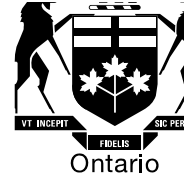


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BY E-MAIL

February 8, 2018

Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: Essex Powerlines Corporation (Essex Powerlines)
Application for 2018 electricity distribution rates
OEB Staff Interrogatories
Ontario Energy Board File Number: EB-2017-0039**

In accordance with Procedural Order No. 1, please find attached OEB staff's interrogatories in the above noted proceeding. Essex Powerlines and all intervenors have been copied on this filing.

Essex Powerlines' responses to interrogatories are due by March 2, 2018.

Yours truly,

Original Signed By

Donald Lau
Project Advisor – Rates Major Applications

Attach.

OEB Staff Interrogatories
2018 Electricity Distribution Rates Application
Essex Powerlines Corporation (Essex Powerlines)
EB-2017-0039
February 8, 2018

Exhibit 1 – Administration

1-Staff-1

Letters of Comment

Following publication of the Notice of Application, the OEB received two letters of comment. Sections 2.1.6 of the Filing Requirements state that distributors will be expected to file with the OEB their response to the matters raised within any letters of comment sent to the Board related to the distributor's application. If the applicant has not received a copy of the letters or comments received at the community meetings, they may be accessed from the public record for this proceeding.

Please file a response to the matters raised in the letters of comment referenced above. Going forward, please ensure that responses to any matters raised in subsequent comments or letter are filed in this proceeding. All responses must be filed before the argument (submission) phase of this proceeding.

1-Staff-2

Updated Revenue Requirement Work Form

Upon completing all interrogatories from OEB staff and intervenors, please provide an updated RRWF in working Microsoft Excel format with any corrections or adjustments that the Applicant wishes to make to the amounts in the populated version of the RRWF filed in the initial applications. Entries for changes and adjustments should be included in the middle column on sheet 3 Data_Input_Sheet. Sheets 10 (Load Forecast), 11 (Cost Allocation), 12 (Residential Rate Design) and 13 (Rate Design) should be updated, as necessary. Please include documentation of the corrections and adjustments, such as a reference to an interrogatory response or an explanatory note. Such notes should be documented on Sheet 14 Tracking Sheet, and may also be included on other sheets in the RRWF to assist understanding of changes.

1-Staff-3

New Services Service Quality Indicator

Ref: 1.4.2 Business Plan & Objectives - Customer and Community Value – New Services Service Quality Indicator (Exhibit 1 page 15)

Essex Powerlines provided the percentage of connections for new services under 750V that were connected within five business days over the last eight years. The percentage

of connections are trending downward to 2016, which is just above the requirement from the Distribution System Code.

- a) Please explain the downward trend of the number of connections connected within five business days.
- b) What has Essex Powerlines done to mitigate this decline in service quality indicator?

1-Staff-4

Regulated ROE Targets

Ref: 1.4.2 Business Plan & Objectives - Customer and Community Value – Regulated ROE Targets (Exhibit 1 page 31)

Essex Powerlines stated that it has been formally monitoring its actual return on equity (ROE) since 2015.

- a) Please provide the actual ROE for each year starting 2010.

1-Staff-5

SmartMAP

Ref: 1.4.2 Business Plan & Objectives – Best-In-Class Solutions & Shared Services (Exhibit 1 page 32)

Essex Powerlines has invested in the new software product called SmartMap to enhance the Operations, Engineering and Customer Service departments in the effective management of renewable generation integration, outage identification & restoration, and an overall faster, more efficient and cost effective decision making tool.

- a) Please describe how this system is used in Essex Powerlines' asset management practices for the purposes of asset replacement, planning system development, and planning distribution contingencies.
- b) Please provide examples of cost savings or efficiencies that SmartMap has provided since its implementation.
- c) What is the yearly cost to maintain this system?
- d) Does the SmartMap currently have the ability to communicate with neighbouring utilities and coordinate outage restoration? If so, how does it accomplish this? If not, does SmartMap have this capability and does Essex Powerlines plan to pursue this capability?

1-Staff-6

SmartMAP

Ref: 1.4.2 Business Plan & Objectives – Essex Powerlines – An efficient single voltage utility (Exhibit 1 page 33)

Essex Powerlines stated that *“Essex Powerlines has made it a priority to complete the necessary conversion work to simplify its distribution system, reduce inventory, shrink maintenance costs and reduce its distribution losses for the benefit of EPLC’s customers.”*

Essex Powerlines also stated that it *“has a small number of step down transformers in remote areas however, Essex Powerlines plans to convert them when most technically and financially feasible.”*

- a) Please provide the actual total capital dollars spent on projects related to voltage conversion since 2010.
- b) Has Essex Powerlines prematurely replaced distribution lines which were not at end-of-life as a result of this initiative? Of the total costs provided in a) what percentage of projects were premature replacements?
- c) Does Essex Powerlines still need to stock spares for the small number of step down transformers in the remote areas? Please provide the yearly savings in reduced inventory due to the conversion initiative and a breakdown of the equipment no longer required.
- d) Please provide a high level summary of Essex Powerlines’ spares inventory for each year from 2010-2018. This should be grouped by asset type and provide an explanation of variances.
- e) Please provide the reduced maintenance costs due to the conversion initiative and a breakdown of the activities no longer required. Since there is less maintenance work required are the maintenance staff reassigned to other duties or does this lead to the need for less staff.

1-Staff-7

Self-Healing Grid

Ref: 1.4.2 Business Plan & Objectives – The Self-Healing Grid

Essex Powerlines anticipates that the self-healing grid is capable of reducing the impact of Loss of Supply incidents to its customers. The loss of supply incidents cause over 75% of Essex Powerlines total customer hours of outage.

- a) Please provide the loss of supply outage hours broken down into upstream station outage and upstream feeder outage.

- b) Please provide Essex Powerlines' current outage contingency plans to redirect loss of supply.
- c) Please provide the SmartMap's contingency philosophy to redirect loss of supply.
- d) Did Essex Powerlines complete a study comparing the incremental cost of each sensor on the system to the diminishing returns of improved reliability?

1-Staff-8

Customer Engagement

Ref: Innovative Survey Overview & Results – 2014

Ref: Convergys Survey Overview, Results & Recommendations – 2016

In both surveys, customers appear to be unsatisfied with Essex Powerlines' communication with them.

- a) What were the specific issues customers had with Essex Powerlines' communication?
- b) How has Essex Powerlines addressed this issue in this application?

1-Staff-9

Customer Engagement

Ref: Attachment 1-G 2018 Rate Application Review – Customer Consultation Workbook

Ref: Attachment 1-G Essex Powerlines Corp. Ratepayer Telephone Survey

Essex Powerlines included in Attachment 1-G a "2018 Rate Application Review – Customer Consultation Workbook", which included a number of feedback questions.

- a) How many customers reviewed this workbook and answered all the feedback questions?
- b) Please provide the responses to the feedback questions included in the workbook.

In the Innovative Research Group Telephone Survey the System Challenges & Priorities section asks customers "*do you feel the best approach is to replace the equipment before it breaks down to avoid unscheduled power outages, even if it means not getting the "full" value from each piece of equipment?*" The question does not relate "not getting full value" of the equipment to the revenue requirement or bill impact.

- c) Please explain what happens to an asset, from an accounting perspective, when Essex Powerlines retires an asset before end-of-life.
- d) If the early retirement of equipment causes revenue requirement to increase why does the survey not explain that to customers?

In the Innovative Research Group Telephone Survey the System Challenges & Priorities section asks customers “*Given there are many other areas of needed investments, such as connecting new customers, replacing aging equipment and expanding capacity for long-term growth, how important do you feel it is for Essex Powerlines to invest now in modernizing the distribution system?*”

- e) Please explain if this question implies that resources are limited and is asking the customer to choose between modernizing the distribution system and other investments.

1-Staff-10

Board Recommendation

Ref: EB-2014-0301, EB-2014-0072, Decision and Order, June 9, 2015 (page 15-16)

In the Decision and Order referenced above Essex Powerlines indicated that any financial consequence in excess of \$380,000 would put Essex Powerlines off-side of its debt servicing covenants. The OEB expressed its concern with the apparent risks assumed by Essex Powerlines in structuring its debt arrangement and the thin margin of risk it can absorb. As a result, the OEB recommended that Essex Powerlines files sufficient information to enable the OEB to fully review the inherent risks of its financial arrangements.

- a) Please provide the largest loss that Essex Powerlines can absorb currently without putting it off-side of its debt servicing covenants.
- b) Please explain how Essex Powerlines has changed its debt structure since the Decision and Order to mitigate financial risks.

1-Staff-11

Rate Base Variance Analysis

Ref: 2015 Actual Vs. 2016 Actual (Exhibit 2 Page 45-50)

Essex Powerlines stated that the increase to the Intangible Plant category was due to the relocation of assets to better align with direction in the APH.

- a) Please explain why the debit balances in account 1611 and 1612 does not equal the credit balance in account 1806 and 1925.

Exhibit 2 – Rate Base

2-Staff-12

Chapter 2 model

Ref: EPLC Chp2Appendice 20170828 – Appendix 2-BA - 2015 – 2018 Account 1995 and Account 2440

Essex Powerlines appears to have simply moved amounts from Account 1995 to Account 2440 for the amounts related to customer contributions on adoption to IFRS. This treatment is not consistent with the APH guidance provided in Section 510.

- a) Please review the APH Section 510 and update the applicable evidence as needed.

2-Staff-13

Chapter 2 model

Ref: EPLC Chp2Appendice 20170828 – Appendix 2-BA

Ref: EPLC Chp2Appendice 20170828 – Appendix 2-EC

Please explain and/or refile the appropriate schedules for the following OEB staff observations:

- a) Appendix 2-BA for 2012 CGAAP – certain disposals under the Cost column are shown as debits, and in some cases there are no corresponding disposals shown under the Accumulated Depreciation column. Please explain.
- b) Appendix 2-BA for 2013 Former CGAAP – the closing net PP&E per Appendix 2-BA does not match Appendix 2-EC.
- c) Appendix 2-BA for 2014 Revised CGAAP – Under the Cost column, the disposals for certain accounts are shown as debits. Please explain why are disposals shown as debits and not credits?
- d) Appendix 2-BA for 2015 MIFRS shows a large credit amount under the Accumulated Depreciation column for disposals. Please explain why the entry is a credit.
- e) Appendix 2-BA for 2016 MIFRS - Under the Cost column, the disposals for an account are shown as a debit and not credit. Please explain.
- f) Appendix 2-BA for 2016 MIFRS shows several credit amounts under the Accumulated Depreciation column for disposals. Please explain why the entries are not debits.

2-Staff-14

Chapter 2 model

Ref: EPLC Chp2Appendice 20170828 – Appendix 2-OB

Ref: EPLC_RRWF_20170828

Ref: EPLC_PILs_20170828

The long-term interest rate in the PILs Workform is 3.72% but is 3.54% under the cost of capital tab in RRWF and in Appendix 2-OB.

- a) Please amend and refile the schedules as needed.

2-Staff-15

Capital Expenditures

Ref: Figure 37 – Capital Expenditures – By Project & Year (Exhibit 2 Page 89)

Essex Powerlines provided capital expenditures by project for each year from 2011-2018.

- a) Please provide the same breakdown for 2010 actuals.

2-Staff-16

Direct Buried Cable Replacement Program

Ref: Figure 37 – Capital Expenditures – By Project & Year (Exhibit 2 Page 89)

Essex Powerlines has significantly increased the Direct Buried Cable Replacement program in the 2018 test year.

- a) Please provide the need that drives the increase in underground cable replacement.
- b) How was the need not anticipated in previous years and done through a phased approach?

2-Staff-17

Cost of Power

Ref: Figure 17 - Cost of power Summary

Essex Powerlines provided a cost of power summary table which includes the total power purchased and global adjustment. Essex Powerlines also stated that it used the “Regulated Price Plan Report – May 1, 2017 to April 30, 2018” report to calculate the commodity price used in this application.

- a) Please provide a breakdown of the power purchased and global adjustment total including the rate and volumes used to calculate the total in excel format.
- b) What rates did Essex Powerlines use to calculate power purchased and global adjustment for the period after April 30, 2018? If Essex Powerlines did not

continue the rate from the report please provide justification on the proposed rate.

- c) Please calculate what the cost of power would be if Essex Powerlines used the rate from the report for the whole year.

2-Staff-18

RTSR – Network cost

Ref: Figure 17 - Cost of power Summary

Ref: Figure 23 – Proposed Cost of Power – 2017/2018

For the 2018 test year there is a discrepancy for RTSR – Network total in Figure 17 and Figure 23. Please confirm which value is correct and update the tables.

2-Staff-19

Self-Healing Grid

Ref: Attachment 2-C – EPL Distribution System Plan (page 17)

“Reclosers:

Historically, EPL’s service territory consisted solely of manual load-break switches which required manual operation and provided no fault protection. Fault protection was provided by a station breaker or an upstream recloser outside of EPL’s service territory. With the implementation of remotely-controlled reclosers (“smart reclosers”), EPL is facilitating the capabilities of remote operation, real-time outage detection, as well as the ability to isolate the system from an upstream distributor/transmitter. Furthermore, incremental data about EPL’s distribution system is gathered and fed into the SmartMAP toolset.

As Loss of Supply incidents continue to cause over 75% of EPL’s total customer interruption hours, EPL continues to make prudent investments to minimize customer outage impacts and enhance overall customer value.”

- a) If the customer interruption hours are largely caused by loss of external supply, please explain how the cited Essex Powerlines investments will enhance customer value.

2-Staff-20

System O&M

Ref: Attachment 2-C – EPL Distribution System Plan – Table 2-1 Historical and forecast net capital expenditures and system O&M (Page 22)

Ref: Attachment 2-C – EPL Distribution System Plan – Table 4-17 Historical and forecast capital expenditures and system O&M

Essex Powerlines provided the above two tables which show an increase in System Service investments over the forecast period and also the corresponding system O&M. Essex Powerlines stated that System Service investments include investments for the self-healing grid, which should reduce outages and restoration costs.

- a) Please explain why there is no corresponding decrease forecast for System O&M expenditures with the increase in spending in System Service investments.
- b) Please reconcile the System O&M expenditures shown in Table 2-1 and Table 4-17.

2-Staff-21

Substations

Ref: Attachment 2-C – EPL Distribution System Plan – Anticipated Sources of Cost Savings (Page 24)

Recently, Essex Powerlines completed a significant portion of its voltage conversion program, harmonizing its service area to 27.6/16 kV. In addition to eliminating the need to own and maintain a distribution substation, the voltage conversion investments have allowed Essex Powerlines to reduce its stock, inventory, and kilometres of line under management while the number of customers has continued to increase.

- a) Please confirm that Essex Powerlines does not have any distribution substations in its service territories.
- b) Please provide the upstream Hydro One transmission/distribution stations that supplies power to each of Essex Powerlines service territories and also the distribution feeder identification.
- c) Please provide the electronic single line diagram for each associated station and service area.

2-Staff-22

Reactive Replacements

Ref: Attachment 2-C – EPL Distribution System Plan (Page 25)

“EPL has increased the amount of planned capital work over the forecast period and has consequently budgeted less capital spending on reactive replacements over the forecast period compared to the historical period average. This is a more cost-effective investment strategy since planned replacements generally cost less than reactive replacements, which may require emergency or overtime work.”

- a) Please provide quantitative evidence, in the form of a business case, cost-benefit analysis or equivalent, demonstrating that proactive capital projects and programs are more cost-effective (from a ratepayer perspective) than reactive

replacements. Please explain in detail the assumptions employed in the analysis.

- b) Essex Powerlines' planned capital work may be cost effective if the pre-emptive replacements do not exceed the number that would have failed in a normal year. How does Essex Powerlines guarantee that is the case?
- c) Does Essex Powerlines' planned capital work investment strategy factor in the opportunity cost of foregoing remaining asset life (i.e.: how can customers be confident that Essex Powerlines' isn't just building rate base)?

2-Staff-23

Customer Satisfaction

Ref: Attachment 2-C – EPL Distribution System Plan – Figure 2-5: Percentage of satisfied customers for surveyed customer classes in 2014 (Page 28)

Ref: Attachment 2-C – EPL Distribution System Plan (Page 29)

On page 29, Essex Powerlines stated:

“The majority of residential and GS customers agree that EPL should:

Invest what it takes to replace aging infrastructure to maintain system reliability, even if that requires an increase to their bill”

Figure 2-5 shows that only 50% of residential customers and 37% of GS<50 customers think that bills are reasonable.

- a) Please reconcile the above statement that residential and GS customers agree that Essex Powerlines should make the necessary investments even if it requires an increase to their bill, with the statistics in Figure 2-5.
- b) Please provide the evidence that Essex Powerlines used to draw the above conclusion.

2-Staff-24

Consultation with Hydro One

Ref: Attachment 2-C – EPL Distribution System Plan (Page 31-32)

“A significant portion of the system service investments over the five-year planning period of the DSP are a result of coordinated planning activities with HONI. In 2018 and 2019, EPL will purchase and sell assets related to Leamington TS in transactions with HONI. From 2019 to 2021, EPL will reconfigure its feeders egressing from Malden TS in conjunction with two new feeders as a result of planning activities with HONI. Finally, the system service budget from 2020 to 2022 includes the purchase and sale of assets in LaSalle in transactions with HONI. The planned asset transfers are anticipated to be

required to facilitate long-term load transfer removal as well to accommodate significant HONI work currently ongoing in the respective areas.”

- a) Please describe how the planned asset transfer investments have been economically optimized.
- b) Did Essex Powerlines carry out business case analyses to support the described asset transfers? If yes, please provide these analyses. If not, please explain why not.
- c) Please demonstrate quantitatively that these investments are in ratepayers' interest.
- d) Please confirm if approval is being sought for the budgeted expenditures to transfer assets between Essex Powerlines and Hydro One as part of Essex Powerlines' present cost of service application, if approval of these investments will be sought under an Incremental Capital Module to be filed later, or a combination of these approaches?
- e) Has Essex Powerlines considered the rate impact of the capital contribution for Leamington TS over the timeframe of the distribution system plan? If not, why not?

2-Staff-25

Consultation with IESO

Ref: Attachment 2-C - EPL Distribution System Plan - Table 2-3: Reg investments projected in the 2018 Test Year (Page 34)

Ref: Figure 37 – Capital Expenditures – By Project & Year (Exhibit 2 Page 89)

Essex Powerlines showed the projected REG investments in 2018 is \$110k but in the capital expenditure table referenced above the forecast for FIT & Generation Connections is \$181k.

- a) Please explain the difference between both tables and provide an explanation for the variance.

2-Staff-26

System Reliability

Ref: Attachment 2-C - EPL Distribution System Plan - Figure 2-11: Customer interruption hours by cause code (2013 to 2016)

Ref: Attachment 2-C - EPL Distribution System Plan – Figure 2-13 to 2-15: Severity – Impacts of outages caused by defective equipment

Essex Powerlines has shown that most of the outage hours are caused by loss of supply from Hydro One. The second largest outage hours are due to defective

equipment, which Essex Powerlines further attributes to defective underground equipment.

- a) Please provide the causes for the loss of supply from Hydro One. If Essex Powerlines does not have all the causes please comment on general known causes in coordinating with Hydro One.
- b) Does Essex Powerlines anticipate the construction of Leamington TS will help reduce the loss of supply from Hydro One? If so, by how much and how will this be accomplished.
- c) Please explain each variable presented in Figure 2-13 to 2-15. What does the variable represent? How is it calculated? What is its significance?

2-Staff-27

Asset Management Process

Ref: Attachment 2-C - EPL Distribution System Plan – Table 3-1: EPL’s asset management objectives and related corporate goals

Essex Powerlines uses an Asset Investment Strategy that provides an optimized resource investment plan based on desired asset performance and risk tolerance. Table 3-1 provides seven business objectives that describe how Essex Powerlines’ risk exposure is accounted for and how it is used to facilitate development of an optimal Asset Investment Plan.

- a) Since these are all qualitative scores how does Essex Powerlines ensure that the evaluation of each objective for each project/program is consistent?
- b) Does Essex Powerlines change the optimal Asset Investment Plan developed from the Asset Optimization Tool? If yes, please identify all changes that deviated from the optimal plan and an explanation as to why.
 - I. For bullet 5 “Financial returns” please provide details on how the net present value is determined. This should include the calculation used, underlying assumptions, and quantified examples of actual calculations.
- c) How are the numerical weights assigned to Essex Powerlines’ asset management objectives determined?
- d) How does Essex Powerlines assign the numerical weights for each objective? Does Essex Powerlines plan to change these weights from application to application?
- e) How does Essex Powerlines assess whether the Asset Investment Plan is economically optimal?
- f) What metric is being optimized (e.g.: risk adjusted minimization of costs to ratepayers) and is the current plan optimal?

2-Staff-28

Primary Underground Cable

Ref: Attachment 2-C - EPL Distribution System Plan – Table 3-4: Primary Underground cable service age relative to TUL

A large amount of the budget planned for system renewal is related to the replacement of underground cables. Essex Powerlines justifies this with approximately 19% of the cables reaching typical useful life. This is approximately 48.9km of underground cables that need replacement.

- a) Over the last 8 years how many outages and outage hours are related to the failure of an underground cable?
- b) Has Essex Powerlines tried to do cable testing for areas where it expects cable failure? If not, why?
- c) What is the typical cost per kilometer of proactive direct buried cable replacement? What is the typical cost of reactive direct buried cable replacement?
- d) What percentage of underground cable are laterals (no loop feed) and what percentage of underground cable are loop fed?
- e) For each underground cable that are lateral identified in d) what is the average number of customers on that lateral?

2-Staff-29

Reliability-Centred Maintenance

Ref: Attachment 2-C - EPL Distribution System Plan – Reliability-Centred Maintenance (Page 69)

“RCM considers the risk of customer outages, asset failure probabilities, methods to reduce the risk failure (probability or consequence), costs, the asset’s role in the system, and other measures when selecting a specific maintenance program for an asset. RCM offers the following benefits:

- *The consequences of a single event on the distribution system are determined.*
- *The severity and importance of each component are assessed.*
- *Failures with the greatest consequences are prevented.*
- *Unnecessary maintenance is avoided.*

The cost associated with each failure is used to predict future costs using failure trends. EPL has used RCM for the past ten years to assess and monitor the health of the distribution system assets. RCM is divided into 45 categories for reporting purposes and each outage is entered under the correct category.”

- a) How does Essex Powerlines forecast the probability of failure?
- b) Essex Powerlines has five categories for each qualitative score but since they are qualitative in nature the distinction between neighbouring categories can be subject to bias. How does Essex Powerlines ensure a consistent approach to the qualitative scores between evaluators?
- c) Given that Essex Powerlines has been using this methodology for the past 10 years and the assets are generally in good to very good condition, is it possible that Essex Powerlines is setting the Risk scores too high and replacing instead of repairing/maintaining assets?
- d) Does Essex Powerlines assess the tradeoffs between O&M costs and system renewal investments? If so, please provide that analysis.
- e) Has the implementation of RCM led to a noticeable improvement in productivity (e.g. using a multi-factor productivity model)? If yes, please provide evidence.
- f) Has the implementation of RCM led to higher annual CAPEX when compared to pre-RCM capital investment levels?
- g) Does Essex Powerlines predict the reliability results associated with different capital investment portfolios?
 - I. If yes, please provide the forecasted reliability for each capital and OM&A investment.
 - II. Does Essex Powerlines compare predicted performance with actual performance? If yes, please provide details.

2-Staff-30

Asset Life Cycle Risk Management

Ref: Attachment 2-C - EPL Distribution System Plan – Asset Lifecycle Risk Management Policies and Practices

Ref: Attachment 2-C - EPL Distribution System Plan – Figure 3-23: Risk matrix to select and prioritize capital expenditure

Ref: Attachment 2-C - EPL Distribution System Plan – Table 3-6: Overall asset risk rating

“Conclusions of risk analyses use a scoring system to select and prioritize capital expenditures. Each potential project is scored in the risk matrix shown in Figure 3-23 by considering all seven strategic business objectives and using the following formulation.

$$R_e = R_f + \beta(R_m - R_f)$$

- *Re is the expected rate of return.*
- *Rf is the risk-free rate of return*
- *Rm is the average market rate of return*

By definition:

- *Operational β less than 1 is low risk.*
- *Operational β equal to 1 is average risk*

- *Operational β greater than 1 is higher risk”*
- a) Please explain how Essex Powerlines uses the Capital Asset Pricing Model to prioritize projects.
 - b) What is used as the risk-free rate of return? Please provide an example.
 - c) What is used as the average market rate of return? Please provide an example.
 - d) Please provide how beta is calculated and examples of the calculation.
 - e) Is rate of return a measure of the economic value of an investment to Essex Powerlines as an asset owner, or to Essex Powerlines’ ratepayers? Please provide details.
 - f) Is the purpose of this formula to maximize the expected rate of return?
 - g) Table 3-6 appears to drive the timing of projects, which is based on risk alone. How does table 3-6 and the Capital Asset Pricing Model relate to each other in terms of project prioritization?

2-Staff-31

Pole Replacement Program

Ref: Attachment 2-C - EPL Distribution System Plan – System Renewal

“Pole Replacement Program

The purpose of this program is to replace poles that have either failed or are at the end of their service life due to failure risk. Through its thorough preventative maintenance program, EPL reviews the condition of its poles continuously to limit failure and maximize safety via non-destructive testing methods such as drilling. Poles which have been tested to have a remaining strength of below sixty percent (60%) are prioritized for replacement. Budgeting is reviewed annually based on preventative maintenance program findings and availability of resources.”

- a) Can a pole with 60% remaining strength be considered adequate for its application?
 - I. If no, please explain why not.
 - II. If yes, please explain why Essex Powerlines uses a 60% threshold for pole replacements.
- b) How does Essex Powerlines ensure that poles are not being prematurely replaced and that Essex Powerlines is not overinvesting in pole replacement programs? Please provide a detailed explanation.

2-Staff-32

Risk Consequences

Ref: Attachment 2-C - EPL Distribution System Plan – Table 4-12: Definitions of numeric scores describing the consequence of project deferral

- a) In the reference Table 4-12, Financial Risk is defined as a measure of lost revenue or avoided cost.
 - I. How does Essex Powerlines ensure that its measure of lost revenue does not overlap with other items in this table, such as reliability?
 - II. Please provide an example of how Essex Powerlines calculates avoided cost as referenced in this table.
- b) What is the measure and medium for collecting information for the Company Image metric?
- c) Please confirm if the order of definitions in Table 4-12 under Legal Risk, Regulatory Risk, Safety Risk and Environmental Risk should be reversed.
- d) Under Environmental Risk, please provide an example of an asset that scores, or is able to score, a consequence score of 5.
- e) Has Essex Powerlines considered the correlation between various items in Table 4-12 above? For example, is a high consequence Environmental Risk likely to trigger high consequence Regulatory, Legal, Company Image, Safety and/or Financial Risks? How does Essex Powerlines ensure that risks are not being exaggerated as a result of the various correlations and interdependencies?

2-Staff-33

Project Prioritization

Ref: Attachment 2-C - EPL Distribution System Plan – Table 4-14: 2018 Test Year project prioritization

Essex provided a list of projects for 2018 prioritized based on the risk/strategic objective score.

- a) Please provide a breakdown of the components that compose the risk/strategic objective score for each project.
- b) Were there other projects that have been removed from this list as a result of pacing the five year capital spending?
- c) If the total capital envelope was reduced would Essex Powerlines cut projects from the bottom of this list upwards until the envelope is reached?

2-Staff-34

Investment Drivers

Ref: Attachment 2-C - EPL Distribution System Plan – Table 4-1: List of material capital expenditure – System Access

Ref: Attachment 2-C - EPL Distribution System Plan – System Service (Page 118)

Essex Powerlines stated that *“EPL is mandated to meter customers to ensure accurate billing. Meter replacements are made due to failure, technology limitations requiring upgrades, or seal expiry. There is a downward spending trend for metering investments as a result of the implementation of smart meters.”*

In Table 4-1 it appears the budget for the Metering Upgrade & Replacement Program is trending upwards.

- a) Please confirm that the evidence seems contradictory and if so please reconcile the statement or Table 4-1.

2-Staff-35

Municipal Requests

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Municipal Requests (Page 7)

Historical and Future Capital and Related O&M Expenditures

	Historical Costs (\$ '000)					Future Costs (\$ '000)				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Capital	\$1,048	\$1,577	\$311.3	\$12.3	\$600.0	\$612.0	\$624.2	\$636.7	\$649.5	\$662.4
O&M	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

- a) What is Essex Powerlines level of confidence in the projected expenditure requests for 2018 and beyond?
 - I. What is the basis of Essex Powerlines' confidence in the request quantum for each of these future years?
- b) What are expenditures for the 2017 bridge year to-date?

2-Staff-36

Material Investments

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – New Service Upgrades C&I (Page 10)

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Metering Upgrade & Replacement Program (Page 13)

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Overhead Reactive Replacement (Page 21)

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Underground Reactive Replacement (Page 25)

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Install/Replace Load Breaks (Page 29)

Essex Powerlines provided the following capital expenditure forecast tables and historical actuals for each of the references above.

New Service Upgrades C&I

Historical and Future Capital and Related O&M Expenditures

	Historical Costs (\$ '000)					Future Costs (\$ '000)				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Capital	\$100.9	\$21.1	\$3.8	\$99.1	\$350.0	\$357.0	\$364.1	\$371.4	\$378.8	\$386.4
O&M	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Metering Upgrade & Replacement Program

Historical and Future Capital and Related O&M Expenditures

	Historical Costs (\$ '000)					Future Costs (\$ '000)				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Capital	\$100.1	\$7.7	\$8.5	\$54.2	\$163.0	\$166.3	\$169.6	\$173.0	\$176.5	\$180.0
O&M	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Overhead Reactive Replacement

Historical and Future Capital and Related O&M Expenditures

	Historical Costs (\$ '000)					Future Costs (\$ '000)				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Capital	\$0	\$6.1	\$0	\$0	\$80.8	\$82.4	\$84.0	\$85.7	\$87.4	\$89.2
O&M	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Underground Reactive Replacement

Historical and Future Capital and Related O&M Expenditures

	Historical Costs (\$ '000)					Future Costs (\$ '000)				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Capital	\$10.7	\$0	6.9	\$0	\$63.7	\$65.0	\$66.3	\$67.6	\$68.9	\$70.3
O&M	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Install/Replace Load Breaks

Historical and Future Capital and Related O&M Expenditures

	Historical Costs (\$ '000)					Future Costs (\$ '000)				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Capital	\$0	\$0	\$0	\$0	\$58.8	\$59.9	\$61.1	\$62.3	\$63.6	\$64.9
O&M	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

- a) For each of the Material Investments listed above, please explain why Essex Powerlines forecasts expenditures to be significantly greater than the historic 2013-2016 average annual expenditures?
- b) As part of Essex Powerlines' Overhead Reactive Replacement projects, it is mentioned that "EPL relies on a combination of proactive replacements, Reliability-Centered Maintenance ("RCM"), predictive maintenance, preventative maintenance, and cyclical inspections to manage its distribution assets and reduce the amount of reactive work required." Please explain why Essex Powerlines has forecasted an increase in reactive replacement when RCM is supposed to help minimize the need for reactive replacement and there has not been a historical trend to the proposed level of spending.

2-Staff-37

New Service Upgrades C&I

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – New Service Upgrades C&I (Page 10)

Essex Powerlines stated that it deals with a variety of requests that are not known at the time of budgeting and forecast costs are driven by historical trends and increased by inflation

- a) Please provide a breakdown of the projects that make up the 2017 and 2018 capital expenditures for new service upgrades. Please provide the scope of the project and alternatives considered, if possible.
- b) Please provide an explanation for the abrupt increase in capital spending in 2017 compared to historical years.

- c) To the best of Essex Powerlines' abilities, please provide all known/planned projects for the five year periods. Please provide the scope of the project and alternatives considered, if possible.

2-Staff-38

Metering Upgrade Replacement Program

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Metering Upgrade Replacement Program (Page 13)

Essex Powerlines forecasted the 2018 Test Year expenditure includes 351 interval meters, 672 smart meters, and 4 gatekeepers.

- a) Please provide the total number of interval meters, smart meters, and gatekeepers in Essex Powerlines service territory.
- b) Please provide a break down of the age demographic for the interval meters, smart meters, and gatekeepers. Also provide the typical useful life of each piece of equipment.

2-Staff-39

Pole Replacement Program

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Pole Replacement Program (Page 17)

Essex Powerlines stated the following for pole replacement alternatives:

“Alternatives to pole replacements include a complete overhead rebuild, undergrounding the span, and the “do nothing”. Poles included in this program are not part of an overhead rebuild since the adjacent poles are typically not at the end of their service life. Undergrounding a single span is not feasible. In the case of the “do nothing” option, old and deteriorating poles would remain in the field without intervention, which can result in significant safety concerns, lengthy customer outages, and increases to system O&M costs”

- a) Please provide examples where old and deteriorating poles left in field resulted in significant safety concerns, lengthy customer outages, and increases to system O&M costs.
- b) Does Essex Powerlines track pole failures, and are the failures correlated to weather events (rather than age related failures)? Please provide all available records relating to pole failures.

2-Staff-40

Overhead Reactive Replacement

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Overhead Reactive Replacement (Page 21)

Essex Powerlines has trended the overhead reactive replacement budget to reflect 2017 forecasted actuals for the five years following. Over the last ten years Essex Powerlines has been completing voltage conversion projects, which presumably involves replacement of overhead assets.

- a) Please provide a cost break down of the 2017 forecasted actual. This should be broken down by project, cost of project, scope, and the event that caused the replacement.
- b) Part of the driver for this program is assets at the end of their service life. Please explain how the line work done as part of the voltage conversion projects did not help reduce the probability of asset failure.

2-Staff-41

Underground Reactive Replacement

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Underground Reactive Replacement (Page 25)

Essex Powerlines has trended the underground reactive replacement budget to reflect 2017 forecasted actuals for the five years following. In 2018, Essex Powerlines has budgeted a significant amount to the direct buried cable replacement program.

- a) Please provide a cost break down of the 2017 forecasted actual. This should be broken down by project, cost of project, scope, and the event that caused the replacement.
- b) Part of the driver for this program is assets at the end of their service life. Please explain how the additional capital expenditure in the replacement of direct buried cables would not help reduce the probability of asset failure.

2-Staff-42

Install/replace Load Breaks

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Install/replace Load Breaks (Page 29)

Essex Powerlines has trended the Install/replace load break budget to reflect 2017 forecasted actuals for the five years following.

- a) Is there an asset condition assessment of load break switches? If not, please provide the age demographics of all load break switches.

- b) Please provide a cost break down of the 2017 forecasted actual. Are these replacements due to the condition of the load break switch, to meet the needs of the self-healing grid, or a combination of both?

2-Staff-43

Switchgear Replacement Program

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Switchgear Replacement Program (Page 40)

Essex Powerlines plans to replace two live-front switchgears per year over the next five years. Essex Powerlines also provided an age profile and asset condition assessment for all its switchgears. The age profile show that there are only five switchgears with service age greater than 21 years. Furthermore, there was only two switchgears in fair condition, the remaining are either in very good or good condition.

- a) Please provide Essex Powerlines' justification for replacing switchgears that are in either good or very good condition.
- b) If it is anticipated that the age or condition of the transformer will move over the next five years to a lower echelon, please provide evidence justifying the move.

2-Staff-44

HONI Asset Purchase – Leamington

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – HONI Asset Purchase – Leamington (Page 45)

Essex Powerlines intends to transfer assets between Essex Powerlines and Hydro One through the purchase and sales of assets.

- a) Does Essex Powerlines have plans or anticipate any other possible transfer of assets in its service territory over the next five years?

2-Staff-45

Self-Healing Grid – Reclosers

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Self-Healing Grid – Reclosers (Page 51)

Essex Powerlines intends to reduce the duration of outages caused by loss of supply by installing reclosers that can facilitate automatic switching and service restoration.

- a) Please provide the business case supporting the Self-Healing Grid. This should include the scope of the whole project, alternatives considered, expected savings, and implementation plan.

- b) Does Essex Powerlines need to communicate with Hydro One before automatic switching? Please provide the steps that are taken starting from the moment the outage is detected till a final load transfer is completed.
- c) For interoperability Essex Powerlines stated that there is substantial work on Hydro One's end to update their systems, processes, and protocols to accommodate the request.
 - I. Does that mean that there won't be full automation until this is completed?
 - II. What is the expected timeline from Hydro One to have a fully functional system?
- d) For each of the figures 9 through 11 please provide the electronic single line diagram for the distribution system that are legible.

2-Staff-46

Building & Fixtures

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Building & Fixtures (Page 60)

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix H: Building Condition Review

Essex Powerlines budgeted approximately \$1.5M in building & fixture projects over the five year period. This is supported by the building condition review report in appendix H. In the report, the total estimated costs were approximately \$750k and it also noted that over the next five years there were only concerns on the parking asphalt, roofing/skylight, and the Heating Ventilation and Air Condition (HVAC) system.

- a) Please explain what Essex Powerlines plans to spend the additional \$750k requested in the budget.
- b) Please provide the list of projects planned between 2020-2022.

2-Staff-47

Computer software

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Computer software (Page 63)

Essex Powerlines budgeted a consistent expenditure of \$80k a year for 2019 to 2022.

- a) Please provide a breakdown of the planned projects for each of the four years.

2-Staff-48

Transportation Equipment

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix A: Project Narratives – Transportation Equipment (Page 66)

Ref: Attachment 2-C - EPL Distribution System Plan, Appendix I: Fleet Purchasing Policy

Essex Powerlines forecasted a growth in expenditure over the next five years, doubling by 2022.

- a) For each vehicle planned for replacement please also provide the number of kilometers driven, and a condition assessment, if available.
- b) Please explain why there does not appear to be any planned vehicle replacements for 2019 and 2021 but Essex Powerlines has budgeted \$275k and \$445k for the respective years.

Exhibit 3 – Operating Revenue

3-Staff-49

Load Forecast

Ref: Attachment 3-A – EPLC Load Forecast

In section 2.2 GS<50 of the load forecast, Essex Powerlines used March and December as variables for the load forecast. Essex Powerlines also used a shoulder variable which represent the months of March, April, May, September, October, and November.

- a) Please explain the statistical significance to have both a shoulder variable and a March variable.
- b) The December variable results in a negative coefficient. Please comment on why Essex Powerlines expect load to decrease in one of the colder months of the year.

3-Staff-50

Load Forecast

Ref: Attachment 3-A – EPLC Load Forecast

In section 4.4 Embedded Distributor of the load forecast, Essex Powerlines forecasted the 2017 and 2018 kWh through linear trending. Essex Powerlines also stated that the embedded distributor class is fed through three connection points. There were historically seven connection points and reduced to three in 2016.

- a) Please confirm if the reduction in connection points is due to the transfer of assets through purchase/sales with Hydro One

- b) If assets were transferred how was linear trending used to forecast future loads when discrete customers were either added/removed from Essex Powerlines system.

3-Staff-51

Load Forecast

Ref: Attachment 3-A – EPLC Load Forecast – CDM Adjustments

Ref: EPLC Chp2Appendice 20170828 – App.2-I LF CDM

Essex Powerlines calculated the total LRAMVA target of 16,566,174kWh in the load forecasting model. In the chapter 2 appendix reference above the total LRAMVA threshold is 20,385,844.

- a) Please confirm if Essex Powerlines intends to use the amounts in appendix 2 for future LRAMVA claims. If yes, please update the load forecast model.

3-Staff-52

Other Revenues

Essex Powerlines stated that most variances in Account 4375 and 4380 are due to Conservation & Demand Management (CDM) items.

- a) Please provide a breakdown of what CDM items are included in the revenue and expense accounts.

Exhibit 4 – Operating Expenses

4-Staff-53

OM&A Summary

Ref: EPLC Chp2Appendice 20170828 – App.2 – JA OM&A Summary Analys

- a) Please identify what improvements in services and outcomes the Applicant's customers will experience in 2018 and during the subsequent IRM term as a result of increasing the provision for OM&A in 2018 at about 44% times since the last rebasing eight years ago.
- b) How has the Applicant communicated these benefits and the associated costs to its customers, and how did customers respond? Please provide some examples, including a synopsis of any customer feedback. If no communications took place, please explain why not.

4-Staff-54

Cost Drivers

EPLC Chp2Appendice 20170828 – App.2 JB OM&A Cost Drivers

Essex Powerlines provided the drivers for the year-to-year changes in OM&A.

- a) Please reconcile the sum of the operations sub-total for the 2018 test year and the drivers that sum up to it.
- b) The cumulative increase for OM&A expenses related to O/H Right of Way – Conversion since 2010 is \$321,703, which represent approximately 21% of the changes to OM&A. Please explain why the expenses related to conversion did not decrease as the voltage conversion initiative concluded.
- c) The cumulative increase for OM&A expenses related to Customer Billing since 2010 is \$333,432, which represent approximately 22% of the changes to OM&A. Please explain what has changed in they way customers are billed to warrant this increase.
- d) The cumulative increase for OM&A expenses related to Change in Employee Pensions & Benefits since 2010 is \$362,363, which represent approximately 24% of the changes to OM&A. Please provide an explanation for this increase.

4-Staff-55

Control Room Support

Ref: Exhibit 4: Operating Expense – Control Room Support (Page 7)

Essex Powerlines plans to use a 3rd party Control Room support service to provide monitoring and control for its distribution system as part of the Self-Healing Grid initiative.

- a) Please provide the scope used for Essex Powerlines' Request for Quotation (RFQ).
- b) How many competitive bids were there for this RFQ? What was the selection criteria?
- c) Does the 3rd party control room vendor provide 24 hour service?
- d) Does Essex Powerlines expect to reduce the number of staff required during off hours with the 3rd party control room?
- e) Does the 3rd party control room vendor provide data acquisition services as part of the contract? If so, how does Essex Powerlines plan to use this data?

4-Staff-56

Cybersecurity Maintenance

Ref: Exhibit 4: Operating Expense – Cybersecurity Maintenance (Page 8)

Essex Powerlines plans to use 3rd party IT experts to provide cybersecurity services in order to be compliant with the OEB's proposed Cybersecurity Framework.

- a) Please provide the scope used for Essex Powerlines' Request for Quotation (RFQ).
- b) How many competitive bids were there for this RFQ? What was the selection criteria?
- c) Has Essex Powerlines completed its Cyber Security self certification requirement.
- d) Is the Cyber Security infrastructure on-site or cloud based?

4-Staff-57

Cost per Customer & FTE

Ref: EPLC Chp2Appendice 20170828 – App.2-K Employee Costs

Essex Powerlines stated in other areas of the application that increase in OM&A expense is due to inflationary pay increases.

- a) Please explain the reason for the sudden decrease in full time employees between 2010 and 2011.
- b) The average employee compensation increased more than 10% in 2012 and again between 2015-2016. Please explain the reasons for the step increase.

4-Staff-58

General Building Expenses

Ref: Exhibit 4: Operating Expense – General Building Expenses (Page 20)

Essex Powerlines chose to consolidate all its regulated activities to its Oldcastle Service Station to reduce its rent expense.

- a) Please provide the yearly rent Essex Powerlines was paying at the Essex Civic Centre.
- b) What incremental building expenses were incurred as a result of consolidation?

4-Staff-59

Regulatory Affairs

Ref: Exhibit 4: Operating Expense – Regulatory Affairs (Page 21)

Essex Powerlines created two new positions in regulatory affairs, a Manager of Regulatory Accounting and a Regulatory Accounting Analyst.

- a) Please explain the need for the two new positions.
- b) The regulatory affairs costs increased approximately by \$237k from 2016 to 2017. Is this cost increase fully due to the salary of the two new positions?

4-Staff-60

Customer Collection

Ref: Exhibit 4: Operating Expense – Customer Collections (Page 22)

Essex Powerlines stated that the increase in Customer Collection expenses were due to the loss of a water billing customer which provided cost offset of \$70,000 and inflationary increases to wages.

- a) Please provide the cost allocation method used for the Customer Collection expenses to bill the water billing customer.
- b) The cost offset from the water billing customer is approximately 1/3 of the total expense. Please explain why the loss of this customer does not reduce the amount of work required for customer collection.
- c) Offsetting the 2018 Customer Collection expense by \$70,000 and comparing it with the 2010 actuals still shows an increase of 70%, an average increase of 8.7% per year, which is above inflation. Please explain what other costs have increased in this expense.

4-Staff-61

Vegetation Control

Ref: Exhibit 4: Operating Expense – Vegetation Control (Page 23)

Essex Powerlines stated that it does not believe that it will be required to continue spending at historical spending levels but believes rigorous vegetation control can significantly improve reliability.

- a) Please provide the tree related outages between 2010 to 2016.
- b) What is Essex Powerlines tree trimming cycle? Does Essex Powerlines have a vegetation management policy? If so, please provide.

4-Staff-62

Meter Operations

Ref: Exhibit 4: Operating Expense – Meter Operations (Page 23)

Essex Powerlines stated that most of the increase in this expense is due to the re-allocation of Meter Maintenance expense and inflationary pay.

- a) Comparing the 2010 OEB approved to the 2010 actual expense for both these expense accounts show an approximate underspending of 50%. Please explain the underspending in 2010.
- b) The spending in the Meter Operations expense were particularly high between 2012 to 2014. Please provide an explanation to the costs incurred during that period.

4-Staff-63

Operations Management

Ref: Exhibit 4: Operating Expense – Operations Management (Page 24)

Essex Powerlines stated that most of the increase in Operations Management expense is due to 3rd party control room support as part of the Self-Healing Grid initiative.

- a) Please breakout the costs related to the 3rd party control room support.

4-Staff-64

Overhead Operations

Ref: Exhibit 4: Operating Expense – Overhead Operations (Page 24)

Essex Powerlines stated that the increase in Overhead Operations expense is due to focusing on overhead plant as Essex Powerlines begins more overhead related conversion work. Essex Powerlines also stated that it is complete the voltage conversion work on its distribution system.

- a) Please explain why there is still more voltage conversion work if Essex Powerlines is apparently complete.
- b) Please provide an estimation of kilometers of line that still require voltage conversion.

4-Staff-65

Transformer Operations and Underground Operations

Ref: Exhibit 4: Operating Expense (Page 24)

Essex Powerlines did not provide a variance analysis for the Transformer Operations and Underground Operations expense.

- a) Please provide the variance analysis for both of these expenses.
- b) Comparing the 2010 OEB approved to the 2010 actual expense for Transformer Operations show an approximate underspending of 70%. Please explain the underspending in 2010.

4-Staff-66

Age Demographics

Ref: Exhibit 4: Operating Expense – Aging Demographics (Page 28)

Approximately 60% of union staff are near retirement age.

- a) What are Essex Powerlines plans for the transition with the retirement of so many staff?

4-Staff-67

Shared Services

Ref: Exhibit 4: Operating Expense – Shared Services from Affiliates (Page 43)

Essex Powerlines purchases services from Essex Energy Corporation and Essex Power Corporation to provide CDM, HR, IT, Procurement, and Executive services.

- a) Has Essex Powerlines tried to procure the same services it receives from Essex Energy Corporation through a competitive bidding process?
- b) How does Essex Energy Corporation and Essex Power Corporation allocate the costs it charges Essex Powerlines for the services provided?
- c) Please provide the total number of man hours charged yearly to Essex Powerlines by Essex Energy Corporation and Essex Power Corporation.
- d) Are the employees from these affiliates included in Essex Powerlines full-time employee?

4-Staff-68

Non-Affiliate Services

Ref: Exhibit 4: Operating Expense – Purchases of Non-Affiliate Services (Page 46)

The services procured for Billing Services from EARTH Holdings Inc. have increased significantly since 2011 to 2016.

- a) Please provide an explanation for the costs increase and more specifically explain why it almost doubled between 2015 and 2016.
- b) Please provide the competitive bidding process used to select the vendor for billing services, the number of bidders, the number of evaluators, and the selection process.

4-Staff-69

LRAMVA

Ref: Exhibit 4: Operating Expense – Conservation and Demand Management (Page 79-80)

Ref: EPLC LRAMVA 20170828 – Tab 1 – Table 1.b

The application indicates that Essex is seeking disposition of a debit balance of \$513,500 in lost revenues associated with new CDM program savings between 2013 and 2015. However, the LRAMVA work form indicates a disposition of lost revenues from 2013 to 2016.

There are no forecast savings used as a comparator against actual savings over this period, as there was no CDM adjustment and LRAMVA threshold approved from the distributor's 2010 COS application.

- a) Please confirm whether Essex is seeking disposition of lost revenues between 2013 and 2016, as indicated in Table 1-b of the LRAMVA work form.
- b) If yes, please ensure all evidence reflects the disposition of lost revenues between 2013 and 2016.

4-Staff-70

LRAMVA

Ref: EPLC LRAMVA 20170828 – Tab 3 – Table 3

Ref: EB-2012-0123 Tariff of Rates and Charges

Essex Powerlines included the distribution volumetric rate for each year 2013-2016. The model also requires the rate rider for tax sharing, foregone revenue, or other rate riders. In Essex Powerlines tariff sheet for 2013-2016 there is a rate rider for Tax Changes.

- a) Please explain why Essex Powerlines did not include the Tax Change rate rider for the years 2013-2016.
- b) Please provide the account number that records the amount credited to customers for tax sharing.

4-Staff-71

LRAMVA

Ref: EPLC LRAMVA 20170828 – Tab 5 – Table 5-b 2016 Lost Revenue Work Form

Table 5-b provides a template for distributors to input 2016 energy and demand savings by program that were verified by the IESO.

- a) Please confirm that there were no energy or demand savings from Conservation First Programs that were verified by the IESO in the 2016 program year.

4-Staff-72

LRAMVA

- a) Please file an excel copy of the IESO CDM Final Verified Results Reports for the 2013, 2014, 2015 and 2016 program years.
- b) Please file a copy of the IESO persistence savings reports for 2013, 2014 and 2015.

4-Staff-73

LRAMVA

Ref: EPLC LRAMVA 20170828

If Essex has made any changes to the LRAMVA work form as a result of its responses to interrogatories, please file an updated LRAMVA work form.

Exhibit 5 – Cost of Capital

5-Staff-74

Debt Instruments

Ref: Attachment 5-C Debt Instruments

Essex Powerlines stated it is currently renegotiating the two municipal loans.

- a) Please provide an update on the status of the renegotiation.

Exhibit 7 – Cost Allocation

7-Staff-75

Weighting Factors

Ref: Exhibit 7 – Cost Allocation – Weighting Factors – Figure 3

Ref: Exhibit 7 – Cost Allocation – Weighting Factors – Figure 4

Essex Powerlines stated that the weighting for each class was based on assessment of work required to support each respective class in relation to the Residential Class

- a) Please explain on what basis the assessment was made for each rate class.
- b) Was the weighting calculated on a qualitative or quantitative basis? Please provide the metrics from either method.

7-Staff-76

Bad Debt

Ref: EPLC Cost Allocation 20170828 – I6.2 Customer Data

Ref: EPLC Chp2Appendice 20170828 – App.2 – JC OMA Programs

Essex Powerlines provided the total bad debt between 2014-2016 in both tables in the above reference.

- a) Please reconcile the total bad debt for each of these years.

7-Staff-77

Co-Incident Peak

Ref: EPLC Cost Allocation 20170828 – I8 Demand Data

Essex Powerlines provided four co-incident peak (4CP) for the embedded distributor rate class. It also provided the single co-incident peak (1CP) for the embedded distributor rate class.

- a) Please explain how the 4CP value is larger than four times 1CP.

7-Staff-78

Direct Allocation

Ref: EPLC Cost Allocation 20170828 – I9 Direct Allocation

Essex Powerlines allocated \$86k to the Embedded Distributor rate class for the cost of settlement as well as regulatory and senior management review.

- a) Please explain what incremental work is required to bill Hydro One.

Exhibit 8 – Rate Design

8-Staff-79

Loss Adjustment Factors

Ref: EPLC Chp2Appendice 20170828 – App.2-R Loss Factors

Essex Powerlines stated that it has realized significant reductions in distribution losses as a result of the Voltage Conversion Program.

- a) Please explain why the 2012 distribution loss factor was lower than all the other historical years.
- b) Please explain why the distribution loss factor appears to be trending upwards when Essex Powerlines stated that voltage conversion is supposed to reduce losses.

Exhibit 9 – Deferral and Variance

9-Staff-80

Accounting Audit

Ref: Exhibit 9 – Deferral and Variance – Overview (Page 5)

Essex Powerlines has stated that it has made adjustments to its Group 1 and Group 2 account balances, and that all adjustments, except one, were consistent with the OEB's recent audit findings.

- a) Please indicate where these adjustments are shown in the application
- b) Please disclose the results of the audit for Group 1 accounts (2015 IRM) and Group 2 accounts (2013 Audit Report).
- c) Please explain the adjustment that was not made in accordance with the OEB's audit.
 - i. Please quantify the impact of the adjustment.
- d) In EB-2014-0072, Group 1 balances as at December 31, 2013 was approved on an interim basis. Please indicate if Essex Powerlines is requesting final disposition of the balances.

9-Staff-81

Cost of Power reconciliation

Ref: Exhibit 9 – Deferral and Variance – 9.2.2 Cost of Power Reconciliation (Page 8)

It is indicated that figure 3 shows the revenues and expenses net to zero. However, for 2010, 2012, 2015, these revenues and expenses do not net to zero.

- a) Please explain the differences for each of the years.

9-Staff-82

Deferral and Variance Account

Ref: Exhibit 9 – Deferral and Variance – 9.3 Proposed Disposition (Page 10)

Essex Powerlines is requesting disposition of \$166,920 in Account 1518 RCVA Retail. According to Article 490 of the APH:

This variance account is established to record the difference between the amount billed in relation to an STR and the incremental costs of providing the initial screening and actual processing services for the STR.

- a) Please provide a description of the costs incurred and in which USoA were they recorded in.

OEB staff notes that Essex Powerlines' 2.1.7 filing for 2016 does not show any amount recorded in Account 4082.

- b) Please explain why there are no revenues associated with this variance account.

Essex Powerlines is requesting disposition of (\$3.5M) net of any timing related adjustments.

- c) What do "net of any timing related adjustments" mean?

9-Staff-83

Deferral and Variance Account

Ref: Exhibit 9 – Deferral and Variance – 9.4.8 Account 1588: cost of Power Variance Account (Page 15)

Ref: EPLC_DVAContinuity_20170828 – Tab 2. 2016 Continuity Schedule

Ref: EPLC_DVAContinuity_20170828 – Tab 7.a GA Analysis Workform

Essex Powerlines has stated that it is "currently following the guidance of the Board's May 23, 2017 letter pertaining to the period that is being requested for 1588". Please indicate:

- a) Does Essex Powerlines reflect true-up adjustments in the books prior to closing them at year-end?
- b) Did Essex Powerlines settle a true-up adjustment related to 2016 consumption with the IESO subsequent to year-end?
 - i. If yes, please indicate, under which column is the true-up adjustment is shown on the DVA Continuity Schedule and the amount.
- c) Did Essex Powerline make an adjustment related to RPP and Non-RPP true-up related to actual proportions for GA costs for 2016 consumption subsequent to year-end?
 - i. If yes, please indicate under which column is this adjustment shown on the DVA Continuity Schedule, and the amount.

9-Staff-84

Deferral and Variance Account

Ref: EPLC_DVAContinuity_20170828 – Tab 2. 2016 Continuity Schedule

Ref: EPLC_DVAContinuity_20170828 – Tab 7.a GA Analysis Workform

In booking expense journal entries for Charge Type 1142 (formerly 142), and Charge Type 148 from the IESO invoice, please confirm which of the following approaches is used:

- a) Charge Type 1142 is booked into Account 1588. Charge Type 148 is pro-rated based on RPP/non-RPP consumption and then booked into Account 1588 and 1589, respectively¹.
- b) Charge Type 1142 is booked into Account 1588. In relation to Charge Type 148, the non-RPP quantities multiplied by the GA rate is booked to account 1589 and the remainder of Charge Type 148 is booked to account 1588.
- c) Charge Type 148 is booked into Account 1589. The portion of Charge Type 1142 equalling RPP-HOEP for RPP consumption is booked into Account 1588. The portion of Charge Type 1142 equalling GA RPP is credited into Account 1589.
- d) If another approach is used, please explain in detail

9-Staff-85

Deferral and Variance Account

Ref: EPLC_DVAContinuity_20170828 – Tab 2. 2016 Continuity Schedule

Ref: EPLC_DVAContinuity_20170828 – Tab 7.a GA Analysis Workform – Reconciliation items 1a and 1b

With regards to the amount being requested for disposition of USoA 1589 account balance as at Dec. 31, 2016, all components that flow into Account 1589 (i to iv in table below) should be based on actuals in the DVA Continuity Schedule Tab 2. Please complete the following table to:

- a) Indicate whether each of the components are based on estimates or actuals at year end, and
- b) Quantify the adjustment amount pertaining to each component that is true-up from estimate to actual.

	Component	Estimate or Actual	Notes/Comments	Quantify True Up Adjustment \$ Amount
i	Revenue (i.e. is an unbilled revenue true-up adjustment reflected in the balances being requested for disposition?)			
ii	Expenses - GA non-RPP: Charge Type 148 with respect to the			

¹ Note, the following in all references in OEB Staff questions relating to amounts booked to accounts 1588 and 1589. Amounts are not booked directly to accounts USoA 1588 and 1589 relating to power purchase transactions, but are rather booked to the cost of power USoA 4705 Power Purchased, and 4707 Charges - Global Adjustment, respectively. However, accounts 1588 and 1589 are impacted the same way as accounts 4705 and 4707 are for cost of power transactions.

	quantum dollar amount (i.e. is expense based on IESO invoice at year end)			
iii	Expenses - GA non-RPP: Charge Type 148 with respect to the RPP/non-RPP kWh volume proportions.			
iv	Credit of GA RPP: Charge Type 142 if the approach under Staff Question 1c is used			

- c) Please confirm that the GA Analysis Workform for 2016 and the DVA Continuity Schedule Tab 2 for 2016 have been adjusted for settlement true-ups where settlement was originally based on estimate and trued up to actuals subsequent to 2016 per the table above.

9-Staff-86

Deferral and Variance Account

Ref: EPLC_DVAContinuity_20170828 – Tab 2. 2016 Continuity Schedule

With regards to the amount being requested for disposition of USoA 1588 account balance as at Dec. 31, 2016, all components that flow into Account 1588 (i to iv in table below) should be all based on actuals at year end. Please complete the following table to:

- a) Indicate whether the component is based on estimates or actuals at year end, and
b) Quantify the adjustment pertaining to each component that is trued-up from estimate to actual

	Component	Estimate or Actual?	Notes/Comments	Quantify True Up Adjustment \$ Amount
i	Revenues (i.e. is an unbilled revenue true-up adjustment reflected in the balances being requested for disposition?)			
ii	Expenses – Commodity: Charge Type 101 (i.e. is expense based on IESO invoice at year end)			

ijj	Expenses - GA RPP: Charge Type 148 with respect to the quantum dollar amount (i.e. is expense based on IESO invoice at year end)			
iv	Expenses - GA RPP: Charge Type 148 with respect to the RPP/non-RPP kWh volume proportions.			
v	RPP Settlement: Charge Type 142 including any data used for determining the RPP/HOEP/RPP GA components of the charge type			

- c) Please confirm that the DVA Continuity Schedule Tab 2 for 2016 has been adjusted for settlement true-ups where settlement was originally based on estimate and trued up to actuals subsequent to 2016 per the table above.

9-Staff-87

Global Adjustment

Ref: EPLC_DVAContinuity_20170828 – Tab 2. 2016 Continuity Schedule

Ref: EPLC_DVAContinuity_20170828 – Tab 7.a GA Analysis Workform – Reconciliation items 2a and 2b

- a) No amounts have been included in the GA Analysis Workform for reconciliation items 2a and 2b, please explain why not.

9-Staff-88

Global Adjustment

Ref: EPLC_DVAContinuity_20170828 – Tab 7.a GA Analysis Workform – Consumption Data Excluding for Loss Factor – Box E

Ref: EPLC_DVAContinuity_20170828 – Tab 7.a GA Analysis Workform – Analysis of Expected GA Amount

- a) The calculated value from the GA Analysis Tab for “F59/D26” = 1. 2362 and Essex Powerline’s, OEB approved total loss factor is 1.0602. Please reconcile this difference.
- b) Please confirm that the Non-RPP Class B kWh amounts entered in column F represent the kWh that was consumed by non-RPP Class B customers for each month.

9-Staff-89

Global Adjustment

Ref: EPLC_DVAContinuity_20170828 – Tab 7.a GA Analysis Workform – GA Billing Rate

- a) Essex Powerlines has not completed the GA Billing Rate Description under Note 3. Please provide a description as per the GA Analysis Instructions Tab 7. Of the DVA Continuity Schedule.
- b) What GA rate is used to bill customers? Is the same GA rate used for unbilled revenue? If not what rate is used?
- c) Explain how the GA billing rate is determined for billing cycles that span more than one load month.
- d) Confirm that the GA rate that is used is applied consistently for all billing and unbilled revenue transactions for non-RPP Class B customers for each customer class.
- e) Where the same GA rate is not used for non-RPP Class B customers in all customer classes, explain what GA rate is applied to each customer class.

9-Staff-90

Global Adjustment

Ref: Exhibit 9 – Deferral and Variance – Account 1589: Global Adjustment Variance Account (Page 15)

Essex Powerline has stated that it does not have any Class A customers for the disposition period but does have them effective 2017. Please confirm that these new Class A customers who were Class B during the variance accumulation period of 2015 and 2016 would be charged:

- a) The GA rate rider.
- b) The CBR Class B rate rider.

9-Staff-91

Deferral and Variance Account

Ref: Exhibit 9 – Deferral and Variance – Account 1595 (Page 17-19)

Ref: EPLC_DVAContinuity_20170828

- a) Accounts 1590 (2010), 1595 (2012) and 1595 (2014) were disposed on an interim basis in Essex Powerlines 2015 IRM. Accounts 1590 and 1595 are only expected to be disposed once. Please explain why Essex Powerlines is requesting to dispose these sub-accounts again and what the balances being requested for disposition pertain to.

- b) Essex Powerlines is requesting disposition of Account 1590. Essex Powerlines previously disposed this account balance. This account was discontinued by the OEB in 2008. As per the EDDVAR policy, once the residual balance in the recoveries account is disposed, it should be transferred to the vintage rate year in which the residual balance was approved.
 - i. Why does Essex continue to record balances in account 1590?
 - ii. Please provide a detailed analysis of this account from 2014
 - iii. Please describe Essex Powerlines accounting procedures with respect to recording of approved dispositions.
- c) OEB staff is unable to verify the principal and interest dispositions columns for Account 1595 for 2015. Please reconcile to the approved interim dispositions.
- d) According to the 2015 Essex Decision and Order interim dispositions were as follows:
 - i. Rate Rider 1 Credit \$3,202,317
 - ii. Rate Rider 2 Credit \$1,089,506
 - iii. Rate Rider 3 Credit \$2,151,441
 - iv. Rate Rider 4 Debit \$4,382,923

Please reconcile the above amounts to the dispositions columns for 2015 in the DVA Continuity Schedule.

- e) Please explain the Principal Adjustments and Interest Adjustments shown in 2015 for all accounts.

9-Staff-92

Deferral and Variance Account

Ref: Exhibit 9 – Deferral and Variance – 9.5.3 Account 1525 Misc. deferred Debits (Page 21)

Essex Powerlines stated that it is using Account 1525 to record costs of previous rate rebasing applications that were subsequently deferred, that added value to this Application and were not counted as part of regulatory costs.

- a) Please provide further details showing how the balance in the account was accumulated and provide a discussion on the prudence of these costs.
- b) Per the APH, Article 220, “Amounts of regulatory expenses that by approval or direction of the Board are to be spread over future periods shall be charged to Account 1525, Miscellaneous Deferred Debits, and amortized by charges to this account.”. Please provide reference to the OEB’s approval or direction to record the amounts in Account 1525.

9-Staff-93

Deferral and Variance Account

Ref: Exhibit 9 – Deferral and Variance – 9.5.4 Account 1531 Renewable Generation Connection Capital (Page 21-23)

Account 1531, 1534, and 1535 – renewable capital for disposition. It appears that Essex Powerlines has approximately \$701K recorded in these accounts. However, Essex Powerlines has not provided Appendices 2FA to 2FC to request disposition and propose inclusion in rate base for the spending related to the direct benefits portion of the balances.

- a) Please review Chapter 5 of the March 28, 2013 Filing Requirements for Electricity Distribution Applications, Consolidated Distribution System Filing Requirements, and APH accounting guidance issued in March 2015 and propose disposition of the balances in these accounts.

9-Staff-94

Deferral and Variance Account

Ref: Exhibit 9 – Deferral and Variance – 9.5.9 Account 1572: Extra-Ordinary Event Costs (Page 25)

Essex Powerlines is requesting disposition of Account 1572 relating to costs incurred from a tornado. Please provide a breakdown of these costs and reasons explaining why these costs were incurred. In particular, please discuss the prudence of these costs.

9-Staff-95

Deferral and Variance Account

Ref: Exhibit 9 – Deferral and Variance – 9.5.11 Account 1592: PILs & Tax Variances (Page 26)

Essex Powerlines is requesting disposition of Account 1592, Sub-account HST / OVAT Input Tax Credits (ITCs).

- a) Please clarify whether the (\$211k) represents 100% or 50% of the savings.

9-Staff-96

Account Status

Ref: Exhibit 9 – Deferral and Variance – 9.6 Account Status (Page 27-28)

- a) Essex Powerlines plans to continue to use Account 1531 Renewable Generation Connection Capital. Per the March 2015 APH Guidance #8, the deferral accounts for renewable generation connection are to be discontinued following the approval of a rate order that is underpinned by a distributor's first consolidated DS plan. Please revise Essex Powerline's proposal to discontinue usage of these accounts.

- b) Essex Powerlines plans to discontinue using Account 1576 Accounting Changes Under CGAAP, this account should continue to be used until the disposition period for the related rate rider expires as per March 2015 APH Guidance #6. Please clarify Essex Powerline's proposal as to when the discontinuation of this account will occur.

9-Staff-97

Embedded Distributor

Ref: Exhibit 9 – Deferral and Variance (Page 30)

Essex Powerlines has excluded embedded distributor volumes from billing determinants, and has stated that Essex Powerlines is not proposing to charge any RTSR charges as Embedded Distributor does not materially contribute to any Group 1 or Group 2 variance. OEB staff notes that as a distribution customer, the embedded distributor would be paying RTSR charges. In addition, all distribution customers use the distribution system and should be allocated the Group 2 rate riders.

- a) Please discuss in more detail Essex Powerlines' justification for excluding the embedded distributor from the proposed dispositions calculations

9-Staff-98

Stranded Meter

Ref: Exhibit 9 – Deferral and Variance - 9.5.8 Account 1555: Smart Meter Capital (Page 36)

Ref: EPLC Chp2Appendice 20170828 – App.2-S Stranded Meters

Ref: EPLC Chp2Appendice 20170828 – App.2BA Fixed Asset Cont

Essex Powerline is proposing disposition of \$1,095,650 debit amount from its residential and GS <50 classes. OEB staff notes that Account 1555 is not on Essex Powelines' DVA Continuity Schedule, or in the 2.1.7 filings for 2016. In addition Essex Powerlines has not provided calculation of the rate rider as part of the rate rider calculations tab of the DVA Continuity Schedule.

- a) Please update and refile the evidence as necessary.
- b) Please explain why the total meter disposals in the fixed asset continuity from 2010 to 2018 does not match the asset value in Appendix 2-S

9-Staff-99

Ref: Exhibit 9 – Deferral and Variance - Appendix 9-D – IESO Self-Certification

Per section 2.9.5 of the Filing Requirements for 2018 Rate Applications, a certification must be provided to indicate that the distributor has robust processes and internal controls in place for the preparation, review, verification and oversight of the Account 1588 and 1589 balances being disposed, consistent with the certification requirements

in Chapter 1 of the filing requirements. Essex provided Appendix 2-D, IESO's RPP Self-Certification which is not the same as the 2.9.5 Filing Requirement.

- a) Please provide the certification requested on the Account 1588 and 1589 balances.