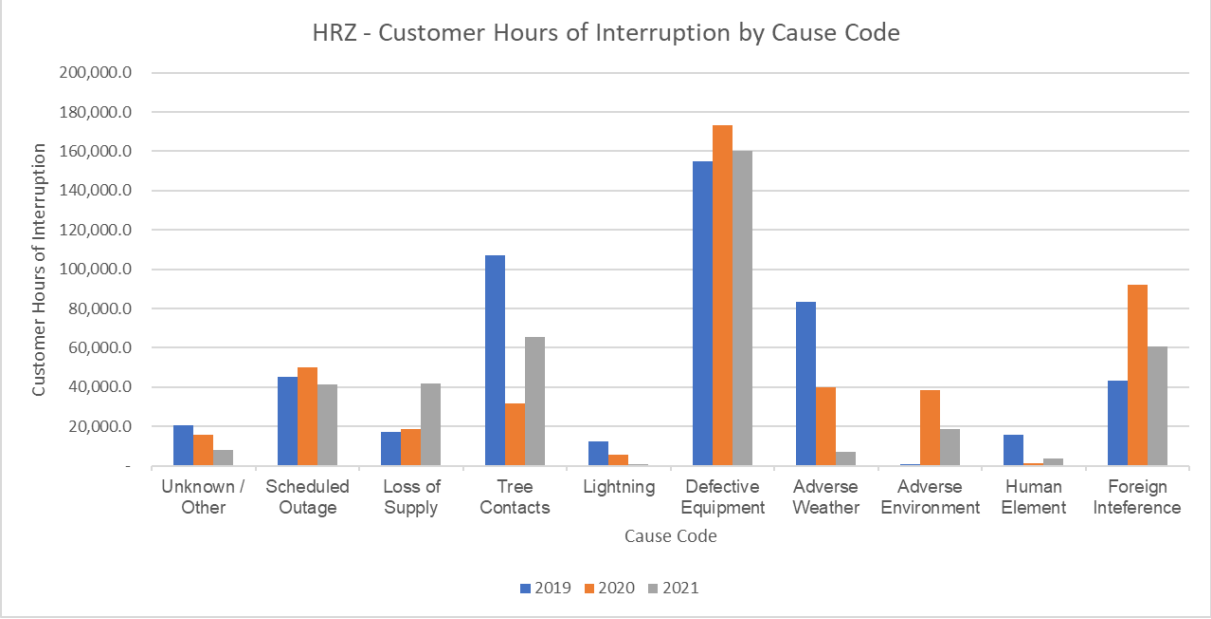


Figure 8: Customer Hours of Interruption by Asset Type for HRZ

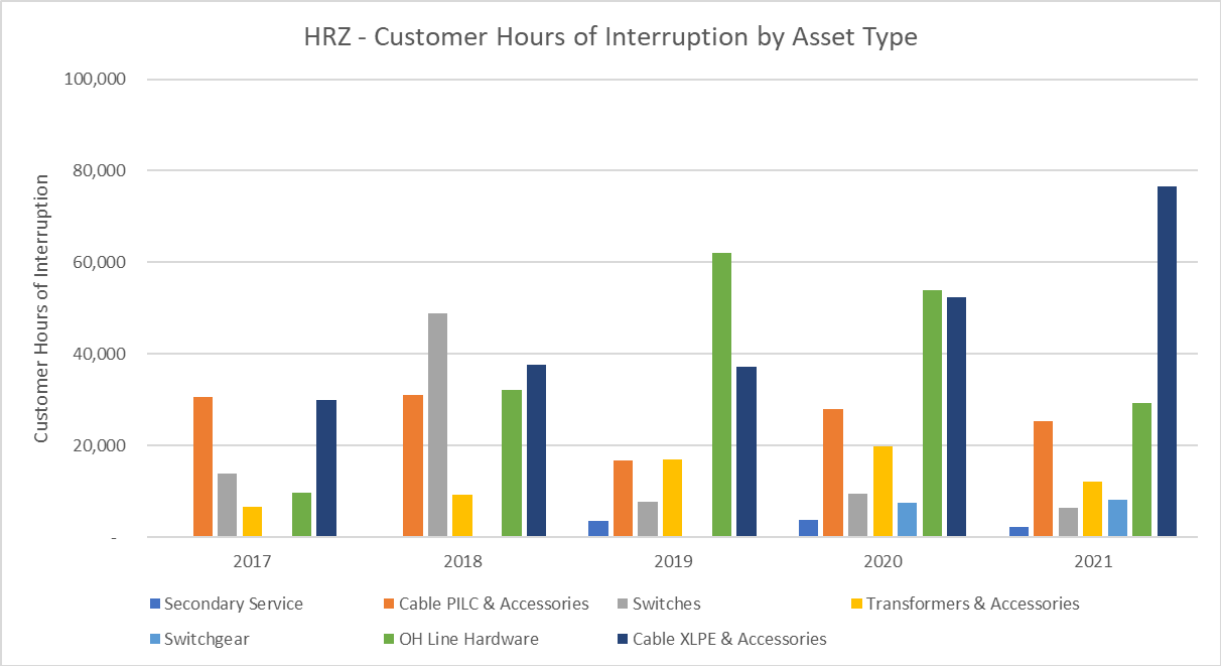


Figure 9: Customer Hours of Interruption by Cause Code for PRZ

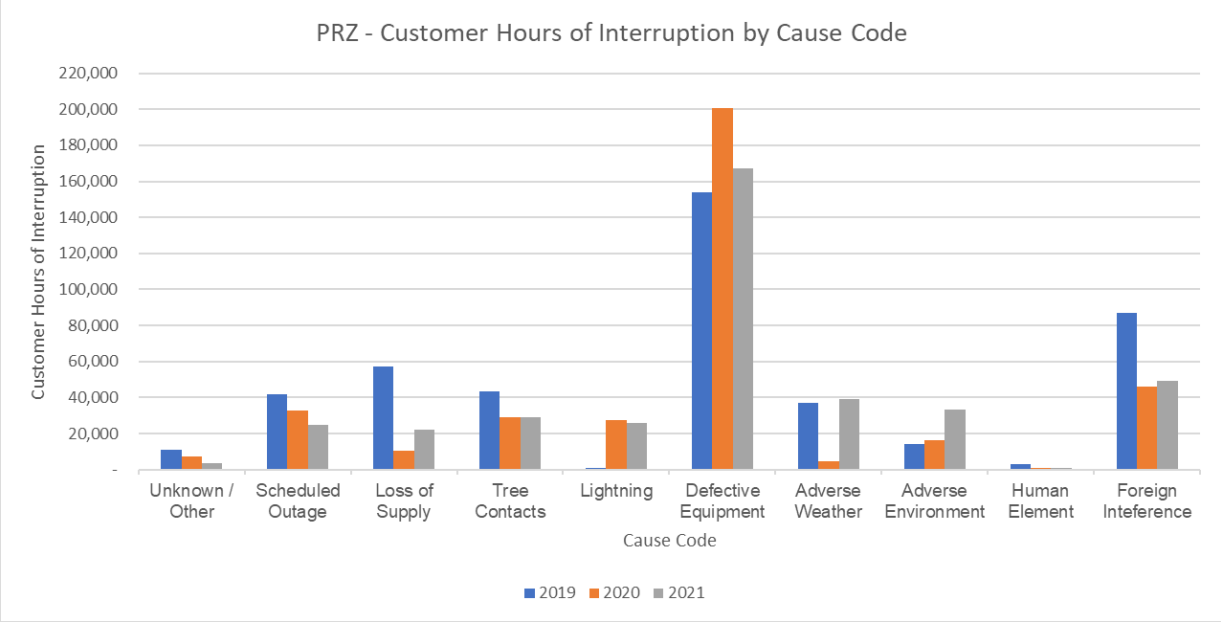
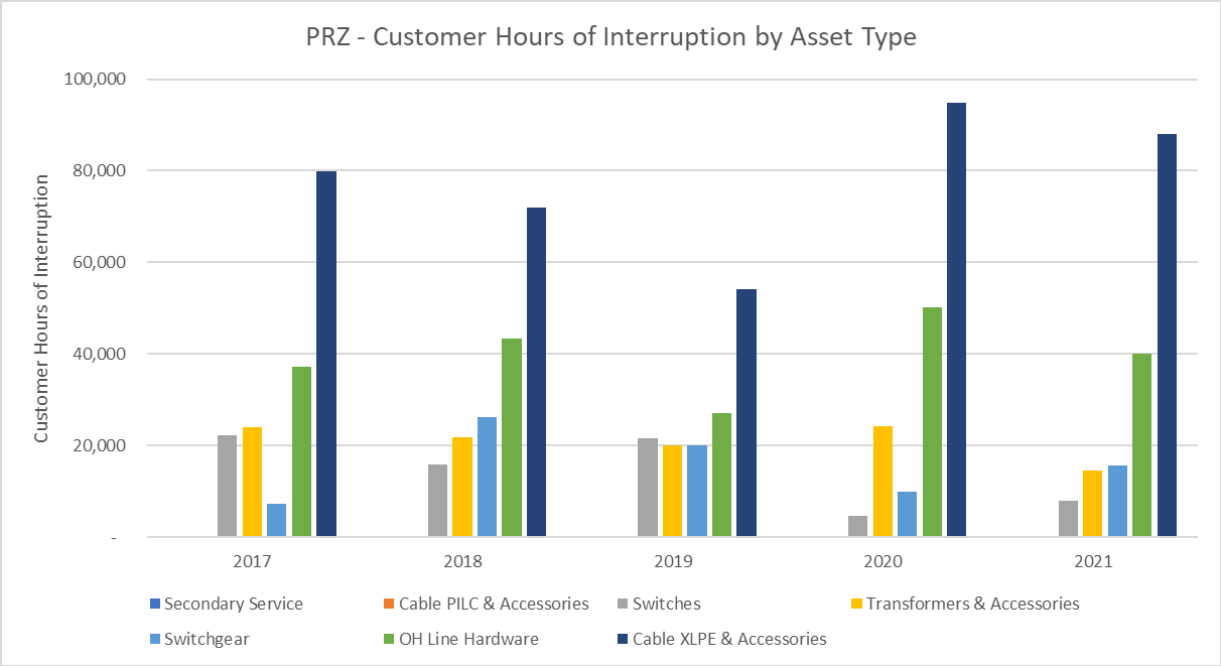


Figure 10: Customer Hours of Interruption by Asset Type for PRZ



Please refer to attached Excel spreadsheet (1-Staff-2_Attachment_1) for the SAIDI related to defective equipment and cables per rate zone. Alectra Utilities would like to caution on the use of SAIDI as a benchmark in contrast to Customer Hours of Interruption ("CHI"). SAIDI can be impacted by the total customer count, and therefore poor performing areas will not stand out on average. Hence, the use of CHI is a better reflection of reliability for our customers.

b) Please note that the scales are different for each graph as the range of values for the number of Customer Interruptions vary between the rate zones.

Figure 1: Customer Interruptions by Cause Code for BRZ

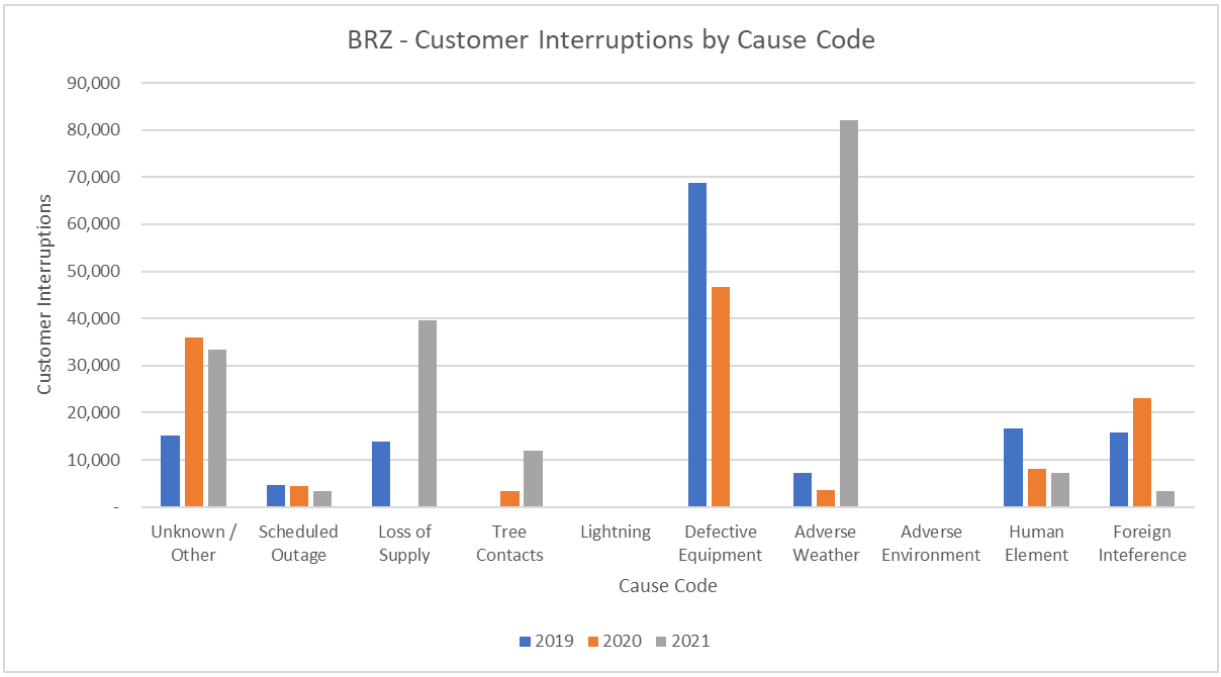


Figure 2: Customer Interruptions by Asset Type for BRZ

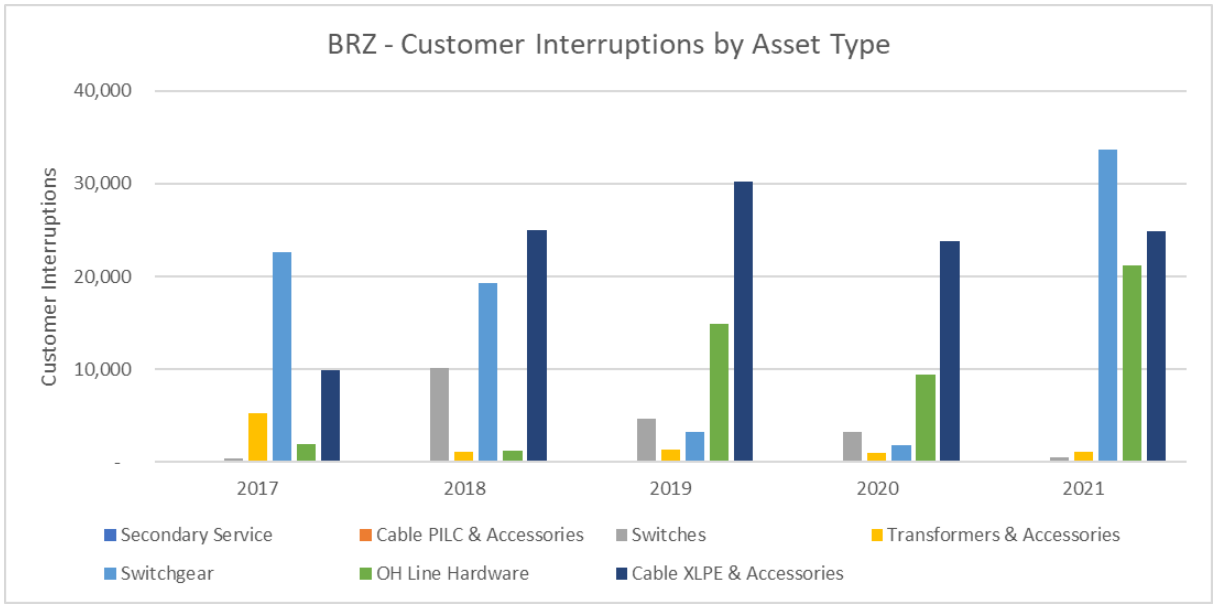


Figure 3: Customer Interruptions by Cause Code for ERZ

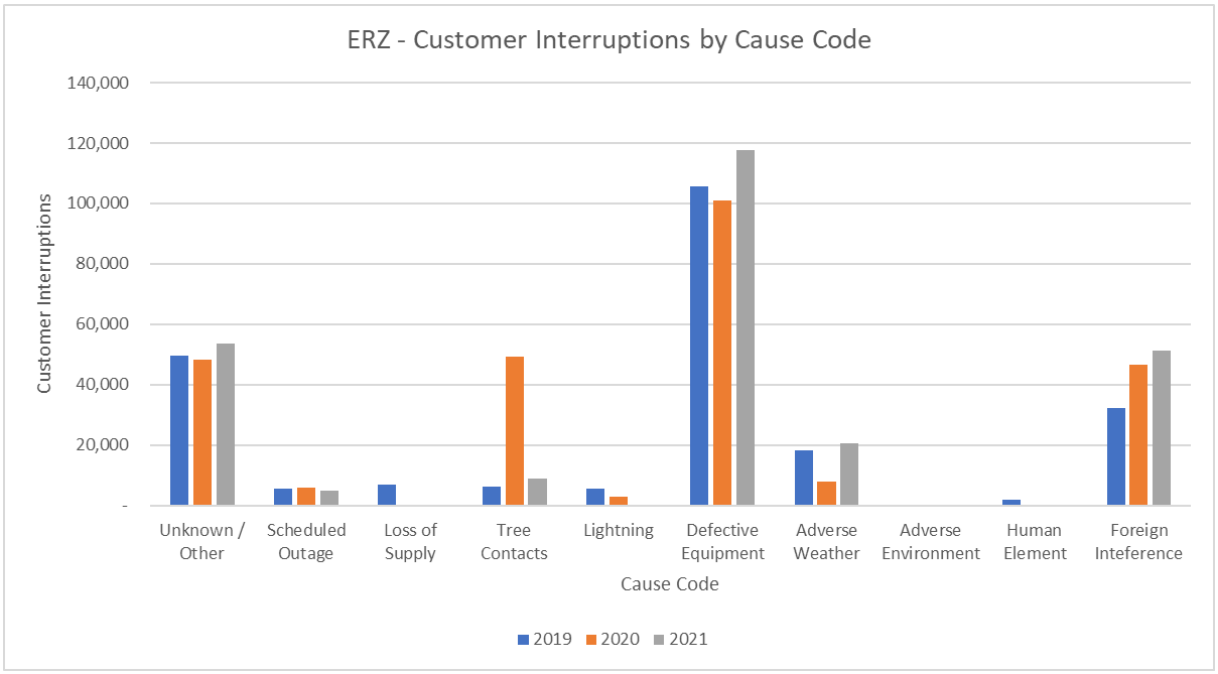


Figure 4: Customer Interruptions by Asset Type for ERZ

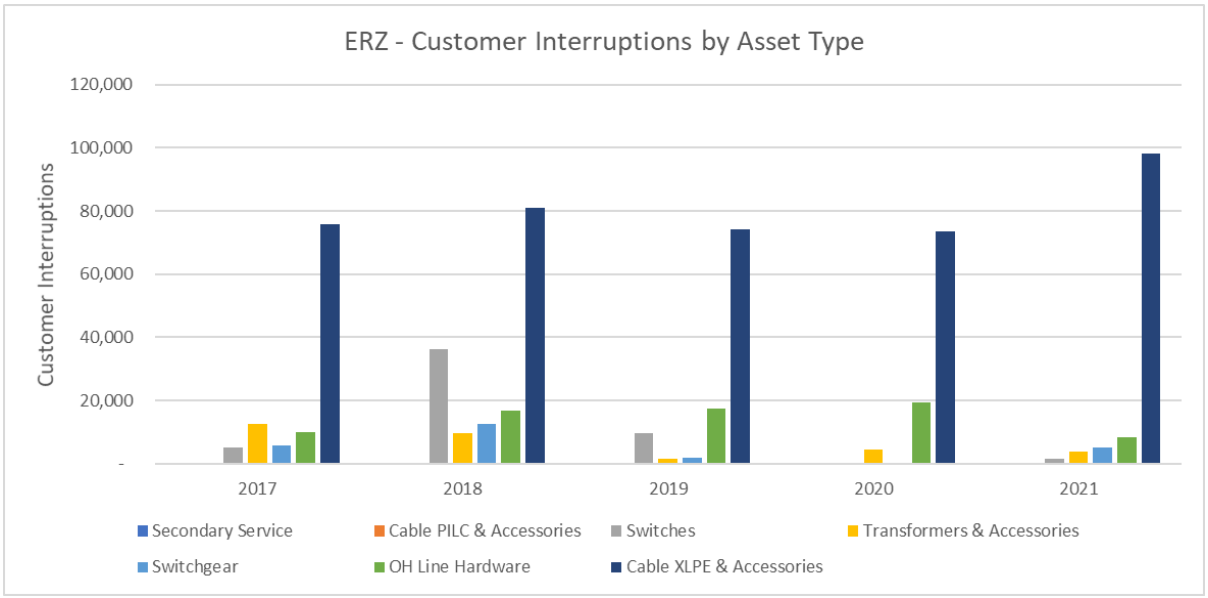


Figure 5: Customer Interruptions by Cause Code for GRZ

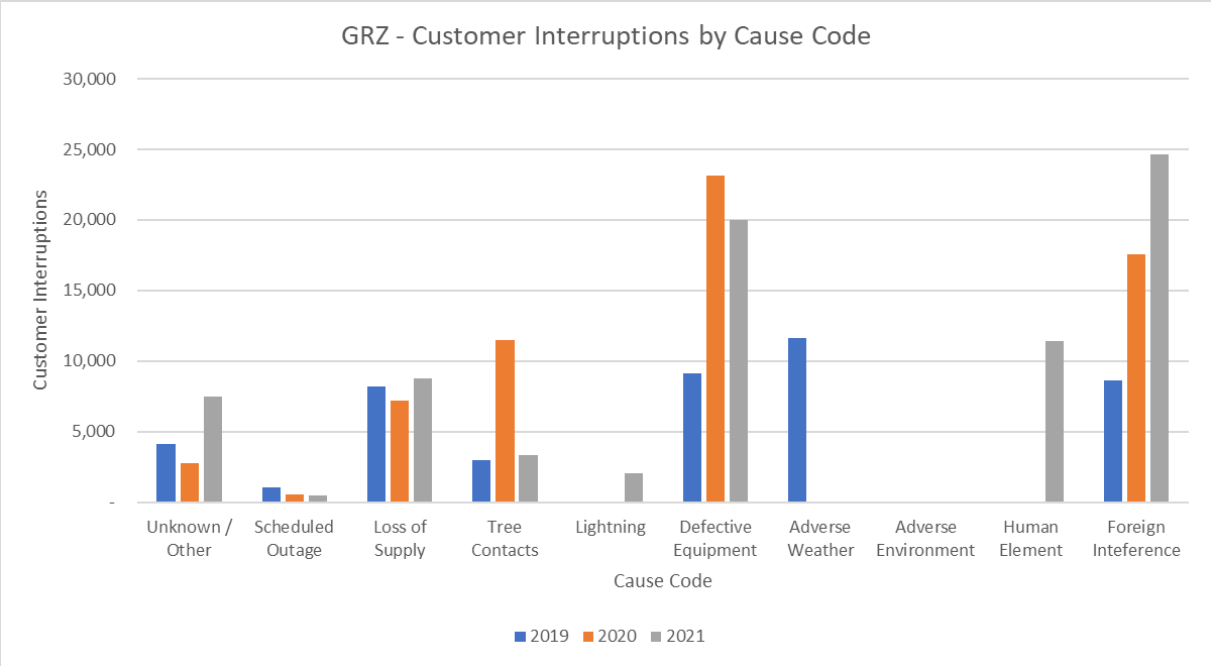


Figure 6: Customer Interruptions by Asset Type for GRZ

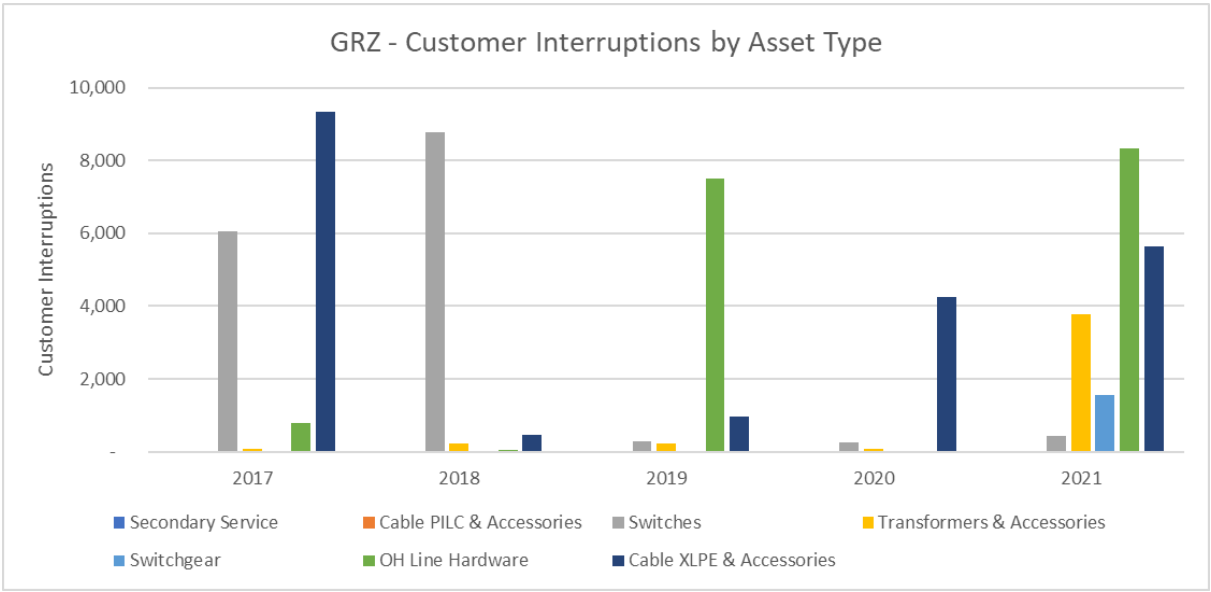


Figure 7: Customer Interruptions by Cause Code for HRZ

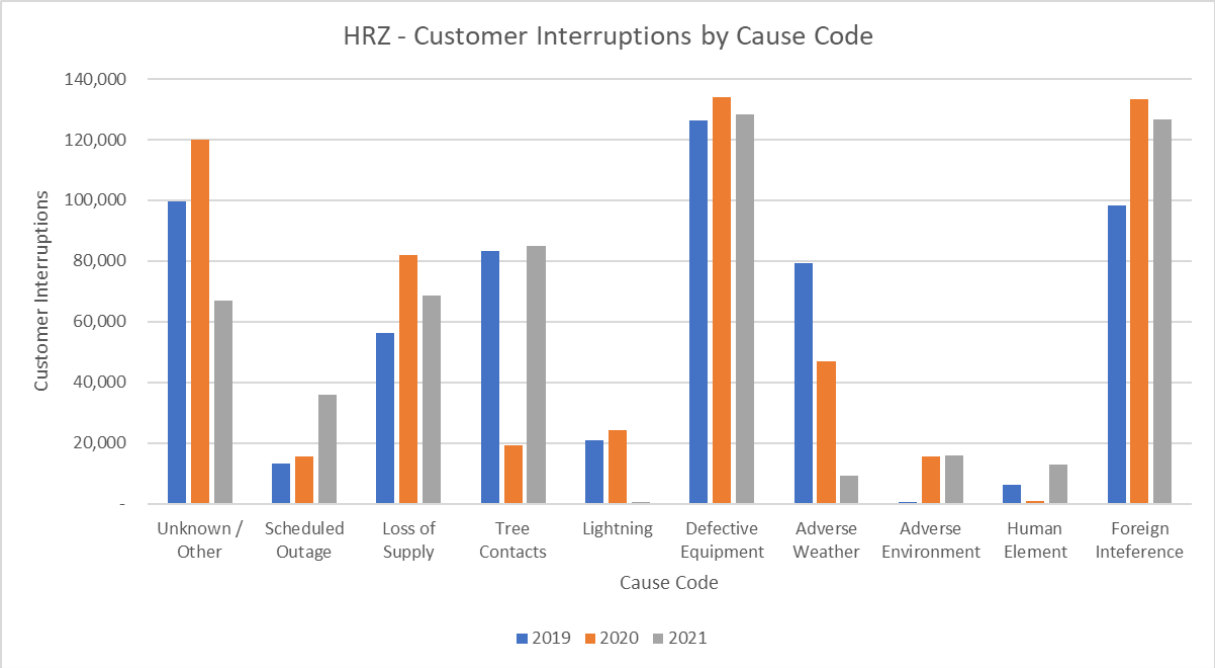


Figure 8: Customer Interruptions by Asset Type for HRZ

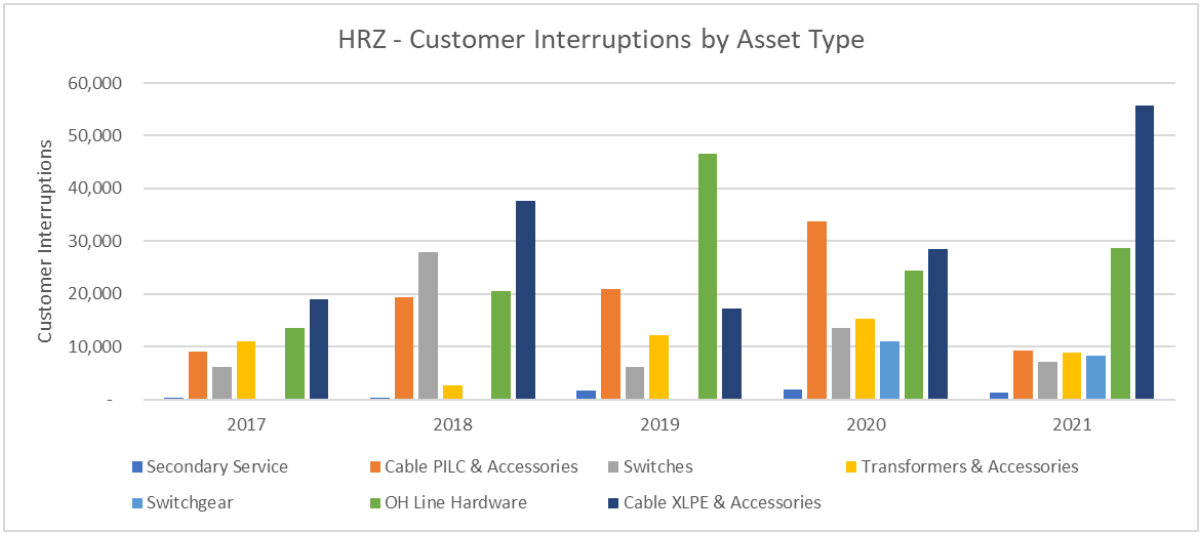


Figure 9: Customer Interruptions by Cause Code for PRZ

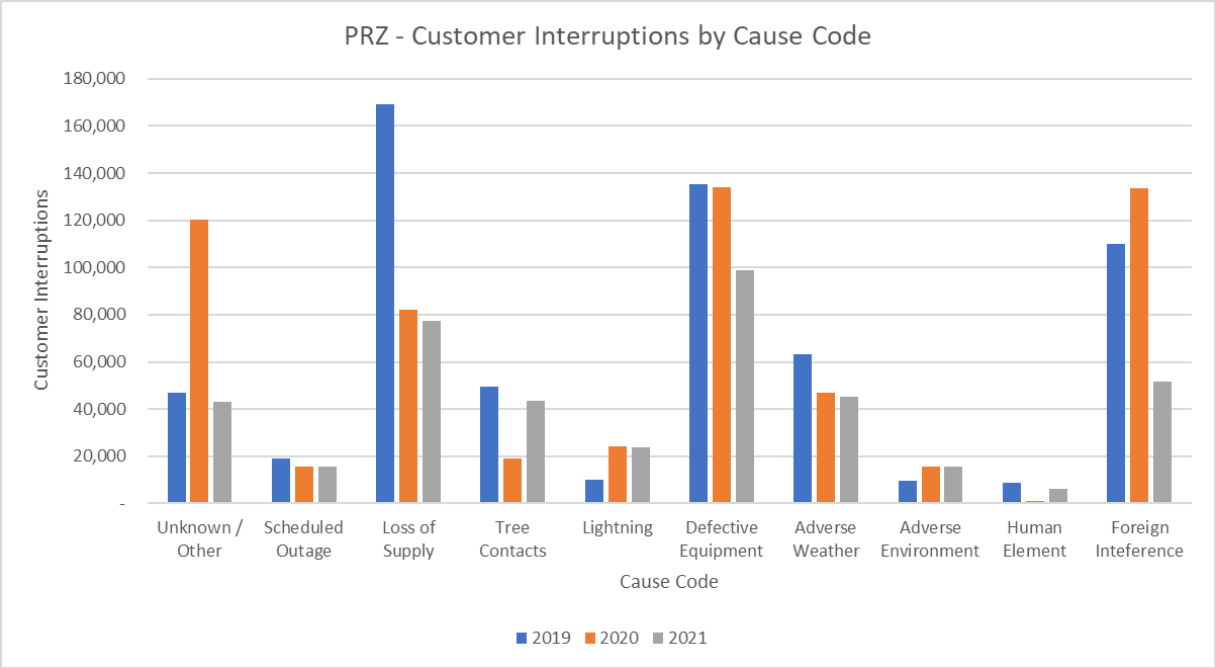
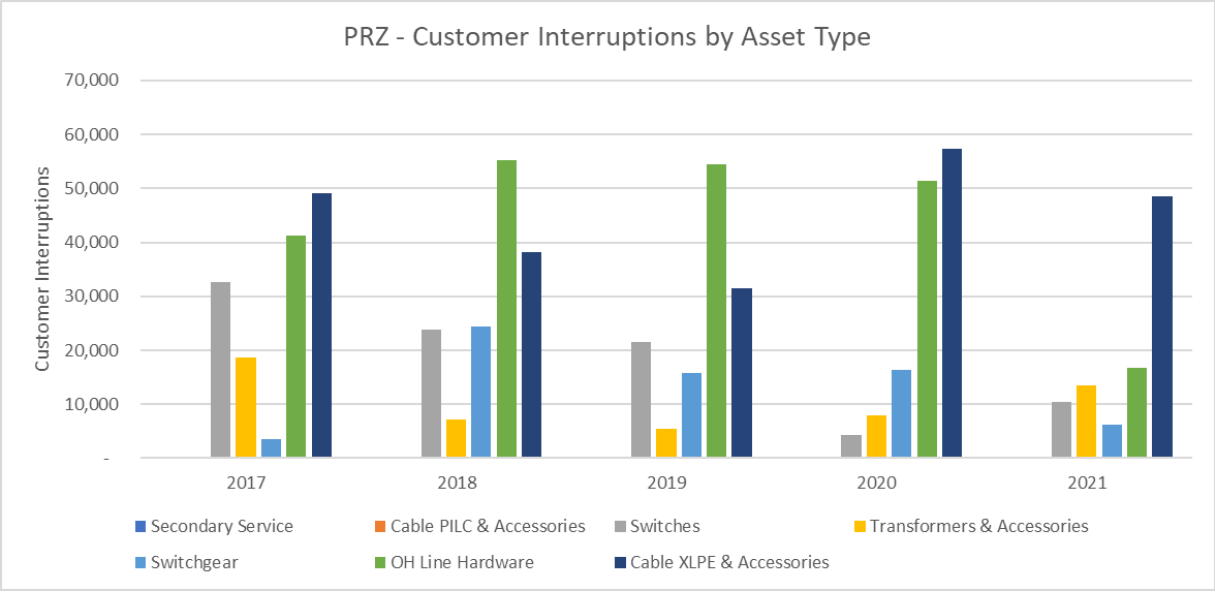


Figure 10: Customer Interruptions by Asset Type for PRZ



Please refer to attached Excel spreadsheet (**1-Staff-2_Attachment_1)** for the SAIFI related to defective equipment and cables by rate zone. Alectra Utilities would suggest that

customer interruption is a slightly better indicator then SAIDI for identifying customer impact of an outages.

c) Please see Table 1 below for investments in underground cables in the PowerStream and Enersource RZs from 2017 to 2021. Please also see Alectra Utilities' response to SEC-10.

Table 1 – UG Cable Renewal Investments by RZ 2017-2021

UG Cable Renewal Investment	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Actual 2021
Enersource RZ	$18.7	$16.1	$14.5	$16.2	$12.6
PowerStream RZ	$12.0	$13.5	$12.4	$21.7	$16.7

d) The value "66% of interruptions" refers to customer-hours of interruption, as provided in Exhibit 3, Tab 1, Schedule 2, page 4, lines 4 – 7. Of the 1.1 million customer-hours of interruption for XLPE cable outages since 2017, 734,000 customer-hours of interruption were experienced in ERZ and PRZ, which represents approximately 66% of the 1.1 million customers-hours of interruption attributed to XLPE cable outages in that timeframe across Alectra.

e) and f)

Outage forecasts for specific cable projects are based on engineering judgement based on two factors:

1) Historical failure rates for cable related outages in each rate zone as compared to the amount of cable installed in that rate zone. This average is then adjusted to the amount of cable being remediated within the project scope to estimate a failure amount for the scope of the project; and
2) Recent outage events are taken into account to adjust the expected average failure amount for a project scope to help estimate near term expected outages.

Since item two above is very specific to a smaller subset of assets it makes it very impractical for Alectra Utilities to forecast outages globally.

1-Staff-2

Attachment 1
SAIDI SAIFI

	SAIDI					SAIFI				
BRZ	**2017**	**2018**	**2019**	**2020**	**2021**	**2017**	**2018**	**2019**	**2020**	**2021**
Defective Equipment	0.24	0.39	0.40	0.19	0.50	0.35	0.43	0.41	0.28	0.48
Cables	0.09	0.22	0.19	0.13	0.15	0.06	0.15	0.18	0.14	0.15
ERZ										
Defective Equipment	0.34	0.57	0.45	0.33	0.49	0.54	0.76	0.51	0.49	0.56
Cables	0.30	0.39	0.33	0.26	0.38	0.37	0.39	0.36	0.35	0.47
GRZ										
Defective Equipment	0.18	0.08	0.07	0.09	0.09	0.38	0.18	0.16	0.41	0.35
Cables	0.07	0.01	0.04	0.01	0.02	0.17	0.01	0.02	0.07	0.00
HRZ										
Defective Equipment	0.39	0.65	0.62	0.71	0.64	0.35	0.45	0.51	0.53	0.50
Cables	0.12	0.15	0.15	0.20	0.30	0.15	0.07	0.07	0.11	0.22
PRZ										
Defective Equipment	0.47	0.49	0.41	0.53	0.44	0.41	0.46	0.36	0.46	0.26
Cables	0.22	0.19	0.14	0.25	0.23	0.13	0.10	0.08	0.15	0.13

1-Staff-3

Cable Engineering
Reference: Exhibit 1, Tab 1, Schedule 4, page 8

Alectra Utilities will implement silicon cable injection to renew cables where feasible. Cables that are deemed to be in very poor condition and too far deteriorated are not considered for injection and would therefore be replaced instead. Alectra Utilities has stated that there is a limited period in which cable injection is an option before cable replacement becomes the only viable option. Cable injection is approximately six times less expensive than cable replacement and can extend the useful life of the cable up to 20 years.

a) **What is the timeline for which cables can be injected before cable replacement is the only viable option?**
b) **Please provide the percentage of faulted cables over 2017 to 2022 that were direct buried and in-duct.**

Response:

a) Refer to EB-2019-0018 Exhibit 04 Tab 01 Schedule 01 page 267 of 438 Lines 11 to 20. Cables that are older than 35 years of age are not considered for injection. As identified in Exhibit 1, Tab 1, Schedule 4, p.8, there is a limited period of time during which lower cost injection work can be executed, and if that window is missed, then cable replacement, which is six times more costly than injection, will be the only remaining option. In addition, Alectra uses specific criteria for choosing between cable replacements versus cable injection include:
   - If the cable segment in question is more than 200 m in length and has no more than 3 existing splices, Alectra Utilities would excavate and remove the old splice with a new splice;
   - If the segment is less than 200 m in length and has 2 or more existing splices, Alectra Utilities considers the cable a candidate for replacement;
   - Location of splices (e.g., under a boulevard, under a sidewalk, under a roadway, under a driveway);

- Actual field conditions (i.e. the ability to excavate and civil work cost required to replace the cable); and
- Third-generation TR-XLPE cable that is strand-filled cannot be injected, and therefore can only be replaced.

b) Of the faulted cables in Alectra East and Central South over 2017 to 2022, 69% were direct buried and 31% were in-duct. This correlates to why Alectra Utilities is focusing on direct buried cables as they have the greatest impact to customer reliability.

1-Staff-4

Reactive Replacements
Reference: Exhibit 1, Tab 1, Schedule 4, page 9

The proposed ICM over the two years from 2023 to 2024 is expected to avoid $180 million in future cable renewal expenditures within the PowerStream and Enersource rate zones. The projects will avoid situations in which Alectra Utilities is forced to respond reactively to a growing number of deteriorated cables.

a) **Please provide the amount of reactive cable renewal spending that was required from 2017-2021 within the PowerStream and Enersource rate zones.**
b) **How was it determined that there would be $180 million in avoided future expenditures as a result of completing the projects proposed in the ICM?**
c) **Please explain the difference in process, time, and cost of reactive and proactive cable replacement. Also, please comment if there is a difference whether the cable has a loop feed that can back feed impacted customers.**
d) **Has there been an increase in OM&A cost because of reactive cable replacements?**
e) **Does Alectra expect the project will decrease OM&A costs in the subsequent years, and if so, how?**

Response:

a) Alectra Utilities tracks and reports on reactive cable repair as an operating expenditure ("OPEX"). If the cable segment requires emergency replacement, the expenditure is captured under the Reactive Capital investment category. If multiple cable segments require urgent replacement in the vicinity, due to an increase in scope and complexity of the work, Alectra Utilities initiates an emerging underground renewal capital project.

Table 1 below provides OPEX costs for the Enersource and PowerStream RZs for cable repairs. In aggregate, cable repair costs for these two RZs contribute to more than 70% of the cable repair OPEX. Furthermore, from 2020 to 2021, the cost of cable repairs has increased by 55% in the Enersource RZ and by 16% in PowerStream RZ, from 2020 to 2021.

Table 1 – Reactive Cable OPEX Spend PRZ and ERZ 2020 and 2021 ($MM)

	2020 Actual ($MM)	2021 Actual ($MM)	Annual
Enersource Rate Zone	$2.73	$4.24	55%
PowerStream Rate Zone	$2.84	$3.28	16%
Total	$5.57	$7.52	
% of Total Alectra Cable Reactive OPEX	70%	72%	

For emergency replacement captured under reactive capital, Alectra Utilities continues to harmonize tracking and reporting of capital reactive expenditures into a consistent practice across all operating zones and consistent methodology by asset type. As such, Alectra Utilities presents reactive capital expenditures from 2019 to 2021 in aggregate in Table 2.

Table 2 – Reactive Capital Expenditures ($MM) 2019-2021

Reactive Expenditures ($MM)	2019	2020	2021
PRZ Reactive Capital (All Assets)	$9.8	$7.5	$10.9
ERZ Reactive Capital (All Assets)	$5.1	$4.6	$4.3
Total ERZ & PRZ Reactive Capital (All Assets)	$14.9	$12.1	$15.2

For cable failure replacement completed under emerging underground cable projects, Alectra Utilities provides Table 3. Alectra Utilities was required to progressively increase emerging underground renewal capital work to address failing underground assets in an urgent manner that could not have been reasonably deferred to future years.

Table 3 – Underground Emerging Expenditures ($MM)

Underground Emerging ($MM)	2019	2020	2021
PRZ Underground Emerging	$1.9	$1.9	$3.0
ERZ Underground Emerging	$0.7	$1.0	$2.8
Total ERZ & PRZ Underground Emerging	$2.6	$2.9	$5.8

b) Alectra Utilities derived the $180MM in avoided future costs utilizing a consistent methodology as presented in 2020-2024 DSP[1]. Alectra Utilities increased the amount of cable injected or

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

replaced in 2023 and 2024 based on the ICM projects. This results in a long-term projection of costs. This was compared to a plan without the increased investment. The long-term impact of a reduction in investment today cascades year over year, resulting in more cable needing to be replaced in the future at much higher costs, resulting in $180MM lower capital expenditures with the inclusion of the proposed ICM cable renewal investments. Alectra Utilities has provided the calculation of the $180MM in Attachment 1. Attachment 1 provides the length of cable renewal (kms) for the base projects; the length of cable (kms) for the base and proposed ICM projects; and the estimated costs per km of replacement. The variance between the plans from 2027 onwards, results in a difference of $180MM.

c) Alectra Utilities provided a summary of a process to address cable failure on Pages 2 to 6 of Exhibit 3, Tab 1, Schedule 4 and outlined the practice to proactively address deteriorating direct-buried XLPE cables from page 9 to 12. Costs for reactive repairs or emergency replacements are dependent on many variables including the location of the faulted cable segment (backyard, under sidewalks, driveways or road crossings), proximity of the cable to other utilities infrastructure such as gas or watermains as well as the severity of the damage caused by the failed cable to other cable or equipment in the vicinity. Such cost factors are not within the control of Alectra Utilities, and create variance in per units costs of completed work. Notwithstanding, Alectra Utilities estimates that on average, emergency replacement of failed underground cable is approximately $1.6MM per kilometer of cable replaced. For planned replacement work, Alectra Utilities can appropriately plan, coordinate and execute the work that on average, is approximately $0.5MM per kilometer of cable replaced.

For customers without a looped supply, Alectra Utilities cannot transfer the customers to an alternative supply source and must immediately move to emergency repair or replacement. Under such constrained timelines, Alectra Utilities may utilize on-site generation at an extra cost, to provide service while emergency repairs or replacement is completed.

d) Please see response to part a) above.

e) Alectra Utilities projects that due to the growing backlog of deteriorated cable[2] and pending volume of cable expected to be in Poor and Very Poor condition over the next five years, OM&A costs to repair failed cable will continue to increase. Through the completion of the proposed incremental capital underground renewal projects, Alectra Utilities expects that cable repair and reactive replacement costs increases will be mitigated, but not offset. Hence, Alectra Utilities does not project that OM&A costs in subsequent years will decrease from the costs incurred in 2021.

[2] Exhibit 3 / Tab 1 / Schedule 2 / Page 15

1-Staff-4

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	37	154	183
2024	44	154	308
2025	43	190	233
2026	52	188	240
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	70	247	288
2024	72	288	330
2025	43	190	233
2026	52	188	240
2027	97	134	232
2028	195	0	195
2029	290	0	290
2030	450	0	450
2031	700	0	700
2032	818	0	818
2033	878	0	878
2034	877	0	877
2035	877	0	877
2036	876	0	876
2037	855	0	855
2038	825	0	825

Year	Cost XLPE cable Replacement per km ($MM)	Cost XLPE cable Injection km ($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	UG Cable (XLPE) Replace	UG Cable (XLPE) Inject	UG Cable (XLPE) Total
2021	$ 30	$ 15	$ 46
2022	$ 19	$ 15	$ 34
2023	$ 21	$ 14	$ 35
2024	$ 25	$ 14	$ 39
2025	$ 26	$ 19	$ 45
2026	$ 32	$ 19	$ 52
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	UG Cable (XLPE) Replace	UG Cable (XLPE) Inject	UG Cable (XLPE) Total
2021	$ 30	$ 15	$ 46
2022	$ 19	$ 15	$ 34
2023	$ 37	$ 23	$ 60
2024	$ 39	$ 27	$ 66
2025	$ 26	$ 19	$ 45
2026	$ 32	$ 19	$ 52
2027	$ 62	$ 14	$ 76
2028	$ 127	$ -	$ 127
2029	$ 193	$ -	$ 193
2030	$ 306	$ -	$ 306
2031	$ 485	$ -	$ 485
2032	$ 579	$ -	$ 579
2033	$ 635	$ -	$ 635
2034	$ 648	$ -	$ 648
2035	$ 662	$ -	$ 662
2036	$ 676	$ -	$ 676
2037	$ 673	$ -	$ 673
2038	$ 664	$ -	$ 664

Year	Variance	
2021	-	
2022	-	
2023	25.36	
2024	26.93	
2025	-	
2026	-	
2027	-	**Variance from 2027 onwards**
2028	3.25	
2029	6.65	
2030	6.89	
2031	(15.39)	
2032	(20.47)	
2033	(20.91)	Sum = $180.03
2034	(36.88)	
2035	(33.90)	
2036	(22.30)	
2037	(22.91)	
2038	(24.06)	

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Capital Expenditures
Reference: Exhibit 2, Tab 1, Schedule 1, pages 7 & 14

As part of determining the capital eligible amount, Alectra Utilities has provided System Access, System Service, System Renewal, and General Plant actual and budgeted costs from 2017 to 2024 for the PowerStream and Enersource rate zones.

a) Please provide a list of projects that make up the four cost categories from 2017 to 2022 for the two rate zones.

Response:

a) Due to the size of the project list tables, Alectra Utilities has submitted this response in Excel format as an attachment. Alectra Utilities has utilized a similar format to the tables provided in Attachments 5, 6, 9 & 10 in Exhibit 4, Tab 1, Schedule 1, where a materiality threshold of $1 million has been applied. Projects with spending less than the materiality threshold have been combined as “Miscellaneous Projects (under materiality threshold)”.

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Attachment 1
ERZ PRZ Project Listing

System Access	Actual 2017 ($MM)	Actual 2018 ($MM)	Actual 2019 ($MM)	Actual 2020 ($MM)	Actual 2021 ($MM)	Forecast 2022 ($MM)
Road Authority YRRT Yonge St	16.11	20.99	3.84	0.48	0.08	0.00
New Residential Subdivision and Condo Tower Development - Alectra East	0.00	0.00	6.29	7.58	6.65	8.72
New Residential Subdivision Development - SOUTH	6.99	8.65	0.00	0.00	0.00	0.00
Road Authority Expenditure PS South	2.96	1.22	2.18	4.39	0.98	3.01
Road Authority Projects - East North	1.75	3.83	1.97	0.41	3.08	1.50
Bathurst Street Widening	0.00	0.00	3.46	2.83	0.12	0.00
New Residential Subdivision Development - NORTH	2.88	1.23	2.09	0.00	0.00	0.00
New Subdivision Development - Secondary Service Lateral - Alectra East	0.00	0.00	1.75	1.06	1.41	1.92
Unforeseen Projects Initiated by the customer PS South	-0.75	0.47	4.75	0.85	0.00	0.00
Services (New and Upgrades) - Commercial, Industrial and Institutional (ICI) Projects - East South	-0.14	-0.79	2.99	0.78	0.52	1.73
GS>50 MIST Meter Implementation - PowerStream RZ	0.00	0.00	0.00	2.12	2.39	0.20
Customer Initiated Distribution System Project - Urbacon Data Center Expansions	0.00	0.00	0.00	0.00	2.02	1.50
Residential Meter "ICON F" Meter Replacement Program - East	0.46	0.72	2.02	0.00	0.00	0.00
Road Authority O/H Line Relocation - Rutherford Rd	0.00	0.00	0.00	0.00	3.03	0.10
Services (New and Upgrades) - Layouts - East South	0.00	0.00	0.00	0.00	1.47	1.44
New Subdivision Development - Secondary Service Lateral - SOUTH	1.46	1.36	0.00	0.00	0.00	0.00
Commercial/Industrial and Wholesale Meter Re-Verification Program (Commercial meters - Non Smart)	0.56	1.01	1.08	0.00	0.00	0.00
New Institutional/Commercial/Industrial Subdivision Development - Alectra East	0.00	0.00	1.42	0.28	0.37	0.29
C & I and Wholesale Metering - PowerStream RZ	0.00	0.00	0.00	2.23	0.00	0.00
New Services - PowerStream RZ	0.00	0.00	0.00	0.00	0.23	1.98
NEW O/H and U/G SECONDARY RESIDENTIAL SERVICE CONNECTION South	0.53	0.50	0.93	0.00	0.00	0.00
Customer Initiated Distribution System Projects - PS South	0.00	0.00	0.00	0.00	1.88	0.03
O/H and U/G RESIDENTIAL SERVICE UPGRADES South	0.50	0.60	0.65	0.00	0.00	0.00
Renew Meter Equip, Except Expired Meters - PowerStream RZ	0.00	0.00	0.00	0.00	0.39	1.31
Barrie TS Upgrade Feeders and Metering	0.00	0.00	0.00	0.00	0.08	1.25
Road Authority O/H Line Relocation - Duckworth St (Bell Farm to St Vincent)	0.00	0.00	0.00	0.00	0.00	1.29
Meter Renewal to MC Compliance (expiries)- PowerStream RZ	0.00	0.00	0.00	0.00	1.00	0.24
Smart Meter Network Expansion - PowerStream RZ	0.00	0.00	0.00	0.40	0.61	0.23
New Commercial Subdivision Development - SOUTH	0.72	0.41	0.00	0.00	0.00	0.00
Unforeseen Projects Initiated by the customer PS North	0.05	-0.20	0.73	0.50	0.00	0.00
New Subdivision Development - Secondary Service Lateral - North	0.65	0.43	0.00	0.00	0.00	0.00
Wholesale Metering - PowerStream RZ	0.00	0.00	0.00	0.00	0.46	0.62
Sub-Total Material Projects	**34.72**	**40.43**	**36.15**	**23.90**	**26.78**	**27.35**
Miscellaneous Projects (under materiality threshold)	1.97	1.53	1.60	4.86	1.32	2.92
Total System Access	**36.69**	**41.97**	**37.75**	**28.76**	**28.09**	**30.27**

System Renewal	Actual 2017 ($MM)	Actual 2018 ($MM)	Actual 2019 ($MM)	Actual 2020 ($MM)	Actual 2021 ($MM)	Forecast 2022 ($MM)
Pole Renewal - East	3.73	3.51	5.62	5.30	6.20	4.60
Reactive Capital, Alectra East - Distribution Equipment	0.00	0.00	0.00	4.62	9.57	8.34
Unscheduled Replacement of Failed Equipment - Poles, etc	5.63	6.51	6.76	0.00	0.00	0.00
Switchgear Renewal - East	1.83	1.93	2.11	2.43	1.86	3.10
Transformer Renewal - East	1.08	0.98	2.68	2.62	2.55	2.45
Underground Asset Renewal-Alectra Initiated Distribution System Projects-East	1.25	1.07	1.86	1.93	3.02	2.27
Switchgears - Unscheduled Replacement of Failed (end of useful Life) Distribution Equipment	2.17	2.13	1.69	0.00	0.00	0.00
Joint Use Pole Removal - Alectra East	0.60	0.51	0.49	0.49	2.21	1.64
Storm Hardening - Four-Circuit Poles - Alectra East	0.00	0.00	0.98	1.34	2.05	0.86
Cable Replacement - Left Behind Cable	1.41	2.03	1.30			
Cable Replacement Project - (BA22) - Sunnidale and Anne, Barrie	0.00	0.00	0.00	1.09	1.88	1.67
Reactive Capital, Alectra East - Storm Damage	0.68	1.87	0.16	0.39	0.58	0.84
Cable Replacement – (V08) - Steeles Ave and New Westminster	0.00	3.54	0.98	0.00	0.00	0.00
Cable Replacement Project – (M49) - Steeles and Fairway Heights, Markham	0.00	0.00	0.02	4.04	0.01	0.00
Reactive Capital, Alectra East - Recoverable Replacement	0.57	0.25	0.88	0.84	0.70	0.76
Cable Replacement - (V01) - York Hill - Hilda - Clark (Phase 1 and Phase 2)	0.00	3.71	-0.01	0.00	0.00	0.00
Cable Replacement Project - East - Left Behind Cable	0.00	0.00	0.00	0.00	1.69	1.67
Cable Replacement – (V38) - Rutherford and Weston	3.28	0.00	0.00	0.00	0.00	0.00
Cable Injection Project - (V37) - Langstaff and Weston, Vaughan	0.00	0.00	0.00	1.20	0.17	1.88
Cable Injection - (V37) - Langstaff and Weston	0.00	1.65	1.30	0.00	0.00	0.00
4-Circuit Pole Storm Hardening	1.51	1.37	0.00	0.00	0.00	0.00
Overhead Asset Renewal-Alectra Initiated Distribution System Projects-East	0.00	0.00	1.85	0.10	0.11	0.65
Cable Replacement - (M43) - Steelcase and Idema	0.00	0.00	2.24	0.28	-0.23	0.00
Cable Injection Project - (M19) - Markham - Steeles - McCowan - 14th, Markham	0.00	0.00	0.00	0.00	0.00	2.23
Cable Injection - (M37) - Woodbine and 14th Ave	0.00	1.10	0.35	0.71	0.01	0.00
Cable Replacement Project - (A02) - Steeplechase Ave, Aurora	0.00	0.00	0.00	2.14	0.00	0.00
Cable Replacement Project - (A10) -Batson Dr, Aurora	0.00	0.00	0.00	0.00	0.00	1.99
Rear Lot Supply Remediation - Royal Orchard - Baythorn	1.95	0.01	0.00	0.00	0.00	0.00
Rear Lot Renewal Project - East of Queen St. to Eastern Ave./North of Greenway St.	0.00	0.00	0.00	1.84	0.12	0.00
Cable Replacement - (V01) - York Hill - Hilda - Clark (Phase 3)	0.00	0.00	1.42	0.51	0.00	0.00
Switch Renewal - East	0.00	0.00	0.62	0.48	0.13	0.58
Planned Circuit Breaker Replacement - Richmond Hill TS#1	0.81	0.96	0.00	0.00	0.00	0.00
Cable Injection Project - (V25) - Major Mackenzie - Keele - Rutherford - Jane, Vaughan	0.00	0.00	0.00	0.02	0.90	0.84
Cable Replacement Project - (V15) - Jardin Dr, Vaughan	0.00	0.00	0.00	1.74	0.00	0.00
Cable Injection Project - (M38) - Hwy 7 - Warden - 14th - Woodbine, Markham	0.00	0.00	0.00	0.00	0.00	1.72
Cable Injection - (M44) - Konrad Cres	1.12	0.00	0.65	-0.10	0.00	0.00
Cable Replacement Project - (M31) - Denison and Birchmount, Markham	0.00	0.00	0.00	0.00	0.00	1.62
Cable Injection Project - (M26) - Hwy 7 -McCowan - 14th - Old Kennedy, Markham	0.00	0.00	0.00	0.00	0.00	1.58
Reactive Capital, Alectra East - Switchgears	0.00	0.00	0.00	1.54	0.00	0.00
Cable Injection - (M27) - Kennedy - 16th Ave - McCowan - Hwy 7	0.07	0.54	0.00	0.91	0.00	0.00
Cable Injection Project - (M32) - Hwy 7 - Main - 14th - Warden, Markham	0.00	0.00	0.00	0.00	1.51	-0.01
Cable Replacement Project - East Left Behind Cable	0.00	0.00	0.00	1.48	0.00	0.00
Cable Injection - (V01) - Young - Steeles - Bathurst - Center	1.17	0.30	0.00	0.00	0.00	0.00
Station Switchgear Replacement (ACA) 8th Line MS323	0.26	1.14	0.06	0.00	0.00	0.00
Cable Injection Project - (M31) - 14th - Old Kennedy - Steeles - Warden, Markham	0.00	0.00	0.00	0.00	0.00	1.44
Cable Injection Project - (M43) - John and Woodbine, Markham	0.00	0.00	0.00	1.36	0.00	0.00
Cable Replacement Project - (BA18) - Ferndale and Benson, Barrie	0.00	0.00	0.00	0.00	1.28	0.00
Concord MS Conversion to 27.6 kV - Phase 4	1.19	0.07	0.00	0.00	0.00	0.00
Vault Cover Renewal - East	0.00	0.00	0.00	0.00	0.49	0.73
Cable Injection Project - (V18) - Major Mackenzie and Keele, Vaughan	0.00	0.00	0.00	0.70	0.43	0.00
Cable Injection - (V18) - Major Mackenzie and Keele	0.00	0.00	1.12	0.00	0.00	0.00
Cable Injection - (M33) - Warden and Hwy 7	1.08	0.00	0.00	0.00	0.00	0.00
Capital Corrective Equipment Replacement - East	0.00	0.00	0.00	0.46	0.26	0.34
Rear Lot Supply Remediation - North Park/Parkdale	1.05	0.00	0.00	0.00	0.00	0.00
Cable Replacement Project - (A05) - Golf Links, Aurora	0.00	0.00	0.00	0.00	0.00	1.04
Cable Replacement - (M51) - Henderson and Doncaster	0.83	0.17	0.00	0.00	0.00	0.00
Sub-Total Material Projects	**33.27**	**35.35**	**35.15**	**40.45**	**37.52**	**44.83**
Miscellaneous Projects (under materiality threshold)	6.10	2.75	4.44	7.53	9.88	4.03
Total System Renewal	**39.37**	**38.11**	**39.59**	**47.97**	**47.40**	**48.86**

System Service	Actual 2017 ($MM)	Actual 2018 ($MM)	Actual 2019 ($MM)	Actual 2020 ($MM)	Actual 2021 ($MM)	Forecast 2022 ($MM)
Distribution Automation - East	1.91	1.45	2.58	1.26	2.43	0.85
Vaughan TS #4 - Build Station	5.27	0.56	0.00	0.00	0.00	0.00
New 44 kV Feeder (13M7) Barrie TS X Huronia & Big Bay Pt. Rd	3.07	2.62	0.00	0.01	0.00	0.00
2x44kV circuits (23M22 & 23M27) from Midhurst TS2 to Essa Rd/Mapleview Dr	4.37	0.30	-0.17	0.00	0.00	0.00
Vaughan TS#4 Feeder Integration - Part 2	0.00	0.00	0.00	3.98	0.05	0.00
New MS, Livingstone MS - Barrie	3.08	0.01	0.00	0.00	0.00	0.00
Double Circuit existing 23M21 Circuit from Bayfield & Livingstone to Little Lake MS.	1.27	1.44	0.01	0.00	0.00	0.00
Build double 27.6kV ccts on Teston Rd and Pine Valley Dr to supply Block 40/47	0.97	0.00	0.00	0.00	1.67	0.00
Vaughan TS#4 Feeder Integration - Part 1	2.47	0.03	0.00	0.00	0.00	0.00
Alternate Energy Sources Rate Based	0.10	0.97	1.23	0.00	0.00	0.00
Vaughan TS#4 Feeder Integration - Part 3	0.00	0.00	0.00	0.00	0.00	2.09
Rebuild 27.6 kV pole line on Warden Ave into 4 ccts from 16th Ave to Major Mack	0.00	0.94	0.94	0.00	0.00	0.00
Mill Street MS835 TX Upgrade - Tottenham	0.27	1.45	0.11	0.00	0.00	0.00
Install a New 27.6kV Pole Line on 19th Ave from Leslie St to Woodbine Ave	0.00	0.00	0.00	1.44	0.02	0.00
Non-Wires Alternative Pilot	0.00	0.00	0.00	0.00	0.00	1.35
Rebuild Pole Line on 14th Ave into 4 cct -From Warden Ave to Kennedy Rd	1.21	0.04	0.00	0.00	0.00	0.00
230kV TS Transformer Primary Bushing Monitoring Enablement-BPD Elimination - 4 TS Transformers-Multi-year initiative-TS	0.00	0.00	0.00	0.27	0.45	0.49
Fault Indicator Installation and Replacement	0.44	0.44	0.27	0.00	0.00	0.00
Sorbweb Oil Containment Systems - 4 Transformers -Multiyear initiative-North & TS	0.00	0.00	0.00	0.68	0.40	0.00
Implementation of Enterprise DERMS Platform	0.00	0.00	0.00	0.00	0.00	1.01
Sub-Total Material Projects	**24.45**	**10.26**	**4.98**	**7.65**	**5.03**	**5.79**
Miscellaneous Projects (under materiality threshold)	5.45	1.78	4.79	4.04	4.03	3.96
Total System Service	**29.89**	**12.03**	**9.77**	**11.69**	**9.06**	**9.75**

System Access	Actual 2017 ($MM)	Actual 2018 ($MM)	Actual 2019 ($MM)	Actual 2020 ($MM)	Actual 2021 ($MM)	Forecast 2022 ($MM)
Metering Renewal - all types but Suite - Enersource RZ	0.00	0.00	3.08	3.27	0.00	0.00
New Residential Subdivision and Condo Tower Development - Alectra Central South	0.00	0.00	0.73	0.37	0.17	2.70
Road Authority Projects - Central South	0.00	0.00	1.22	1.50	0.58	0.43
Service (new and upgrades) - Commercial, Industrial and Institutional (ICI) Projects - Central South	0.00	0.00	0.00	0.00	1.13	2.17
New Services - Enersource RZ	0.00	0.00	0.00	0.00	1.29	1.27
Services (New and Upgrades) - Layouts – Central South	0.00	0.00	0.00	0.70	0.71	0.85
Renew Meter Equip, Except Expired Meters - Enersource RZ	0.00	0.00	0.00	0.00	1.37	0.67
Customer Initiated Distribution System Project - M-City (M1 & M2)	0.00	0.00	0.00	0.00	1.87	0.17
OMSF Expansion Project	0.00	0.00	0.00	0.00	1.27	0.57
Customer Initiated Distribution System Projects - Central South	0.00	0.00	0.00	0.00	1.58	0.15
Industrial/Commercial Connections	1.71	0.00	0.00	0.00	0.00	0.00
Road Authority Project - Poleline Relocation for QEW widening at Dixie Rd.	0.00	0.00	0.00	0.00	1.02	0.63
New Service (new and upgrades) - Commercial and Institutional (ICI) Projects - Central South	0.00	0.00	0.14	1.19	0.00	0.00
Meter Renewal to MC Compliance (expiries) - Enersource RZ	0.00	0.00	0.00	0.00	0.70	0.37
Sub-Total Material Projects	**1.71**	**0.00**	**5.17**	**7.03**	**11.69**	**9.97**
Miscellaneous Projects (under materiality threshold)	4.90	9.11	2.30	0.96	0.23	1.30
Total System Access	**6.62**	**9.11**	**7.47**	**7.99**	**11.92**	**11.27**

System Renewal	Actual 2017 ($MM)	Actual 2018 ($MM)	Actual 2019 ($MM)	Actual 2020 ($MM)	Actual 2021 ($MM)	Forecast 2022 ($MM)
Transformer Renewal - Central South	6.05	6.76	4.51	1.84	1.82	1.35
Lines Central-South - Reactive Renewal	0.00	0.00	1.50	4.22	3.82	3.74
Pole Renewal - Central South	1.01	0.00	2.26	1.94	3.43	3.14
Switchgear Renewal - Central South	0.00	1.67	1.16	1.45	2.05	1.68
Cable Replacement and Transformers Replacement - Rathburn Rd. W, Mississauga	0.00	0.00	6.77	0.00	0.00	0.00
Cable Replacement and Transformers Replacement - Project - Folkway, Mississauga	0.00	0.00	0.00	5.98	0.34	0.00
Cable Replacement and Transformers replacement - Project - Windjammer, Mississauga	0.00	0.00	0.00	3.32	1.32	0.00
Cable Replacement Project- Montevideo & Treviso Crt (19a)-Phase 1, Mississauga	0.00	0.00	0.00	0.00	4.45	0.00
Underground Asset Renewal-Alectra Initiated Distribution System Projects-Central South	0.00	0.00	0.71	0.66	2.83	0.00
Lines Central-South - Non-Recoverable Replacements	0.00	0.00	3.63	0.39	0.00	0.00
Cable Replacement and Transformers Replacement - Project - Copenhagen, Mississauga	0.00	0.00	2.72	0.00	0.00	0.00
Cable Replacement and Transformers Replacement - Project - AUTUMN HARVEST SECTION 3, Mississauga	2.68	0.00	0.00	0.00	0.00	0.00
Cable Replacement and Transformers Replacement - Project - CLARKSON SECTION 2 - BROMSGROVE/LUNDENE/CONSTABL	2.59	0.00	0.00	0.00	0.00	0.00
Critital spares for ultra long lead items	0.00	2.55	0.00	0.00	0.00	0.00
Cable Replacement and Transformers Replacement - Project - GANANOQUE MO, Mississauga	0.00	2.45	0.00	0.00	0.00	0.00
Cable Replacement and Transformers Replacement - Project - BEECHOLLOW CRES. - SECTION 3, Mississauga	2.28	0.00	0.00	0.00	0.00	0.00
Switch Renewal - Central South	0.00	0.00	0.41	0.18	0.60	0.99
Cable Replacement Project- Sigsbee & Brandon Gate Dr (21b)- Phase 2, Mississauga	0.00	0.00	0.00	0.00	2.13	0.00
Cable Replacement and Transformers Replacement - Project - BOUGH BEECHES SECTION 1, Mississagaua	0.00	2.09	0.02	0.00	0.00	0.00
Cable Replacement Project - (AREA46) - Montevideo & Treviso Crt, Mississauga	0.00	0.00	0.00	0.00	0.00	2.02
Cable and Transformer Replacement Project - (AREA24) - Burnhamthorpe & Miss. Road, Mississauga	0.00	0.00	0.00	0.00	0.00	1.92
Cable Replacement and Transformers Replacement - Project - APPLEDORE - SECTION 1, Mississauga	0.01	1.90	0.00	0.00	0.00	0.00
Cable Replacement Project - 7143 Main Feeder	0.00	0.00	0.00	1.80	0.11	0.00
Substation Renewal - YORK MS UPGRADE - 15 KV SWITCH	0.17	1.62	0.00	0.00	0.00	0.00
Cable Replacement and Transformers Replacement - Project - FIELDGATE/ MAPLE RIDGE, Mississauga	1.75	0.00	0.00	0.00	0.00	0.00
Cable Replacement and Transformers Replacement -Project - Shelter Bay Rd. Mississauga	0.00	0.00	0.00	1.74	0.00	0.00
Cable Replacement and Transformers Replacement - Project - WRENWOOD & BAYSWATER REBUILD SECTION 2, Mississauga	1.73	0.00	0.00	0.00	0.00	0.00
Joint Use Pole Removal - Central South	0.00	0.00	0.00	0.27	0.29	1.09
Cable Replacement Project - (AREA46)- Millcreek Dr & Erin Mills Pkway, Mississauga	0.00	0.00	0.00	0.00	0.00	1.62
Station Switchgear Replacement - Shawson MS43 LV1	0.00	0.00	0.00	1.49	0.05	0.00
Cable Replacement and Transformers Replacement - Project - Credit Woodlands Crt and Whiltshire, Mississauga	0.00	0.00	1.46	0.02	0.00	0.00
Cable Replacement and Transformers Replacement - Project - ELLENGALE SECTION-3 - CONYERS CRES. & FAIRDALE DR, Mi	1.48	0.00	0.00	0.00	0.00	0.00
Substation Renewal - CITY CENTRE NORTH MS - 15 KV Switch replacement	0.00	1.47	0.00	0.00	0.00	0.00
Cable Replacement Project- Darcel & Brandon Gate (21a)-Phase 1, Mississauga	0.00	0.00	0.00	0.00	1.39	0.00
Cable Replacement and Transformers Replacement - Project - GLEN ERIN AND BATTLEFORD, Mississauga	0.00	1.36	0.00	0.00	0.00	0.00
Station Switchgear Replacement - City Centre North MS47 HV1 & HV2	0.00	0.00	0.00	0.00	1.21	0.00
Overhead Mini Rebuild - Church Street Rebuild, Mississagua	0.00	0.00	1.19	0.00	0.00	0.00
Overhead Asset Renewal-Alectra Initiated Distribution System Projects-Central South	0.00	0.00	0.71	0.14	0.25	0.07
Cable Renewal - SUMMERVILLE MS - FEEDER EGRESS, Mississauga	0.00	1.07	0.03	0.00	0.00	0.00
Overhead Mini Rebuild - SUMMERVILLE	1.10	0.00	0.00	0.00	0.00	0.00
Cable Injection - (AREA46) - Glen Erin & Aquitane, Mississauga	0.00	0.00	0.00	0.00	0.00	1.09
Cable Replacement and Transformers Replacement - Project - GLEN ERIN MO	0.00	1.06	0.00	0.00	0.00	0.00
Cable Remediation- Main Feeder Cable - Glen Erin, Inlake to Windwood, Mississauga	0.00	0.00	0.00	0.00	0.00	1.03
Cable Replacement and Transformers Replacement - Project - Sir John's Homestead, Mississauga	0.00	0.00	0.00	0.00	0.00	1.02
Cable Replacement and Transformers Replacement - Project - TENTH LINE W, Mississauga	0.00	1.01	0.00	0.00	0.00	0.00
Capital Corrective Equipment Replacement - Stations Central South	0.00	0.00	0.00	0.34	0.38	0.28
Sub-Total Material Projects	**20.85**	**25.02**	**27.05**	**25.79**	**26.44**	**21.02**
Miscellaneous Projects (under materiality threshold)	23.01	16.56	8.15	6.81	1.80	2.59
Total System Renewal	**43.86**	**41.57**	**35.20**	**32.60**	**28.24**	**23.61**

System Service	Actual 2017 ($MM)	Actual 2018 ($MM)	Actual 2019 ($MM)	Actual 2020 ($MM)	Actual 2021 ($MM)	Forecast 2022 ($MM)
Webb MS New 20 MVA Substation / Duke MS	0.00	0.00	0.00	0.00	5.35	0.01
Distribution Automation - Central South	0.00	0.00	0.00	0.05	1.06	0.47
New WiMAX Communication Network - Central South	0.00	0.00	0.56	0.96	0.01	0.00
Port Credit Village West New Feeder (Texaco lands)	0.00	0.00	0.04	1.22	0.11	0.00
Sorbweb Oil Containment Systems - 4 Transformers -Multiyear initiative-CENTRAL	0.00	0.00	0.00	0.54	0.61	0.00
Lines Capacity - SOUTHDOWN - SOUTH OF ROYAL WINDSOR, Mississauga	0.00	1.12	0.00	0.00	0.00	0.00
Sub-Total Material Projects	**0.00**	**1.12**	**0.60**	**2.77**	**7.14**	**0.48**
Miscellaneous Projects (under materiality threshold)	4.31	1.51	0.80	0.70	0.08	2.20
Total System Service	**4.31**	**2.63**	**1.40**	**3.47**	**7.22**	**2.68**

1-Staff-6

Guidehouse
Reference: Exhibit 3, Tab 1, Schedule 1, page 11

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) **How did Guidehouse evaluate the validity of the risk avoidance assessment performed by Alectra Utilities?**

b) **How did Guidehouse evaluate the accuracy of the ACA?**

c) **What steps did Guidehouse take in reviewing the Five-Year Investment Plan to ensure effective prioritization of projects?**

Response:

a) Following its assessment of Alectra's methodology as outlined in the DSP, Guidehouse conducted detailed interviews with Alectra Subject Matter Experts to confirm the validity of the risk avoidance methodology and prioritization of proposed investments. Guidehouse also reviewed in detail worksheets and associated risk factors Alectra prepared to support its investment plans.

b) Guidehouse reviewed in detail the assumptions, methodology and results of the ACA prepared by Alectra and independently reviewed by Kinetrics to confirm the accuracy of condition of Alectra's distribution assets and the need for renewal replacement. Guidehouse also conducted interviews with Alectra's Subject Matter Experts responsible for specific groups of assets for which Alectra seeks funding approval. Guidehouse also relied upon its prior experience in asset condition assessment methods to confirm findings from Kinetrics independent review of the ACA and projects Alectra selected for funding approval is consistent with Chapter 5 of the OEB's filing requirements.

c) Guidehouse undertook several steps to ensure effective prioritization of assets. Each are outlined below:

1. The initial step Guidehouse followed was to ensure the DSP and Adjusted Capital Investment Plan was consistent with the OEB's Chapter 5 filing requirements for the four investment categories. Guidehouse's review determined that Alectra's DSP was in conformance with the OEB's filing requirements.
2. Guidehouse reviewed in detail the methodology and assumptions outlined in Alectra's Adjusted Capital Investment Plan to confirm the spending plan is prudent, and justifies both the amount and timing of investments within each of the four investment categories within each region of Alectra's service territory. Guidehouse also relied upon its experience as an independent and qualified expert in prior rate applications submitted before the OEB, along with its extensive knowledge of electric distribution system assets, to confirm the proposed investment plan is justified and needed to reliably serve its customers.
3. Guidehouse reviewed in detail relevant reports, data and worksheets that Alectra provided to support its proposed Adjusted Capital Investment Plan for each of the OEB's four investment categories.
4. Guidehouse conducted interviews with Alectra Subject Matter Experts responsible for specific asset categories to review and confirm the methods and assumptions Alectra applied to justify and support each of the investments proposed in the Adjusted Capital Investment Plan.

1-Staff-7

Feeder Configuration
Reference: Exhibit 3, Tab 1, Schedule 4, pages 4 & 5

Alectra Utilities has described the impact and response to underground cable failure:

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.

a) **Please identify the projects proposed in this ICM with and without primary loop feeds.**

Response:

a) All proposed cable investment projects submitted for ICM have primary loop feeds.

1-Staff-8

Customer Engagement
Reference: Attachment 11 - Customer Engagement Report Page 2

As part of customer engagement, an online workbook survey was sent out to customers within the Alectra Utilities rate zones. The results of the workbook were reported to Alectra Utilities in two stages. The first report (ICM Report) outlined the results of questions asked to PowerStream and Enersource customers about the ICM. A preliminary version of the results was provided to Alectra Utilities on March 31st, 2022, while the final version was delivered on April 6th, 2022. The second report ("Needs and Outcomes Report") focused on customer needs and outcome priorities across all five rate zones. The preliminary version of the second report was delivered to Alectra Utilities on April 8th, 2022, while the final version was delivered on April 25th, 2022.

a) **Given that the ICM application was filed on May 16th, 2022, what methodology was used to implement the results of the surveys in such a short period?**
b) **Were low-priority projects removed based on customer feedback? If so, how were projects prioritized using customer engagement?**
c) **Did Alectra Utilities make it clear in the engagement surveys that another rate increase may occur as part of 2023 rates due to the separately filed IRM?**

Response:

a) As identified in Exhibit 3, Tab 1, Schedule 3, Alectra Utilities engaged Innovative Research Group ("Innovative") to undertake a customer engagement process seeking customer input on two topics: a broad engagement on customer needs and outcome priorities which will be an important input to the development of Alectra Utilities' next DSP, and a focused engagement on investments to renew underground cable in the PowerStream and Enersource RZs (the "ICM Engagement"). The ICM Engagement assessed customers' preferences and outcomes between **two** investment options (cable injection and cable replacement) in the Enersource and PowerStream RZs only. The results from the ICM Engagement, which informed the proposed ICM investments in this application, were reported as soon as possible following data collection to give planners and engineers timely customer feedback for planning purposes. As provided in the reference above, a preliminary report was

shared with Alectra Utilities on March 31, 2022, 46 days prior to Alectra Utilities submitting its ICM application. There was sufficient time to consider customer feedback given the focused scope of the issues in the ICM engagement.

b) As identified in Exhibit 3, Tab 1, Schedule 4, p.7, Alectra Utilities completed an engineering assessment of cable failures that identified 78 cable renewal projects over the 2023 to 2024 period. Alectra Utilities identified 20 high priority projects in the Enersource RZ and 32 high priority projects in the PowerStream RZ. Of these, 24 projects were included in base funding and the next 28 high priority projects are included for ICM funding. Therefore, only high priority projects were assessed for customer engagement. During customer engagement, customers were presented with 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. 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.

c) Yes. As identified on p. 21 of the ICM Report (Attachment 11, Innovative Customer Engagement Report, Appendix 1.0 – ICM Report) customers were informed about the annual rate increases based on the OEB’s Price Cap Formula and presented with the estimated IRM increases over the 2023 to 2026 period based on the most recently approved Price Cap Adjustment of 3.0%. Customers were also informed that 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.

1-Staff-9

Pace of Cable Deterioration
Reference: Exhibit 2, Tab 1, Schedule 1, page 9

Alectra Utilities stated that "the pace at which cable failures have intensified in existing or new emerging neighbourhoods is greater than what was contemplated in the DSP" filed as part of their 2020 IRM application. Alectra Utilities filed for an 'M-factor' funding program that was denied by the OEB. As such, Alectra Utilities also stated that many projects including cable renewable projects were deferred.

a) **Why have cables deteriorated faster than expected?**
b) **Please explain what is meant by "new emerging neighbourhoods" that are experiencing increased rates of cable failures. Are these "new" (recently built) neighbourhoods, or are they existing neighbourhoods where cable failures have started occurring only in recent years?**

Response:

a) 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 unreliable cable. Delaying proactive cable replacement led to further degradation of the deteriorated cables causing them to fail. As discussed in Exhibit 3, Tab 1, Schedule 4, pages 4 and 5, high fault current stresses all the distribution equipment on the specific circuit, which further deteriorates and damages the performance levels of the system. This means, when a cable fault occurs, the other cables in the same system as the faulted cable also deteriorate and get damaged leading to more cable failure within the same area. This has a cascading effect as additional cable failures lead to more cables being stressed, which further leads to more cable failures.

b) The "new emerging neighbourhoods" are existing neighbourhoods, not newly built. They are existing neighbourhoods that have experienced a recent increase in cable failures. Out of the 28 proposed ICM projects, 15 or 54% are net new projects that address reliability risks in new emerging areas. The remaining ICM projects were included in the DSP, of which four were M-Factor projects. The majority or 62% of the 13 DSP projects were deferred one to three

years due to lack of funding. This reinforces the need for ICM funding as further delays will lead to greater outages impacting customers already experiencing poor reliability.

1-Staff-10

Asset Condition Assessment
Reference: EB-2019-0018 Exhibit 4, Tab 1, Schedule 1, page 272, figure 5.3.3

As per the cable renewal strategy set out at the time of the DSP, cables were to be renewed only if the cables were categorized with a health index of 'poor' or 'very poor'. Cables over the age of 34 years would be replaced, while cables less than 34 years old would be injected.

As part of the ICM, cables are being injected even if in 'fair' condition. As such, the prioritization of cable renewal has changed since the DSP was developed. Since the DSP, Alectra Utilities has implemented a new Asset Analytics platform.

a) Why are cables in 'fair' condition now being assessed for renewal compared to when the DSP was developed?

Response:

a) The prioritization of cable renewal has not changed since the DSP was submitted. Cable renewal includes both replacement and injection as remediation strategies. As stated in the question, cables that are less than 34 years old would be considered for injection and as per the DSP figure 5.0-4 (EB-2019-0018 Ex. 4, Tab 1, Sch. 1, pg 6 of 438, Fig 5.0-4 "Asset Condition of Alectra Utilities Underground XLPE Cable"), cables that are 'fair' condition are generally 32 – 33 years old which aligns with Alectra Utilities' cable renewal strategy. Cables are considered for replacement that are in 'poor' or 'very poor' condition, (EB-2019-0018 Ex. 4, Tab 1, Sch. 1, pg 265 of 438, lines 9 – 11), as often these cables are too deteriorated to be effectively rejuvenated by cable injection. Cables that are in 'fair' condition are being included in some projects where it is opportunistic to include them as part of the larger scope of replacement work. In general, areas that have cable conditions that are predominantly 'fair' or better condition do not meet the assessment criteria for replacement as outlined in the cable renewal strategy. However, when encountering a cable segment that qualifies as 'fair' within a larger area of predominantly 'poor' or 'very poor' condition cables, Alectra Utilities has determined it is prudent to address these segments by installing duct where it is missing and

replacing the cable in order to avoid future outages to customers and minimize the risk of leaving a cable segment to deteriorate further and jeopardize the renewed assets.

1-Staff-11

System Renewal
Reference: Exhibit 3, Tab 1, Schedule 1, page 6

Alectra Utilities has stated that "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."

a) How was the deterioration of cables to 2025 determined?

Response:

a) In the 2018 Asset Condition Assessment ("ACA"), the percentage of deteriorated cables is 14%. In 2020 ACA, the percentage of deteriorated cables increased to 17%. Alectra Utilities projected that continuing at the current pace of cable renewal, the population of deteriorated cables will significantly increase to 25% in year 2025. This was completed by aging the cables to 2025, and keeping the pace of replacement at levels without the ICM funding. The ACA was then run to determine the health index and population of 'Very Poor' and 'Poor' cable. This means that if Alectra Utilities does not increase the pace of cable renewal, the population of deteriorated cables will continue to rise, increasing the risk of cable failures and further increasing the population of deteriorated cables. Figure 1 illustrates the increasing trend of the deteriorated cable population from 2020 to 2025.

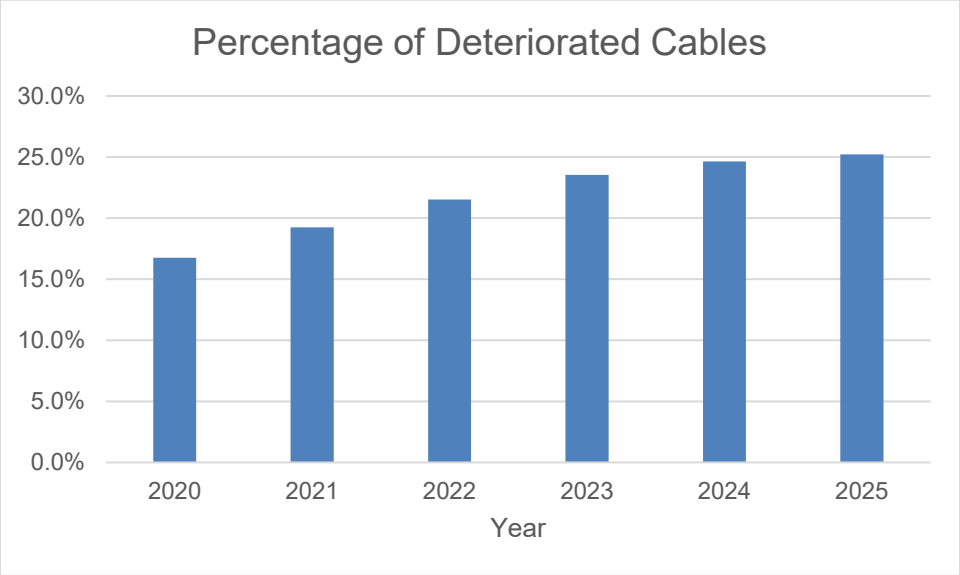

Figure 1 –Percentage of Cable Deterioration 2020-2025

Alectra Utilities aims to maintain the system reliability at five-year historical level and this can only be achieved by increasing the pace of cable renewal. As illustrated in Figure 2, large quantities of cables that are in good and fair are expected to be in poor condition in the next three years. If Alectra Utilities does not increase the pace of renewal, it is projected that one in four neighborhoods will be serviced by deteriorated underground cables.

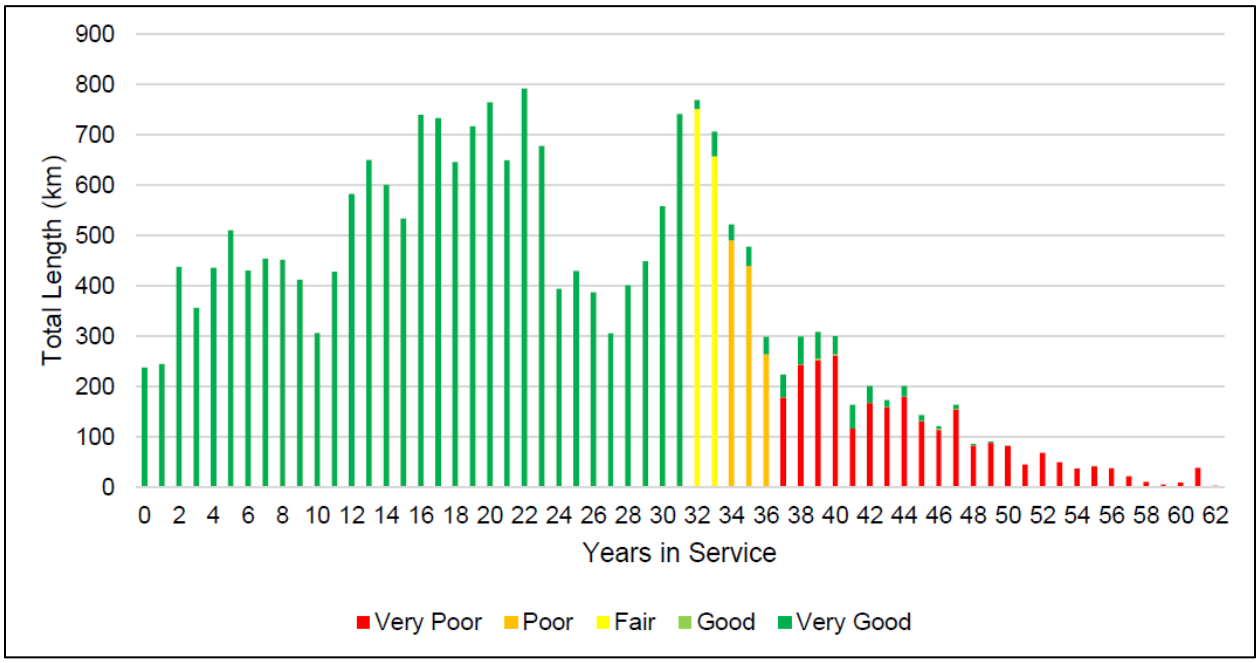

Figure 2 – 2020 XLPE Cable ACA Health and Age vs. Total Length

1-Staff-12

Cables in Other Rate Zones
Reference: Exhibit 3, Tab 1, Schedule 2, page 5, figure 4

Alectra Utilities has deemed that 21% of XLPE cable and accessory failures also come from the Horizon RZ. In comparison, 35% of failures come from the PowerStream rate zone and 31% come from the Enersource rate zone.

a) Has Alectra Utilities considered the cable replacement needs in all other rate zones? If not, why does Alectra Utilities not have a holistic cable investment plan?

Response:

a) Alectra Utilities does consider cable investment needs across each of its rate zones, and has projects planned for cable renewal for all rate zones as part of its cable renewal plan. Alectra Utilities is seeking ICM funding to address cable renewal investments in the PowerStream and Enersource Rate Zones ("RZs") as these RZs are the most significant contributors to XLPE cable and accessory failures at 35% and 31%, respectively. Although the Horizon Utilities RZ accounts for the 3rd highest amount of cable & accessories reliability impact (Exhibit 3, Tab 1, Schedule 2, page 5, Figure 4), it is the accessories and not the cables themselves that have an impact on reliability as compared to other rate zones. Alectra Utilities is addressing the reliability impact from cable accessories in this RZ through distribution automation.

1-Staff-13

Individual Projects
Reference: Exhibit 3, Tab 1, Schedule 4

Risk avoidance was provided for each individual neighbourhood project but not consistently. In addition, the cable type used for replacement was provided for some of the individual neighbourhood projects.

a) **Please provide the cable type being replaced or injected and the cable type being used for replacement.**
b) **Please provide whether each individual neighbourhood project currently has loop feed capability and whether the cables are direct buried or in-duct.**
c) **Please prioritize the list of individual cable renewal projects for each year.**

Response:

a) and b)

For each proposed ICM project, Table 1 below provides the cable type being replaced or injected; the cable type used for replacement; the ICM projects that have loop feed capability; the cables that are direct-buried or in-duct.

Table 1 – Listing of Cable Type, Loop Feed Capability and Construction Type

Project	Existing Cable Type	New Cable Type	Primary Loop	direct buried/in-duct
Project 1 – Cable Replacement – Raymerville Drive Area in Markham (M21)	XLPE	TRXLPE	loop	direct buried
Project 2 – Cable Injection – Cairns Drive of Markham (M21)	XLPE	Keep existing	loop	direct buried
Project 3 – Cable Injection – McNaughton Road Area of Vaughan (V26)	XLPE	Keep existing cable type	loop	direct buried
Project 4 – Cable Replacement – Montevideo & Battleford	XLPE	TRXLPE	loop	direct buried

Project	Existing Cable Type	New Cable Type	Primary Loop	direct buried/in-duct
Area in Mississauga (Area 46)				
Project 5 – Cable Replacement – Glen Erin & Burnhamthorpe of Mississauga (Area 25)	XLPE TRXLPEC	TRXLPE	loop	direct buried
Project 6 – Cable Injection – Glen Erin Dr & Bell Harbour Dr in Mississauga (Area 39)	TRXLPE	Keep existing cable type	loop	direct buried
Project 7 – Cable Injection – Edwards Boulevard Area in Mississauga (Area 43 & 51)	TRXLPE	Keep existing cable type	loop	direct buried
Project 8 – Cable Injection – Derry Road & Ninth Line (Area 56)	XLPE TRXLPE	Keep existing cable type	loop	direct buried
Project 9 – Cable Injection – Winston Churchill & The Colllegeway (Area 58 & 59)	XLPE TRXLPE	Keep existing cable type	loop	direct buried
Project 10 – Cable Injection – Sovereign Court Area in Vaughan (V50)	XLPE	Keep existing cable type	loop	direct buried
Project 11 – Cable Injection – Creditstone Road Area in Vaughan (V24)	XLPE	Keep existing cable type	loop	direct buried
Project 12 – Cable Injection – Jacob Keffer Parkway Area in Vaughan (V17)	XLPE	Keep existing cable type	loop	direct buried
Project 13 – Cable Injection – 8th Line & Highway 11 Area in Bradford (BR5)	XLPE	Keep existing cable type	loop	direct buried
Project 14 – Cable Injection – Willow Farm Lane of Aurora (A09)	XLPE	Keep existing cable type	loop	direct buried

Project	Existing Cable Type	New Cable Type	Primary Loop	direct buried/in-duct
Project 15 – Cable Replacement – Tomken Trail in Mississauga (Area 36)	XLPE	TRXLPE	loop	In-duct
Project 16 – Cable Replacement – Main Feeder Cable on Cantay Road (Area 44)	TRXLPE	TRXLPE	loop	In-duct
Project 17 – Cable Replacement – Hemus Square in Mississauga (Area 16)	XLPE TRXLPE	TRXLPE	loop	direct buried
Project 18 – Cable Replacement – Dixie Road & Winding Trail (Area 19)	XLPE	TRXLPE	loop	direct buried
Project 19 – Cable Replacement – South Millway Area in Mississauga (Area 25)	XLPE TRXLPE	TRXLPE	loop	direct buried
Project 20 – Cable Replacement – Ashbridge Traffic Circle Area in Vaughan (V51)	XLPE	TRXLPE	loop	direct buried
Project 21 – Cable Replacement – Cochrane Drive & Scolberg in Markham (M44)	XLPE	TRXLPE	loop	direct buried
Project 22 – Cable Replacement – Aviva Park Area of Vaughan (V36)	XLPE	TRXLPE	loop	direct buried
Project 23 – Cable Replacement – Larkin Ave Area of Markham (M15)	XLPE	TRXLPE	loop	direct buried
Project 24 – Cable Replacement – St. Joan of Arc Area of Vaughan (V26)	XLPE	TRXLPE	loop	direct buried
Project 25 – Cable Replacement –	XLPE	TRXLPE	loop	direct buried

Project	Existing Cable Type	New Cable Type	Primary Loop	direct buried/in-duct
Hammond Drive Area in Aurora (A09)				
Project 26 – Cable Replacement – Batson Drive in Aurora (A10)	XLPE	TRXLPE	loop	direct buried
Project 27 – Cable Injection – Kersey Crescent Area in Richmond Hill (R23)	XLPE	Keep existing cable type	loop	direct buried
Project 28 – Cable Injection – Rainbridge Ave (V51)	XLPE	Keep existing cable type	loop	direct buried

c) As provided in Exhibit 3, Tab 1, Schedule 4, an assessment of cable failures identified 78 projects that will address hotspots for cable failures. Alectra Utilities identified 20 high priority projects in the Enersource RZ and 32 high priority projects in the PowerStream RZ. Of these 52 projects, 24 was included in base funding. Table 2 below, provides the project scores for the next 28 high priority cable renewal projects in urgent need of cable renewal in the PowerStream and Enersource RZs. Please also see Alectra Utilities' response to AMPCO-18 l).

Table 2 – 2023 and 2024 ICM Cable Renewal Project Value Scores

ICM Project Code	Project Name	ICM	Alectra Value
151432	Cable Injection - (AREA43-51) Edwards Blvd area of Mississauga	Yes	14423
151367	Cable Injection Project - (V26) - McNaughton Road area of Vaughan	Yes	8885
151361	Cable Injection Project - (M21) - Cairns Drive area of Markham	Yes	7800
151935	Cable Replacement Project - (M15) - Larkin Ave area of Markham	Yes	7630
152373	Cable Replacement Project - (V26) - St. Joan of Arc area of Vaughan	Yes	7439
152387	Cable Injection Project - (V51) - Rainbridge Ave, Vaughan	Yes	6352

152375	Cable Replacement Project - (A09) - Hammond Dr area of Aurora	Yes	5433
151435	Cable Injection - (AREA56) - Derry Rd W & Ninth Line, Mississauga	Yes	5134
151520	Cable Injection Project - (A09) - Willow Farm Lane of Aurora	Yes	4795
151329	Cable Replacement Project - (M21) - Raymerville Dr, Markham	Yes	3815
151431	Cable Injection - (AREA 39) - Glen Erin Dr and and Bell Harbour Dr, Mississauga	Yes	2555
151889	Cable Replacement- Tomken Trail in Mississauga (AREA36)	Yes	2396
151913	Cable Replacement Project - (M44) - Cochrane Dr (North) - Scolberg (South), Markham	Yes	2384
151436	Cable Injection - (AREA58 & 59) - Winston Churchill & The Collegeway, Mississauga	Yes	1942
151403	Cable Replacement Project - (AREA46) - Montevideo & Battleford, Mississauga	Yes	1781
151461	Cable Injection Project - (V17) - Jacob Keffer Parkway area of Vaughan	Yes	1767
152379	Cable Replacement Project - (A10) -Batson Dr, Aurora	Yes	1742
151903	Cable Replacement Project - (AREA25) - South Millway, Mississauga	Yes	1689
151517	Cable Injection Project - (BR5) - 8th Line and Highway 11, Bradford	Yes	1541
151912	Cable Replacement Project – (V51) – Ashbridge Circle area in Vaughan	Yes	1472
151407	Cable and Transformer Replacement Project - (AREA25) - Glen Erin & Burnhamthorpe, Mississauga	Yes	1379
151914	Cable Replacement Project – (V36) - Aviva Park, Vaughan	Yes	962
151459	Cable Injection Project - (V24) - Creditstone Rd area of Vaughan	Yes	920
152386	Cable Injection Project - (R23) - Kersey Cr area of Richmond Hill	Yes	772
151902	Cable Replacement Project - (AREA19) - Dixie Rd and Winding Trail, Mississauga	Yes	747
151456	Cable Injection Project - (V50) - Sovereign Court area of Vaughan	Yes	639
151895	Cable Replacement- Main Feeder Cable on Cantay Road, Mississauga (AREA 44)	Yes	410
151901	Cable Replacement Project - (AREA16) - Hemus Square, Mississauga	Yes	223

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1-Staff-14

Individual Projects: Heat Maps
Reference: Exhibit 3, Tab 1, Schedule 4

Alectra Utilities has provided heat maps outlining cable conditions and areas of renewal. From the heat maps, it appears cable segments are being replaced in fair or good condition that are near or connected to cable segments that are in poor or very poor condition. Cables are also being injected that are in good condition that are near or connected to cables that are in fair or poor condition.

a) What methodology did Alectra Utilities use to determine the length of cable to be injected or replaced in each individual project?

Response:

a) Alectra Utilities considered cable age, cable condition, cable connectivity, historical cable failures, and projection of future cable failures to determine which portion of cable in the neighborhood will be: a) left alone, b) injected, and c) replaced.

For cable replacement projects, although some cable segments within the project scope have not yet failed, given the following considerations, it is estimated that the failures are imminent and therefore should be replaced at the same time to prevent future failures:

- The cables are the same vintage;
- Type of construction method used (i.e., direct-buried);
- The cables have experienced the same fault currents; and
- The cables are susceptible to the same soil and water conditions.

Additionally, it is not prudent for Alectra Utilities to target only certain cables and leave others for the following reasons:

- No guarantee that a duct path will be present for the other cables not injected in the future;
- Outages to customers could occur on segments not renewed frustrating customers; and

- Only replacing certain cable segments doesn't allow for integration of a long-term approach.

For cable injection projects, although some of the cable segments within the project scope have not yet failed yet, considering the purpose of cable injection is to rejuvenate the insulation to avoid future cable failures, cable injection should be carried out when cables are still suitable for the injection process. Cables in 'good' or 'very good' condition within the same area as the injection project are omitted from injection. This is because either these cables have been replaced or previously injected. Depending on a variety of factors any cables not suitable for injection are set aside for replacement and completed under Alectra Utilities "Left Behind" cable renewal project.

1-Staff-15

Project 151361: Cable Injection – Cairns Drive of Markham (M21)
Reference: Exhibit 3, Tab 1, Schedule 4, page 34

Project description: "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 $1.7 million and in 2024 is $1.9 million.

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 clustering of failures in this area. Due to the age of the cable, Alectra Utilities 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 the typical useful life of 30 years and in poor or very poor condition."

a) **How can these cables be injected given that they are passed their typical life of 30 years and being that they have been assessed as 'poor' or 'very poor' condition? Please provide reasoning as to why these cables can be injected versus other projects where cable injection is not a viable option.**

Response:

a) In general, provided that the cables have not failed repeatedly and do not have multiple splices and are not older than 35 years, then the cables can be candidates for cable injection. Alectra Utilities uses the following guidelines:
   - If the cable segment in question is more than 200 m in length and has no more than 3 existing splices, Alectra Utilities would excavate and remove the old splice with a new splice;
   - If the segment is less than 200 m in length and has 2 or more existing splices, Alectra Utilities considers the cable a candidate for replacement;

- Location of splices (e.g., under a boulevard, under a sidewalk, under a roadway, under a driveway);
- Actual field conditions (i.e., the ability to excavate and civil work cost required to replace the cable); and
- Third-generation TR-XLPE cable that is strand-filled cannot be injected, and therefore can only be replaced.

When an area has a high concentration of splices, that area may not be eligible for cable injection; if the area were to be injected, the cost associated with splice replacement would be high, which will affect the budget. In these scenarios, Alectra Utilities will include these projects as candidates for cable replacement instead.

1-Staff-16

Reference: ACM/ICM Models

OEB staff has prepared a table in Microsoft Excel documenting the ICM and ACM applications that Alectra Utilities and its predecessor utilities applied for and were approved funding for, included as "1-Staff-16_Attachment 1.xlsx". Applications for incremental capital funding applied for under the ICM and ACM options, and the M-factor proposal in EB-2019-0018, which were not approved, are not shown.

a) The data is taken from the ACM/ICM models filed and used for the draft rate order and reflect the OEB's decision in each application. Please confirm or correct/update the Excel spreadsheet and file any corrected version in Microsoft Excel format.

Response:

a) Alectra Utilities confirms the data in OEB staff's "1-Staff-16_Attachment 1.xlsx" spreadsheet, is correct, but incomplete. Alectra Utilities has updated the spreadsheet to include data related to the ICM for the Brampton Rate Zone, approved in Alectra Utilities' 2018 EDR application (EB-2017-0024).

1-Staff-16

Attachment 1
Approved ICMs

1-Staff-16 / Attachment 1 (Alectra Utilities Update)

ICM/ACM Approved for Alectra Utilities and Predecessor LDCs up to 2022

Utility	Year	Case Number		Total Capex ACM/ICM Model Tab 10/9	Materiality Threshold ACM/ICM Model Tab 9/8	Maximum Allowable ICM Funding ACM/ICM Model Tab 10/9	Project Capex ACM/ICM Model Tab 10/9	Eligible ICM capex for project ACM/ICM Model Tab 10/9	ICM Revenue Requirement ACM/ICM Model Tab 11/10	Annual Depreciation Expense of ICM RR ACM/ICM Model Tab 10/9
Enersource Rate Zone (last rebased 2013)										
	2014									
	2015									
Enersource Hydro Mississauga	2016	EB-2015-0065	ACM	$ 115,425,661	$ 47,160,842	$ 68,264,819	$ 40,478,700	$ 40,478,700	$ 3,285,413	$ 1,011,968
	2017									
Alectra Utilities	2018	EB-2017-0024	ICM	$ 72,682,772	$ 38,693,760	$ 33,989,012	$ 10,653,231	$ 10,653,231	$ 872,842	$ 260,326
Alectra Utilities	2019	EB-2018-0016	ICM	$ 74,315,118	$ 37,654,292	$ 36,660,825	$ 7,500,000	$ 7,500,000	$ 630,556	$ 198,490
	2020									
	2021									
	2022									
					Additional depreciation expense recovered annually through ACM/ICM rate riders					***$ 1,470,783***
PowerStream Rate Zone (last rebased 2017)										
Alectra Utilities	2018	EB-2017-0024	ICM	$ 109,773,500	$ 76,239,665	$ 33,533,835	$ 11,243,530	$ 11,243,530	$ 808,885	$ 266,271
Alectra Utilities	2019	EB-2018-0016	ICM	$ 102,074,174	$ 83,289,658	$ 18,784,516	$ 18,772,246	$ 18,772,246	$ 1,355,703	$ 436,701
	2020									
Alectra Utilities	2021	EB-2020-0002	ICM	$ 101,754,413	$ 81,758,272	$ 19,996,141	$ 2,885,574	$ 2,885,574	$ 204,411	$ 64,124
	2022									
					Additional depreciation expense recovered annually through ACM/ICM rate riders					***$ 767,096***
Brampton Rate Zone (last rebased 2015)										
	2016									
	2017									
Alectra Utilities	2018	EB-2017-0024	ICM	$ 38,069,480	$ 27,730,884	$ 10,338,596	$ 6,800,377	$ 6,800,377	$ 706,794	$ 226,679
	2019									
	2020									
Alectra Utilities	2021	EB-2020-0002	ICM	$ 47,021,054	$ 32,611,320	$ 14,409,733	$ 7,772,417	$ 7,772,417	$ 715,963	$ 188,504
	2022									
					Additional depreciation expense recovered annually through ACM/ICM rate riders					***$ 415,184***

Horizon Rate Zone (final year of last Custom IR 2019)										
	2020									
	2021									
	2022									
Guelph Rate Zone (last rebased 2016)										
	2017									
	2018									
	2019									
	2020									
	2021									
	2022									

1-Staff-17

Adjusted Capital Plan
Reference 1: Exhibit 1, Tab 1, Schedule 4, pages 2-3
Reference 2: EB-2019-0018, Partial Decision and Order, January 30, 2020, page 28
Reference 3: EB-2019-0018, Alectra Utilities, Letter filed April 14, 2020, regarding ICM requests per EB-2019-0018 Partial Decision and Order
Reference 4: Exhibit 3, Tab 1, Schedule 1, page 3, table 18
Reference 5: Exhibit 3, Tab 1, Schedule 1, page 4, table 20

On page 2 of Exhibit 1- Tab 1- Schedule 4, Alectra Utilities documented its reasons for filing the requests for ICM/ACM treatment for Underground Asset Renewal due to worsening reliability due to deterioration of underground direct-buried cable and related equipment.

On page 3 of Exhibit 1- Tab 1- Schedule 4, Alectra Utilities noted that:[1]
[a]s 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 [and following] a comprehensive review of its capital investment plan to identify reductions and deferrals to align the level of investment [including for Underground Asset Renewal] with the funding available in rates.

In its EB-2019-0018 Partial Decision and Rate Order, regarding the OEB's decision to deny the M-Factor proposal, the OEB offered three options for Alectra to consider:[2]

1. **File a cost-based application for rates effective in 2021 proposing updated capital requirements (cost of service or Custom IR), in which case the rebasing deferral period would be terminated.**
2. **Amend the current application to request incremental capital funding in 2020 for projects that meet the ICM criteria. In doing so, Alectra Utilities must provide sufficient evidence to show how the projects meet the ICM criteria [as t]his**

[1] Exhibit 3- Tab 1- Schedule 1- Page 4

[2] EB-2019-0018, Partial Decision and Order, January 30, 2020, Page 28

information cannot be discerned from the current application as Alectra Utilities has not identified projects that meet the established ICM criteria. … there is no explicit prohibition in the Funding of Capital policy.[35] Alectra Utilities may wish to consider a multi-year ICM that meets the ICM criteria if it seeks further ICM funding.

3. **Do not file an amendment to the application for 2020 [and request the OEB approve the] previously approved rates for 2020 on an interim basis … The next application would then be for 2021 rates, in which Alectra Utilities would be eligible to request incremental capital funding through an ICM.**

About one-and-a-half months after the decision was issued, a state of emergency due to COVID-19 was declared. Alectra Utilities did not re-apply for ICMs in 2020.[3]
Alectra Utilities applied for and was approved ICM projects in the PowerStream and Brampton RZs in its 2021 Price Cap IR application.[4]

Alectra Utilities did not apply for any ICMs as part of its 2022 Price Cap IR application.[5]

a) **Table 18 on page 3 of Exhibit 3- Tab 1- Schedule 1 documents that Alectra Utilities reduced the capital budget from what was documented in the 2020-2024 DSP by $150.2 million, before any ICM requests. Table 20 on page 4 of that exhibit documents that the Underground Asset Renewals program had its budget reduced by $125.2 million, before ICM requests. Please provide the percentage reduction of the Underground Asset Renewal program as documented in the 2020-2024 DSP filed in EB-2019-0018 the $125.2 million reduction represents.**
b) **There was a reduction of $125.2 million to the Underground Asset Renewal program from what was forecasted in the 2020-2024 DSP. With the resulting reduced capital budget for this category and Alectra Utilities' knowledge of the condition of underground cable and equipment, was Alectra Utilities' executed capital expenditures for Underground Asset Renewal in 2020-2021 at the level of**

[3] EB-2019-0018, Alectra Utilities, Letter filed April 14, 2020 re: ICM requests per EB-2019-0018 Partial Decision and Order

[4] EB-2020-0002

[5] EB-2021-0005

expenditures pre-2020, or was the executed Underground Asset Renewal budget below pre-2020 levels and trends?

c) It appears that the majority of the capital budget reductions of $150.2 million from the capital budget forecasted in the 2020-2024 DSP (per Table 18) would be accounted for by the $125.2 million reduction in the Underground Asset Renewal program (per Table 20).

i. Please explain why Alectra Utilities decided on such a level of reduction to the Underground Asset Renewal program considering what it knew about the level and increasing pace of underground cable failures.

ii. Please provide Alectra Utilities' reasons on why its decision to reduce the capital budget for the Underground Capital Renewal program is not a driver for the increasing pace of underground cable failures.

Response:

a) The deferral of $125.2MM in Underground Asset Renewal investment plans proposed in the Alectra Utilities DSP represents 8.6% of all capital investments identified over the 2020-2024 planning period. Relative to only the Underground Asset Renewal investments proposed in the DSP, $125.2MM represents a deferral of 31.2%.

In the 2020-2024 DSP, Alectra Utilities proposed to increase the level of investment in its deteriorating underground system along with several priority investments including enhancing resilience of the overhead system to adverse weather events, supporting growth demand from development, implementing ties in the distribution system to mitigate system expansions and investing in monitoring and automation technologies.[6] Alectra Utilities explained in the DSP that a funding gap between the capital investments required over the 2020-2024 planning period and the level of funding through the utility's base rates must be addressed through incremental funding to enable the increased investments in infrastructure required to deliver the outcomes proposed in the DSP.[7] Alectra Utilities identified in the DSP that should the utility not receive the sufficient funds to implement the renewal as proposed in the DSP,

[6] EB-2019-0018/Exhibit04/Tab01/Schedule01/Pages 5-9

[7] EB-2019-0018/Exhibit04/Tab01/Schedule01/Page 12

Alectra Utilities would have to defer essential system renewal investments resulting in a decline in reliability, increasing reactive costs and higher future capital costs.

Alectra Utilities proposed in the DSP to progressively increase the level of investment in its deteriorating underground cables from a five year historical (2015-2019) average of $39.4MM per year to $48MM in 2020, $61MM in 2021, $68MM in 2022, $74MM in 2023 and $81MM in 2024.[8] As Alectra Utilities did not receive OEB approval for the incremental funding proposed in the 2020 EDR application, the utility deferred most of the proposed increases in underground system renewal. Because the renewal investments address deteriorated assets, the deferred investment in underground renewal will proceed through reactive replacement upon asset failure, or if funding availability permits, as planned work.

b) Notwithstanding the capital funding deficit, Alectra Utilities' capital expenditures for Underground Asset Renewal in 2020 and 2021 were higher than the pre-2020 levels. As explained on Page 5 of Exhibit 3, Tab 1, Schedule 1 of the Application, Alectra Utilities was able to avoid greater deferral and reductions to investments in 2020 and 2021 System Renewal because of temporarily reduced investments in System Access resulting from the COVID-19 Pandemic.

Over the 2015-2019 period, Alectra Utilities and its predecessors invested $197MM to renew the deteriorating underground systems, resulting in an annual average capital expenditure of $39.4MM.[9] As provided in Table 21 of the Application, Alectra Utilities executed $54.9MM and $49.1MM of underground cable renewal capital projects in 2020 and 2021, respectively.

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 as well as the continued operation of critical business functions.

[8] EB-2019-0018/Exhibit04/Tab01/Schedule01/Appendix 10/Table A10

[9] EB-2019-0018/Exhibit04/Tab01/Schedule01/Appendix 10/Table A10

c)

i. Alectra Utilities' decision to defer or reduce significant capital investment was necessary to align with the level of investment supported by funding in base rates. Prior to deferring needed investment in underground renewal, Alectra Utilities deferred or reduced capital investment in areas that would not expose Alectra Utilities and its customers to unacceptable safety risks and potential non-compliance related to its requirement to service customers.

In the 2020-2024 DSP, Alectra Utilities proposed several priority investment areas that included:

1) Enhancing resilience of the overhead system to adverse weather events;
2) Supporting growth demand from development,
3) Implementing feeder ties, monitoring and automation in the distribution system to mitigate system expansions, increase grid flexibility and improve reliability; and
4) Increasing the investment of underground cable renewal.

Each capital investment priority proposed by Alectra Utilities over the 2020-2024 planning period prudently addressed necessary infrastructure needs identified through a comprehensive asset management and planning process that was reviewed and validated by an independent third-party assurance review.[10]

1) **Overhead System Renewal** - Alectra Utilities must continue to invest in the overhead system to enhance the resiliency of the system to adverse weather events. Deteriorated poles and overhead assets are prone to failure from adverse weather conditions, which have increased in severity and frequency. Deferral of investment of the overhead system increases the risk of public and worker safety as well as the number of system outages. For example, reinforced and replacement poles are more resilient to wind and ice storms such as the May 21, 2022 storm which impacted 297,650 Alectra Utilities' customers and resulted in 1,515,747 Customer Hours of Interruption. Investment in overhead renewal continues to be a high priority and

[10] EB-2019-0018/Exhibit 4 / Tab 1 / Schedule 1 / Page 53

customer need[11]. Residential and small (less than 50kW) general service customers informed Alectra Utilities in the 2022 ICM Application Customer Engagement[12] that reducing the restoration time and reducing the number of outages during extreme weather events as their top priority reliability outcomes. Reinforced and renewed overhead assets are less prone to catastrophic failures during storms resulting in improved restoration time and fewer customers impacted by storms[13]. Investment in Overhead Renewal requires $18.9MM above the $177MM level of investment proposed in the 2020-2024 DSP. Increased investment in Overhead Renewal is driven by increased scope of work for joint use pole to meet the imposed Municipal and Regional Government requirements on Alectra Utilities to expeditiously make available and remove redundant overhead infrastructure for telecommunications and fast internet infrastructure.

Alectra Utilities continues to experience increases in Reactive Renewal. Over the 2020-2024 planning period, Reactive capital investments are tracking $16.5MM above the $98MM level set in the DSP. Due to the increasing backlog of deteriorating assets and increasing intensity, severity and frequency of extreme weather events, Alectra Utilities must replace failed assets and restore supply to customers. Alectra Utilities manages Reactive Capital investments as mandatory expenditures and sets the capital plans for such investments using the most recent historical actual expenditures. To offset increases in Reactive Capital, Alectra Utilities deferred $14.8MM of Rear Lot Conversion projects which represents 74% of the $20MM level of investment proposed over the 2020-2024 planning period. There are no further reductions available in Rear Lot Conversion projects due to the risk of public safety.

Alectra Utilities continues to execute transformer renewal according to the capital investment level set out in the DSP. Capital investment in transformer renewal is required for timely replacement of identified leaking transformers and transformers with hazardous PCB oil so to mitigate expensive environmental remediations.

[11] EB-2019-0018/Exhibit 4 / Tab 1 / Schedule 1 / Page 36

[12] 2023 EDR Application / Exhibit 4 / Tab 1 / Schedule 1 / Attachment 11 / Page 9

[13] EB-2019-0018/Exhibit 1/Tab 1/Schedule 1/Appendix K: CIMA Report - Hardening the Distribution System Against Severe Storms/Page 33

2) **Supporting Development and Demand Growth** - System Access investments include mandatory expenditures required to support growth demand from green-field development, intensification and redevelopment throughout Alectra Utilities service area. Alectra Utilities has incorporated investment for customer driven projects based on the best available information from external parties including developers, municipal and regional plans and other customers initiating distribution infrastructure to facilitate connection and appropriate metering of service. Although temporarily paused due the COVID-19 pandemic, investments in System Access are again proceeding with the re-opening of the economy and will be within $1.2MM of the $334.1MM level set in the DSP.

3) **Feeder ties, automation and monitoring -** In the 2020-2024 DSP, Alectra Utilities proposed a priority investment to incorporate additional linkages, ties, monitoring and automation to improve grid flexibility, reduce outage restoration times, balance feeder loading and mitigate the need for system expansion. Capital investments in SCADA, Automation, System Control and Communications infrastructure has increased $4.5MM above the $56.4MM proposed in the DSP to modernize the distribution system. Alectra Utilities decided against deferring investments to modernize the grid since such deferrals would be offset by a need for Alectra Utilities to construct additional feeders, install manual switches and limit the development of a flexible modern system capable of efficiently connecting emerging technologies such as DERs and electric vehicles.

Relative to the magnitude of investment plans outlined in the DSP, Alectra Utilities decided to make significant deferrals in feeder capacity expansion and station capacity expansions. Over the 2020-2024 planning period, Alectra Utilities deferred $56.9MM of the proposed $110.1MM of investment in lines capacity expansion which represents a deferral of 52% of the investment. The amount of investment in Lines Capacity expansion projects is now at the bare minimum level to only match the timing of known and committed development. Any further reduction in Lines Capacity work would result in Alectra Utilities operating feeders beyond loading limits. Similarly, Alectra Utilities deferred $9.5MM of the proposed DSP investment level of $19.6MM for station

capacity expansion projects representing a 48% reduction of the investment level. Any further reductions to station capacity expansion projects will result in Alectra Utilities loading stations beyond the planning limits and is not recommended.

4) **Increase Investment in Underground Renewal** - Alectra Utilities proposed in the 2020-2024 DSP to progressively increase capital investment of underground system renewal as necessary to pace renewal with the growing backlog of deteriorated cables, as well as the pending first wave of underground cables projected to reach end of life by 2024. From the period of 2015 to 2019, Alectra Utilities (and predecessor utilities) executed $228.5MM in underground renewal. To address the growing backlog of deteriorated and failing underground cable, Alectra Utilities proposed to increase the investment in accordance with the increasing pace and volume of deteriorated cable over the 2020-2024 period to $401.8MM. In order to align the level of capital investment to the funding in base rates, Alectra Utilities deferred $125.2MM in underground renewal which represents 31% deferral of the capital investment proposed in the DSP.

   Alectra Utilities' decision to defer increasing investment in underground cables renewal reflects lack of options available for Alectra Utilities to y support the urgent need for infrastructure renewal within the envelope provided by the existing base rates.

Please see response to SEC-14 for a detailed explanation on the need to invest in Information Technology systems, security and assets.

ii. Alectra Utilities does not agree that a reduction to the budget for Underground System Renewal is the driver for the increasing pace of underground cable failures. As provided in response to part b) above, Alectra Utilities has allocated available capital funding to address deteriorated cable renewal. Table 21 as provided in Exhibit 3 / Tab 1 / Schedule 2 of the Application demonstrates that Alectra Utilities has executed cable renewal above historical levels in 2020 and 2021. The driver behind the increasing severity and duration of underground cable outages is the growing backlog of deteriorated direct-buried underground cable installed during the exponential municipal growth which started in the

1970s. The period of high growth resulted in an asset wave that is proving to outpace historical rate of renewal upon which Alectra Utilities base rates were set. Notwithstanding the reallocation of available funding into Underground Renewal over the last two years, the backlog of deteriorated cables and the pace of cable deterioration (and consequent failure) is continuing to outpace the rate of renewal beyond the levels supported by rates. Without increases to cable renewal investments as proposed in this Application, Alectra Utilities will experience a further increase in the volume of deteriorated and failing cables.

1-Staff-18

2021 ICM Funding

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

On page 2 of this schedule, Alectra Utilities notes that it was approved for $10.7 million of ICM funding for several projects as part of its 2021 Price Cap IR application.[1]
Alectra Utilities also states that it revamped its capital plan in March and April 2022 for the remainder of the DSP plan period (2022-2024). Table 18 on page 3 of this exhibit is replicated below.

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)

a) **Please identify where the $10.7 million of 2021 ICM funding approved in EB-2020-0002 is included in Table 18.**

Response:

a) The 2021 ICM funding approved in EB-2020-0002 is included in the 2021 actuals of $261.9MM.

[1] EB-2020-0002

1-Staff-19

Variance of DSP Budget and Adjusted Capital Budget

Reference 1: Exhibit 3, Tab 1, Schedule 1, pages 4, table 20

Reference 2: Exhibit 3, Tab 1, Schedule 2, page 13, table 21

Table 20, shown on page 4 of this exhibit, is replicated below.

Table 20 – Adjusted Capital Plan 1 – 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)**

Following this table, on pages 4-9 of this exhibit, Alectra Utilities provides some discussion of the reductions or increases to the capital budget by the Chapter 5 capital categories (e.g., System Access, System Service, System Renewal, General Plant).

a) **Please provide a version of Table 20 broken out by the years of the DSP (2020-2024).**
b) **Table 20 shows that Alectra Utilities has reduced its Underground Asset Renewal by $125.2 million (before the ICMs being proposed in the current application) from the 2020-2024 DSP as filed in EB-2019-0018, while the Information Technology (IT) budget has increased by $34.3 million. Please explain the basis for Alectra Utilities prioritizing IT investments relative to Underground Asset Renewal.**
    i. **What are the expected cost savings from implementing the proposed IT projects?**
    ii. **How have the customer engagement surveys been utilized in the prioritization of these IT projects?**

iii. Were the IT investments considered in the Asset Analytics Platform? If not, why not? How would these investments be compared to the cable investments if it was completed in hindsight?

c) Table 21 on page 13 of Exhibit 3- Tab 1- Schedule 2 shows that Alectra Utilities has actual and forecasted Underground Asset Renewal capital spending of $236.1 million from 2018 to 2022. The $125.2 million reduction in the capital budget for that category shown in Table 20 is over 50% of what was spent. Considering Alectra Utilities' evidence of an accelerating pace of buried cable and equipment failure, please provide Alectra Utilities' view, with support where possible, that Alectra Utilities' reductions in the Underground Asset Renewal category is not a factor in the increasing incidence and pace of underground cable and equipment failures.

Response:

a) Alectra Utilities provides an updated version of Table 20 with annual values from 2020-2024.

Table 1 – Adjusted Capital Plan – Material Changes ($MM) 2020-2024 (Ref. Table 20)

Summary of Material Changes	2020	2021	2022	2023	2024	Total
Underground Asset Renewal	$0.4	($18.9)	($26.9)	($38.0)	($41.8)	($125.2)
Lines Capacity	($9.9)	($17.0)	($12.7)	($14.2)	($3.2)	($56.9)
Information Technology Systems	($1.3)	($4.4)	$9.5	$17.1	$13.4	$34.3
Other	($16.1)	$22.1	$1.1	$1.6	($11.1)	($2.4)
Total Reduction before Proposed ICM	**($26.9)**	**($18.2)**	**($29.0)**	**($33.5)**	**($42.7)**	**($150.2)**
Proposed ICM Investments	$0	$0	$0	$25.4	$26.9	$52.3
Total Net Reduction	**($26.9)**	**($18.2)**	**($29.0)**	**($8.1)**	**($15.8)**	**($97.9)**

b) i) Alectra Utilities develops business cases which estimate OM&A costs and savings related to capital projects. OM&A savings in the business cases entered into C55 consider cost saving benefits into three categories: avoided costs; efficiency savings; and reduction savings. Estimated avoided costs are reflected in capital investment that enable Alectra Utilities to avoid future cost increases. Estimated efficiency savings are reflected in investment which enable more efficient use of Alectra Utilities' employees' time, enabling them to work on other tasks.

Table 2 below provides the net OM&A savings from the proposed IT projects.

Table 2 – IT Proposed Net OM&A Savings (2022-2026)

Project Name	Net OM&A Savings 2022 – 2026 ($MM)
Customer Service Strategy-CX Project	7.0
Advanced Analytics on Alectra Utility Data	4.3
New Customer Connections Process (NCCP) Portal Enhancements	0.9
IVR Enhancements	0.7
Back-end Automation (Orchestration Tool\Setup)	0.1
Total	**13.0**

b) ii) Alectra Utilities filed its first consolidated Distribution System Plan ('DSP") in its 2020 rate application. The DSP was informed by multiple rounds of customer engagement, which occurred both before investment options were identified, and again once specific options and outcomes were defined. In the DSP customer engagement, customers were asked for their preferences on specific investments areas, including general plant investments. Alectra Utilities incorporated customer preferences in the DSP by adjusting the pace of investments and deferring certain projects.

As identified in Exhibit 3, Tab 1, Schedule 1, pp. 1-2, Alectra Utilities' capital plans are based on its DSP. The capital plans are reviewed and updated on an annual basis, in order to address the evolving needs and priorities of the distribution system and Alectra Utilities' customers. Alectra Utilities' 2023 and 2024 budget, including its IT projects, are informed by this annual process.

b) iii) Alectra Utilities implemented the Asset Analytics Platform to support assessment of equipment condition and performance data for distribution assets such as transformers, poles, cables and switchgear. As such, Alectra Utilities does not currently utilize the Asset Analytics Platform to manage the lifecycle, condition and performance of information technology assets. Instead, Alectra Utilities manages IT related assets lifecycle management (e.g., software, hardware) in the ServiceNow application. Alectra Utilities evaluates all capital investments, including capital IT projects, along with investments in distribution assets in the Copperleaf Capital Investment Planning system. As explained in detail in Section 5.4.1.2 of Alectra

Utilities' 2020-2024 DSP[1], Alectra Utilities considers each potential capital investment based on a business case, which is evaluated using the Copperleaf Value Framework. The Value Framework is an algorithm that systematically determines the overall value of each potential investment by scoring each investment's benefits, costs and risk mitigation measures. This approach enables Alectra Utilities to evaluate dissimilar investments using a consistent, systematic, and uniform approach.

c) Please see Alectra Utilities' response to 1-Staff-17.

[1] EB-2019-0018/Exhibit 4/Tab 1/ Schedule 1/Pages 333-343

1-Staff-20

Cable Projects Funded Through Base Rates
Reference: Exhibit 3, Tab 1, Schedule 4, pages 7-8

Alectra Utilities documents that it has identified 78 total underground cable injection and replacement projects in the PowerStream and Enersource RZs, of which 52 it identifies as "high priority". It also documents that 24 of these high-priority projects are funded through the base distribution rates. Hence the ICM funding is being requested for the other 28 high-priority projects in the Enersource and PowerStream RZs.

a) **Please provide a table in the same format as Table 28, shown on page 8 of Exhibit 3- Tab 1- Schedule 4, for the 24 high-priority projects in the Enersource and PowerStream rate zones that Alectra Utilities considers as being funded through existing distribution rates.**
b) **Please provide a table showing the underground cable injection replacement actual and forecasted capital budgets, in total for Alectra Utilities and each rate zone, for the period 2020-2024. The table should divide the budget by funds allocated through distribution rates and that for which ICM funding is being sought. The following table format can be used and is attached as a separate Excel file, "1_Staff_20_Attachment_1.xlsx". Please provide the table in Microsoft Excel format.**

Underground Cable Injection and Replacement Capital Budgets

Alectra - 2020-2024

Rate Zone	Number of Metered Customers (Residential, GS,		Year					
			2020	2021	2022	2023	2024	2020-2024
			Actual	Actual	Forecast	Forecast	Forecast	
Brampton		Funded through distribution rates						$ -
		Funded through ICM rate riders						$ -
		Total	$ -	$ -	$ -	$ -	$ -	$ -
Enersource		Funded through distribution rates						$ -
		Funded through ICM rate riders						$ -
		Total	$ -	$ -	$ -	$ -	$ -	$ -
Guelph		Funded through distribution rates						$ -
		Funded through ICM rate riders						$ -
		Total	$ -	$ -	$ -	$ -	$ -	$ -
Horizon		Funded through distribution rates						$ -
		Funded through ICM rate riders						$ -
		Total	$ -	$ -	$ -	$ -	$ -	$ -
PowerStream		Funded through distribution rates						$ -
		Funded through ICM rate riders						$ -
		Total	$ -	$ -	$ -	$ -	$ -	$ -
Alectra (total)	0	Funded through distribution rates	$ -	$ -	$ -	$ -	$ -	$ -
		Funded through ICM rate riders	$ -	$ -	$ -	$ -	$ -	$ -
		Total	$ -	$ -	$ -	$ -	$ -	$ -

Response:

a) Please see attached file 1-Staff-20_Attachment_1 for a listing of the 24 high priority projects in PowerStream and Enersource Rate Zone Alectra Utilities considers to be funded in rates.

b) Please see attached file 1-Staff-20_Attachment_2 for an updated table showing capital budgets for Cable Injection and Replacement from 2020-2024 for all rate zones as requested.

1-Staff-20

Attachment 1
ERZ PRZ Base Cable Projects

Project #	Project Name	2023	2024
151424	Cable and Transformer Replacement Project - (AREA21) - Miss. Valley & Bloor, Mississauga	$ 0.4	$ 2.4
151904	Cable Replacement Project - (AREA54) - Copenhagen Rd, Mississauga	$ -	$ 2.2
151428	Cable Injection - (AREA30) - Eglinton Ave W & Miss Rd, Mississauga	$ 0.6	$ -
151433	Cable Injection - (AREA46) - Glen Erin & Aquitane, Mississauga	$ 1.0	$ -
151408	Cable and Transformer Replacement Project - (AREA24) - Burnhamthorpe & Miss. Road, Mississauga	$ 1.6	$ -
151855	Cable Replacement and Switchgear Removal - (AREA19) - Fieldgate and Ponytrail Dr, Mississauga	$ 1.6	$ -
151516	Cable Replacement Project - (AREA46)- Millcreek Dr & Erin Mills Pkway, Mississauga	$ 1.5	$ -
151366	Cable Injection Project - (M19) - Markham - Steeles - McCowan - 14th, Markham	$ 2.1	$ -
151911	Cable Replacement Project - (A05) - Golf Links, Aurora	$ 2.0	$ 2.0
152281	Cable Replacement Project - (M31) - Denison and Birchmount, Markham	$ 1.8	$ -
151457	Cable Injection Project - (V25) - Major Mackenzie - Keele - Rutherford - Jane, Vaughan	$ 0.6	$ -
151336	Cable Replacement Project - (BA22) - Sunnidale and Anne, Barrie	$ 1.6	$ 2.0
151360	Cable Injection Project - (M31) - 14th - Old Kennedy - Steeles - Warden, Markham	$ 1.4	$ 1.4
152383	Cable Injection - (AREA 39) - Erin Mills Pkway & Thomas St, Mississauga	$ -	$ 0.9
151430	Cable Injection- (AREA 38) - Bristol & Creditview, Mississauga	$ -	$ 0.8
152388	Cable Injection Project - (V17) - Langstaff - Railway - Rutherford - Dufferin, Vaughan	$ -	$ 1.7
152385	Cable Injection Project - (R23) - Bathurst - Weldrick - Yonge - Carville, Richmond Hill	$ -	$ 1.6
150262	Cable Replacement Project - (M33) - 16th Avenue and Village Parkway, Markham	$ -	$ 0.6
151363	Cable Injection Project - (M25) - 14th - McCowan - Steeles - Old Kennedy, Markham	$ 1.3	$ 1.4
151362	Cable Injection Project - (M39) - 16th - Warden - Hwy 7 - Woodbine, Markham	$ 1.2	$ 2.1
151364	Cable Injection Project - (V23) - Hwy 7 - Keele - Langstaff - Jane, Vaughan	$ 1.2	$ -
151458	Cable Injection Project - (V31) - Langstaff - Weston - Rutherford - Jane, Vaughan	$ 1.1	$ -
150255	Cable Replacement Project - (B23) - Cundles Rd and Janine St, Barrie	$ -	$ 1.2
150263	Cable Replacement Project - East - Left Behind Cable	$ 2.1	$ 3.0
	Total Investment Funded in Rates	$ 22.9	$ 23.4

1-Staff-20

Attachment 2
UG Capital Budgets

Underground Cable Injection and Replacement Capital Budgets

Alectra - 2020-2024

Rate Zone	Number of Metered Customers (Residential, GS, Large Use)		Year					
			2020	2021	2022	2023	2024	2020-2024
			Actual	Actual	Q1 Forecast	Forecast	Forecast	
Brampton	169,572	Funded through distribution rates	$ 4.46	$ 10.01	$ 5.05	$ 3.47	$ 5.34	$ 28.34
		Funded through ICM rate riders	$ -	$ -	$ -	$ -	$ -	$ -
		Total	**$ 4.46**	**$ 10.01**	**$ 5.05**	**$ 3.47**	**$ 5.34**	**$ 28.34**
Enersource	208,420	Funded through distribution rates	$ 15.19	$ 9.73	$ 9.29	$ 6.73	$ 7.00	$ 47.94
		Funded through ICM rate riders	$ -	$ -	$ -	$ 8.73	$ 8.69	$ 17.42
		Total	**$ 15.19**	**$ 9.73**	**$ 9.29**	**$ 15.46**	**$ 15.69**	**$ 65.36**
Guelph	57,003	Funded through distribution rates	$ 1.55	$ 1.04	$ -	$ 0.47	$ 0.43	$ 3.49
		Funded through ICM rate riders	$ -	$ -	$ -			$ -
		Total	**$ 1.55**	**$ 1.04**	**$ -**	**$ 0.47**	**$ 0.43**	**$ 3.49**
Horizon	253,164	Funded through distribution rates	$ 5.96	$ 4.43	$ 6.84	$ 8.21	$ 9.25	$ 34.70
		Funded through ICM rate riders	$ -	$ -	$ -	$ -	$ -	$ -
		Total	**$ 5.96**	**$ 4.43**	**$ 6.84**	**$ 8.21**	**$ 9.25**	**$ 34.70**
PowerStream	381,524	Funded through distribution rates	$ 19.79	$ 13.71	$ 19.21	$ 16.20	$ 16.96	$ 85.88
		Funded through ICM rate riders	$ -	$ -	$ -	$ 16.63	$ 18.24	$ 34.88
		Total	**$ 19.79**	**$ 13.71**	**$ 19.21**	**$ 32.83**	**$ 35.21**	**$ 120.75**
Alectra (total)	1,069,683	Funded through distribution rates	$ 46.96	$ 38.92	$ 40.40	$ 35.09	$ 38.99	$ 200.35
		Funded through ICM rate riders	$ -	$ -	$ -	$ 25.36	$ 26.93	$ 52.30
		Total	**$ 46.96**	**$ 38.92**	**$ 40.40**	**$ 60.45**	**$ 65.92**	**$ 252.64**

1-Staff-21

Underground Asset Renewal Reductions Reconciliation
Reference 1: Exhibit 3, Tab 1, Schedule 1, page 4, table 20
Reference 2: Exhibit 4, Tab 1, Schedule 1, Attachment 12-*Guidehouse Assurance Review*

Table 20 of Exhibit 3- Tab 1- Schedule 1 shows that Alectra Utilities has reduced its Underground Asset Renewal by $125.2 million (before the ICMs being proposed in the current application) from the 2020-2024 DSP as filed in EB-2019-0018, while Alectra Utilities is proposing ICM projects of $52.3 million for underground asset renewal for the Enersource and PowerStream RZs.

Guidehouse Canada Ltd's (Guidehouse's) document filed as Attachment 12 to Exhibit 4- Tab 1- Schedule 1 is a third-party Assurance Review of Alectra Utilities' revised 2020-2024 DSP, per revisions made earlier this year. Guidehouse's report is dated May 2022. In its report, Guidehouse states on page 2 of its report:

> **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. 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.**

OEB staff calculates, based on the data that is reported in Table 20, that the reduction in underground cable injection and replacement (i.e., underground asset renewal), would be $125.2 million - $52.3 million (proposed for ICM recovery) = $72.9 million. This is a reduction of nearly $15 million more than the $58 million documented by Guidehouse.

a) **Please provide a reconciliation between the underground asset renewal reductions from the 2020-2024 DSP between Alectra Utilities' evidence in Table 20 and that documented by Guidehouse in the "Assurance Review" report.**

Response:

a) In the documentation by Guidehouse, they refer to approximately $58 million over five years for System Renewal; mostly underground cable injection and replacement. The total reduction for System Renewal includes other elements such as an increase in Reactive capital. Guidehouse was highlighting that the largest variance is a result of underground. The calculation is correct that the total net variance from underground specifically was $72.9MM after the inclusion of ICM projects.

1-Staff-22

Materiality Threshold
Reference: Exhibit 2, Tab 1, Schedule 1, pages 4-5 & 18-20

On page 4 of Exhibit 2- Tab 1- Schedule 1, Alectra Utilities documents the materiality threshold equation per the current Capital Funding Option policy of the OEB.[1] The Price Cap Index (PCI), used in the materiality threshold calculation is the "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".

Alectra Utilities has used the 3.3% value for the PCI, as approved by the OEB in the Generic IPI decision for 2022 rate applications.[2] Alectra Utilities has documented that this value will be updated for the OEB-issued PCI for 2023 rate applications at the time of the decision and rate order for the final determination of the 2023 eligible ICM capital funding and the resulting ICM rate riders.[3] Similarly, Alectra Utilities proposes that the final determination for the 2024 eligible ACM capital funding and the resulting ACM rate riders would be calculated based on the OEB-issued PCI for 2024 rate applications at the time of the decision and rate order for Alectra Utilities' 2024 rates application.[4]

OEB staff notes that the use of the single, current value of the PCI is a simplification of the formula but was reasonable before the onset of the COVID-19 pandemic when inflation fluctuated around the 2% target of the Bank of Canada and the Government of Canada. However, beginning in mid-2021, inflation has increased outside of the 1% to 3% range that the Government and the Bank of Canada target. While part of the increase, initially, can be attributed to a "rebound" or base year effect of lower inflation in 2020 due to socioeconomic lockdowns to address the onset of the pandemic, restricting many goods and services and creating an oversupply in other sectors, inflation has proven to be higher and more persistent than was hoped for.

[1] EB-2014-0219, *Report of the OEB on New Policy Options for the Funding of Capital Investments: Supplemental Report*, January 22, 2016

[2] EB-2021-0212

[3] Exhibit 2- Tab 1- Schedule 1- Page 5

[4] Exhibit 2- Tab 1- Schedule 1- Page 18-20

a) Please document any sensitivity analyses that Alectra Utilities has done concerning its ICM proposals in this application, with respect to changes in inflation on prices or on the forecasted costs of the Underground Asset Renewal projects.

b) Please confirm that Alectra has not taken into account the annual depreciation expense being recovered (and specifically in each of the PowerStream and Enersource RZs) through current approved ICM rate riders. This information is provided in the attachment to 1-Staff-16, "1-Staff-16_Attachment 1.xlsx", in which Alectra has been requested to confirm and update in response to that interrogatory.

Response:

a) Please see Alectra Utilities' response to 1-Staff-23.

b) Alectra Utilities confirms that it has not taken into account the annual depreciation expense being recovered (and specifically in each of the PowerStream and Enersource RZs) through current approved ICM rate riders.

1-Staff-23

Sensitivity Analysis for Adjusted Capital Plan
Reference: Exhibit 3, Tab 1, Schedule 1

Alectra documents, beginning on page 2 of this exhibit, its adjusted DSP following the EB-2019-0008 M-factor Decision as conducted in the March-May 2022 period.

a) What inflation factor was used as part of the Adjusted Capital Plan?
b) Does Alectra Utilities plan to further adjust its capital for this application as new inflation data is available?
c) Please document any sensitivity analysis, contingencies, or updates, that Alectra Utilities considered and/or adopted as part of the DSP update done in March/April 2022.

Response:

a) Alectra Utilities applied an inflation factor of 3.2% to 2023 projects and an inflation factor of 3.8% to 2024 projects.

b) Alectra Utilities is not planning any further adjustments to its capital plan inflation rate.

c) Please see response to 1-Staff-22 (a).

1-Staff-24

PILs

Reference 1: Exhibit 2, Tab 1, Schedule 1, pages 11 & 18

Reference 2: Chapter 3 Filing Requirements for Electricity Distribution Rate Applications - 2022 Edition for 2023 Rate Applications, May 24, 2022, pages 29-30

The Accelerated Investment Incentive Program (AIIP) provides for a first-year increase in capital cost allowance (CCA). Alectra Utilities indicated that PILs in the ICM have been calculated using a full year of CCA.

Under the AIIP, in 2023, accelerated CCA will be calculated by applying the CCA rate at 1.5 times the additions in the year. In 2024, accelerated CCA is being phased out, and accelerated CCA will be calculated by applying the CCA rate at one time the additions in the year.

a) **Please confirm that for 2023, accelerated CCA has not been reflected in the ICM PILs and that any accelerated CCA impacts will be reflected in Account 1592, Sub-account CCA Changes. If not confirmed, please explain.**
b) **Please confirm that for 2024, no amounts are expected to be recorded in Account 1592, Sub-account CCA Changes as the calculation of CCA in the ICM PILs and actual CCA expected to be claimed are aligned. If not confirmed, please explain.**
c) **The Chapter 3 Filing Requirements indicate that the OEB may consider accelerated CCA in assessing the impact of the proposed capital projects on the operations of the distributor in determining if ICM funding is warranted.**
    i. **Please provide the calculation of the incremental revenue requirement if accelerated CCA is reflected for each of the PowerStream and Enersource rate zone's 2023 ICMs. Please also provide this calculation for the 2024 ICMs if accelerated CCA has not already been reflected in the ICM PILs.**
    ii. **Please comment on whether the ICMs have a significant influence on the operation of the distributor and whether ICM funding is warranted after taking accelerated CCA into account for the ICMs.**

Response:

a) Alectra Utilities confirms that for 2023, accelerated CCA has not been reflected in the ICM PILs and that any accelerated CCA impacts will be reflected in Account 1592, Sub-account CCA Changes.

b) Alectra Utilities confirms that for 2024, no amounts are expected to be recorded in Account 1592, Sub-account CCA Changes.

c)

i. The incremental revenue requirement with accelerated CCA for the PowerStream and Enersource RZs in 2023 and 2024, is summarized in Table 1 and Table 2 below. The calculations for 2023 are filed as Attachments 1 and 2 to this response.

Table 1 – Impact of Accelerated CCA – PowerStream RZ

Incremental Revenue Requirement	2023	2024
Incremental Revenue without CCA impact	$1,178,318	$1,292,359
Incremental Revenue with CCA impact	$938,429	$1,292,359
Difference	$239,889	$0

Table 2 – Impact of Accelerated CCA – Enersource RZ

Incremental Revenue Requirement	2023	2024
Incremental Revenue without CCA impact	$684,953	$681,792
Incremental Revenue with CCA impact	$559,063	$681,792
Difference	$125,890	$0

ii. The incremental revenue requirement for the PowerStream RZ before the impact of accelerated CCA is $1,178,318 in 2023, compared to $938,429 inclusive of accelerated CCA (a difference of $239,889). The incremental revenue requirement for the Enersource RZ before the impact of accelerated CCA is $684,953 in 2023, compared to $559,063 inclusive of accelerated CCA (a difference of $125,890). The revenue requirement in 2023 under both calculations is material and will have a significant influence on Alectra Utilities. Further, as confirmed in response to part b), there is no impact to ICM revenue requirement

when assessing the impact of the accelerated CCA on ICM funding. For further details on significant influence, please see Exhibit 2, Tab 1, Schedule 1, p. 8 and 16.

1-Staff-24

Attachment 1
2023 ICM Model CCA 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 5.01

Utility Name	Alectra Utilities Corporation-Enersource Rate Zone
Assigned EB Number	
Name of Contact and Title	
Phone Number	
Email Address	
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

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

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 2013	Year 1 2014	Year 2 2015	Year 3 2016	Year 4 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 2018	Year 6 2019	Year 7 2020	Year 8 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 2018			Year 6 2019			Year 7 2020			Year 8 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						$ 65,265,647		
Materiality Threshold			$ 51,648,970			$ 52,182,923		
Maximum Eligible Incremental Capital (Forecasted Capex less Threshold)			$ -			$ 13,082,724		
			Year 9			Year 10		
			2022			2023		
Project Descriptions:	**Type**		**Proposed ACM/ICM**	**Amortization Expense**	**CCA**	**Proposed ACM/ICM**	**Amortization Expense**	**CCA**
Cable Renewal						$ 8,729,165	$ 193,981	$ 1,047,500
Total Cost of ACM/ICM Projects			$ -	$ -	$ -	$ 8,729,165	$ 193,981	$ 1,047,500
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	$ 1,047,500	$ 1,047,500	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)			$	1,047,500	V
Incremental Taxable Income			-$	545,177	W = T + U - V
Current Tax Rate	26.5%	X			
Taxes/PILs Before Gross Up			-$	144,472	Y = W * X
Grossed-Up Taxes/PILs			-$	196,560	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	-$	196,560	AC
Incremental Revenue Requirement		$	559,063	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%	232,257	0	0	232,257	185,198	1,560,006,402		0.10	0.0000	0.0000
GENERAL SERVICE LESS THAN 50 kW	7.89%	6.53%	0.00%	44,102	36,486	0	80,588	19,152	650,022,841		0.19	0.0001	0.0000
GENERAL SERVICE 50 TO 499 kW	2.58%	0.00%	18.58%	14,439	0	103,878	118,317	3,560	1,802,899,951	5,106,990	0.34	0.0000	0.0203
GENERAL SERVICE 500 TO 4,999 kW	8.28%	0.00%	8.06%	46,272	0	45,055	91,327	501	1,908,000,191	4,304,608	7.70	0.0000	0.0105
LARGE USE	1.17%	0.00%	3.85%	6,554	0	21,500	28,054	9	960,912,688	1,654,974	60.69	0.0000	0.0130
UNMETERED SCATTERED LOAD	0.27%	0.15%	0.00%	1,490	848	0	2,338	3,131	11,802,772		0.04	0.0001	0.0000
STREET LIGHTING	0.73%	0.00%	0.38%	4,070	0	2,112	6,182	50,897	14,888,780	41,559	0.01	0.0000	0.0508
Total	**62.46%**	**6.68%**	**30.86%**	**349,184**	**37,335**	**172,544**	**559,063**	**262,448**	**6,908,533,625**	**11,108,132**			
							559,063						
							From Sheet 11, E93						

1-Staff-24

Attachment 2
2023 ICM Model CCA 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 5.01

Utility Name	Alectra Utilities Corporation-PowerStream Rate Zone		
Assigned EB Number			
Name of Contact and Title			
Phone Number			
Email Address			
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
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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

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

Cost of Service Rebasing Year		**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 $Threshold\ Value \times d$

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

Project Descriptions:	Type	Test Year 2017	Year 1 2018			Year 2 2019			Year 3 2020			Year 4 2021		
			Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA
Rutherford Road Widening	New ICM													
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 Year 5 2022	*Price Cap IR* Year 6 2023
Distribution System Plan CAPEX		$ 120,055,337
Materiality Threshold	$ 96,546,202	$ 97,788,466
Maximum Eligible Incremental Capital (Forecasted Capex less Threshold)	$ -	$ 22,266,871

Project Descriptions:	Type	Year 5 2022			Year 6 2023		
		Proposed ACM/ICM	Amortization Expense	CCA	Proposed ACM/ICM	Amortization Expense	CCA
Cable Renewal					$ 16,633,796	$ 369,640	$ 1,996,055
Total Cost of ACM/ICM Projects		$ -	$ -	$ -	$ 16,633,796	$ 369,640	$ 1,996,055
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	$ 1,996,055	$ 1,996,055	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)			$ 1,996,055	V
Incremental Taxable Income			-$ 1,048,728	W = T + U - V
Current Tax Rate	26.5%	X		
Taxes/PILs Before Gross Up			-$ 277,913	Y = W * X
Grossed-Up Taxes/PILs			-$ 378,113	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	-$ 378,113	AC
Incremental Revenue Requirement		$ 938,429	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%	519,331	0	0	519,331	342,946	2,962,781,846		0.13	0.0000	0.0000
GENERAL SERVICE LESS THAN 50 kW	5.65%	8.49%	0.00%	53,028	79,644	0	132,671	33,352	941,632,609		0.13	0.0001	0.0000
GENERAL SERVICE 50 TO 4,999 KW	4.34%	0.00%	24.56%	40,737	0	230,458	271,195	5,224	4,521,404,350	11,893,965	0.65	0.0000	0.0194
LARGE USE	0.07%	0.00%	0.18%	672	0	1,693	2,365	2	91,936,942	163,835	28.00	0.0000	0.0103
UNMETERED SCATTERED LOAD	0.16%	0.13%	0.00%	1,519	1,252	0	2,772	3,195	13,968,337		0.04	0.0001	0.0000
SENTINEL LIGHTING	0.00%	0.00%	0.00%	35	0	33	68	152	262,056	719	0.02	0.0000	0.0455
STREET LIGHTING	0.65%	0.00%	0.42%	6,120	0	3,907	10,027	93,485	47,642,169	134,089	0.01	0.0000	0.0291
Total	**66.22%**	**8.62%**	**25.16%**	**621,442**	**80,896**	**236,092**	**938,429**	**478,356**	**8,579,628,310**	**12,192,608**			
							938,429						
							From Sheet 11, E93						

1-Staff-25

Return on Equity
Reference 1: Exhibit 2, Tab 1, Schedule 1, pages 8 & 16
Reference 2: Exhibit 4, Tab 1, Schedule 1, Attachment 2
Reference 3: EB-2019-0018, Partial Decision and Order, January 30, 2020, pages 42-46
Reference 4: EB-2020-0002, Decision and Rate Order, December 17, 2021, pages 43-46

Alectra Utilities' 2021 return on equity (ROE) was 6.18%, 277 basis points below the consolidated ROE for Alectra Utilities of 8.95%. In Attachment 2, Alectra Utilities provided the summary of the OEB's *Reporting and Record-Keeping Requirements* (RRR) 2.1.5.6 it filed with the OEB to support its 2021 ROE. OEB staff has attached the full RRR 2.1.5.6 filed with the OEB in "1-Staff-25 RRR 2.1.5.6.pdf".

Alectra Utilities' 2021 RRR 2.1.5.6 includes an adjustment of ($32,568,001) for Net OM&A Merger Savings in applicable areas.

a) **In the Horizon rate zone's 2017 to 2019 ESM calculations, adjustments were made to exclude merger-related costs and savings. Please confirm that the nature of the adjustment for Net OM&A Merger Savings in Alectra Utilities' 2021 ROE is the same as the adjustments for Horizon's 2017 to 2019 ESM. If not confirmed, please explain the nature of the adjustments.**
b) **OEB staff recalculated Alectra Utilities' 2021 ROE excluding the Net OM&A Merger Savings adjustment in applicable areas to be 7.95%. Please confirm the accuracy of the recalculated ROE. If not confirmed, please provide Alectra Utilities' ROE calculation excluding the Net OM&A Merger Savings adjustment in the same format as in Attachment 2.**
c) **Please explain the rationale for the Net OM&A Mergers Savings adjustment in Alectra Utilities' 2021 ROE calculation and why this adjustment is appropriate in determining the ROE for ICM funding purposes. Please discuss this in the context of how it compares to the appropriateness of including the adjustment for ESM purposes.**

Response:

a) Alectra Utilities confirms that the nature of the adjustment for net OM&A merger savings in the 2021 ROE calculation is the same as the adjustments for Horizon's 2017 to 2019 ESM.

b) Alectra Utilities confirms that 2021 ROE excluding the net OM&A merger savings adjustment is 7.95%.

c) On March 26, 2015, the OEB issued its *Report of the Board: Rate-making Associated with Distributor Consolidation* ("MAADs Policy"). The OEB requires consolidating entities that propose to defer rebasing beyond five years to implement an ESM for the period beyond five years, whereby excess earnings are shared with consumers on a 50:50 basis for all earnings that are more than 300 basis points above the consolidated entity's annual ROE. The ESM is designed to protect customers and ensure that they share in any increased benefits from consolidation during the deferred rebasing period. As stated at p. 7 of the MAADs Policy, this sharing provides for the shareholders to continue to recover transaction costs while ensuring customers of the consolidated entity will benefit from the efficiencies and savings the new distributor has achieved.

The ESM will consider the earning of Alectra Utilities in years six to ten (i.e., 2022 to 2026) of the deferred rebasing period as a consolidated entity. Specifically, in years six to ten, Alectra Utilities will exclude the net OM&A merger savings adjustment in its calculation of ROE. In effect, this will ensure that the calculated ROE includes the savings Alectra Utilities achieved as a result of the consolidation, consistent with ESM requirement in the MAADs Policy. As the ESM is only effective beyond the initial five-year deferral period, 2021 RRR ROE included an adjustment for net OM&A merger savings. This is consistent with Alectra Utilities' calculation of RRR ROE for 2017, 2018, 2019 and 2020.

To be eligible for ICM, a distributor must pass the means test. Under the means test, if a distributor's regulated return, as calculated in its most recent calculation (RRR 2.1.5.6), exceeds 300 basis points above the deemed ROE embedded in the distributor's rates, the funding for any incremental capital project will not be allowed. Alectra Utilities' 2021 ROE including (6.18%) or excluding (7.95%) the net OM&A merger savings adjustment does not

exceed 300 basis points above its deemed ROE (8.95%), therefore, under both calculations, Alectra Utilities satisfies the means test.