



September 20, 2017

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319, 27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

Re: Alectra Utilities Corporation 2018 Electricity Distribution Rate Application – CIR & IRM
AMPCO Interrogatories
Board File No. EB-2017-0024

Dear Ms. Walli:

Attached please find AMPCO's interrogatories in the above proceeding.

Please do not hesitate to contact me if you have any questions or require further information.

Sincerely yours,

(ORIGINAL SIGNED BY)

Colin Anderson
President
Association of Major Power Consumers in Ontario

Copy to: Alectra Utilities Corporation

**Alectra Utilities Inc. (Alectra)
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G-AMPCO-1

Please explain any significant differences in the types of system renewal asset management projects and programs undertaken by each rate zone.

G-AMPCO-2

Please confirm the proposed 2018 capital plans and ICM requests in Brampton RZ, Enersource RZ and PowerStream RZ are intended to maintain reliability. If not, please summarize the expected reliability outcomes for each rate zone.

G-AMPCO-3

Please explain any significant differences in the information and cost/benefit analysis provided in business cases prepared by each rate zone to support capital investment needs.

G-AMPCO-4

Please explain how Alectra has achieved investment portfolio optimization across all four rate zones.

G-AMPCO-5

Please provide the forecast and actual capital in-service additions for the Brampton, Enersource and PowerStream rate zones for the years 2013 to 2016 and forecast for 2017.

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Brampton Rate Zone

BRZ-AMPCO-1

Ref: Ex 2-2-10 Page 2 Table 60

- a) Please provide the forecast Capital Budget amounts by investment category and totals included in the DSP for 2016, 2017 and 2018.

BRZ-AMPCO-2

Ref: Ex 2-2-10 Page 3 Table 61

- a) Please provide the 2017 capital spend to date for each category.
- b) Please provide an update to 2017 forecast Actuals for each category.

BRZ-AMPCO-3

Ref: Ex 2-2-10 Page 3 Table 62

- a) Please provide the 2017 capital spend to date for each category.
- b) Please provide an update to 2017 forecast Actuals for each category.
- c) For the years 2013 to 2016, an average of \$3.732 million has been spent on UG Lines Planned Asset Replacement. Please explain the need for the significant increases in 2017 and 2018 to \$5.229 million and \$5.149 million, respectively, and the expected outcome.
- d) Please explain why the investment in Stations/P&C – Planned Replacement is significantly lower in 2017 (\$134,000) compared to previous years and 2018 (\$1.677 million).

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PowerStream Rate Zone

PRZ-AMPCO-1

Ref: Ex 2-3-10 Page 4 Table 91

- a) Please update the table to include the spending to date in 2017.
- b) Please update the forecast for 2017.

PRZ-AMPCO-2

Ref: Ex 2-3-10 Page 4 Table 92

- a) Please identify System Access projects in 2016 and 2017 that were deferred and did not proceed as planned and explain why.

PRZ-AMPCO-3

Ref: Ex 2-3-10 Page 8 Table 93

- a) Please update the table to include spending to date in 2017.
- b) Please update the forecast for 2017.

PRZ-AMPCO-4

Ref: Ex 2-3-10 Page 9 Table 95

- a) Please explain the need for advancement of the upgrade to Customer Information Systems to 2017.

PRZ-AMPCO-5

Ref: Ex 2-3-10 Page 13 Table 98

- a) Please provide the bill impacts for the Large User Class.

PRZ-AMPCO-6

Ref 1: Ex 2-3-10 Attachment #35

- a) Please provide a live version of Attachment #35 in excel format that maps the 2018 projects to the spending categories in Table 93 at Ex 2-3-10 Page 8.
- b) Please provide the project ID#, forecast in-service date and priority ranking for each project in the spreadsheet completed in part (a).

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c) Please identify all new categories of spending under system renewal.

PRZ-AMPCO-7

Ref 1: Ex 2-3-10 Attachment #35

Ref 2: EB-2015-0003 Undertaking JTC 1.5_App 2-AA 2015-2020_20150911

Cable Injection Program	4,375,771
Cable Replacement Program	14,288,297
Emerging Cable Replacement Projects	1,081,576

- a) The table above from reference #2 shows the forecast 2018 budget in the PowerStream DSP for Cable injection and replacement work. Please explain any adjustments to the proposed spending in 2018 in Attachment #35 related to cables.
- b) Please provide the forecast spend in 2017 for the three cable projects/programs in the above table and provide the number of units addressed under each project/program
- c) Please provide the proposed number of units to be addressed under each cable project in 2018 listed in Attachment #35.

PRZ-AMPCO-8

Ref 1: Ex 2-3-10 Attachment #35

Ref 2: EB-2015-0003 Undertaking JTC 1.5_App 2-AA 2015-2020_20150911

- a) Please list the projects in 2018 that include pole replacements and provide the forecast number of poles to be replaced under each of the projects and the % to be replaced that are in very poor and poor condition.
- b) Please provide PowerStream's Pole Reinforcement budget in 2018 and the number of poles to be addressed.

PRZ-AMPCO-9

Ref: Ex 2-3-10 Attachment #35

- a) Please provide annual historical failure data (# of failures, # customer outage minutes) for each of the years 2010 to 2017 for the following asset groups: cable, poles, switchgears and padmount transformers.

PRZ-AMPCO-10

Ref 1: Ex 2-3-10 Attachment #35

Ref 2: EB-2015-0003 Undertaking JTC 1.5_App 2-AA 2015-2020_20150911

Switchgears - Unscheduled Replacement of Failed (end of useful Life) Distribut	1,421,218
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Preamble: At reference #2, PowerStream proposed to spend \$1.421 Million in 2018 on unscheduled replacement of switchgears. In Attachment #35, the forecast spend in 2018 is now \$1.817, a 28% increase.

a) Please explain the need for the increase and the expected outcome.

PRZ-AMPCO-11

Ref 1: Ex 2-3-10 Attachment #35

Ref 2: EB-2015-0003 Undertaking JTC 1.5_App 2-AA 2015-2020_20150911

Preamble: At reference #2, PowerStream's spending in 2013 and 2014 on the Radial Supply Remediation/Conversion on Miller Avenue totaled \$650,000 and no subsequent spending was planned for the years 2017 to 2020.

a) Please explain the need for additional spending in 2018 of \$1.628 million.

PRZ-AMPCO-12

Ref: Ex 2-3-10 Attachment #35

a) Please provide the forecast spend for Rear Lot Supply Remediation in 2017.

b) Please provide the forecast spend for the 4-Circuit Pole Storm Hardening Program in 2017.

PRZ-AMPCO-13

Ref 1: Ex 2-3-10 Attachment #35

Ref 2: EB-2015-0003 Undertaking JTC 1.5_App 2-AA 2015-2020_20150911

Pad Mount Transformer Replacement	536,122
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Preamble: At reference #2, PowerStream proposed to spend \$0.536 million in 2018 on Pad Mount Transformer Replacement. In Attachment #35, the forecast spend in 2018 is \$1.072 million, double the amount. Please explain the need for the increase and the expected outcome.

PRZ-AMPCO-14

Ref: Ex 2-3-10 Page 14

Preamble: The evidence states "Further, for system service and system renewal projects, customers were asked which capital investment approach they would prefer Alectra Utilities to take in 2018 for the PowerStream RZ: (i) system reliability is maintained (correlates with bill impacts identified in Table 98 above); (ii) system reliability eventually declines, calculated at 50% of the bill impacts identified in Table 98 above; and (iii) system reliability significantly declines."

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- a) If the Board does not approve an ICM in 2018 for the PowerStream RZ, will reliability be maintained? If not, please provide the resulting impact on reliability and show the analysis.
- b) Please discuss the information provided to customers in order to respond to the above question.
- c) Were customers provided with the project details in Attachments #35? If not, why not?

PRZ-AMPCO-15

Ref: Ex 2-3-10 Page 17

- a) Please provide the 0.82% growth rate calculation.

PRZ-AMPCO-16

Ref: Ex 2-3-10 Page 20

Preamble: The evidence indicates each ICM project is distinct, unrelated to a recurring annual capital project, and has been evaluated in the asset management and capital planning process as required in 2018.

- a) Please explain further how each project under system unrelated to a recurring annual capital project.

PRZ-AMPCO-17

Ref: PRZ-Staff-7

- a) For the ICM projects that were included in the original DSP please explain the reason why any projects in 2018 were advanced from subsequent years or deferred from previous years to 2018.

PRZ-AMPCO-18

Ref: Attachment #33

- a) Please complete the table at Appendix A to summarize the assets replaced in 2016, and forecast to be replaced in 2017 and 2018. Please adjust the asset categories as required.

PRZ-AMPCO-19

Ref 1: Attachment #33 Page 11 Station Switchgear Replacement – 8th Line MS323

Ref 2: EB-2015-0003 Ex G Tab 2 Appendix A Project #101572

Preamble: The evidence states “The most recent asset condition assessment of the low voltage (15kV) switchgear at the 8th Line MS323 has identified a system renewal investment driven by technical obsolescence, poor condition assessment and historical trend of equipment failure.

- a) The confirm the date of the most recent asset condition assessment.

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- b) Please provide a table that sets out the number of assets to be replaced under this project by asset type, the quantity in very poor and poor condition, and the actual historical failures by asset type.

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Horizon Rate Zone

HRZ-AMPCO-1

Ref: Ex 2-4-11 Page 3

- a) Page 3 - Please provide the list of 2018 projects in to address the negative trend in overall system performance.
- b) Page 3 - Please provide the list of 2018 projects to address the negative trend in customer service quality.
- c) Page 10 – Please provide a copy of the latest Kinectrics’ Asset Condition Assessment report.
- d) Page 10 – Please provide an overview of the outage data tracked by Alectra and the nature of the improvements made to review outage data.
- e) Page 20 – Please discuss the changes in more frequent and detailed inspections and provide details of the assets impacted.
- f) Page 20 – Please describe the additional analytical methods used.

HRZ-AMPCO-2

Ref: Ex 2-4-11 P16

Preamble: The reactive replacement program to address substandard or failed transformers is forecast to cost \$1.1MM in each year from 2017 to 2019 and \$1.4MM in 2022.

- a) Please identify the capital project in Attachment #49 where this cost is captured.
- b) Please provide the number of failed transformers replaced for the years 2010 to 2022.

HRZ-AMPCO-3

Ref: Ex 3-1-1 Attachment #49

- a) Please provide a live version of Attachment #49 in excel format that maps the 2018 projects to the spending categories in Table 133 at x 2-4-11 Page 19.
- b) Please provide the project ID#, forecast in-service date and priority ranking for each project in the spreadsheet completed in part (a).

HRZ-AMPCO-4

Ref 1: Ex 3-1-1 Attachment #49

Ref 2: EB-2015-0065 Undertaking JT1.2

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At reference # 2, the following capital project categories were included under Overhead Rebuilds in 2016.

ENERSOURCE HYDRO MISSISSAUGA
CAPITAL EXPENDITURE PROJECTS
2016 ICM

Business Unit	Description	Submission (Dec)	
		2016 Budget	
1 C0561 - Overhead Rebuilds	2016 Overhead Switch Replacement Program	\$	300,000
2 C0561 - Overhead Rebuilds	2016 Insulator Replacement Program	\$	300,000
3 C0561 - Overhead Rebuilds	2016 Stores Small Capital Material	\$	400,000
4 C0561 - Overhead Rebuilds	2016 Wood Pole Installations	\$	400,000
5 C0561 - Overhead Rebuilds	2016 Concrete Pole Installations	\$	800,000
6 C0561 - Overhead Rebuilds	2016 Misc Capital (FIs, Term Poles, Animal Protection, Grounding Replacements)	\$	200,000

At reference #1, the project categories have changed from JT1.2.

a) Please provide the capital projects in 2018 at reference #1 and proposed spending that correspond to the Overhead Rebuild work in the above table.

HRZ-AMPCO-5

Ref 1: Ex 3-1-1 Attachment #49

Ref 2: EB-2015-0065 Undertaking JT1.2

At reference # 2, the following capital project categories were included in the 2016 proposed capital budget.

ENERSOURCE HYDRO MISSISSAUGA
CAPITAL EXPENDITURE PROJECTS
2016 ICM

Business Unit	Description	Submission (Dec)	
		2016 Budget	
C0562 - Subtransmission Renewal		\$	4,200,000
C0563 - U/G TX/Replace/Overhaul	Underground Transformer and Equipment Renewal	\$	4,125,000
C0563 - U/G TX/Replace/Overhaul		\$	4,125,000
C0564 - O/H TX/Replace/Overhaul	Overhead Transformer and Equipment Renewal	\$	3,000,000
C0564 - O/H TX/Replace/Overhaul		\$	3,000,000
C0565 - U/G Cable Replace	Pad Mounted Switchgear Replacement	\$	1,780,000
C0565 - U/G Cable Replace	Primary Distribution Equipment Replacement	\$	475,000
C0565 - U/G Cable Replace	Underground Cable and Splice Replacement	\$	1,400,000
C0565 - U/G Cable Replace	Secondary Cable Replacements	\$	95,000
C0565 - U/G Cable Replace		\$	3,750,000
C0567 - Emergency Replacements	Emergency Replacements	\$	320,000

At reference #1 the budget for Underground Transformer and Equipment Renewal is \$716,044. The project Overhead Transformer and Equipment Renewal is not listed. A new project Transformer Replacement Project – Underground & Overhead is listed with a budget of \$8,447,243.

a) Please explain the differences in the capital projects between reference #2 and reference #1.

HRZ-AMPCO-6

a) Please complete Appendix B.

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HRZ-AMPCO-7

Ref: Ex 2-4-11 Page 20

Preamble: The evidence states "In contrast, all jacketed primary cables installed in Mississauga over the last 22 years have experienced only a 4.8% failure rate.

a) Please provide the failure rate calculation.

HRZ-AMPCO-8

Ref: Ex 3-1-1 Attachment #50 Page 68

a) Please provide the number of interruptions by cause code for each of the years 2011 to 2015.

HRZ-AMPCO-9

Ref: Ex 3-1-1 Attachment #50 Page 133 Table 32

a) Please recast Table 32 to show the HI as numerical quantities instead of percentages.

b) Please provide a live excel version of the table in part (a).

c) For each asset category, please provide the Data Availability Index (DAI) for this year compared to last year.

HRZ-AMPCO-10

Ref: Ex 3-1-1 Attachment #50 Page 133 Table 32

a) Please complete Appendix C to show the quantity of assets replaced.

HRZ-AMPCO-11

Ref: Ex 3-1-1 Attachment #50 Page 133 Table 33

a) Please identify and explain any changes in Alectra's maintenance analysis, strategy and frequency of maintenance since EB-2015-0065.

HRZ-AMPCO-12

Ref: Ex 3-1-1 Attachment #50 Page 262

a) Please provide a table that sets out Kinectrics' proposed asset replacement action plan quantities compared to Alectra's proposal.

HRZ-AMPCO-13

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Ref: Attachment #50 Page 265 Table 55

- a) Please provide a live excel version of Table 55 Material Capital Projects 2017 -2022.

HRZ-AMPCO-14

Ref: Attachment #50 Page 342 Table 67

- a) Please provide the plan amounts compared to actuals for each category for the years 2015 and 2016.

HRZ-AMPCO-15

Ref: Attachment #50 Page 362-364

- a) Page 362: Please provide the number of cable failures for the years 2010 to 2013.
- b) Page 363: Please provide the customer minutes due to cable failures for the years 2010 to 2013.
- c) Page 364: The evidence indicates that average age of failed cables is approximately 40 years. Please provide this calculation.
- d) Page 363: Please provide the ten years of underground cable failure history referred to.

HRZ-AMPCO-16

- a) Please provide annual historical failure data (# of failures, # customer outage minutes) for each of the years 2010 to 2017 for the following asset groups: Overhead switches, insulators, wood poles, concrete poles, underground transformers, overhead transformers, padmount switchgears.

HRZ-AMPCO-17

- a) Please complete Appendix D.