

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF an application by Toronto Hydro-Electric System Limited for an order approving just and reasonable rates and other charges for electricity distribution to be effective May 1, 2015 and for each following year effective January 1 through to December 31, 2019.

**REPLY ARGUMENT OF
TORONTO HYDRO-ELECTRIC SYSTEM LIMITED**

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SECTION 1 – OVERVIEW

1.1 Introduction

1. This is Toronto Hydro-Electric System Limited’s Reply Argument.
2. The RRFE represents a new framework for the Ontario Energy Board’s regulation of electricity distributors. Toronto Hydro embraced the letter and spirit of the RRFE. It filed a Custom Incentive Regulation application that is amply supported by detailed evidence.
3. Toronto Hydro adopted 4th Generation IRM wherever possible, and departed from that only to the extent necessary and appropriate. The primary driver for Toronto Hydro’s custom approach is the nature and size of capital investment needed to ensure safe, reliable electricity for Toronto and to meet customers’ expectations. Toronto Hydro’s custom stretch factor is custom only to the extent that, based on benchmarking evidence that extends the current OEB methodology, it seeks to move cohorts within the existing OEB rankings. Toronto Hydro has reconciled these custom aspects with incentive regulation through its proposed custom price-cap index formula. Toronto Hydro’s approach to OM&A is identical to the standard 4th Generation IRM formula, including treating the first year as a rebasing year. Finally, Toronto Hydro has proposed a robust range of metrics and reporting, as well as mechanisms designed to protect and share benefits with ratepayers.

4. As discussed throughout this Reply Argument, Argument-in-Chief and the evidence, Toronto Hydro's planning processes and outcomes explicitly considered rate impacts, and its customer engagement activities resulted in qualified acceptance of the capital plan. Toronto Hydro acknowledges the annual rate increases resulting from its application. But, in Toronto Hydro's submission, those rate impacts are necessary and justified. The overall total bill increases for each year of the plan are well below the OEB's guidelines for rate mitigation, and are not "unprecedented."

1.2 System Renewal is at the Core of this Proceeding

5. Toronto Hydro has a growing backlog of distribution assets operating beyond their useful lives. The condition of those assets is deteriorating. Substantial system renewal investment is needed. That need is central to the Distribution System Plan (DSP), and at the core of this Custom Incentive Regulation (CIR) application. Over the five-year CIR period, total system renewal investments exceed the sum of the investments proposed in the other three categories combined. In fact, many of the investments in those other categories also support system renewal.

6. The asset management and investment planning approaches used to determine the needed system renewal investments are not new. Toronto Hydro has used and refined them over many years. During that time, they have been validated as appropriate, indeed, by industry leading external experts. They have been reviewed by the OEB and the parties in other proceedings. Attempts to portray the approaches used here as fundamentally different from those used in past applications are misguided.

7. With the exception of SIA, most parties claim that the need is less urgent than Toronto Hydro represents. With respect, they are wrong. The evidence in this proceeding – the need statements for the system renewal programs, the detailed descriptions of specific assets to be addressed in 2015, the independent expert reports, and the testimony of Toronto Hydro's system planners and engineers under cross examination – all points in a single direction. Growing numbers of assets are operating beyond their useful lives and their condition is deteriorating. In opposition to this evidence, parties offer opinions and conjecture from individuals who have no expertise in distribution planning and asset management, and, unlike Toronto Hydro's witnesses,

do not have decades of experience planning, building and repairing its system. Their untested opinions are not evidence and many of the “facts” they rely on appear for the first time in argument and were never put to Toronto Hydro witnesses or tested in the proceeding.

1.3 The DSP is a comprehensive investment plan for the CIR period

8. The product of Toronto Hydro’s capital planning is the DSP – a comprehensive and detailed integrated investment plan for the 2015-2019 period. The DSP is made up of 46 detailed capital programs, organized into four prescribed investment categories, each with supporting justifications. This evidence is an important tool for evaluating the reasonableness and appropriateness of the proposed capital plan, which is designed to provide customer value by making the investments necessary to sustain and renew the distribution system and operate it in a safe and reliable manner.

9. Beyond System Renewal, the DSP includes investments to address a number of critical system-level concerns that do not relate to a single asset or asset class, but rather to broader issues such as continued load growth despite limited capacity, contingency issues relating to the configuration of the radial downtown system, as well as potential safety issues for workers and the public attributable to legacy and obsolete equipment. These issues are addressed by System Service investments in the DSP. Toronto Hydro’s capital investment plans must address these realities while at the same time provide for required investments to fulfill its regulatory and statutory obligations to provide access to electricity services via the distribution system through System Access investments. Finally, in addition to replacing core distribution assets, Toronto Hydro must also address General Plant capital which includes the facilities and equipment that support both its day-to-day operations and System Renewal, System Service and System Access work. These assets include buildings, tools and equipment, rolling stock and software.

10. The DSP includes a comprehensive range of metrics and measures to track the outcomes of the plan and drive continuous improvement and operational efficiency over the course of its term. Several parties urge the OEB to require targets rather than metrics, but these submissions are, at best, premature. As the OEB has recognized, it is crucial to gain experience with the operation of metrics and a track record against which to gauge performance before targets should even be considered.

11. Toronto Hydro's investment plan is driven by an assessment of Toronto Hydro's assets, including their age and condition, and is intended to mitigate the growing level of risk in the system while addressing critical issues, mandatory investments, and operational needs, with consideration for rate impacts. In Toronto Hydro's submission, parties' suggestion that Toronto Hydro execute an investment plan with lower expenditures than are proposed in this Application will tend to increase total costs to customers in the long term, and pose unacceptable system risks.

12. Further, if adopted, parties' suggestions that the OEB could stretch out the DSP investments beyond five years or approve lower investment levels but require that spending be maintained in specific categories would be harmful to customers. Consistent with OEB guidance, the DSP is an integrated plan and Toronto Hydro respectfully urges the OEB to view it as such. If the OEB approves rates to fund a lower level of investment than requested, it should not restrict Toronto Hydro's ability to develop a new integrated plan so that the utility can endeavour to address system needs and provide safe and reliable service at the available investment level.

1.4 The level of capital investment builds on the ICM work program and is well within Toronto Hydro's capacity to execute

13. Over the plan period (2015-2019), Toronto Hydro proposes to execute a capital program of approximately \$498 million per year, on average. This amount represents an increase relative to the historical average of approximately 13% using the 2012-14 ICM average annual amount of \$440 as a basis.

14. Toronto Hydro is confident that it can successfully execute the work proposed in the DSP based both on the programs it has developed for the 2015-2019 period and its historical experience. During the ICM period, Toronto Hydro's capital program peaked in 2014 at \$589 million as the utility worked to complete the jobs that could not be executed in 2012 and 2013 due to delayed ramp-up of the ICM work program. This amount is more than Toronto Hydro proposes to undertake in any year of the CIR period.

15. With respect to the delivery of the 2012-2014 capital work-program, Toronto Hydro's in-service additions and capital expenditures were within approximately 5% of the utility's

forecasts at the end of 2014. In addition, 90% of the filed ICM jobs were completed or in progress at the end of the plan, while the remaining 10% of filed jobs replaced by other work within OEB-approved ICM segments to address emerging needs.

1.5 The proposed OM&A budget is necessary to support system renewal, ongoing operations and customer service

16. The OM&A funding requested for 2015 is based upon a “top down and bottom up” budget process. Toronto Hydro senior management challenged departmental leaders to bring forward anticipated current and sustained needs, but also to exercise restraint in bringing forward proposals. Where funding was requested for new initiatives or expanded activities, senior management expected the departments to justify those requests. The budgeting objective was to synthesize system needs and functional requirements with customer impacts.

17. The business units prepared detailed operational assessments of the utility’s service obligations and compliance requirements. This exercise entailed analyzing ongoing needs for 2015 and justifying new initiatives and materially increased programs.

18. Based on this planning process, Toronto Hydro developed the programs that comprise its requested OM&A budget of \$269.5 million for 2015. This request represents the test year spending necessary to provide customers with safe, reliable and responsive service and support the ongoing capital program. To support this request, Toronto Hydro filed 19 individual OM&A programs, each with detailed justifications explaining the need/rationale for the program, drivers of historical/bridge/test year variances, and examples of completed and/or ongoing operational improvements.

19. None of the proposed reductions from Toronto Hydro’s 2015 OM&A forecast result from a program by program analysis of required spending in each area. Instead, they represent a total amount of 2015 OM&A funding that “seems about right” to each party. In developing their recommendations, parties completely fail to address the implications of their recommended 2015 OM&A budget on critical new programs, such as Disaster Preparedness, or on Toronto Hydro’s ability to fund necessary cost increases in areas such as Customer Care and system Maintenance. Toronto Hydro respectfully submits the submissions of the parties provide little assistance to the

OEB in determining whether the evidence establishes the need for the requested level of OM&A spending in each program.

20. A number of parties assert, incorrectly, that an increase in capital spending should mean a decrease in OM&A. To the contrary, the relationship between OM&A and capital spending is multi-dimensional and complex. Increased capital spending increases administrative and operations spending because large portions of the work needed to support the capital program cannot be capitalized. For maintenance activities, the effect of increased capital spending may be to increase, decrease or have no impact on OM&A levels. While system renewal should ultimately lead to less need for corrective maintenance, that is many years away. Right now, Toronto Hydro is seeing an increasing number of assets that are failing and must be addressed through corrective work.

1.6 The Application Complies with the Renewed Regulatory Framework

21. The application complies with the Renewal Regulatory Framework.

22. In the RRFE, the OEB appropriately provided for flexibility in the incentive rate regime to account for circumstances that cannot be accommodated under 4th Generation Incentive Regulation (4GIRM). Ultimately, due to the nature, size and consistent level of Toronto Hydro's capital needs, only the CIR approach offers a suitable rate-setting mechanism. Because its situation fits squarely within the CIR criteria of “large, multi-year capital needs”, Toronto Hydro developed and filed a CIR application.

23. Toronto Hydro applied the tenets of the RRFE throughout its application, including:

- (a) A rate setting approach that begins with elements of the OEB's 4GIRM framework such as an initial rebasing year and escalation by I-X for OM&A and includes custom elements to account for Toronto Hydro's large and consistent capital need over the following four years of the plan.
- (b) A rigorous assessment of Toronto Hydro's productivity past and future, including total cost and reliability econometric benchmarking grounded in the OEB's benchmarking approach and methods. These were applied to an expanded data set

that compares Toronto Hydro against both a combined US/Ontario sample and a US only sample. In doing so, this benchmarking captured the effects of operating in Ontario's economic and regulatory environment as well as other important business conditions Toronto Hydro shares with dense, large, and mature urban utilities.

- (c) Customer engagement through the ordinary course of its business and a structured engagement process that included workbooks, focus groups, on-line survey and statistically valid telephone surveys.
- (d) A comprehensive suite of metrics and measures to track the outcomes of the DSP and drive continuous improvement and operational efficiency. Through annual reporting, these metrics will allow the OEB and interested parties to monitor important *customer-oriented performance outcomes* from the DSP; DSP implementation through *cost efficiency and effectiveness metrics*; and the effect of the DSP on *critical system issues*.

24. As stated by SEC in its reply: "to their [its] credit, the Applicant has sought to implement the spirit, as well as the letter, of the RRFE."

1.7 The proposed rate framework should be adopted because it reflects OEB policy for CIR applications

25. The individual elements of the rate framework, and the values of those elements, are reasonable, consistent with OEB policy and should be approved. The framework proposed is an appropriate, customized modification of the OEB's 4GIRM approach.

26. Benchmarking consumed a significant part in the hearing. Understanding the proper role of that evidence is important. Toronto Hydro agrees with the OEB that benchmarking is a "tool to focus and prioritize its attention on certain costs. Benchmarking increases the efficiency of regulatory oversight. It does not replace the need for substantiating evidence in support of spending levels."

27. Two issues were prominent in parties' submissions: the size of the stretch factor and whether it should be applied to capital. The OEB heard from PSE and PEG. Under well-established OEB policy, the stretch factor is to be determined by benchmarking and the preferred benchmarking evidence – PSE's more rigorous analysis – demonstrates that a 0.3% factor should be adopted for use in 2016 to 2019.

28. The use of the C-factor to reflect the revenue requirement impact of capital spending over the term of the CIR plan is appropriate, but no stretch factor should be applied to capital (the C-factor). Productivity is sufficiently built into Toronto Hydro's capital plans.

1.8 The Application Provides Substantial Ratepayer Protection and On-going Reporting

29. As summarized in the below Tables, the application provides substantial ratepayer protection and on-going reporting.

Table 1: Summary of Ratepayer Benefits and Protections

Ratepayer Benefits and Protections	Description	Reference
Rate Framework ¹	<ul style="list-style-type: none"> The Custom PCI will constrain the Toronto Hydro's operational funding over the 2016-2019 period, and require/incent the utility to find productivity and efficiency improvements. Up-front sharing of benefits with ratepayers through the stretch factor. Embedded capital productivity through competitive procurement practices. Return to ratepayers an appropriate portion of revenue from billing determinant growth. 	<p>Reply argument, at sections 5.1 to 5.3.</p> <p>Reply Argument, at sections 2.4.1, 3.3.1 and 4.2.</p> <p>Argument-in Chief, at Tab 5, pages 5-7.</p>
Operational Centers Consolidation Program (OCCP)	<ul style="list-style-type: none"> Ratepayers receive all net gains on sale of properties derived through the OCCP program. Direct outcome of the company's productivity initiative to reduce its square footage by 43%. 	Argument-in Chief, at Tab 2, page 16.
Tax Refund	<ul style="list-style-type: none"> A revision of 2006-10 tax position related to post-employment benefits resulted in a tax refund, which is being returned to customers in the current application. 	Exhibit 8, Tab 1, Schedule 1, at page 13.
Compensation Costs	<ul style="list-style-type: none"> Toronto Hydro reduced total compensation costs by \$8.7 million between 2011 and 2015, and negotiated labour agreement (CUPE) at average wage increase of 1.75% per year through to 2018. 	Reply Argument, at sections 3.1.3 and 3.5.1.
Procurement Strategy	<ul style="list-style-type: none"> Leverages, and passes on to ratepayers through embedded savings, the natural productivity achieved by companies in the competitive market. Incents external service providers and suppliers to become more productive, and shifts the risk of cost-overrun onto to external parties. Results in 81% of capital costs and 33% of OM&A costs being market-driven 	<p>Reply Argument, at sections 2.4.1 and 3.5.1.</p> <p>Argument-in Chief, at Tab 2, pages 24-26.</p>

¹ Toronto Hydro proposes that an earnings sharing mechanism is not appropriate and should be rejected. However, should the OEB be inclined to apply an ESM, Toronto Hydro submits that the mechanism should be symmetrical and that a 100 basis point dead-band is appropriate having regard to the explicit benefit sharing mechanism (the stretch factor) already embedded in the rate framework. Earnings in excess of the 100 basis point dead-band but below the 300 basis point off-ramp would be split on a 50/50 basis with customers. This is discussed in detail in section 5.5.2.

Ratepayer Benefits and Protections	Description	Reference
Cost-Efficiency Metrics	<ul style="list-style-type: none"> Metrics will drive the utility to find ways to improve its cost performance in three areas: (1) capital planning, design and support, (2) material handling and distribution; and (3) internal construction work. Benefits will be shared with customers throughout the duration of the plan (and beyond) in the form of more cost-effective assets being placed into service, and prudent capital re-investment 	Reply Argument at sections 2.4.3 and 2.5.7.
Historical Productivity	<ul style="list-style-type: none"> The funding proposals in this application reflect the operational savings attained by the company through numerous historical productivity initiatives. Detailed in the Past Productivity Study and the 2012 UMS Productivity Benchmark Study. 	Reply Argument, at sections 2.4.3 and 4.6.1.
Feeder Investment Model (FIM)	<ul style="list-style-type: none"> Finds the optimal balance between the economic benefits of deferring capital investments as long as possible and the additional failure costs (including customer interruption costs) associated with assets that are at the end-of-life and/or in poor condition. A sophisticated empirical tool that helps system planners make sound investment decisions to maximize net benefits to ratepayers over time. 	Reply Argument, at section 2.2.5. Argument-in-Chief, at Tab 2, page 10.
Capital Related Revenue Requirement Variance Account	<ul style="list-style-type: none"> Protects ratepayers against over-recovery if capital investments do not materialize as planned. Keeps ratepayers whole if forecasted in-service amounts shift from earlier to later years. 	Reply Argument, at section 5.5.1
Externally Driven Capital Variance Account	<ul style="list-style-type: none"> Protects against the potential over-recovery associated with third party related capital work which may not materialize as forecasted, due to the unpredictable nature, costs and timing of the projects. 	Reply Argument, at section 6.2.1. Argument-in-Chief, at Tab 6, page 2.
Derecognition Variance Account	<ul style="list-style-type: none"> Protects against volatility with respect to year over year derecognition losses. 	Reply Argument, at section 6.2.2 Argument-in-Chief, at Tab 6, page 2.

Table 2: Summary of Reporting and Adjustments

Reporting & Adjustments	Timeline / Trigger	Description	Reference
DSP Performance Metrics	Annual	<ul style="list-style-type: none"> <i>Customer-Oriented Performance:</i> SAIDI, SAIFI, CAIDI, FESI, MAIFI. <i>Cost-Efficiency and Implementation:</i> DSP Implementation Progress, Planning Efficiency, Supply Chain Efficiency, Contractor Cost Benchmarking, Asset Assemblies.² <i>System/Asset-Oriented Performance:</i> Defective Equipment Outages and Stations Capacity Availability. 	<p>Reply Argument, at sections 2.4.3 and 2.5.1.</p> <p>Argument-in Chief, at Tab 2, at pages 26-28.</p>
OEB Scorecard	Annual	<ul style="list-style-type: none"> <i>Customer Focus:</i> Service Quality and Customer Satisfaction <i>Operational Effectiveness:</i> Safety, System Reliability, Asset Management, Cost Control <i>Public Policy Responsiveness:</i> CDM and Connection of REG <i>Financial Performance:</i> Financial Ratios 	Exhibit 1B, Tab 2, Schedule 6 at page 2.
Adjustments	Annual	<ul style="list-style-type: none"> Annual distribution rate adjustment Following the OEB's determination of the newest inflation factor. 	Exhibit 1B, Tab 2, Schedule 6 at page 4.
	Z-Factor Event	<ul style="list-style-type: none"> Standard Z-factor criteria under 4th Generation IRM. <i>One-time events:</i> targeted rate rider <i>Ongoing events:</i> adjustment to base revenue requirement 	Reply Argument, at sections 5.5.3 and 6.2.3.
Off-Ramps	+/- 300 basis points	<ul style="list-style-type: none"> Standard 4th Generation IRM treatment. 	Exhibit 1B, Tab 2, Schedule 3, at page 16.

² Toronto Hydro has proposed that the DSP Implementation Progress metric report on its capital expenditures – annually, as the percentage completed of the five-year plan total. Should the OEB feel that more granular reporting is required, Toronto Hydro proposes that this DSP Implementation Progress reporting be limited to expanding the DSP Implementation Progress measure to the OEB DSP investment category level (i.e. System Renewal, System Service, System Access and General Plant). This is discussed further in section 2.5.8.

Reporting & Adjustments	Timeline / Trigger	Description	Reference
Stakeholder Conference	2018	<ul style="list-style-type: none"> Review mid-term results and approaches to current DSP measures, and discuss measures for the next application. Review results of third-party benchmarking study regarding reliability forecasting practices. 	Reply Argument, at sections 2.5.1 and 2.5.5.

1.9 Table of Concordance

30. This Reply Argument is organized in the same manner as Toronto Hydro's Argument-in-Chief. For convenience, attached as Appendix B is a Table of Concordance to the OEB-approved Issues List.

SECTION 2 – CAPITAL INVESTMENT

2.1 Overview of the Reply Argument on capital investment issues.

31. The asset management and investment planning approaches that Toronto Hydro uses are fundamental to the development of the Distribution System Plan (DSP). These processes have been used and refined over many years. During that time, they have been validated as appropriate, indeed as industry leading, by external experts and have been reviewed by the OEB and the parties in various applications.

32. To read the submissions of the parties, one would think that this application represents a radical shift in Toronto Hydro's asset management and investment planning. It does not. The capital planning process underlying the DSP represents an evolution and improvement of Toronto Hydro's past approaches. It is an extension of the approach used in the ICM application, which in turn advanced the methods used to develop earlier capital plans. These plans and Toronto Hydro's planning processes have been part of the rate applications that the utility has brought before this OEB for nearly a decade.

33. At the core of parties' positions on asset management and investment planning are two assertions: (1) Toronto Hydro has moved from condition-based to age-based planning, and (2) using asset age in planning leads to premature replacements. These assertions, made without evidentiary support, are plainly wrong.

34. As detailed in the sections that follow, Toronto Hydro's evidence demonstrates that it considers age, condition, customer impacts and other asset-specific information in its planning. Age demographics and condition trends are particularly important in the long-term planning process, which asks the questions "what does the utility need to invest to meet its obligations, maintain reliability and maximize customer value, and at what pace?" The short-term planning process (i.e. project development) incorporates an array of measures and industry-leading decision-support systems such as the Feeder Investment Model (FIM) and Health Index scores to target and prioritize immediate investments with the greatest net benefits to customers.

35. Over the past decade, Toronto Hydro has been working to better understand the assets on its system in terms of both their demographics and performance. These efforts and actual

experience on the ground confirm that over a population of assets, age is a reliable predictor of failure rates. This view is not unique to Toronto Hydro, as age is a consistent element in asset management plans across the electric utility industry.

36. Over the same time period, Toronto Hydro also began testing some asset classes for specific degradation factors. Based on this testing, Toronto Hydro began developing a Health Index approach for certain assets. Toronto Hydro has continued working to expand the size of the samples tested and has initiated testing for additional assets.

37. AMPCO and its supporters fail to understand five important points about asset age and condition.

- (a) First, Toronto Hydro defines the Useful Life of an asset as the mid-point between Kinectrics' Minimum Useful Life, beyond which most assets are expected to operate, and the Maximum Useful Life, beyond which an overwhelming majority of assets are expected to have failed. The fact that Useful Life is the midpoint and not something closer to the minimum reflects the imprudence of trying to replace all assets before they fail. However, beyond the Useful Life midpoint, assets begin to degrade and fail at an exponential pace. This is why Useful Life is one of the primary indicators of long-term system health and a critical measure of the amount of proactive investment needs that the DSP must address.
- (b) Second, while age information exists for all asset classes, condition information only exists for some classes.
- (c) Third, condition information is based on testing a sample of assets for particular degradation factors. An asset is in "very poor" condition if testing shows significant degradation and in "very good" condition if the test finds no degradation. The results of this sampling are extrapolated to the asset population as a whole.
- (d) Fourth, AMPCO and SEC both make a significant error in assuming that assets in "very poor" condition are recommended for replacement by Kinectrics in two to

three years. In fact, Kinectrics recommends replacement of “very poor” condition assets within one year.

- (e) Fifth, and most importantly, while the presence of significant degradation means that an asset is in worse condition than would be expected for its age, the opposite is not true. An asset in “very good” condition is not better than would be expected for its age and therefore is not more likely to operate beyond its Useful Life. This is because an aged asset includes multiple parts, all of which have an age-related probability of failure no matter the condition as a whole. Not every part can be assessed for condition, but all are susceptible to age-based failure. A vintage car can have a polished exterior, but its transmission can still fail.

38. The submissions with respect to age and condition echo the position taken by the parties, and rejected by the OEB, in the ICM proceeding. In that proceeding, parties asserted that Toronto Hydro should only replace assets in very poor condition in a given area, ignoring the important associated work in that area which would need to be done later. In effect, these parties submitted that Toronto Hydro should only be allowed to complete the bare minimum of work one step at a time, notwithstanding that this approach is demonstrably more costly and more disruptive to customers and the public. The OEB found that Toronto Hydro’s economically opportunistic approach – whereby all assets that are at or near end-of-useful life are replaced as part of a single, coordinated effort – is a sensible and prudent approach to renewal. It specifically agreed that “doing only the bare minimum of work may be more expensive and counterproductive in the long run.”

39. The parties offer the OEB incorrect conclusions about the Feeder Investment Model (FIM). The FIM does not drive the overall level of capital need in the DSP. The primary application of the FIM in this proceeding is in the Business Case Evaluations included for most of the capital programs. In this application, the FIM compares the cost of the proposed program investment against the risk costs of the assets the program is addressing to determine the magnitude of net benefits to customers. The risk cost includes customer interruption costs and the costs of reactive replacement. Parties wrongly suggest that the FIM uniformly recommends replacing assets before they reach end-of-Useful Life. In fact, for assets where the consequences

of failure are low relative to the cost of replacement, the FIM will recommend optimal intervention times so far into the future that they are essentially equivalent to a “run to failure” approach. Finally, the FIM is only one of the tools used in making investment decisions.

40. Based on their arguments, parties appear to believe that “steady state” is a fanciful and aspirational abstraction, but it is more prosaic than that. Essentially, “steady state” is the extrapolation of Toronto Hydro’s core asset management policies into the future, with a strict focus on improving customer value over time. It is used to place the scope and magnitude of Toronto Hydro’s capital need in a longer-term context. The notion of a “steady state” is not itself a driver of investment needs over the next five years.

41. The product of Toronto Hydro’s planning is the DSP – a comprehensive and detailed integrated investment plan for the 2015-2019 period. It is designed to provide customer value by proposing the investments necessary to sustain and renew the distribution system and operate it in a safe and reliable manner. The plan conforms to the RRFE requirements and presents the 46 programs proposed for 2015-2019 in the RRFE’s four investment categories. Toronto Hydro’s investment plan is driven by an assessment of Toronto Hydro’s assets, including their age and condition, and is intended to mitigate the growing level of risk in the system while addressing critical issues, mandatory investments, and operational needs, with consideration for rate impacts. In Toronto Hydro’s submission, parties’ suggestion that Toronto Hydro execute an investment plan with lower expenditures than are proposed in this application will tend to increase total costs to customers in the long term, and pose unacceptable system risks.

42. The vast majority of the work proposed is continuation of work performed during the ICM period. The preliminary ICM true-up information provided in evidence demonstrates that Toronto Hydro completed or has in-progress 90% of the jobs proposed while spending within 5% of the ICM approved budget. While Toronto Hydro believes that this information adequately supports including the ICM in-service additions contained in 2015 opening rate base, it has proposed a variance account to capture any differences between amounts approved for inclusion in 2015 rate base related to ICM work, and any permanent disallowance that may result from the ICM true-up process. In this way, ratepayers are fully protected.

43. While the DSP investments were planned based on system needs and not to meet a particular reliability target, the proposed pace of renewal spending is expected to maintain or somewhat improve system reliability over the plan period. The integration of these investments with targeted and cost-effective System Service programs like Feeder Automation will help deliver the additional reliability improvements forecast in the DSP. Reductions in Toronto Hydro's capital spending plans would create cost pressures and additional system risks for customers in the long term. Toronto Hydro respectfully submits that, contrary to the suggestions of a number of parties, it is not appropriate to defer these investments until 2020 or beyond.

44. Parties argue that Toronto Hydro's proposed capital expenditures should be reduced in light of reliability improvements during the 2009-2013 period that were achieved with lower levels of capital spending than proposed in the DSP. However, there is no simple correlation between system-wide reliability and total expenditures. The correlation between capital expenditures and reliability is much more complex and nuanced: it involves, among other things, looking at specific investments in context. In response to sharply declining reliability between 2004 and 2008, Toronto Hydro began ramping up its capital program in 2007. Initially, the utility was able to reach "low hanging fruit" through investment interventions (2007-2011) that resulted in short-term reliability gains. While this initial approach was necessary and appropriate for the system and customer experience, it was not sufficient to sustain reliability long term – that requires programmatically replacing the underlying aging and deteriorating distribution system. Under the paced investment plan presented in this Application, this proactive approach is focused on a long-term strategy to sustain early reliability gains by addressing the underlying assets using tools such as the FIM, which were developed during the 2009-2011 period, to prioritize investments.

45. If adopted, parties' suggestions that the OEB could stretch out the DSP investments beyond five years or approve lower investment levels but require that spending be maintained in specific categories would be harmful to customers. Consistent with OEB guidance, the DSP is an integrated plan and Toronto Hydro respectfully urges the OEB to view it as such. If the OEB approves rates to fund a lower level of investment than requested, it should not restrict Toronto

Hydro's ability to develop a new integrated plan so that the utility can endeavor to address system needs and provide safe and reliable service at the available investment level.

46. The DSP includes a comprehensive suite of metrics and measures to track the outcomes of the plan and drive continuous improvement and operational efficiency over the course of its term. Several parties urge the OEB to require targets rather than metrics, but these submissions are at least premature and in some cases not appropriate. As the OEB has recognized, it is crucial to gain experience with the operation of metrics and a track record against which to gauge performance before moving to targets.

47. Toronto Hydro estimates that 81% of the utility's capital costs relate to goods and services procured through competitive market processes. External contractors are pre-qualified and then selected based on the fixed prices they offer for the 6,400 units contained in Toronto Hydro's RFP. Once selected, these contractors are not guaranteed any minimum amount of work. Instead, each job is offered to the contractor with the lowest overall price based on the combination of units that comprises that job. Toronto Hydro also procures all electrical materials, those used by contractors and those used internally, through competitive solicitations. This widespread use of competitive procurement drives continuous improvement and embeds market efficiency for the services, equipment and materials procured by Toronto Hydro and helps ensure that these procurements represent the best value for customers while also satisfying the operational needs of the utility.

48. Parties offered relatively few challenges to the specific programs proposed. Those few proposals that were made generally rest on mischaracterizing or misstatement of the evidence supporting the program. To the extent that parties have offered criticisms of particular types of investments, these have largely been aimed at the System Renewal category. Parties largely did not comment on the investments contained within the other three categories: system service, system access and general plant. In the result, parties offer no basis for modifying, let alone rejecting, any of the 46 programs that comprise the DSP. The cuts proposed are arbitrary and in Toronto Hydro's respectful submission, are of no assistance to the OEB and should be rejected.

49. The annual investment contained in the DSP is about 13% higher than the annual investment over the ICM period, with a \$30 million per year increase in the System Renewal category. The level of investment devoted to System Renewal is fully justified by the increasing percentage of assets beyond end-of-life and worsening asset condition. Investments in other categories, which were mostly unchallenged by the parties, are at the levels needed to provide customers access, address system-wide safety, reliability and efficiency issues and replace the facilities, equipment and vehicles necessary to operate, repair and renew the system. Toronto Hydro respectfully submits that, based on the record in this proceeding, the DSP should be approved as submitted and the resulting capital investments authorized.

2.2 Toronto Hydro has undertaken a robust and sophisticated capital planning process, using industry-leading practices and decision-support systems

2.2.1 Toronto Hydro has appropriately identified the capital work that must be undertaken over 2015-2019 CIR period

50. Toronto Hydro has undertaken a robust and sophisticated capital planning process. Parties' submissions with respect to capital need have largely ignored the detailed evidence provided in each of the individual business cases, instead adopting high-level criticisms aimed at overarching planning considerations. One notable exception is SIA, which commends Toronto Hydro on the detailed and comprehensive evidence provided.³

51. Only SIA's submissions on the proposed level of capital expenditures appear to be grounded in a detailed review of the individual capital programs in evidence. While Toronto Hydro ultimately disagrees with SIA's program-specific criticisms, it finds that SIA's overall assessment of System Renewal requirements is supportive and fundamentally aligned with the utility's asset management approach. SIA summarizes its general support for the investment program as follows:

Taken in its entirety, the SIA believes that THESL's proposed capital program is certainly aggressive, but not extreme. The SIA notes that THESL's capital spending between 2011-2014 was on average \$440 million per year. In this application, THESL proposes spending levels of approximately \$497 million per year.

³ SIA Argument, at section 2.7

The SIA is mindful of the Board's comments in the recent EB-2013-0416 Decision, in which it observed that significant reductions in HONI's proposed capital spending "would likely create cost pressures in the longer term". Given THESL's demonstrated capital needs to address a substantial backlog of aged and failing assets, the SIA certainly believes this concern to be equally if not even more true in this proceeding.⁴

52. Toronto Hydro agrees in particular with SIA's comments regarding the OEB's findings in the above-noted recent HONI decision. As Toronto Hydro discussed throughout its evidence and in its Argument-in-Chief, investing less than the amounts proposed by Toronto Hydro in this application will disadvantage customers by elevating the risks of failure, increasing the backlog of assets at or near end-of-life, and creating a snowplow effect that will render actions necessary to address aging infrastructure in future years more expensive and more challenging.⁵

53. Relative to SIA, other parties' submissions on capital need are characterized by a comparative silence on program-specific content. SEC, while recommending a revenue requirement sufficient to fund only \$139 million in 2015 capital expenditures (see Appendix A to this Reply Argument), disingenuously submits that it "does not take issue with the capital programs as set out in the DSP." It then argues however, that there are "significant concerns" with the amount of capital work and the cost to do that work.⁶ These submissions are based on fundamental errors about Toronto Hydro's planning process and should be ignored.

54. AMPCO and SEC submit extensive, but flawed, critiques of Toronto Hydro's overall capital planning assumptions as they relate to age and condition demographics. Fundamentally, their arguments rest on two propositions: (1) assets are selected for replacement solely on the basis of their age; and (2) relying on age alone leads to premature replacement. As discussed in sections 2.2.2 to 2.2.4 below, both points are wrong. As a result, the OEB should place no weight on the criticisms offered by AMPCO and SEC on capital planning and the pace of necessary asset replacement.

⁴ SIA Argument, at page 14

⁵ OH Transcript Volume 5 (February 24, 2015) at page 134; Toronto Hydro Argument-in-Chief EB-2014-0116, Tab 2, page 6.

⁶ SEC Argument, at page 33, paragraph 2.2.2

55. As an initial matter, Toronto Hydro notes that while it has presented detailed evidence in the DSP on both its long-term and short-term planning processes, there remains a level of confusion in parties' submissions as to the application of various decision-making tools and considerations in Toronto Hydro's planning processes.⁷ OEB Staff in particular is explicit about this confusion, noting an apparent "gap" or "inconsistency" in statements from Toronto Hydro.⁸ The following paragraphs provide an overview of Toronto Hydro's planning before responding to the parties' specific criticisms.

56. The long-term planning process is used to determine the necessary level and pacing of distribution system investment. It is based on trends in asset age and condition, system performance, projected failure rates for various asset classes, load growth projections, issues unique to particular asset types (e.g., Fibertop Network Protectors) and consideration of program-based system needs like the amount of outstanding rear lot to front lot conversions.⁹ Long-term planning also considers the historical costs to carry-out required work in order to project future capital expenditure needs on a program by program basis.

57. The short-term planning process involves taking the identified needs and program architecture from the long-term planning process and selecting and prioritizing particular assets for replacement or reconfiguration using a broad array of decision-support tools, including condition information of various types, age, Feeder Investment Model (FIM) outputs, historical reliability, loading, configuration, and site visits by professionals. All of these prudent planning and performance considerations go into selecting assets for replacement.¹⁰

58. In determining long-term spending requirements and short-term investment priorities, Toronto Hydro's engineering professionals do not rely on a single tool or measure above all others and they do not ignore their own experience and judgment. Throughout the proceeding, parties have sought to establish a single objective determinant of investment need, and have asserted, incorrectly, that Toronto Hydro uses, in isolation, either asset age or the FIM for this

⁷ Exhibit 2B, Section D

⁸ OEB Staff Argument, at page 45

⁹ Exhibit 2B, Section D3.1.1.; OH Transcript, Volume 4 (February 23, 2015) at page 43, lines 20-28.

¹⁰ Exhibit 2B, Section D3.1.2.

purpose. As the evidence comprehensively demonstrates, this is simply not the case. A reading of the 46 individual capital program business cases reveals a multi-faceted analysis of capital expenditure requirements and customer benefits over the five-year CIR period.

59. AMPCO's submissions exemplify this erroneous view of investment planning. AMPCO, joined by other intervenors, argues that Toronto Hydro's asset management approach and investment strategy is essentially flawed.¹¹ As noted above, the basis for AMPCO's position is the assertion that Toronto Hydro has adopted a purely age-based approach to planning which is misaligned with industry standards, and that this age-based approach overstates Toronto Hydro's capital needs.¹²

60. AMPCO is wrong. Its position ignores Toronto Hydro's evidence on planning and is predicated on an incorrect description of what various conditions mean in terms of the timing of asset replacement and a flawed understanding of the interplay between age and condition. AMPCO also provides no evidence with respect to what it asserts are industry standards. The following sections respond to AMPCO's and other parties' submissions regarding the overall capital planning approach used for the CIR period.

2.2.2 Toronto Hydro has not ignored asset condition; to the contrary the Asset Condition Assessment confirms Toronto Hydro's forecasted capital needs

61. The claim by AMPCO that Toronto Hydro has adopted an "exclusively" age-based planning approach is wrong.¹³ The declining condition of Toronto Hydro's assets demonstrates the increased risk of asset failure. The paced approach to System Renewal that Toronto Hydro advocates is aligned with the recommendations in the Kinectrics 2014 Asset Condition Assessment Audit (2014 ACA), an independent assessment of Toronto Hydro's assets by an OEB recognized expert, analysis which was not challenged by any party.

62. The 2014 ACA is the most recent review of the condition of core asset classes within Toronto Hydro's distribution system. It presents a Health Index ("HI") score that allows Toronto

¹¹ AMPCO Argument, at page 4; CCC Argument, at page 4, paragraph 6; SEC Argument, at page 36, paragraph 2.3.13; VECC Argument, at page 39.

¹² AMPCO Argument, at page 7.

¹³ *Ibid.*

Hydro to target its intervention efforts at those assets that are in the worst condition and more likely to fail.¹⁴ The 2014 ACA shows a significant decline in the overall health of Toronto Hydro's system.

63. Specifically, Kinectrics found “that there has been a downward trend in the overall health of a majority of THESL's asset groups. Of the 21 asset groups audited, only 4 groups showed improvements in overall health. For the remaining 17 asset categories, an overall decline in condition was observed.”¹⁵ Some of the key findings are as follows:

System	Asset Type	Condition Trend / Health Index Distribution
Stations	Power Transformers	• Very Significant Decline
	Switchgear	• Very Significant Decline
	Air Magnetic & KSO Oil Circuit Breakers	• Very Significant Decline • Kinectrics also noted a concern with the overall Health Index distribution of circuit breakers
	SF6 Circuit Breakers	• Significant Decline
Underground	Padmounted Transformers	• Extremely Significant Decline
	Submersible Transformers	• Very Significant Decline
	Vault Transformers	• Kinectrics noted a particular concern with respect to Vault Transformers, which are typically the only source of power in the buildings where they are located.
Overhead	Overhead Remote Switches	• Very Significant Decline
	Overhead Manual Switches	• Notable Decline
	Wood Poles	• Improvement • Kinectrics notes a concern with the Health Index distribution of this asset class due to there being 123,000 Wood Poles in the system, 11% of which are in Very Poor or Poor condition and 43% of which are in Fair condition.
Network	Network Transformers	• Very Significant Decline
	Network Protectors	• Significant Decline
	Network Vaults	• Extremely Significant Decline
	Cable Chambers	• Significant Decline

64. Parties argue that the ACA results contradict the age-based demographic view of Toronto Hydro's assets.¹⁶ To arrive at this conclusion, AMPCO, SEC and others ignore the overall declining trend in asset condition emphasized in Kinectrics' report, and focus instead on statistics

¹⁴ OH Undertaking J1.5 at pages 1-3.

¹⁵ Exhibit 2B, Section D, Appendix A at page 13.

¹⁶ SEC Argument, at page 38, paragraph 2.3.19; CCC Argument, at page 10.

related to the two worst condition categories: Poor and Very Poor. They argue that the absence of a large number of units in these two poorest condition categories somehow refutes Toronto Hydro's overall capital need.¹⁷

65. In arriving at this interpretation, AMPCO and SEC rely on assumptions about the recommended replacement timing for assets that fall into each of the three poorest condition categories (i.e. very poor, poor, and fair). Referring to Kinectrics' 2007 ACA study, AMPCO submits:

Kinectrics recommended in 2007 that assets in very poor condition be planned for replacement in two to three years and assets in fair condition be planned for replacement in 4 to 10 years.¹⁸

66. With respect, this statement is in error.¹⁹ The actual Kinectrics recommendation in the referenced report was as follows:

It is recommended that the assets in "very poor" condition be planned for replacement in the next year, assets in "poor" condition be planned for years 2 and 3, and assets in "fair" condition be planned for replacement in 4 to 10 years. It is anticipated that the assets now in "fair" condition will be in "very poor" condition by the end of the ten years.²⁰

67. The approach that flows from AMPCO's and SEC's incorrect interpretation of the 2007 ACA study is one in which utilities with a large number of aging assets should wait ten years until the assets in "fair" condition degrade to "very poor" condition before beginning replacement. SEC's proposal for extreme reductions to Toronto Hydro's proposed capital expenditures appears designed to put this approach into practice.²¹ Given the large number of

¹⁷ AMPCO Argument, at page 12; SEC Argument, at pages 37-38, paragraphs 2.3.15-2.3.17.

¹⁸ AMPCO Argument, at page 8

¹⁹ This error appears to stem from a mistake in the main body of the EB-2007-0680 evidence, where Toronto Hydro states that "it is recommended that assets in "very poor" condition be planned for replacement in two to three years [...]." ¹⁹ Nevertheless, it is troubling that AMPCO would attribute this statement to Kinectrics without bothering to read the Kinectrics 2007 ACA Report, which was attached as an Appendix to the Toronto Hydro evidence that AMPCO cites.

²⁰ EB-2007-0680, Exhibit D1, Tab 8, Schedule 9, Appendix A, at page iv.

²¹ AMPCO, despite its recommendation to cut System Renewal spending to "pre ICM" levels (page 33), inconsistently also adopts SEC's rate adjustment formula, which produces extreme capital expenditure reductions (AMPCO Argument at page 35). Because AMPCO recommends a larger OM&A budget than SEC, AMPCO's proposal to use SEC's formula actually results in more severe cuts to capital than SEC proposes. See Appendix A of this Reply Argument.

Toronto Hydro assets that are in “fair” condition and the fact that assets in “very poor” condition are recommended for replacement within one year, it is not an overstatement to say that adoption of the approach advanced by AMPCO and SEC would lead to a situation where it would become impossible for Toronto Hydro to address the volume of assets expected to fail each year.²²

68. As explained in the discussion regarding age-based probability of failure in section 2.2.3 below, assets tend to degrade in an accelerated fashion as they age beyond Useful Life. Given the high volume of assets currently in fair condition or worse and the overall declining trend in asset condition, Toronto Hydro considers assets in the “poor” condition category as high priority for proactive replacement. “Very poor” condition assets are approaching unsustainability and may need to be replaced reactively. Mr. Paradis elaborated on this point:

MR. PARADIS: So, for example, if we were to identify that a specific neighbourhood had a series of transformers in poor and very poor health, we may choose to take action even faster, or prioritize that investment ahead of others in our program -- even in certain instances, do so reactively.

It's one thing we didn't touch on, that in cases where there is an inspection done and an asset is identified to be in a state that is unsustainable or likely to lead to imminent failure, we would actually take action reactively and address the asset prior to, you know, any planned activity taking place.

So in those cases, the very worst assets would get removed on the spot, if you will, immediately, in anticipation of possible failure.²³

69. The ‘find it, fix it’ approach was recently implemented in recognition of the need to address the increasing number of assets in poor health. Through this approach, Toronto Hydro expects to partially address the need to proactively replace assets in the ACA study that appear to be in very poor or poor condition by replacing them on a reactive basis.²⁴

70. Finally, it should be noted that the ACA is not only limited in that it can only assess a small sample of the assets in a particular class, it is also limited in the array of asset classes that it covers. In their arguments, parties make the mistake of applying a flawed analysis of available ACA data to System Renewal as a whole and to significant renewal programs that primarily

²² Exhibit 2B, Section D, Appendix A, at pages 22-23.

²³ OH Transcript, Volume 4 (February 23, 2015) at page 62, lines 9-22.

²⁴ IR Response 2B-OEB-Staff-34 at page 3.

address assets that are not evaluated in the ACA (i.e., assets that are not or cannot be assessed on the basis of condition data such as underground direct buried cable).

71. For example, both SEC and AMPCO cite the Underground Circuit Renewal program as a situation where Toronto Hydro is, in the opinion of the parties, proposing to replace large amounts of assets that are not yet in “very poor” or “poor” condition.²⁵ However, as described in the detailed business case evidence, the replacement of underground cross-linked polyethylene (XLPE) cable – which is not evaluated in the ACA – with tree-retardant, cross-linked polyethylene (TR-XLPE) cable in concrete-encased duct is the primary driver for this program. The evidence supporting this replacement in the business case goes far beyond age, noting for example that 181,577 customer interruptions in 2013 were due to primary underground cable failures.²⁶

72. The business case also addresses the complaints of AMPCO and SEC²⁷ regarding the condition profile of underground transformers and switches by providing detailed information on the degradation factors that Toronto Hydro is observing in the field and the particular reasons why certain assets types are degrading prematurely, as well as the known risks to customers associated with failure of the assets.²⁸

73. In sum, Toronto Hydro disagrees with parties’ interpretation of the ACA and their overly broad and flawed application of the ACA to determine what they believe, absent any supporting engineering evidence, are Toronto Hydro’s system needs. In light of the aging system and the severe decline in asset condition overall, Toronto Hydro has proposed the minimum spending required to manage risks and maintain acceptable service levels over the CIR period. Toronto Hydro’s plan is fundamentally aligned to Kinectrics’ conclusions and recommendations in the ACA report, which are as follows:

An overall decline in health for 17 asset categories was observed. In addition to the downward trend of asset health, there are numerous categories with large

²⁵ AMPCO Argument, at pages 10-12; SEC Argument, at pages 34-35, paragraphs 2.3.5-2.3.6.

²⁶ Exhibit 2B, Section E6.1, at page 36, lines 9-13.

²⁷ AMPCO Argument at pages 11-12; SEC Argument at pages 35-36, paragraphs 2.3.5-2.3.7.

²⁸ Exhibit 2B, Section E6.1, at page 36, lines 9-13.

numbers of units in fair or worse condition. The downward trend and large quantities of fair to worse conditions are a cause for concern.

Although it is possible that the decline in health is partially attributable to better asset knowledge due to the increased sample sizes, it is recommended that THESL examine the root cause of decline in asset health. It is further recommended that THESL review the timing and pacing of system renewal investments based on the trend in asset health.

Short term strategies are particularly important for asset groups that have large quantities in poor and very poor condition. Long term strategies should be put in place for groups that have large quantities in fair condition. This will allow THESL to pace investments and prevent spikes in required replacement costs in the future. [Emphasis added.]²⁹

74. Finally, it is worth emphasizing again that AMPCO and SEC ultimately propose capital expenditure allowances for the five-year period that are much lower than their argument on capital would suggest. This is because of the operation of SEC's flawed proposed rate setting approach that AMPCO adopts.³⁰

2.2.3 Asset age is a reliable predictor of asset failure and is one of the foundations of prudent long-term capital planning

75. System Renewal investments are driven by the need to mitigate the risk of equipment failure through the replacement of assets that are past or approaching end-of-life, with priority placed on replacing those assets that are in poor health condition and that present the highest level of risk to customers.

76. Currently, 26% of Toronto Hydro's assets are operating beyond the end of their useful lives, representing billions of dollars in required investment.³¹ By the end of 2019, Toronto Hydro estimates that 33% of assets will be beyond their useful lives if the utility does not undertake a proactive strategy and instead operates on the basis of a run-to-failure approach.³² As explained in section 2.2.2 above, the pace of system aging is reflected in the rapidly deteriorating condition of the asset base.

²⁹ Exhibit 2B, Section D, Appendix A, at pages 22-23.

³⁰ See Appendix A to this Reply Argument.

³¹ EC Transcript (November 17, 2014), at page 10, lines 5-21.

³² Exhibit 2B, Section D2 at page 9.

77. AMPCO's argument notes that Toronto Hydro has made significant capital investments of \$1,059.81 million over the period 2012 to 2014 on Incremental Capital Module (ICM) projects, a large proportion of which are system renewal related investments.³³ However, notwithstanding these investments, the percentage of assets beyond end-of-life has increased from 22% in 2011 to 26% in 2015.³⁴ The growing number of assets reaching end-of-life is a function of the fact that large quantities of assets were installed during periods of rapid development.³⁵ As the OEB has noted: "Many parties acknowledge that parts of the Applicant's network, built from the 1950s to the 1980s as Toronto and its suburbs grew, are aging and in need of repair or replacement."³⁶

78. Assets that are at or beyond their expected useful lives present a significant risk of failure. This observation is inherent to the useful life concept as defined in both Toronto Hydro's 2009 Kinectrics Asset Depreciation Study and the OEB's own 2010 Kinectrics study and as applied across the utility industry.³⁷

79. Toronto Hydro defines the Useful Life of an asset as the mid-point between Kinectrics' Minimum Useful Life and Maximum Useful Life for a specific asset type.³⁸ As defined in the Kinectrics study "Toronto Hydro Electric System Useful Life of Assets," most assets are expected to operate to the Minimum Useful Life or beyond. Assets that age beyond the mid-point (i.e. Useful Life) begin to fail at an exponentially increasing rate with each passing year. Maximum Useful Life is the age at which an overwhelming majority of assets typically have failed.³⁹

80. The Useful Life of an asset is not an automatic trigger for replacement, nor is age the sole determinant of future investment needs. Age is the starting point of and the foundation for long-

³³ AMPCO Argument, at page 3.

³⁴ TC Undertaking J1.3.

³⁵ Exhibit 2B, Section E2, at pages 7-10.

³⁶ EB-2007-0860, Decision (May 15, 2008) at page 12.

³⁷ Exhibit 1B, Tab 2, Schedule 4, Appendix B, at page 25.

³⁸ IR Response 2B-OEBStaff-36(b) at page 2, lines 16-25, which references the Kinectrics Study: "Toronto Hydro Electric System Useful Life of Assets" filed in EB-2010-0142 as Exhibit Q1, Tab 2, Schedule 7-2.

³⁹ Kinectrics Study: "Toronto Hydro Electric System Useful Life of Assets" filed in EB-2010-0142 as Exhibit Q1, Tab 2, Schedule 7-2 at page 3. See also, Kinectrics Report, "Asset Depreciation Study for the Ontario Energy Board" (July 8, 2010) at page 10.

term needs assessment. As Mr. Paradis testified, “age has shown over the years to be a good predictor of risks of failure, [...] age is indicative of the state of the population.”⁴⁰

81. Mr. Paradis also explained that Toronto Hydro’s experience has demonstrated that age is a reliable predictor of failure and is often more informative than asset condition information:

MR. PARADIS: [...] What I am trying to say for the example of the transformer is that the health index itself and its formulation, how it is calculated and what data it accounts for, may not be fully representative of the health of that asset.

And what we were trying to say earlier is that in those cases, age is actually based on our experience with failures, and age is a good representation of the risk of failure associated with those assets.

So in the specific case, we would consider quite strongly the demographics of that asset class in defining the program and the level of attention it requires, or investment it requires.

MR. QUESNELLE: So that is based on your empirical knowledge of when the failures take place, or a correlation between health of the asset and its age?

MR. PARADIS: It would be based on our experience with failures and the age at which those failures occur.⁴¹

82. The fact that the ACA is an analysis of readily observable degradation factors that are cost-effective to assess and not a complete assessment of an asset’s condition was explained several times by Toronto Hydro witnesses. Mr. Walker testified as follows:

MR. WALKER: I think there is a bit of a misunderstanding around what these condition assessments represent. Where we have a particular condition that we can measure on a given asset, we try to determine whether it is in poor or fair or et cetera condition. That is not comprehensive of all the conditions that can happen on an asset.

As an example, plastic-insulated cable is prone to something call water treeing, and we can't detect that in any practical way across our system, but we know that as the asset ages those water trees become more and more prevalent until the insulation on the cable fails.

So it's not -- you can't characterize our entire asset base based on the situations where we have condition data. We only have it rated for certain conditions on

⁴⁰ OH Transcript, Volume 4 (February 23, 2015) at page 58, lines 22-25.

⁴¹ OH Transcript, Volume 4 (February 23, 2015) at pages 64-65.

certain assets. And we know that age is a very good indication of the long-term viability of our assets, and we use that in many cases for our assets.⁴²

83. Parties argue that because Toronto Hydro does not increase the useful lives of assets in “very good” or “good” condition, its analysis is biased toward early replacement.⁴³ AMPCO is perhaps the most strident advocate of this view stating, for example: “It is unfathomable to AMPCO how THESL could determine it was prudent to replace these levels of underground asset quantities when the ACA says virtually no underground assets are in very poor or poor condition.”⁴⁴

84. The preceding argument reveals the depth of parties’ fundamental misunderstanding of the relationship between asset condition and age. Asset condition is developed through a “defect analysis.”⁴⁵ That is, assets are examined for specific degradation factors and ranked according to the degree to which these degradation factors are observed. An asset with a Health Index score of “very good” is one where the specific degradation factors being tested for are absent. What this means is that the testing did not find the known degradation factors that would cause the asset to fail prematurely (i.e., earlier than age alone would suggest). It does not mean that the asset is in better condition than would be expected and therefore more likely to operate beyond its useful life.

85. In other words, while the presence of significant degradation means that an asset is in worse condition than would be expected for its age, the opposite is not true. An asset in “very good” condition is not better than would be expected for its age and therefore is not more likely to operate beyond its useful life.

86. Mr. Otal also spoke to this point, explaining how the age-based probability of failure differs from the more limited condition assessment calculation because, by considering actual

⁴² OH Transcript, Volume 1 (February 17, 2015) at pages 59-60; see also the testimony of Mr. Paradis at OH Transcript, Volume 4 (February 23, 2015) at page 63, lines 9-22

⁴³ AMPCO Argument at page 29; SEC Argument at page 35, paragraphs 2.3.8-2.3.20.

⁴⁴ “It is unfathomable to AMPCO how THESL could determine it was prudent to replace these levels of underground asset quantities when the ACA says virtually no underground assets are in very poor or poor condition.” AMPCO Argument at pages 11-12.

⁴⁵ Transcript, Volume 4 (February 23, 2015) at page 59, line 25 to page 60, line 11.

failures across the entire population, useful life metrics account for all failure modes including those not covered by the degradation factors that are measured in the ACA.⁴⁶

2.2.4 Parties' submissions inappropriately reject useful life as a planning criteria

87. Despite the empirical experience that age predicts probability of failure, parties urge the OEB to ignore Toronto Hydro's evidence on useful life. For example, SEC frames Useful Life as a financial concept, asserting that "the fact that 33% of [Toronto Hydro's] assets will be fully depreciated is not indicative of a problem with the quality of its infrastructure."⁴⁷ But, as established in section 2.2.3 above, Useful Life is an engineering assessment in the first instance, representing the point in time midway between the age at which assets of a particular type start to fail and the age when virtually all of the assets of that particular type will have failed; the concept of Useful Life is not simply the point at which these assets are fully depreciated.

88. Furthermore, it is not simply that the assets requiring replacement have reached end-of-useful-life, but that many of them are operating well beyond end-of-useful life and will continue to age – especially if there is sustained underinvestment – meaning that the risk of failure, already high, will continue to grow at an exponential rate.⁴⁸

89. An example of the consequence to customers of this growing backlog of high-risk assets was described by Mr. Walker:

MR. WALKER: Well, given the level of assets that are past their end-of-life as it is today, we're seeing those effects very directly as, you know, as it affects our customers.

I've mentioned a couple of examples already where, you know, customers have suffered, and I've got many more that I could speak to.

The way I would characterize it is when I started at the Hydro, we used to have our crews organized in a group called construction and maintenance, and the reason we did that is their normal job would be to do capital construction, and they would be called away periodically if there was a reactive requirement, if something failed and it needed to be replaced, and then they would go back to their capital work.

⁴⁶ *Ibid.*

⁴⁷ SEC Argument, at page 38, paragraph 2.3.19.

⁴⁸ See for example, "Power Transformer Renewal," Exhibit 2B, Section E6.14, at page 17, Figure 8.

Today, we have two departments and 13 full-time crews that do nothing but replacement of failing assets, and that's because of this age-related problem. Those assets are past end-of-life and are failing at a significant rate.

And that's what we're trying to address in this plan. It is something we need to address.

And if we were to take this plan and just spread it out over more years, that is going to become worse. That's going to be a worse situation for our customers. More of them are going to experience those failures.⁴⁹

90. In light of the evidence, Toronto Hydro submits that AMPCO and other parties have provided no factual basis for their request that the OEB ignore useful life as an investment planning consideration. Toronto Hydro's evidence and practice in this regard is uncontroverted - it is also aligned with industry practice.

2.2.5 The Feeder Investment Model is an industry leading, customer-focused decision-support tool

91. Various parties comments negatively about the FIM. Their comments are based on unsupported opinions or misunderstandings about how the FIM works, the stages in the planning process where it is applied, and the results it produces.

92. The Feeder Investment Model (FIM) is a sophisticated tool that allows Toronto Hydro to find the optimal balance between the economic benefits of deferring capital investments as long as possible and the additional failure costs (including customer interruption costs) associated with end-of-Useful Life and poor condition assets.⁵⁰

93. The FIM does not perform wholesale evaluations of asset classes or types. The basic output of the FIM is an Economic End-of-Life (or "optimal intervention time") result for an individual asset operating with its own unique age, condition, configuration, loading, and location. The Economic End-of-Life is the estimated point in time when replacing the asset proactively will result in the lowest overall lifecycle cost for that asset. When the FIM is used to

⁴⁹ OH Transcript, Volume 4 (February 23, 2015) at pages 64-65.

⁵⁰ Exhibit 2B, Section D3.1.2.1(i).

evaluate assets across the system, it helps system planners make decisions that will maximize net benefits to ratepayers over time.⁵¹

94. In the context of Toronto Hydro's large and growing backlog of aging assets, with many assets already operating well beyond their Economic End-of-Life, the FIM helps to target assets that carry the greatest amount of risk cost, ensuring that projects are prioritized in a manner that maximizes value-for-money.⁵²

95. The FIM is applied at the capital program and project level to produce fully quantified economic business cases for distribution system investments. The empirically based and consistently positive business case evaluations in the System Renewal and System Service programs demonstrate that Toronto Hydro has proposed a suite of programs that deliver real and significant value to ratepayers over the CIR term.⁵³

96. Navigant, in their review of the DSP, notes that Toronto Hydro's FIM approach is aligned with the "best practices and principles that leading utilities now employ."⁵⁴ In Toronto Hydro's last rate proceeding – the 2012-2014 ICM – the OEB commended Toronto Hydro on developing this tool.⁵⁵

97. In its submission, OEB Staff uses Toronto Hydro's acknowledgement that assets may fail earlier or later than the optimal intervention time to claim "that the optimal intervention time, as projected by the FIM cannot be fully relied upon as indicating the optimal replacement time for assets given concerns of this kind."⁵⁶ This comment reveals a fundamental misunderstanding of the nature of age and condition-based failure probability curves, which are foundational inputs to the FIM. These curves are not intended to predict exactly when a given asset will fail. Rather, they show the cumulative probability that an asset will have failed at a given point in time. Like any probabilistic assessment, the FIM is useful when applied consistently across a large

⁵¹ Exhibit 1B, Tab 2, Schedule 4, at page 15, lines 22-27 to page 16, lines 1-5.

⁵² OH Transcript, Volume 1 (February 17, 2015) at page 130, lines 1-14.

⁵³ OH Undertaking J9.3 at page 3.

⁵⁴ Exhibit 1B, Tab 2, Schedule 4, Appendix B at page 3.

⁵⁵ EB-2012-0064, Partial Decision and Order (April 2, 2013) at page 21.

⁵⁶ OEB Staff Argument, at page 44.

population of assets over time. While an individual asset may fail earlier or later than its age and condition based probability of failure curve predicts, over the population of assets the resulting predictions are accurate.

98. OEB Staff submits that Toronto Hydro provided no examples of assets or asset categories to validate the assertion that replacing assets after the Economic End-of-Life would risk incurring avoidable costs associated with failure.⁵⁷ OEB Staff's concerns are misplaced, as again they relate to Toronto Hydro's assumptions regarding the *probability* of failure, which is based directly on the age (Useful Life) and condition (Health Index) measures discussed previously.

99. The Economic End-of-Life uses these probabilistic inputs and layers on additional information which allows engineers to assess the capital costs for replacement, which decrease over time, against the risk costs, which increase over time. This balancing, however, does not automatically lead to asset replacement. In instances where the capital cost of an asset is low, but the risk costs are high, the model may give a relatively early Economic End-of-Life result. Engineers recognize that what the model is likely showing in this instance is that the customers on the feeder are poorly configured and exposed to excess risk of failure.⁵⁸ In this scenario, Toronto Hydro would examine alternatives to renewal, such as the changes to feeder design and contingency enhancements proposed in the DSP, or cost-effective modernization options like Feeder Automation in preference to replacement.

100. In the context of its FIM submissions, OEB Staff notes the results of an interrogatory in which Toronto Hydro was asked to increase the Useful Life for its power transformers.⁵⁹ Naturally, this altered the percentage of power transformers operating beyond Useful Life. It is unclear what OEB Staff expects the OEB to conclude from this. It is certainly true that if one arbitrarily assumes that power transformers will last longer than indicated by Kinectrics' expert opinion based on decades of experience involving thousands of transformers, then the predicted probability of failure at any point in time will be lower. The problem with this approach is that OEB Staff offers no evidentiary basis to support the longer useful life that it asked Toronto

⁵⁷ OEB Staff Argument, at page 44.

⁵⁸ TC Undertaking J1.7, Appendix A (see: Footnote 1)

⁵⁹ *Ibid.*

Hydro to assume. While OEB Staff suggests that this demonstrates “variability” in end-of-life asset projections, Toronto Hydro views this as nothing more than an arbitrary change to an empirically derived measure.

101. BOMA acknowledges this point, but asserts, without evidence, that “replacement is the result in almost all cases.”⁶⁰ In reality, Toronto Hydro has budgeted tens of millions of dollars over the five-year CIR period for high-value System Service investments that help Toronto Hydro maintain reliability within the proposed pace of System Renewal.⁶¹

102. Other parties’ submissions adopt a broader criticism that the FIM is generally biased toward replacing assets earlier than necessary. The evidence, however, entirely contradicts this position.

103. AMPCO’s opinion is that Customer Interruption Costs (CICs) in the FIM are overstated.⁶² However, as referenced in this proceeding, Toronto Hydro has compared its CICs to values from a number of other studies and has determined that its CICs generally fall in the mid-to low-end of the range, suggesting that, if anything, these values may be understated.⁶³

104. BOMA and others say that, in the context of the Economic End-of-Life model, Toronto Hydro considers Health Index information only to increase the probability of failure shown by the age-based probability curve.⁶⁴ As noted in section 2.2.3, Toronto Hydro witnesses repeatedly testified that condition information is a limited analysis of measureable degradation factors. It is a “defect” analysis that looks for specific factors that tend to increase the probability of failure.⁶⁵ If none of these factors are present, the probability of failure is the inherent age-based probability. It is prudent from a planning perspective to use age-based probability of failure curves except in cases where assets are observed to be degrading faster than expected.

⁶⁰ BOMA Argument, at page 16.

⁶¹ Exhibit 2B, Section E7.

⁶² AMPCO Argument, at page 29.

⁶³ TC Undertaking J1.8; EB-2012-0064, Tab 6F, Schedule 1-27, part c, Table 1.

⁶⁴ BOMA Argument, at pages 15-19.

⁶⁵ OH Transcript, Volume 4 (February 23, 2015) at page 59, line 25 to page 60, line 11.

105. In Toronto Hydro's submissions, parties lose sight of the fact that one of the primary features of the FIM is the quantification of benefits to ratepayers of investment deferral. This is demonstrated in Toronto Hydro's response to Technical Conference undertaking J1.7, which shows the range of Economic End-of-Life results by major asset class. In most classes, the FIM recommends replacing some assets at ages as high as 100 years.⁶⁶ Essentially, if the costs of replacing a specific asset significantly outweigh the risks to customers, the FIM will recommend a run-to-failure approach.

106. The FIM is a rigorous and sophisticated tool that enables cost-effective planning decisions. As set out above, the OEB commended Toronto Hydro on the development of the FIM in its Phase 1 ICM decision:

The Board finds that the FIM is a useful tool to compare the financial consequences of failure of aging assets to the benefits of delaying the work and to assess capital spending associated with replacement by extending service life as long as possible.

As conceded by THESL's witnesses, there are certain generalizations used in developing the inputs into the FIM. These include the type of customers in a particular area, and the impact that outages may have on them. The Board finds that these limitations do not outweigh the usefulness of this tool, and commends THESL for developing it. While the Board expects that it will continue to be refined, the Board notes that the level of detail sought by some of the intervenors may only be available at significant effort or cost.⁶⁷

107. Toronto Hydro remains committed to continuous improvement and refinement of the FIM during the CIR period. To that end, it has proposed further enhancement of CIC values.⁶⁸ Importantly, the FIM is not determinative of Toronto Hydro's investment plans. It is one tool among many, such as the ACA, that Toronto Hydro uses in combination with significant data, experience and judgment to formulate robust paced investment plans to meet its customers' expectations and the utility's obligation to maintain the system.

⁶⁶ TC Undertaking J1.7, Appendix A ("Economic End-of-Life" column).

⁶⁷ EB-2012-0064, Partial Decision and Order (April 2, 2013), at page 21.

⁶⁸ Exhibit 2B, Section E8.8.

2.2.6 Criticisms of Toronto hydro's steady-state model are inaccurate and unwarranted

108. To illustrate the longer-term objectives of Toronto Hydro's capital plan, the utility provided a high-level estimate of what it would take to reach an overall "steady-state", wherein the total lifecycle cost (including customer interruption costs) of operating the distribution system would be minimized to the overall benefit of ratepayers.⁶⁹

109. The concern of OEB Staff and others that investment needs in the five-year DSP were determined based on the "theoretical construct" of FIM and steady-state is misplaced.⁷⁰

110. The steady-state model was used as a concept to place the scope and magnitude of the capital need in context, and was not itself a material factor in establishing the underlying need for the five-year capital plan.⁷¹ In essence, it was a simple extrapolation of Toronto Hydro's core asset management policies into the future, with a strict focus on maximizing customer value. Toronto Hydro presented it because the utility assessed that this context may be of assistance to the OEB.

111. The "backlog" of renewal work referenced throughout Toronto Hydro's evidence is a factor in the steady-state model only insofar as the steady-state model considers the optimal time to replace aging and poor condition assets. However, the "backlog" itself is simply the quantification of the large and growing number of end-of-life assets that Toronto Hydro must address in a paced and proactive manner to maintain reliability and avoid the snowplow effect of investment deferral (as supported by the Kinectrics' ACA results).⁷²

112. The steady-state projection used two investment timing concepts. For assets that can currently be modeled on a system-wide basis in the FIM, Toronto Hydro used the Economic

⁶⁹ Exhibit 2B, Section D3.

⁷⁰ OEB Staff Argument, at page 42.

⁷¹ OH Transcript, Volume 1 (February 17, 2015) at page 127, lines 14-28 and page 128, lines 1-9.

⁷² Exhibit 2B, Section D, Appendix A, at pages 22-23.

End-of-Life results to project timing for asset replacement. For assets that are not yet modeled in this way, Toronto Hydro defaulted to an age-based replacement projection.⁷³

113. As noted in the discussion of FIM in section 2.2.5 above, replacing assets at or near their Economic End-of-Life minimizes the overall lifecycle costs (including customer interruption costs), thereby maximizing value to customers. Steady-state for these assets is achieved when the number of assets operating beyond Economic End-of-Life is effectively minimized.⁷⁴ As explained in section 2.2.5, the Economic End-of-Life result for an asset can be much later than the asset's Useful Life; there is therefore no basis for intervenors' complaints that this approach drives early asset replacement.

114. AMPCO's argument introduces a claim that Toronto Hydro's age-based model is somehow different and more aggressive than the approach to steady-state described in PowerStream's latest CIR application.⁷⁵ This claim was never put to the Toronto Hydro witnesses and there is no evidence on the record to support it. As is demonstrated below, AMPCO's claim is wrong, which illustrates once again why the OEB should disregard claims that appear for the first time in argument without evidentiary support.

115. AMPCO's argument selectively quotes a portion of Mr. Walker's testimony where he attempted to simplify the steady-state by relating to the end-of-life concept. The full quote is as follows:

MR. CROCKER: All right. And what do you mean by "steady state"?

MR. WALKER: The steady state theoretically is the point at which all assets are replaced at their optimal intervention time, as we describe in several places in the evidence, the point at which the annualized cost of the asset and the annualized risk of that asset are at their lowest mathematically added point.

But that's the more theoretical steady state. Basically, in the steady state, if you want to think of it this way, it's when all of the backlog is taken care of, so that for

⁷³ Exhibit 2B, Section E2, at page 4, lines 17-22.

⁷⁴ Exhibit 2B, Section E00, at page 7, lines 8-15.

⁷⁵ AMPCO Argument, at page 5.

the most part our assets are operating within their useful lives.⁷⁶ [Emphasis added.]

116. AMPCO contrasts the second half of this quote with the definition of steady-state that appears in PowerStream's 2016-2020 CIR application, and incorrectly concludes that Toronto Hydro's approach reflects "an illogical desire to reach a state of perfection with respect to its asset base at a significant cost to ratepayers."⁷⁷ The PowerStream definition is as follows:

If proactive replacement of the worst performing assets can be attained, the level of anticipated failures can be held to a steady state. If the levels of proactive system replacement, when combined with the reactive system replacements, fall within the anticipated annual failure rates within various asset classes, a steady state can be achieved.

PowerStream believes this approach results in levels of capital spending that are acceptable with the risk mitigated; that provide level, paced capital spending; and that do not increase the reactive maintenance capital costs.⁷⁸

117. AMPCO incorrectly asserts that this is different than Toronto Hydro's steady-state model. The steady-state approach that PowerStream defines is the same probabilistic age-based analysis that Toronto Hydro has applied to assets that have not been modeled on a system-wide basis using the FIM. This common approach sets a baseline replacement rate for asset classes to which the utility then manages on a predictive basis through a deliberate mix of proactive and reactive replacements. This is essentially a reliability maintenance approach, and therefore does not attempt to achieve a "state of perfection" in which all assets are simply replaced by the time they reach Useful Life.

118. In sum, Toronto Hydro's illustrative steady-state model is a hybrid of best utility practices, neither of which seeks to replace all assets before the end of Useful Life. Toronto Hydro uses the Economic End-of-Life approach for those asset classes currently modeled in the FIM, maximizing customer value by balancing reactive and interruption costs against the benefit of deferring capital investment. For all other asset classes, Toronto Hydro uses a replacement rate approach, which simply projects the level of investment needed to maintain a steady-state of reliability performance for each class.

⁷⁶ OH Transcript, Volume 1 (February 17, 2015) at page 47, lines 3-15.

⁷⁷ AMPCO Argument, at page 5.

⁷⁸ EB-2015-0003, Exhibit G2, Tab 2, at page 5.

2.3 The proposed capital plan is appropriate, reasonable and necessary to maintain and operate the system in accordance with good utility practice

2.3.1 The Distribution System Plan responds to the RRFE Requirements and provides a sound basis for approving the Requested capital expenditures

119. Toronto Hydro's DSP is a comprehensive and detailed integrated investment plan for the 2015 - 2019 period. In Toronto Hydro's submission, challenges to the plan's scope and level of expenditures are without merit because:

- the Plan is an integrated approach to address system needs identified through a rigorous long-term planning approach;
- the growing backlog of assets beyond Useful Life, worsening asset condition and the integrated nature of the plan preclude an across-the-board reduction of the scope and level of capital expenditures required for the Plan as proposed by intervenors;
- the Plan is driven by an assessment of Toronto Hydro's assets, including their age and condition, and is intended to mitigate the growing level of risk in the system while addressing critical issues, mandatory investments, and operational needs, with consideration for rate impacts;
- contrary to the submissions of some parties, the DSP is not based on achieving steady state. Steady state is an extrapolation of Toronto Hydro's asset management policies, and was presented to illustrate the impacts of the proposed plan in relation to the economically optimal result; and
- the levels of capital investment are appropriate and reasonable, are consistent with historical spending levels over the recent past and have been shown to be within Toronto Hydro's ability to execute.

120. Toronto Hydro's distribution system is under increased pressure because of a significant number of aging and deteriorating assets and issues related to the configuration of its infrastructure, legacy equipment and obsolete devices across the system. Significant investment is required to mitigate the risk that Toronto Hydro's customers will experience increased

frequency and duration of outages and the added cost arising from a reactive instead of a proactive approach to capital investment (“System Renewal”).⁷⁹

121. Toronto Hydro is also faced with a number of critical system-level issues that go “beyond the asset” in the sense that such issues do not relate to a single asset or asset class but rather to broader issues such as continued load growth despite limited capacity, contingency issues relating to the configuration of the radial downtown system, as well as safety issues for workers and the public attributable to legacy and obsolete equipment. These issues are addressed by System Service investments in the DSP.⁸⁰

122. Furthermore, Toronto Hydro’s capital investment plans must address these realities while at the same time providing for required investments to fulfill its regulatory and statutory obligations to provide access to electricity services via the distribution system (“System Access”).⁸¹

123. Finally, in addition to replacing core distribution assets, Toronto Hydro must also address General Plant capital, which includes the facilities and equipment that support both its day-to-day operations and System Renewal, System Service and System Access work. These assets include buildings, tools and equipment, rolling stock and software.⁸²

124. SEC and CCC ask the OEB to dismiss the DSP, claiming that “it is an entirely bottom-up plan, ‘this is what we need’, approach” and “everything else is secondary.”⁸³ SEC and CCC misconstrue the significant capital challenge facing Toronto Hydro and the intent and purpose of the Plan. The Plan is not about what “Toronto Hydro” needs; rather it is what the “system” needs in order to serve the customers by mitigating the risk of asset failure in order to continue providing reliable service and system access in a cost effective manner.

⁷⁹ Exhibit 2B, Section E4.2.2 and OH Undertaking J9.3.

⁸⁰ Exhibit 2B, Section E2.4.3.

⁸¹ Exhibit 2B, Section E4.2.1.

⁸² Exhibit 2B, Section E4.2.4.

⁸³ SEC Argument, at page 32, paragraph 2.1.3 and CCC Argument, at page 4, paragraph 2.

125. CCC asserts that Toronto Hydro has provided no “empirical” evidence that deferral of needed investment now will increase rates in the future,⁸⁴ when, in fact Toronto Hydro has done just that. The fully quantified business case evaluations for System Renewal and System Service investments empirically demonstrate the significant risk costs avoided (i.e. reactive replacement costs and customer interruption costs) and cost benefits gained (i.e. efficiencies gained through planned renewal projects) as a result of the proposed investments. These calculations are quantification of the costs that ratepayers avoid in the future as a result of prudent investment planning.⁸⁵

126. SEC characterizes Toronto Hydro’s focus on need as an “old debating trick,”⁸⁶ in an effort to dismiss the evidence wholesale, without specifically addressing particulars of the written record in this proceeding or the testimony provided by numerous company witnesses. In SEC’s submission, evidence supporting proposed expenditures is just an “old debating trick” and the OEB should proceed as if no evidence were filed. Toronto Hydro respectfully disagrees. In any event, and as discussed in section 2.2.2 through 2.2.6, SEC’s attempt to establish that the DSP overstates the system need fails.

127. In Toronto Hydro’s submission, addressing identified capital needs has much more to do with determining the rates necessary to deliver safe and reliable distribution service than SEC’s high-level assertions and cursory and erroneous review of econometric benchmarking resulting in arbitrary cuts. Moreover, the DSP is not merely a bottom-up tally of capital need. It is a plan that addresses Toronto Hydro’s capital assets in an integrated fashion, was developed using sophisticated and comprehensive system and asset analysis tools, and is the product of a rigorous planning process that engaged both bottom-up and top-down considerations (including engagement with customers and consideration of rate impacts).⁸⁷

128. Toronto Hydro provided detailed evidence regarding asset age and condition, system and access needs and internal capital requirements including rigorous justification of proposed

⁸⁴ CCC Argument, at page 4, paragraph 4.

⁸⁵ OH Undertaking J9.3.

⁸⁶ SEC Argument at page 6, paragraph 0.2.11.

⁸⁷ Exhibit 2B, Sections E2.1.3 and E2.4.

investment plans for the 2015-2019 period. It does so on a system-wide, program-level and asset-specific basis. This includes a comprehensive five-year capital expenditure plan comprised of 46 detailed capital programs, organized on the basis of System Renewal, System Access, System Service and General Plant. These detailed programs include, among other things, a section describing the trigger and secondary drivers of each investment proposed and how those drivers relate to the forecast investments for the five years of the program, as well as a timing and pacing discussion that describes and explains the pattern and level of spending over the five-year plan, including as it relates to historical periods.⁸⁸ Thus, the investments that Toronto Hydro proposes over the 2015 to 2019 period are fully justified.

2.3.2 Toronto Hydro's investment plan is necessary to retain the improvements in reliability achieved in recent years and to deliver customer value over the long-term

129. In an attempt to portray the DSP as overstating the need for system renewal, parties urge the OEB to discard Toronto Hydro's detailed evidence regarding system needs and customer value in favour of broad and incorrect system-wide assumptions. Intervenor submit that Toronto Hydro's capital plan should be curtailed on account of the fact that improvements in SAIDI, SAIFI and Defective Equipment outages from 2009 to 2013 were achieved with lower overall levels of capital expenditures than those proposed in the Custom IR application.⁸⁹

130. While it is valid to consider the correlation between overall spending and system average reliability metrics, any analysis that fails to look beyond a simple correlation of these figures over time is inadequate to determine the future capital needs of any utility, particularly one with a large, complex and aging asset base. A number of important factors are absent in the parties' submissions.

131. First, the amount of spending required to maintain reliability on a forecast basis is largely unrelated to the amount of spending that was required to achieve the same outcomes historically. This is because the future failure rates of assets in the system are dictated by future profiles in age and condition. Toronto Hydro's system is older now than it was in 2011 despite significant investment, and its condition is deteriorating. A greater amount of proactive investment will be

⁸⁸ See, for example "Box Construction Conversion," Exhibit 2B, Section E6.7.

⁸⁹ AMPCO Argument, at pages 15-16; SEC Argument, paragraphs 2.9.1-2.9.2.

required to maintain reliability. This is the basic principle underlying PowerStream's definition of steady state, which was included in AMPCO's argument and discussed in section 2.2.6 above.

132. Using results from the Current-state System Assessment (CSA), Toronto Hydro's reliability forecasts in the DSP include the anticipated effects of past investments, the anticipated effects of planned DSP investments, and projected failure rates based on age, condition and other forecasting considerations.⁹⁰ Therefore, in Toronto Hydro's submission, the forecast is ultimately a more relevant metric for assessing the outcomes of the proposed capital plan than a correlation between system average metrics and past spending.

133. AMPCO and SEC do not consider potential differences in the nature of the investments made by Toronto Hydro in its system during the 2009-2013 period referenced. Following is a summary of the necessary historical context:

- (a) As AMPCO notes, Toronto Hydro experienced a decline in reliability between 2004 and 2008.⁹¹ This decline was due primarily to a sharp increase in defective equipment outages during this period, with an especially pronounced trend in terms of Customer Interruptions (i.e. contributions to SAIFI).⁹²
- (b) As noted in its 2010 Cost of Service application, filed in 2009, Toronto Hydro had, at that time, a "renewed focus on FESI-12 feeders," i.e. feeders experiencing 12 or more outages over the course of a year. Given their demonstrably poor performance, these feeders were targeted for improvement in almost a reactive manner. Capital projects were generated and executed "as soon as possible," and projects in the planning stages were advanced.⁹³
- (c) Given the high concentration and frequency of interruptions on FESI-12 feeders, it stands to reason that the early days of Toronto Hydro's ramp-up in renewal capital spending would have resulted in highly cost-effective improvements to

⁹⁰ Exhibit 2B, Section D3, at page 19, lines 15-21.

⁹¹ AMPCO Argument, at page 9.

⁹² EB-2009-0139, Exhibit B1, Tab 14, Schedule 1, at page 7.

⁹³ EB-2009-0139, Exhibit D1, Tab 7, Schedule 1, at page 13.

system average reliability metrics. This is true for capital-intensive renewal projects such as underground circuit rebuilds but also for the less capital-intensive interventions that Toronto Hydro implemented to address reliability concerns in the short-term, such as the widespread installation of animal guards and lighting arrestors, the replacement of glass and porcelain insulators, and the installation of new sectionalizing switches and fault indicators.⁹⁴

- (d) All of these investments were aimed at capturing the “low-hanging fruit.” While this initial approach was necessary and appropriate for the system and customer experience, it was not sufficient to sustain reliability long term - that requires programmatically replacing the underlying aging and deteriorating distribution system. Accordingly, in parallel with these early investments, Toronto Hydro refined its long-term and proactive strategy to address the underlying problem of aging and deteriorating assets. This included developing (and working with third parties to develop) investment planning tools such as the ACA, FIM and Kinectrics useful life study. Under the paced investment plan presented in this Application, this proactive approach is focused on a long-term strategy to sustain early reliability gains by addressing the underlying assets.

134. SAIDI and SAIFI are system averages that obscure the actual experience of individual customers. For example, from 2009 to 2013 there was an annual average of 35 feeders that had experienced seven or more interruptions in a year.⁹⁵ The customers served by these feeders experienced significantly worse reliability than the system average of 1.4 outages per year during the same period.⁹⁶ This level of poor reliability performance can result in frustration and material financial losses for customers. As evidenced by the yearly Worst Performing Feeder maps in the DSP, new FESI-7 feeders continue to emerge every year and often require large scale planned renewal investments to reduce reliability risks and provide long-term improvements.⁹⁷ Furthermore, as demonstrated in the project-specific details that were provided for 2015 in the

⁹⁴ EB-2009-0139, Exhibit D1, Tab 7, Schedule 1, at page 13.

⁹⁵ Exhibit 2B, Section C2.2.2.

⁹⁶ Exhibit 2A, Tab 10, Schedule 2, at page 8, figure 7.

⁹⁷ Exhibit 2B, Section E6.21, figures 1-4.

individual DSP capital programs, the planned investments for the CIR period will target locations that are experiencing significant and sustained reliability issues. For example, the Overhead Circuit Renewal project titled “OH Feeder Rehab-Alexdon, Chesswood, Champagne”, scheduled for 2015, addresses a feeder that experienced 19 outages between 2009 and 2013, with seven outages in 2011.⁹⁸

135. SAIDI and SAIFI can be volatile, even without MEDs and Loss of Supply included. This can work both ways. For example, the significant improvement in SAIDI and SAIFI in 2012 was largely attributed to favourable weather conditions and a decrease in overall wind speeds.⁹⁹ Changes in weather conditions in the future, including a return to hotter summers that would increase loading on aging equipment, could negatively impact future SAIDI and SAIFI results. Other, unanticipated issues can negatively impact reliability as well. For example, the recent rash of pole fires caused by failing insulators was unanticipated and will significantly contribute to SAIDI and SAIFI (excluding MEDs) for 2015.¹⁰⁰

136. Both the PSE and PEG reliability benchmarking studies support the conclusion that Toronto Hydro is a poor SAIFI performer relative to peers,¹⁰¹ which reflects the need, identified through long-term planning processes, to address the aging and deteriorating assets that are the root cause of poor SAIFI performance.

137. Given the significant backlog of aging assets, Toronto Hydro has proposed a pace of renewal spending that is expected to maintain or somewhat improve system reliability over the plan period. The integration of these investments with targeted and cost-effective System Service programs like Feeder Automation will help deliver the additional forecasted improvements in service quality presented in the DSP.¹⁰²

138. The System Renewal investments proposed in the DSP are largely a continuation of the types of investments that have delivered reliability improvements in recent years, including

⁹⁸ Exhibit 2B, Section E6.4, at page 70.

⁹⁹ Exhibit 2A, Tab 10, Schedule 2, at page 7, lines 11-17.

¹⁰⁰ OH Transcript, Volume 9 (March 3, 2015) at page 80, lines 10-19.

¹⁰¹ Exhibit 1B, Tab 2, Schedule 5, Appendix C, at pages 2-3.

¹⁰² IR Response 2B-AMPCO-1(b), pages 3-7.

major programs like Underground Circuit Renewal, Overhead Circuit Renewal, Box Construction Conversion and Stations Switchgear Renewal.¹⁰³

139. For example, Toronto Hydro's largest System Renewal program, Underground Circuit Renewal, continues to replace aging cross-linked polyethylene (XLPE) cable that was installed prior to 1990 and is subject to water ingress ("treeing") due to compromised insulation integrity.¹⁰⁴ As described in Toronto Hydro's historical reliability evidence, underground cable faults – especially direct-buried cables – continue to be the dominant contributor to SAIDI and SAIFI. From 2009 to 2013, contributions to SAIDI and SAIFI due to underground cable faults remained more or less constant.¹⁰⁵

140. Toronto Hydro's proposed System Renewal spending in major renewal programs has not significantly increased versus the historical average spending in the 2010-2014 period. The largest program, Underground Circuit Renewal, has increased by only \$6 million per year on average, while the second largest program, Overhead Circuit Renewal, has actually decreased on average.¹⁰⁶ The overall increase in System Renewal spending versus the previous five-year period is due, again, to forecasted system needs related to aging and poor condition assets, including emerging issues (e.g. obsolete Sachsenwerk switch and fuse units that are prone to catastrophic failure)¹⁰⁷ that did not appear in previous plans and were unopposed by intervenors. Furthermore, AMPCO and SEC have not attempted to account for differences in historical and forecast spending for capacity driven investment programs and other categories of spending that are not driven by reliability (e.g. System Access and General Plant categories).

2.3.3 The size of the proposed capital plan is explained by system need, not a change in asset management policies.

141. AMPCO and others assert that the level of capital expenditures proposed for 2015-2019 is driven by a change in asset management policies. AMPCO suggests that this change in approach occurred sometime between the 2008-2010 Cost of Service, which AMPCO

¹⁰³ Exhibit 2A, Tab 6, Schedule 2.

¹⁰⁴ Exhibit 2B, Section E6.1, at pages 9, 25.

¹⁰⁵ Exhibit 2A, Tab 10, Schedule 2, at pages 18-19.

¹⁰⁶ Exhibit 2A, Tab 6, Schedule 2.

¹⁰⁷ Exhibit 2B, Section E6.3.2.1.

characterizes as driven by age and condition, and the 2015-2019 Custom IR, which in AMPCO's opinion is driven only by age.¹⁰⁸

142. AMPCO relies on a comparison of two different capital expenditures forecasts for the 2015-2019 period to establish this argument: the proposed DSP and the 2010-2019 10-year plan filed in Toronto Hydro's 2010 Cost of Service application. Once again, this comparison was not placed in evidence or put to Toronto Hydro's witnesses. Based on these two different 2015-2019 forecasts, AMPCO reaches a broad conclusion:

Fast forward to the current application where age is the primary driver and THESL's proposed capital spend for 2015 to 2019 has grown from \$1,553 million to \$2,489 million, a 60% increase that cannot be fully explained by Copeland TS in the latest estimate and the omission of General Plant spending in the earlier estimate. In AMPCO's view the increase is primarily attributable to THESL's current age based approach (26% estimate of assets past useful life) which has the effect of increasing the asset quantities targeted for replacement compared to what was identified back in 2009 and what THESL's latest ACA recommends.¹⁰⁹

143. In Toronto Hydro's submission, the OEB should reject AMPCO's analysis. It is factually incorrect and misleading. Had AMPCO undertaken even a superficial review of the differences between the two forecasts, it would have seen that they are not due to a change in the underlying planning approaches. More importantly, as explained in section 2.2.2 to 2.2.4 above, Toronto Hydro has not moved to an exclusively age-based planning approach as AMPCO claims.¹¹⁰

144. The gap that AMPCO identifies amounts to approximately \$936 million.¹¹¹ This gap can be explained by comparing what was in the referenced 10-year plan¹¹² to what appears in the DSP.¹¹³ The explanations are as follows:

¹⁰⁸ AMPCO Argument, at pages 8-9; CCC Argument, at pages 10-11.

¹⁰⁹ AMPCO Argument, at page 9.

¹¹⁰ AMPCO Argument, at page 7.

¹¹¹ AMPCO Argument, at page 9.

¹¹² EB-2009-0139, Exhibit D1, Tab 8, Schedule 10, at page 43.

¹¹³ Exhibit 2A, Tab 6, Schedule 2.

Investment Program or Project	Category,	Reason for Variance: DSP vs 2010-year Plan	\$ Difference in 2015-2019
General Plant category		Excluded from 10-year plan	\$293 million
Copeland TS project		Not forecasted in 10-year plan	\$112 million
Metering program		Excluded from 10-year plan	\$80 million
Reactive Capital program		Increase in forecast based on failure rates ¹¹⁴	\$74 million
Customer Connections		Customer growth and large projects ¹¹⁵	\$70 million
SCADA-Mate R1 Switch Renewal program		Need emerged after 10-year plan was published ¹¹⁶	\$13 million
Polymer SMD-20 Switch Renewal program		Need emerged after 10-year plan was published ¹¹⁷	\$5 million
“Smart Grid” investments ¹¹⁸		Feeder Automation and Generation Protection, Monitoring and Control programs increased ¹¹⁹	\$30 million
Load Demand (Formerly “Capacity Growth”) program		Increase in concentrated load growth ¹²⁰	\$21 million
Contingency Enhancement and Design Enhancement programs		Introduced to correct system design deficiencies that have emerged over time ¹²¹	\$56 million
Other new and material renewal programs		Underground Legacy Infrastructure, Overhead Circuit Relocation, Stations	\$63 million

¹¹⁴ Exhibit 2B, Section E6.20.3.2.

¹¹⁵ Exhibit 2B, Section E5.2, at page 2, lines 2-12.

¹¹⁶ Exhibit 2B, Section E6.8.

¹¹⁷ Exhibit 2B, Section E7.6.

¹¹⁸ EB-2009-0139, Exhibit D1, Tab 8, Schedule 10, at pages 21-24.

¹¹⁹ Exhibit 2B, Sections E7.3 and E5.5.

¹²⁰ Exhibit 2B, Section E5.4.

¹²¹ Exhibit 2B, Sections E7.1 and E7.2.

Investment Program or Project	Category,	Reason for Variance: DSP vs 2010-year Plan	\$ Difference in 2015-2019
		Building Infrastructure and Distribution System Communication Infrastructure ¹²²	
Inflation in the DSP		The 10-year plan was not inflation adjusted	\$97 million
Total			\$914 million

145. The investments in the table above account for approximately \$914 million (or about 98%) of the gap between the 10-year Plan and DSP forecasts as identified by AMPCO. These investments consist of a variety of programs that are not age or condition related, are externally driven, or that have been developed to address emerging issues. The remaining \$22 million, or \$4.4 million per year, is related to other, relatively small new investments and the balance of positive and negative revisions to program needs and forecasts due to the passage of time and improved information.

2.3.4 The overall size of the Toronto Hydro's capital request is necessary, reasonable and in-line with historical spending

146. **Prioritization and Capital Levels.** BOMA suggests that the OEB should eliminate the work scheduled for the fifth year of the Plan or potentially the fourth and fifth years for each of System Renewal, System Service and General Plant.¹²³ BOMA asserts that because Toronto Hydro prioritizes projects within each program to deal with those that are the most urgent first, less urgent projects can be deferred. BOMA uses this argument to justify limiting capital expenditures to a maximum of \$440 million per year.¹²⁴

147. These proposals are not in the interest of customers. Not only is the suggested approach arbitrary, it also ignores both the size of the asset backlog and the integrated nature of the plan.

¹²² Exhibit 2B, Sections E6.3, E6.5, E6.18 and E6.22.

¹²³ BOMA Argument at pages 17-18.

¹²⁴ BOMA Argument at page 18.

The situation that Toronto Hydro faces is not one where there is a fixed number of assets that are beyond useful life and will be fully replaced over the period of the plan. In fact, the circumstance facing Toronto Hydro is a growing number of assets that are beyond useful life. What is not replaced in one year simply needs to be replaced in the next along with the new group of assets that passed their useful lives in that year. As stated by Mr. Walker:

But as I mentioned, this analysis is ongoing, and every year our assets are getting older and every year the need is growing. So it's not as if from this point on there's no change in the risk that our system takes on for the rest of infinity and it is always going to be lower-priority projects.

Every year that we delay, our need grows, the impact on our customers grows, the impact on reliability grows.¹²⁵

148. The proposed plan balances the remaining risk of asset failure and associated cost of failure for the system and customers against the rate impacts of the plan.¹²⁶ Arbitrarily cutting part of the Plan will require to Toronto Hydro to address more failures on a reactive or urgent response basis which will only serve to increase cost and further add to the backlog as resources are diverted from planned to reactive work.

149. As Mr. Walker further indicated:

...from a purely efficiency and cost perspective, the long-term cost of managing the system will go up, because rather than going out and replacing those assets today, let's say, we're going to incur another two or three years of reactive response, where we go out and replace bits and pieces of it and then have to go out and replace the whole thing at that point.

So it becomes very inefficient from a cost perspective. But from the customer's perspective, it is, you know, it's -- I had an example of a single customer whose service was down for ten days. He had an underground service wire into his house that was down for ten days because it failed. We came out, we repaired it. It failed again. We came out again and repaired it again.

And, you know, we had crews there day and night and on the weekend, and we could not re-energize that service. So we ultimately had to replace that individual's service. But you know that if his service is -- was reacting that way, the other services in that area are of the same vintage, the same type of cable, and the same ground conditions, the same loading conditions and so on. They're

¹²⁵ OH Transcript, Volume 5 (February 24, 2015) at page 134.

¹²⁶ Exhibit 2B, Section E2, at page 6, lines 6-17.

going to have the same sort of effect, and we'll be sending crews out there over and over and over again until we go out and address the underlying problem.¹²⁷

150. In Toronto Hydro's submission, "Kicking the can down the road", as BOMA suggests, is not a prudent or reasonable approach to capital planning.

151. Although the investments above are categorized for the purposes of this Application under the RRFE categories of (i) System Renewal, (ii) System Service, (iii) System Access and (iv) General Plant, the Plan was developed and will be implemented on an integrated basis because investments in one category bear a complimentary or supportive relationship to investments in other categories.

152. For example, targeted, high-value System Service programs such as Feeder Automation and Contingency Enhancement will allow Toronto Hydro to deliver reliability improvements while keeping System Renewal program spending at a minimum.¹²⁸ Without these investments, Toronto Hydro would need to carry-out less cost-effective renewal work to achieve the same improvements. A supportive relationship also exists between capacity and contingency related programs – such as Station Expansion, Load Demand and Contingency Enhancement – and the ability to execute planned renewal work, which requires sufficient spare switching and sectionalizing capacity to avoid planned interruptions and expensive weekend work.¹²⁹

153. Energy Probe suggests that for 2016-2019, the CIR Formula Capital Factor, as modified by PEG, would determine the total capital expenditures envelope and that the OEB should direct Toronto Hydro to maintain the System Renewal program at a minimum level of \$200 million per year during the CIR plan.¹³⁰ Again, because of the integrated nature of the DSP, it makes no sense from a project management or work execution perspective to arbitrarily reduce spending in various categories or programs. As Toronto Hydro testified, an overall reduction in approved capital expenditures would require a re-evaluation of the Plan.¹³¹ Any reduction would require

¹²⁷ OH Transcript, Volume 6 (February 25, 2015) at pages 67-68.

¹²⁸ IR Response 2B-AMPCO-1(b), pages 3-7; OH Transcript, Volume 9 (March 3, 2015) at page 187, lines 25-28 to page 188, lines 1-6; Exhibit 2B, Section 00, at page 33, lines 2-8.

¹²⁹ Exhibit 2B, Sections E7.9, E5.4 and E7.1.

¹³⁰ Energy Probe Argument, at page 4.

¹³¹ OH Transcript, Volume 4 (February 23, 2015) at page 97, lines 6-12.

technical and operational analysis and therefore, Toronto Hydro submits that it is not in the best interests of customers for the OEB to mandate a particular level of spending on one category of Toronto Hydro's proposed capital investments. On the basis set out above, the OEB should reject Energy Probe's suggested result.

154. OEB Staff's overall recommendation is to approve annual capital expenditures in the range of \$400 million.¹³² OEB Staff does not supply any specific derivation of this figure. Instead it expresses a number of concerns, addressed below, but fails to establish how these "concerns" translate in to a \$400 million dollar per year capital plan except to inaccurately say that Toronto Hydro's requested increase represents a 20% jump from the recent (2012-2014) average capital spending of \$440 million. In fact, the proposed five-year average capital spend (\$498 million) represents an increase of approximately 13%.¹³³

155. CCC proposes that the period of the capital plan be reduced from five to three years and that an independent engineer be appointed to assess Toronto Hydro's capital planning approach.¹³⁴ This position is based on the claim that customers face unnecessary risks with a five-year plan. The application before the OEB is for the minimum five-year custom incentive term specified in the RRFE. In contrast with the situation underlying the recent HONI decision, Toronto Hydro's application meets the terms of the RRFE and satisfies the OEB's Filing Requirements. CCC's proposal should be rejected and Toronto Hydro's application should be approved for the full five-year term requested.

156. Further, Toronto Hydro's evidence demonstrates a comprehensive and sophisticated approach to asset management and capital planning and a thorough understanding of the nature and condition of its distribution system and its operation. Oversight by an independent engineer is unnecessary and the appointment of an overseer would be inconsistent with Toronto Hydro's statutory responsibility to plan, maintain and operate its system.

¹³² OEB Staff Argument, page at page 52.

¹³³ Exhibit 1B, Tab 2, Schedule 4, page 6.

¹³⁴ CCC Argument, at page 5, paragraph 2.

157. AMPCO observes that, for 2015, the ratio of Toronto Hydro's capital budget relative to the revenue requirement is 80% as compared to 40% in Hydro One's Custom IR application.¹³⁵ Toronto Hydro respectfully submits that to the extent this comparison has any value in this proceeding, it is only to underscore the magnitude of Toronto Hydro's capital need and why CIR is appropriate. As Ms. Klein stated:

MS. KLEIN: [...] it's really our capital investment that -- the capital investment needs specifically that drive us towards the custom IR. And there's two aspects of this.

The first aspect is that Toronto Hydro has annual system investment needs that well exceed depreciation currently.

And the second is really that the nature of our investments are largely consistent year over year. Our program contains a large collection of discrete multi-year projects, and much of which is asset replacement and refurbishment.

And on the basis of these two components of the capital program, this means that neither 4th generation IRM or ICM or ACM is really suitable for Toronto Hydro.

And this is what the RRFE contemplates. [...] the RRFE indicates the CIR framework is best suited to utilities with significant multi-year capital investment requirements, and that is Toronto Hydro.

This approach is also the only one that enables us to achieve the RRFE outcomes.
¹³⁶

158. To the extent that AMPCO seeks to use this comparison to support any other conclusions about Toronto Hydro and Hydro One relative to one another, it should be ignored. Such a comparison, to be meaningful, would need to be based on evidence addressing factors such as system age, condition, operating environments, investment plans and so on. AMPCO has provided no such evidence.

2.3.5 The forecasted levels of capital investment are reasonable and appropriate

159. Over the plan period (2015-2019), Toronto Hydro proposes to execute a capital program of approximately \$498 million per year, on average.¹³⁷ AMPCO, BOMA, SEC and OEB Staff express concerns about the increase of the program relative to the historical average of spending

¹³⁵ AMPCO Argument, at page 13.

¹³⁶ EC Transcript (November 17, 2014), at page 8, lines 21-28 to page 9, lines 1-13.

¹³⁷ Exhibit 2A, Tab 6, Schedule 2.

(approximately 13% over the 2012-14 ICM average annual amount of \$440). Their concerns relate to both the overall magnitude of spending, and the ability to execute the proposed program. Toronto Hydro will address each of these points below.

160. **Magnitude.** As discussed at some length above, Toronto Hydro's capital program is driven by the renewal needs of the system, and the obligations of the utility to provide safe and reliable service to its customers. The increase in the capital program relative to the recent historical periods is attributable to following factors:¹³⁸

- (a) the age profile and condition of the distribution system (i.e. one third of assets will be past their useful life by the end of 2019, and many assets have experienced a deterioration in health);
- (b) the increased demands on the system as a result of growth, development and intensification of the City (e.g. connecting high-rise developments, and managing increased load demand concentrated in particular areas of the City);
- (c) critical system needs and issues that go beyond core renewal and capacity/utilization (e.g. safety issues, system design deficiencies and reliability issues); and
- (d) operational needs in order to maintain and enhance critical non-distribution system assets that support the efficient and effective execution of the proposed capital program, maintenance activities and other essential business functions.

161. The evidence amply explains these drivers and their impact on capital need.¹³⁹ In light of this evidence, which was largely unchallenged by the intervenors, Toronto Hydro submits that the requested increase in the capital program relative to historical levels is supported and appropriate.

¹³⁸ Exhibit 1C, Tab 2, Schedule 4, at pages 7-10.

¹³⁹ Exhibit 2B.

2.3.6 Toronto Hydro is confident that it can execute the proposed capital plan

162. Toronto Hydro's confidence that it can successfully execute the work proposed in the DSP is based on both the programs it has developed for the 2015-2019 period and its historical experience.

163. On a forward looking basis, Toronto Hydro has filed execution evidence which: (i) describes the nature of the work to be performed, (ii) provides details about the proposed work plan, and (iii) explains the execution risks and mitigation measures.¹⁴⁰ In addition, the utility performed a thorough scheduling and execution analysis against the detailed projects in the 2015 work plan,¹⁴¹ which are highly indicative of the types of work that Toronto Hydro intends to execute in the 2016-2019 period.¹⁴² No party challenged this evidence.

164. From a historical perspective, Toronto Hydro has demonstrated that it can successfully execute a large and complex multi-year capital program. Over the past five years (2010-2014), the utility delivered a program of approximately \$433 million per year, on average.¹⁴³ During the ICM period (2012-2014), Toronto Hydro's capital program averaged \$440 million, peaking in 2014 at \$589 million as the utility worked to complete the jobs that were approved, but could not be executed in 2012 and 2013 due to delayed ramp-up of the ICM work program.¹⁴⁴

165. Toronto Hydro submits that the successful delivery of the 2012-2014 ICM program approved by the OEB in EB-2012-0064 is the best evidence of its ability to deliver a capital program of the size and complexity contained in the application. Nonetheless, some intervenors and OEB Staff express concerns about Toronto Hydro's accomplishments over the ICM period. The paragraphs that follow address these concerns and demonstrate that they offer no basis for reducing the 2015-2019 capital plan.

¹⁴⁰ OH Transcript, Volume 4 (February 23, 2015) at page 35, line 5-16. For an example, see Exhibit 2B, Section E6.9.5.

¹⁴¹ Exhibit 2B, Section E2.3; OH Transcript, Volume 4 (February 23, 2015) at pages 38-39.

¹⁴² OH Transcript, Volume 4 (February 23, 2015) at page 109, lines 17-24.

¹⁴³ Exhibit 2A, Tab 6, Schedule 3.

¹⁴⁴ OH Transcript, Volume 1 (February 17, 2015), at page 104, lines 12-16.

166. **ICM Accomplishments.** The bottom line with respect to the delivery of the ICM work-program is that: (a) Toronto Hydro's in-service additions and capital expenditures were within approximately 5% of the utility's forecasts at the end of 2014; and (b) 90% of the filed jobs were completed or in-progress at the end of the plan, while the remaining 10% of filed jobs were replaced by other work within OEB-approved ICM segments to address emerging needs.¹⁴⁵

167. Nonetheless, OEB Staff questions Toronto Hydro's ability to execute the proposed plan, noting that when the ICM accomplishments are normalized for the segments where significant under or overspending occurred, the analysis shows that Toronto Hydro underspent on the remaining projects by just over 10 percent. In addition, OEB Staff comments on the variability in the spending.¹⁴⁶ Other intervenors, in particular SEC, appear to be more concerned with overspending in particular ICM segments, and the implication that these patterns of spending have on the next five years.¹⁴⁷ Toronto Hydro respectfully submits that the OEB place no weight on these arguments.

168. From an execution perspective, the issue is whether the utility has completed the work that it set out to do. Generally, Toronto Hydro has. With respect to ICM work, the evidence demonstrates that the plan was largely completed.¹⁴⁸ Where variances exist, they have been appropriately explained on a preliminary basis.¹⁴⁹ In addition, through the true-up process, Toronto Hydro intends to provide the OEB and intervenors with a specific reconciliation of forecasts versus actual, including detailed explanations for segment-level variances. Toronto Hydro expects that this analysis will be filed with the OEB by the end of the second quarter of 2015.¹⁵⁰

169. On the issue of variability in spending, Toronto Hydro submits that there are two important considerations that the OEB should keep in mind in evaluating the arguments made by SEC and OEB Staff:

¹⁴⁵ Exhibit OH, Tab 1, Schedule 3 at page 1.

¹⁴⁶ OEB Staff Argument, at page 50.

¹⁴⁷ SEC Argument, at page 44, para. 2.6.4.

¹⁴⁸ Exhibit OH, Tab 1, Schedule 3 at page 3.

¹⁴⁹ Exhibit OH, Tab 1, Schedule 3.

¹⁵⁰ IR Response 2B-OEB-Staff-39, at pages 5-6, line 21-5.

- (a) The timing of the 2012 Cost of Service and ICM decisions affected Toronto Hydro's ability to ramp-up the resources it required to deliver the ICM work program, particularly the work forecasted to be brought into service in 2012 and 2013.¹⁵¹ This naturally led to underspending in some areas, and overspending in others, as available resources were balanced to achieve the optimal pace of execution.
- (b) Toronto Hydro regularly contends with realities on the ground that require it to adjust the timing and specifics of particular work (e.g. advance or defer a planned project because of weather, emerging needs, or municipal permitting).¹⁵² These execution challenges were thoroughly canvassed in the ICM proceeding,¹⁵³ and were discussed by Mr. Walker during his testimony on Day 1 of this case.

During the course of any given year, there are things that emerge that need to be addressed for reliability purposes, for safety purposes. One example was stray voltage. When we determined that there were situations where we had stray voltage on some of our electrical plant, we had to undertake to deal with that. So there are things that emerge that have to be addressed and, you know, it is part of our obligation to serve our customers. And if that means we have to overspend, then that's what we will do.¹⁵⁴

170. Variances from year to year and program to program (or segment to segment in the ICM context) are normal in delivering a complex multi-year capital program in a dense and dynamic operating environment such as the City of Toronto.

MR. WALKER: And I think that you may recall that in the evidence, in a number of places, we talked about the need for that flexibility, the need to be able to advance, defer, replace jobs.

That was -- that's something that is in the normal course of our business. Things do emerge that are of high priority and need to be addressed.

¹⁵¹ OH Transcript, Volume 1 (February 17, 2015), at page 104, lines 9-22 and page 116, lines 9-26.

¹⁵² Exhibit 1B, Tab 2, Schedule 4, Appendix A; Exhibit 2B, Section C at pages 15-16.

¹⁵³ EB-2014-0064, Tab 2, Schedule 1, 2014 Evidence Update – Manager's Summary (August 19, 2013), at page 10; EB-2014-0064, Tab 2, Manager's Summary (October 21, 2012), at pages 9-10; EB-2012-0064, Tab 2, Addendum to the Manager's Summary (October 31, 2014), at pages 4-6.

¹⁵⁴ OH Transcript Volume 1 (February 17, 2015), at page 78, lines 13-123.

MS. GIRVAN: But if I look at what the Board decided in the ICM Decision, I think they said, unlike the envelope approach often adopted in cost of service proceedings, the monies must be reported on a per-project segment.

MR. WALKER: Yes, I agree.

MS. GIRVAN: You agree? Okay. But you're saying as long as the overall envelope -- that's what you're seeking approval for?

MR. WALKER: No. I think what we're saying is that, as we said in our evidence, we do expect to see jobs advanced, deferred or replaced, and that the expectation is that we would justify that at true-up, those jobs being of the same nature as what was requested in the ICM segments, and with justification as to why we did it.¹⁵⁵

171. **Execution Flexibility.** The proposed DSP will allow Toronto Hydro to prudently manage the execution challenges noted above by providing the utility the funding certainty and flexibility that it requires to mobilize resources and schedule work effectively, respond to externalities and changing circumstances on the ground, and maintain a steady pace of execution.

172. Toronto Hydro acknowledges that the proposed capital funding mechanism, the C-Factor, provides an annual adjustment to rates which is driven by the amount of work that the utility forecasts to put in-service in a given year, and that, as a result, some parties have concerns about the potential for over-recovery if actual in-service amounts are less than forecast in a given year. These concerns are unsubstantiated in light of the evidence that Toronto Hydro delivered the ICM program within 5% of its forecasts, and that its capital accomplishments in 2014 (the only year of the ICM program that was not constrained from an execution perspective) notably exceed the proposed work plan on any given year during the CIR period.

173. Nonetheless, to address parties' concerns, Toronto Hydro proposes a capital related revenue requirement variance account to address any concerns relating to the company's ability to place capital in-service over the Custom IR term. The workings of this account are described in section 5.5.1.

174. **ICM True-Up.** Toronto Hydro intends to file the true-up of the ICM program in the second quarter of 2015. This timing is necessary for Toronto Hydro to provide the OEB and

¹⁵⁵ OH Transcript Volume 4 (February 23, 2015), at page 104, lines 4-25.

interested parties an accurate and complete reconciliation and variance analysis of the ICM work program for two primary reasons.¹⁵⁶

- (a) The financial closeout of the 2014 year could not be completed until March 2015, and because of the integrated nature of the ICM work-program, providing early or partial true-up information would have been inefficient and inconsistent with the OEB's Decision in EB-2012-0064.
- (b) Due to the technological limitations of the utility's current Enterprise Resource Planning (ERP) system, and practical constraints resulting from changes in job timing and composition within ICM segments, Toronto Hydro needed to use a manual process to reconcile spending in the approved ICM segments.¹⁵⁷

175. AMPCO questions the true-up process and raises doubts about the accuracy of the information to be provided.¹⁵⁸ As discussed, there are significant complexities associated with the ICM true-up due to the timing, magnitude and granularity of the work program, as well the nature of Toronto Hydro's operations which require the utility to respond to changing circumstances on the ground. To prepare complete and accurate reconciliation and variance analysis of the work at a segment level, these complexities must be untangled manually, as Mr. Walker notes:

It is a real shortcoming of our ERP, because ERP should facilitate that project from its cradle to its grave, and it just doesn't do that. So we can do it, we have all of the data, but it's a manual effort to go through and map it out, unfortunately.¹⁵⁹

176. AMPCO asks the OEB to draw an adverse inference about the accuracy of the information to be provided as part of true-up. On the contrary, the fact that Toronto Hydro is devoting the time and resources necessary to produce a detailed and rigorous true-up analysis should provide the OEB and parties increased confidence in the accuracy and completeness of the information.

¹⁵⁶ Exhibit 2A, Tab 9, Schedule 1.

¹⁵⁷ Exhibit OH, Tab 1, Schedule 3 at pages 5-6.

¹⁵⁸ AMPCO Argument, at page 19.

¹⁵⁹ OH Transcript Volume 1 (February 17, 2015) at page 113, lines 7-11.

177. Toronto Hydro has provided detailed information about its accomplishments in 2012 and 2013 through an interrogatory response¹⁶⁰ and included 2014 information in a supplemental exhibit.¹⁶¹ During the Oral Hearing, it became clear that intervenors had concerns about not being able to test the prudence of the 2015 opening rate base related to ICM spending. In response, Toronto Hydro proposed a rate base variance account, described by Ms. Klein as follows:

We are confident in the prudence of the spending that is associated with the forecasts of the ICM segments, and that would include some of the spending that would be above forecast in those segments. And in order to provide the Board and the parties with some comfort regarding those details, we would -- we would propose actually a variance account to capture any difference between the amount of the ICM-based in-service additions that are currently forecast, and then the amount that would be approved by the Board at true-up.

This would effectively mean that 2015 opening rate base would be set on the basis of the utility's forecasts, as in any other rebasing application. But the existence of the variance account would provide the Board with the ability to change the revenue requirement impacts of opening rate base, in the event that any portion of the ICM work is found to be imprudently incurred.¹⁶²

178. Toronto Hydro's made reasonable efforts to provide as much information as possible about the work completed during the ICM. OEB Staff acknowledges this, stating:

Toronto Hydro has provided sufficient information in this proceeding on the status of ICM true-up to allow for an assessment of the extent to which it has managed to complete the ICM work which was approved in EB-2012-0064.¹⁶³

179. Despite the information provided, AMPCO and CCC argue that it is difficult to assess the reasonableness and appropriateness of the utility forecasts over the 2015-2019 period without the ICM true-up information.¹⁶⁴ Again, Toronto Hydro submits that this confuses the revenue reconciliation concept of true-up with the prudence analysis that the OEB typically undertakes during a rebasing application.

¹⁶⁰ IR Response 2B-OEBStaff-39, at page 4, lines 1-9; OH Transcript Volume 1 (February 17, 2015), at pages 117-119, lines 21-12.

¹⁶¹ Exhibit OH, Tab 1, Schedule 3.

¹⁶² OH Transcript Volume 7 (February 26, 2015), at pages 156-157, lines 20-8.

¹⁶³ OEB Staff Argument, at page 26.

¹⁶⁴ AMPCO Argument, at pages 17-18; CCC Argument, at page 8.

180. The ICM true-up was approved as a detailed segment-by-segment reconciliation process to compare the revenues collected through the approved ICM rate riders with the revenues to which Toronto Hydro was entitled, based on the timing and amount of ICM capital placed in service. This exercise is largely unprecedented in OEB regulation of gas and electricity rates. It is very different than the review that the OEB typically undertakes in evaluating a utility's capital needs on a forecast basis or when determining whether the in-service additions from a prior IRM period should enter rate base at rebasing.

181. Because of the nature and magnitude of ICM work program and the detailed evidence filed in the ICM application, the OEB and parties have had access to an unprecedented level of information about prior capital spending. Contrary to AMPCO's and CCC's assertions, Toronto Hydro submits that the ICM information filed in the prior application (EB-2012-0064), the preliminary true-up information filed in this application and the detailed 2015 capital program set out in the evidence all contribute to the OEB's ability to conduct a rigorous assessment of the proposed capital plan. This is particularly true in light of the fact that 86% of the work in the DSP is a continuation of the type of work performed during the ICM period.¹⁶⁵ Toronto Hydro submits that it has provided the OEB and the parties with more information and a higher level of detail than would normally be the case in a rebasing proceeding.

182. The OEB accepted the need, prudence and non-discretionary nature of the ICM work program.¹⁶⁶ AMPCO and CCC assert that Toronto Hydro "automatically expects" the OEB to approve the same level of investment that was approved in the ICM proceeding.¹⁶⁷ That is simply not true. Toronto Hydro understands that the DSP will be evaluated on its own merits, which is why the utility has filed a comprehensive plan, supported by rigorous engineering analyses and detailed program-based evidence that has been reviewed by external experts.

183. **DSP Evidence.** The DSP includes a detailed Asset Management Process section that describes Toronto Hydro's rigorous asset management processes, policies and decision-making tools and a comprehensive five-year capital expenditure plan comprised of 46 detailed capital

¹⁶⁵ Exhibit 1B, Tab 2, Schedule 4, at pages 2-3.

¹⁶⁶ EB-2012-0064, Partial Decision and Order (April 2, 2013).

¹⁶⁷ AMPCO Argument, at page 3.

programs, organized into the four prescribed investment categories, each with detailed justifications. This evidence, which was largely uncontested by the intervenors, is an important tool for evaluating the reasonableness and appropriateness of the proposed capital plan.

184. However, some intervenors, in particular SEC, argue that the evidence should be ignored, and that instead, benchmarking should be the primary consideration in evaluating the reasonableness and appropriateness of the plan and ensuing funding request.¹⁶⁸ Toronto Hydro disagrees.

185. As discussed in Section 4.5, while benchmarking is an important consideration in evaluating the reasonableness of a utility's forecasts: "it does not replace the need for substantiating evidence in support of spending levels."¹⁶⁹ The two types of evidence must be used together: the reasonableness of the utility's capital forecasts must be informed by the results of the benchmarking evidence, and the benchmarking evidence must be interpreted in light of the utility's capital needs.

186. **System O&M.** The DSP outlines Toronto Hydro's maintenance planning criteria and explains how the company considers the relationship between capital and system operations and maintenance (O&M) factors in its investment planning and decision-making processes.¹⁷⁰ This issue was also thoroughly canvassed by the parties during the proceeding. OEB Staff express concerns about the lack of evidence in this respect.¹⁷¹ Toronto Hydro respectfully submits that these concerns are unsubstantiated in light of the evidence. BOMA, VECC and SEC assert that asset replacement results in lower maintenance costs.¹⁷² The evidence does not support this simplistic conclusion, but rather shows that the relationship between capital and system O&M is complex and program-specific.¹⁷³ This issue is fully discussed in section 3.2.4.

¹⁶⁸ SEC Argument at page 26, paragraph 1.7.19.

¹⁶⁹ EB-2013-0416, Decision and Order (March 12, 2015) at page 24.

¹⁷⁰ Exhibit 2B, Section D3.2 and D3.3.

¹⁷¹ OEB Staff Argument, at page 46.

¹⁷² BOMA, Argument at page 50; VECC Argument at page 33; SEC Argument, at pages 45-46.

¹⁷³ IR Response 2B-OEBStaff-34; OH Transcript, Volume 4 (February 23, 2015) at pages 71-72.

2.3.7 The program forecasts are reasonable and appropriate

187. The 2015 costs for each program are defined by the specific projects that have been scoped and estimated by the engineers for the 2015 execution work program. The details of these projects are provided at the end of each individual program. The 2015 work plan is representative of the types of work that the utility intends to execute in the 2016-2019 period.¹⁷⁴

188. 2016-2019 program-specific budgets were determined using the outputs of the long-term asset management process (e.g. location of end-of-life assets and identification of specific priority areas to be targeted for investment over the five-year period),¹⁷⁵ and the application of experienced engineering judgment to estimate, at a high-level, the costs of accomplishing work in the identified areas. The engineering estimates are informed by the particular circumstances of the targeted areas of investment, and comparable work done in the past.¹⁷⁶

189. As each budget year in the plan approaches, detailed projects for each program are developed, along with detailed cost estimates. This is a prudent way to plan and manage large volumes of work over a five-year horizon for a number of reasons:

- (a) *Operational Flexibility*: Given the number and type of assets that are past end-of-life, the discrete assets that must be addressed in a particular year may change as needs emerge on the ground (i.e. assets fails in a particular area, or an asset shows signs of rapid deterioration). To ensure that it addresses the assets that pose the greatest risks to customers, Toronto Hydro must maintain the operational flexibility to respond to changing circumstances and emerging needs.¹⁷⁷ Mr. Walker provided the following example:

We recently had a circumstance, two circumstances, actually, one in the west end and one in the east end, where we had a number of rapid cable faults. We could not re-energize those cables and we had to install temporary overhead lines in to restore power.

¹⁷⁴ OH Transcript, Volume 4 (February 23, 2015) at page 109, lines 17-24.

¹⁷⁵ Exhibit 2B, Section D3.1.1.

¹⁷⁶ OH Transcript, Volume 4 (February 23, 2015), at pages 43, 50-51.

¹⁷⁷ OH Transcript Volume 5 (February 24, 2015), at page 132, lines 5-18.

So now we are adding that to the program as urgent projects, and that can happen at any time.¹⁷⁸

- (b) *Cost Efficiency*: At the planning stage, it is more efficient to prepare high level estimates rather than detailed project designs.¹⁷⁹ If the work is deferred to accommodate an emerging requirement such as the one described above by Mr. Walker (or for other valid operational reasons), the detailed plan must be revisited and often altered before execution to account for changing circumstances in the intervening years (e.g. reconstruction and widening of roads and other utility projects like water, gas, and telecommunication, modifications in design and construction standards). Creating detailed project plans at the planning stage would therefore lead to unnecessary costs. In a given year, internal design costs typically range between 6% to 8% distribution capital work executed by internal resources, and 5% to 10% of the work executed by design and construction contractors.¹⁸⁰ Over the 2015-2019 period, this cost would be significantly higher if Toronto Hydro performed detailed designs for its outer year projects.

190. AMPCO, CCC and SEC criticize Toronto Hydro for not providing detailed execution plans beyond 2015, and argue that funding should be denied for System Renewal investments in 2016-2019 as a result of this deficiency.¹⁸¹ AMPCO even goes as far as to argue that Toronto Hydro is asking the OEB to approve a “blank cheque” for 2016-2019. There is no basis for this argument. Mr. Walker explained why during his cross-examination:

Those numbers beyond 2015, as we spoke about this morning, are forecasts, but they're based on an expectation of particular work that we want to do. So it's not just a request for blanket approval.

¹⁷⁸ OH Transcript Volume 5 (February 24, 2015) at page 131, lines 19-26.

¹⁷⁹ Exhibit OH, Tab 1, Schedule 3 at pages 5-6, lines explains the difference between high-level planning estimates and detailed project designs.

¹⁸⁰ OH Undertaking J7.3.

¹⁸¹ AMPCO Argument at page 20.

There is work expected to be done under that, of the same type as what's in the '15 program. It is not down at a job level, but it is expected to be the same kind of work.¹⁸²

191. The evidence contained in the DSP clearly substantiates the need, both at a system level (i.e. one-third of assets will be past their useful life by 2020) and on a program-basis, to invest in the renewal of the distribution system over the next five years. The utility went beyond the Chapter 5 Filing Requirements and provided project level details for 2015 to illustrate the type of work that it plans to execute and provide as part of each program. As Ms. Klein noted,

... we have provided very detailed business cases with respect to what we intend to do in our capital program for the years 2015 to 2019. And in the first year, we actually went beyond the DSP requirements and provided an additional level of detail, dropping down into something that probably would resemble more closely the ICM level of detail, to provide the Board and parties some continuity between the two regulatory views of the application and the continuation of the capital plan.

....

And so we have, as best as possible and at quite a granular level of detail, provided an indication of the types of work we intend to do. I believe there is something like 46 DSP programs, most of which span all five years and a number of which span several of the years. Beyond that, providing more detailed plans is not our intention and, at this point, for the later years is not possible.¹⁸³

192. Toronto Hydro would have had to expend significant costs and resources to prepare detailed project designs for the outer years of the plan in a format that would be useful to the OEB, in addition to the increased regulatory costs associated with reviewing, evaluating and defending the capital proposals. AMPCO and CCC argue that 2016-2019 project details are necessary to evaluate the reasonableness and appropriateness of the DSP, but do not explain how the information would actually be useful for this assessment. More importantly, the parties do not consider the benefits relative to the costs, or the potential inefficiency implicit in their argument.

193. **Unit Costs:** As discussed above, Toronto Hydro's program forecasts are based on the identified needs of the system and the application of experienced engineering judgment to

¹⁸² OH Transcript Volume 4 (February 23, 2015) at page 109, lines 17-24.

¹⁸³ OH Transcript Volume 8 (February 27, 2015), at page 47, line 12-23 and pages 48-49, lines 17-7.

estimate, at a high-level, the costs of accomplishing work in the identified areas. For the reasons detailed above, Toronto Hydro does not forecast capital expenditures on the basis of detailed design estimates, which would be required to derive accurate unit costs.

194. AMPCO and SEC assert that they expected Toronto Hydro to be able to provide unit cost information. In his affidavit to the AMPCO Motion, Mr. Walker explained why this information is not readily available:

To provide the information requested by AMPCO, Toronto Hydro would have to manually reconcile the costs of executed projects against the scope of work initially developed for each corresponding project. Through such a process, Toronto Hydro would need to determine the quantities and costs for the assets in question and aggregate those asset quantities and costs back to the specific projects and programs where they originated, while taking into account any scope changes that may have occurred over the lifecycle of the project. Toronto Hydro would also have to manually derive the unit costs for each of the assets in question for each project by way of analyzing each work order for a project to allocate costs. This data is not readily available within Ellipse [Toronto Hydro's legacy ERP system]. This process would be very labour-intensive. Toronto Hydro estimates that if it were to dedicate three staff from the System Planning and Project Management functions on a full-time basis, it would take a duration of approximately one year to manually derive all of the unit cost information requested by AMPCO.¹⁸⁴

195. Ultimately, unit costs do not provide a meaningful assessment of costs or efficiency because the costs of doing work can vary significantly on the circumstances of each particular job.¹⁸⁵ Again, this was explained by Mr. Walker:¹⁸⁶

If we try to compare past cost to future cost, projected cost, we're not necessarily comparing the same kind of unit. Installing a pole in, you know, the downtown core of Toronto is a completely different costing structure than installing it in a subdivision in the north of Scarborough, as an example.

Some poles have a single-phase single circuit on. And some have a three-phase circuit. Some have two three-phase circuits. Some have transformers hung on them and some do not, and so on. So the variability in units is huge, and the variability in the programs year over year can be huge as well. In one year, if we are doing more projects in the downtown core than we are in the Horseshoe, our

¹⁸⁴ Toronto Hydro Response to AMPCO Motion, M. Walker Affidavit (January 13, 2015) at page 18.

¹⁸⁵ Toronto Hydro Response to AMPCO Motion, M. Walker Affidavit (January 13, 2015) at paras. 9-10.

¹⁸⁶ OH Transcript, Volume 1 (February 17, 2015) at pages 91-92, lines 17-15.

unit costing -- should we calculate one -- is going to be significantly higher than it would be if we were doing more in Scarborough than we were in downtown Toronto.

If we're doing those poles in an area where there's parking restrictions in this job and there's another job where there are no parking restrictions, our costs are going to be different, and so on and so on.

So when we try to apply average unit costing, we find it meaningless. And especially as an efficiency measure, it provides no value.

196. In addition, because a significant portion of Toronto Hydro's capital work is performed by external contractors, there is also an issue of comparability with respect to unit costs. If the work, or a portion of it, has been contracted, the costs reflect the contractor's bid price for the civil materials, labour, overhead and other costs necessary to execute the work (with the exception of electrical materials that are provided by Toronto Hydro). The contractor is bound to its bid price even if its actual costs of completing the project differ. If the work is being performed using internal resources, the costs represent the actual material, labour and equipment costs incurred by Toronto Hydro to execute the work, which are tracked through a detailed work order process.¹⁸⁷ To better understand the difference between internal and external construction costs going forward, Toronto Hydro has developed the Contractor Cost Efficiency metric, which is discussed in more detail below.

197. **Asset Assemblies Metric.** Recognizing the OEB and parties' interest in unit costs, over the 2015-2019 Toronto Hydro also proposes to develop a metric which will enable the utility to effectively track and evaluate the internal labour inputs of completing specific types of assets in a manner that recognizes the complexity and diversity of the utility's service territory.¹⁸⁸ This measure will enable Toronto Hydro's engineers and designers to prepare better estimates to account for specific engineering, topographic or other related circumstances applicable to each individual project.¹⁸⁹ It will also allow Toronto Hydro to analyze the costs structure of

¹⁸⁷ Toronto Hydro Response to AMPCO Motion, M. Walker Affidavit (January 13, 2015) at para. 6.

¹⁸⁸ Exhibit 2B, Section C3.5.

¹⁸⁹ Exhibit 2B, Section C3.5, at page 26, lines 9-12.

constructing different asset assemblies given their particular circumstances, so as to drive efficiency.¹⁹⁰

198. None of the parties opposed or critiqued the Standard Asset Assemblies metric, except to say that it is of limited value at this time. Although the metric is still being developed, it demonstrates Toronto Hydro's commitment to continuous improvement with respect to the efficient execution of its DSP, which is valuable for assessing the appropriateness of the plan and its compliance with the OEB's requirements and policy expectations.

2.4 Toronto Hydro has demonstrated that it will execute the DSP efficiently, and will pursue opportunities for continuous improvement over the course of the plan

2.4.1 Toronto Hydro's procurement process leverages market efficiencies to ensure that the services and materials procured by Toronto Hydro represent the best value for its customers

199. Toronto Hydro's procurement process drives continuous improvement and market efficiency for 81% of the utility's capital costs, and helps ensure that the services, equipment and materials procured by Toronto Hydro represent the best value for its customers while also satisfying the operational needs of the utility.¹⁹¹

200. BOMA, CCC and SEC argue that the evidence does not demonstrate that the capital program will be delivered efficiently or that it reflects productivity. BOMA states that the market does not guarantee increasing productivity – that in fact there could be companies in the market that become less productive over time.¹⁹² CCC argues that capital forecasts do not embed productivity – that they are simply bottom up cost of service projections.¹⁹³ SEC erroneously draws the inference from this evidence that “Toronto Hydro is essentially telling the Board that there is no way for it to deliver its capital program more efficiently on a year over year basis.”¹⁹⁴ For the reasons that follow, Toronto Hydro submits that these assertions are wrong.

¹⁹⁰ OH Transcript, Volume 1 (February 17, 2015) at pages 94, lines 11-17.

¹⁹¹ OH Transcript, Volume 4 (February 23, 2015) at page 88, line 4-16.

¹⁹² BOMA Argument, at page 55.

¹⁹³ CCC Argument, at page 4.

¹⁹⁴ SEC Argument, at page 41, para. 2.5.8.

201. The OEB recognizes and relies on the competitive forces of the external market to drive efficiencies and inform the prudence of utility expenditures. In EB-2008-0272, the OEB found:¹⁹⁵

In the typical scenario of contracting for goods and services the company can go to the market place and solicit offers from multiple service providers. If the tendering parties are at arm's length from the company the Board can rely on typical market forces and profit incentives to determine that the costs incurred in association with the contract are prudent.

202. As discussed in detail by Mr. Nash, Toronto Hydro's procurement process leverages market efficiencies and drives productivity in a number of different ways:¹⁹⁶

- (a) Toronto Hydro's extensive RFQ/RFP process allows the utility to enter into agreements with those contractors or suppliers who are able to offer products and/or services at an optimal price relative to their peers in the market, but who have also demonstrated other important competencies such as staffing capabilities, technical expertise, and a commitment to health and safety.
- (b) In securing these contracts, the utility does not commit itself to one supplier or contractor – it is free to pursue other opportunities and is not obligated to provide minimum levels of work or order volumes. This provides Toronto Hydro the flexibility to source a particular scope of work or given quantity of material at the most cost-effective price.
- (c) Toronto Hydro often leverages fixed price contracts. These types of contractual arrangement provide price certainty and shift the risk of external changes in price and/or scope to the contractor or supplier. The onus is on the external parties to find productivity improvements to cope with changes in price or scopes, but the benefit of those productivity improvements are shared with the company, and hence ratepayers, upfront through the fixed price contract.

¹⁹⁵ EB-2008-0272, Decision with Reasons (May 19, 2009), at page 28.

¹⁹⁶ OH Transcript, Volume 6 (February 25, 2015) at pages 98-116, lines 6-10.

- (d) In other cases, such as with cable, Toronto Hydro's supplier contracts are structured in a hybrid way, whereby the price of the manufacturing component is fixed over the longer term, while the price of metals such as aluminum and copper fluctuates in accordance with the commodity markets. This approach challenges the suppliers to find more efficient ways to produce the equipment, while making sure that the utility pays no more than the current market price for key commodities.
- (e) The utility procures all of the electrical materials used by external contractors in order to protect itself from any potential procurement inefficiencies on the part of individual contractors and to effectively leverage its buying power.
- (f) Electrical design and construction contracts include a granular schedule of 6400 activity-based unit prices negotiated during the RFP process and subject to pre-determined annual escalation levels to secure price certainty. When submitting bids for specific projects, the contractors are free to offer price quotes based on any combination of units – this pricing methodology allows the contractors to offer more competitive prices. However, once a job is assigned, the contractor is responsible for completing it within the quoted price, thereby protecting Toronto Hydro and its ratepayers from any risk associated with cost overruns.
- (g) From an internal perspective, Toronto Hydro's unit price contracting strategy allows the utility to cost-effectively resource the work without incurring the procurement cost and burden of tendering of every single job. For obvious reasons, this strategy is commonly employed by other utilities, particularly in the southern Ontario area.

2.4.2 Toronto Hydro's contracting strategy is prudent and justified

203. Several parties question the prudence of Toronto Hydro's contracting strategy. BOMA notes that there has not been a clear explanation of the pros and cons of unit price contracts, and that to judge the risks to ratepayers from contracting out, one would need to see substantially

more information on the contracts than has been offered.¹⁹⁷ SEC argues that Toronto Hydro has not performed a rigorous analysis to determine if its approach is optimal.¹⁹⁸ CUPE asserts that Toronto Hydro has failed to provide a detailed analysis that justifies its decision-making with respect to its use of external labour.¹⁹⁹

204. Toronto Hydro's response to these argument is as follows:

- (a) contracting out provides Toronto Hydro with the ability to scale its resources to its work requirements, which allows the company to better address changing capital funding levels, maintain flexibility in operations, and gain access to specialized expertise;²⁰⁰
- (b) the contractor cost efficiency metric demonstrates that it is more cost-effective to complete certain types of work using external resources than Toronto Hydro employees;²⁰¹
- (c) the extensive evidence on the record enables a rigorous assessment of the prudence of Toronto Hydro's contracting strategy and approach – this evidence includes:
 - (i) Mr. Owen Nash's testimony, the company's subject matter expert with respect to procurement;²⁰²
 - (ii) the schedule of 6400 unit costs that Toronto Hydro has negotiated with its design and construction contractors;²⁰³
 - (iii) copies of the RFPs and associated selection criteria for design and construction contractors;²⁰⁴

¹⁹⁷ BOMA Argument, at pages 55-56.

¹⁹⁸ SEC Argument, at page 41, para. 2.5.6.

¹⁹⁹ CUPE Argument, at page 3, para. 5.

²⁰⁰ Exhibit 4A, Tab 4, Schedule 3, at page 21, lines 3-5; TC Undertaking J2.29-CUPE-8.

²⁰¹ Exhibit 2B, Section C3.4; IR Response 2B-CUPE-2(a).

²⁰² OH Transcript, Volume 6 (February 25, 2015) at pages 98-113.

²⁰³ TC Undertaking J1.12, Appendix A.

- (iv) the 2015-2018 price increases for the civil and electrical design and construction contractors;²⁰⁵
- (v) annual OM&A and capital expenditures for all external contract services;²⁰⁶
- (vi) detailed explanations about the contractor pre-qualification and compliance process, including information about how utility evaluates the quality of the work completed by third party contractors;²⁰⁷ and
- (vii) information about contractor safety performance.²⁰⁸

2.4.3 The capital plan reflects historical productivity and include measures for continuous improvement

205. SEC suggests that Toronto Hydro simply relies on its procurement strategy in respect to capital productivity, and notes that the utility could create new processes for planning and executing capital projects, or more cost-effective ways to procure materials.²⁰⁹ These arguments should carry no weight in light of the evidence that demonstrates Toronto Hydro's (a) historical productivity and efficiency achievements, and (b) its future initiatives to drive continuous improvement with respect to capital productivity.

206. **Past Productivity Achievements.** Toronto Hydro filed a detailed Past Productivity Study outlining the numerous initiatives that the utility has implemented since amalgamation.²¹⁰ This evidence was largely uncontested. More recently, in 2012, Toronto Hydro engaged UMS Consulting to perform a Productivity Program Benchmark Study.²¹¹ Based on the results of that

²⁰⁴ TC Undertaking J2.29-CUPE-7.

²⁰⁵ TC Undertaking J2.29-CUPE-9, Supplemental Response (Confidential Information).

²⁰⁶ TC Undertaking J2.29-CUPE-14 and J2.29-CUPE-15.

²⁰⁷ TC Undertaking J2.29-CUPE-10;

²⁰⁸ OH Undertaking J1.1 and J7.2.

²⁰⁹ SEC Argument, at page 41, para. 2.5.6.

²¹⁰ Exhibit 1B, Tab 2, Schedule 5, Appendix A.

²¹¹ IR Response 1B-SEC-8, Appendix A.

study, which are summarized in the utility's response to interrogatory 1B-SEC-8, Toronto Hydro took a number of steps to promote capital efficiency and productivity:

- (a) Toronto Hydro established two new departments: 1) the Program Delivery Improvements and Governance group to develop and implement more efficient program execution processes, procedures and tools; and 2) the Permit Delivery Office to reduce the time of obtaining municipal authorization for capital work.
- (b) Toronto Hydro completed a comprehensive review of its construction standards, which resulted in the implementation of new uniform standards that are consistent with industry best practices (as detailed by the PSE Standards Review Study²¹²) and that have led to a significant drop in a number of change requests to standards.
- (c) Toronto Hydro has reduced the size of its fleet by 12% and is in the process of implementing a facilities consolidation plan which will reduce the company's square footage by approximately 43%.²¹³
- (d) Toronto Hydro made significant improvements with respect to its material requisition and planning processes.

207. Continuous Improvement Measures. Toronto Hydro is committed to driving continuous improvement over the 2015-2019 period. In addition to the market-driven efficiencies discussed above, and the companywide productivity initiatives that Toronto Hydro continues to pursue to manage internal cost (e.g., operational centers consolidation,²¹⁴ fleet cost optimization,²¹⁵ electronic procurement platform,²¹⁶ and the implementation of a new ERP

²¹² Exhibit 2B, Section D, Appendix B.

²¹³ Exhibit 2B, Section E8.3, at page 9, line 29-30.

²¹⁴ Exhibit 2B, Section E8.2.

²¹⁵ Exhibit 4A, Tab 2, Schedule 10, at pages 4-6.

²¹⁶ Exhibit 4A, Tab 2, Schedule 12, at page 15.

system²¹⁷), the utility proposes four specific measures to track and evaluate cost efficiency of executing its DSP:²¹⁸

- (a) *Engineering, Design and Support Costs*: tracks the proportion of total distributional capital expenditures that relates to planning, engineering and support labour costs. By tracking this measure, Toronto Hydro expects to drive productivity and efficiency in these underlying processes which currently account for approximately 6-7% of Toronto Hydro's capital costs.²¹⁹
- (b) *Materials Handling On-Cost*: tracks the eligible supply chain and warehousing costs, which are ultimately added to the utility's total capital costs as a percentage surcharge on all materials issued through the utility's warehouse. By tracking this measure, Toronto Hydro expects to drive continuous improvement with respect to the cost of procuring and distributing materials, which currently accounts for approximately 2% of the utility's capital cost.²²⁰
- (c) *Contractor Cost Efficiency*: using a sophisticated methodology, this measure compares the costs of construction projects constructed "in-house" with the prices charged for equivalent work by external design and construction contractors retained by Toronto Hydro. Toronto Hydro plans to use this information to drive continuous improvement of internal work execution practices.²²¹
- (d) *Asset Assemblies Framework*: once developed, tested and implemented, this measure will enable the utility to effectively track the internal labour inputs of completing specific types of assets in a manner that recognizes the complexity and diversity of the utility's service territory. Toronto Hydro intends to use this information to improve planning processes, to analyze the costs of completing

²¹⁷ Exhibit 2B, Section E8.6.

²¹⁸ OH Transcript, Volume 1 (February 17, 2015) at pages 88-89, lines 6-2.

²¹⁹ Exhibit 2B, Section C3.2; IR Response 2B-SEC-19.

²²⁰ Exhibit 2B, Section C3.3; IR Response 1B-BOMA-35.

²²¹ Exhibit 2B, Section C3.4; IR Response 2B-CUPE-2(a).

work on different asset assemblies, and of course, to drive efficiencies with respect to the execution of this work.²²²

208. The productivity outcomes of the above initiatives will be shared with customers throughout the duration of the plan in the form of more cost-effective assets being placed into service, and re-investment into the system.²²³ SEC takes issue with this approach:

If the amount of work to be done in this plan is the right amount... then there is no reason to do more work.²²⁴

209. Toronto Hydro disagrees with SEC's characterizations. The evidence shows that the paced approach proposed by Toronto Hydro is not optimal – it postpones necessary work to the future. The backlog of aging assets will continue to increase over the plan period. The longer that Toronto Hydro takes to address this backlog, the greater the risk and costs that customers will be exposed to.

210. It is therefore appropriate for Toronto Hydro to advance capital savings achieved through productivity to fund additional capital needs. This issue of advancement of funds was considered by the OEB in the Kingston Hydro 2011 rate application where the OEB largely accepted the utility's argument for re-investing available capital funds:

The basis for the top-down approach is that the re-investment that is needed is greater than the funds available to spend. If more funds become available, then under the top-down approach the incremental funds should be spent on needed projects.

...

The Board accepts Kingston Hydro's evidence concerning its top-down approach to investment planning and how the historical run-to-failure practice has resulted in additional investment needs. The Board is of the view that the need for the Substation investment has been substantiated and that this is more of a timing and availability-of-funds decision.²²⁵

²²² Exhibit 2B, Section C3.5; OH Transcript, Volume 1 (February 17, 2015) at pages 88-89.

²²³ OH Transcript, Volume 4 (February 23, 2015) at pages 67.

²²⁴ SEC Argument, at page 43, para. 2.5.16.

²²⁵ EB-2010-0136, Decision and Order (June 23, 2012), at page 15.

211. In addition, Toronto Hydro submits that capital reinvestment is appropriate and justified in light of the evidence that it is more costly to reactively address avoidable asset failures. As Mr. Walker described in testimony, reactive replacement can involve work outside of normal working hours, multiple site visits by multiple crews in order to locate the fault, restore power, build a temporary service solution, and ultimately rebuild the larger area as part of a planned project.²²⁶ A portion of these reactive costs will amount to wasted or avoidable expenditures, increasing the overall lifecycle cost of operating the distribution system.

2.5 The proposed metrics comply with OEB guidance, are outcome-driven, and enable a meaningful assessment of the utility's performance over the course the plan

2.5.1 The DSP includes a comprehensive performance measurement framework

212. Consistent with the OEB's Chapter 5 Filing Requirements, the DSP includes a comprehensive range of metrics and measures to track the outcomes of the plan and drive continuous improvement and operational efficiency over the course of the plan. Through annual reporting, these metrics will allow the OEB and interested parties to monitor:

- (a) a number of important *customer-oriented performance outcomes* of the DSP, namely SAIDI, SAIFI, CAIDI, FESI and MAIFI;
- (b) the implementation of the DSP through five distinct *cost efficiency and effectiveness metrics*; and
- (c) the effect of the DSP on *critical system issues*, such as outages caused by defective equipment and stations capacity availability.

213. Toronto Hydro is one of the first utilities to propose a comprehensive performance measurement framework. The application includes detailed evidence supporting the proposed metrics. This evidence explains the methodology that Toronto Hydro intends to use to calculate each measure, a thorough discussion of past trends (where this information is available), and provides an assessment of how each measure will be used to evaluate the outcomes of the DSP

²²⁶ OH Transcript Volume 6 (February 25, 2015), pages 67-68.

and the utility's implementation of the plan.²²⁷ The parties did not challenge this evidence during the course of the proceeding.

214. The OEB's decision in the recent HONI case clearly states that effective measures must enable an assessment of plan's value for money to customers (i.e. demonstrate what will be gained from the spending).²²⁸ Toronto Hydro respectfully submits that its proposed metrics comply with OEB guidance because they measure a number of important outcomes of the capital plan including various dimensions of reliability, equipment performance, connection capacity availability, and cost efficiency.

215. Providing little reason for its conclusions, CCC argues that the proposed metrics are not meaningful and that the OEB should require Toronto Hydro to work with the intervenors and OEB Staff over the coming years to develop more appropriate reporting metrics.²²⁹ While Toronto Hydro disagrees with CCC's characterization, the utility does see merit in receiving the input of stakeholders and discussing the outputs of the utility's metrics mid-way through the plan. As demonstrated by history and its approach to this application, Toronto Hydro is committed to continuous improvement. Toronto Hydro submits that it would be of assistance conduct a workshop with the interested parties in 2018 in order to assess the lessons learned with respect to the proposed suite of measures and discuss the potential measures for the utility's next multi-year plan. In Toronto Hydro's submission, this mid-term exercise would be of benefit to the participants and the OEB, and contribute to the utility's development of future metrics.

2.5.2 Intervenor criticism and proposals regarding performance targets are unreasonable

216. The parties generally do not oppose the appropriateness of the proposed measurement framework. With some exceptions, which have been noted above and are discussed in more detail below, the primary criticism is that Toronto Hydro has not set targets.²³⁰ Over time, as part of the OEB's transition towards outcome-based regulation, targets for some metrics will become

²²⁷ Exhibit 2B, Section C.

²²⁸ EB-2013-0416, Decision and Order (March 12, 2015), at page 19.

²²⁹ CCC Argument, at page 15.

²³⁰ BOMA Argument, at page 43; AMPCO, at page 21; CCC Argument, at page 9; SEC Argument, at pages 49-50; Society at page 4.

increasingly important. In the current circumstance, however, Toronto Hydro respectfully submits that intervenors' target-setting proposals are, at a minimum, premature, and in at least some cases, unreasonable. This is particularly true for VECC's proposal to adjust the rate framework based on performance targets, such that there would be significant financial consequences for failing to meet the proposed measures.²³¹ Toronto Hydro submits that this approach is unworkable and overly complex. The proposal was not made until final argument and was not put to any witness to comment on.

217. The Filing Requirements require distributors to develop, implement and report annually on metrics that reflect customer-oriented performance, cost-efficiency, and asset/system performance. Targets, however, are not mandated by the Filing Requirements.²³² Indeed, the OEB has recognized in the context of the RRFE policy documents that it is not appropriate to set targets for new measures:

[w]here a new measure is being implemented and therefore no data has yet been collected, the Board will not establish a performance target at this time, preferring to monitor distributor performance and data, until sufficient experience has been gained.²³³

218. A number of the proposed measures, in particular the cost-efficiency metrics, are new – the utility has never tracked or reported its performance in this respect. The ones that currently exist, such as SAIDI and SAIFI, are certainly novel in the context a five-year plan. SIA “agrees with THESL that there is currently insufficient data to set meaningful targets over this period.”²³⁴

219. In short, Toronto Hydro has proposed a novel performance measurement framework in the context of a new five-year plan period. A number of the targets are new to both the industry and Toronto Hydro.²³⁵ There is an absence of relevant data and industry experience upon which

²³¹ VECC Argument, at pages 13-25.

²³² OEB, Filing Requirements for Electricity Distributors (July 17, 2013) at section 5.2.3.

²³³ EB-2010-0379, Report of the Board, Performance Measurement for Electricity Distributors: A Scorecard Approach (March 5, 2014), at page 10.

²³⁴ SIA Argument, at page 21.

²³⁵ Toronto Hydro notes that SEC misquotes Mr. Shlatz from Navigant as stating that many other utilities set targets for these metrics; see SEC Argument at page 49 para 2.10.8. To be clear, Mr. Shlatz said that he has seen target for some of these metrics, but not always; see OH Transcript Volume 5 (February 24, 2015) at page 20, lines 10-11.

to base targets. Toronto Hydro respectfully submits that the OEB should not accept parties' criticisms and alternative proposals regarding targets.

2.5.3 Multi-year reliability targets are not appropriate

220. BOMA acknowledges that multi-year reliability targets are uncharted territory, but challenges Toronto Hydro to "take an opportunity to lead in this area." While Toronto Hydro's application already demonstrates leadership in this area by being the first to propose a comprehensive suite of metrics, setting multi-year reliability targets would be inappropriate for a number of reasons.

221. One reason is that the Ontario sector has relatively limited experience with respect to reliability targets. This is evidenced by the fact that the sector does not even currently have a firm standard for single-year reliability performance. As PEG discusses in its 2013 Report *Service Reliability Standards in Ontario: Analysis of Options*:

distributors are expected to maintain a three-year moving average of their system reliability performance within historical levels, but reported performance is not compared against explicit SAIFI or SAIDI benchmarks.²³⁶

222. Another reason why committing to specific reliability targets at this time does not make sense, including a "soft target" approach proposed by SIA,²³⁷ is because reliability forecasting is inherently complex and highly sensitive to circumstances outside of the utility's control, which are extremely difficult to model. In addition to major weather events, a distributor's reliability performance can be affected a number of externally driven factor factors, such as:

- (a) warmer-than-average summer weather, where increased asset loading for prolonged periods of time raises the risk of outages and limits the distributor's capacity to undertake switching to prevent or resolve them; and
- (b) increased use of salt during icy winters causing debris built up on equipment.

²³⁶ EB-2010-0249, PEG Report, *Service Reliability Standards in Ontario: Analysis of Options* (September 2013), at page 1.

²³⁷ SIA Argument, at page 21.

2.5.4 Reliability is an outcome of the DSP, not a planning target

223. The investments in the DSP are a function of multiple factors, including asset age, condition and asset performance. While improved reliability, as forecasted by the utility, is certainly an expected outcome of the proposed plan, it is not the key driver. In other words, Toronto Hydro did not develop the DSP to meet a specific reliability target. As stated by Mr. Walker:

Reliability is, absolutely, you know, probably the biggest driver of our requirements.

What I was trying to suggest is that we didn't start with a number of SAIDI of 1.53 and then try to build a program that achieved that. That wasn't the way we, you know, constructed our program.

We started with the assets and we looked at what the needs are, given the condition of those assets and the performance of those assets, and then we build a program that best addresses those issues. And then the resulting SAIFI and SAIDI levels are the outcome of that.²³⁸

224. This is not a deficiency of the plan – it reflects the fact that the plan is integrated and driven by numerous important considerations, as detailed at length in Toronto Hydro's evidence. Mr. Walker summarizes these in his response to BOMA's question as to why the utility hesitates to guarantee reliability improvements:

Well, I think we've already talked fairly extensively on that. The reliability numbers that we're forecasting are really the outcomes of the program we want to achieve. They're not the goal in and of themselves. The goal that we're trying to achieve, or the goals, I guess, that we're trying to achieve are established in the four DSP categories of work.²³⁹

225. VECC and the Society argue that ratepayers should be able to expect reliability improvements given the magnitude of investment,²⁴⁰ while OEB Staff notes that the absence of specific reliability targets justifies a reduction to the capital ask.²⁴¹ Toronto Hydro submits that

²³⁸ OH Transcript Volume 6 (February 25, 2015), at page 56, lines 17-24.

²³⁹ OH Transcript Volume 5 (February 24, 2015), at page 141.

²⁴⁰ Society Argument, at page 6; VECC Argument, at page 4.

²⁴¹ OEB Staff Argument, at page 46.

customers can, and should, expect reliability improvements from the proposed plan. Mr. Paradis made this point:

we have a high degree of confidence that that outcome -- in terms of reliability -- is likely, and that's precisely why we have it documented in this context, to demonstrate the value that falls out in terms of reliability from our proposed investments in the different categories that Mr. Walker mentioned.²⁴²

226. However, it would not be appropriate for the OEB to set reliability targets for the proposed plan, or the cut the capital plan in lieu of setting targets. As discussed by Mr. Walker, and detailed throughout the evidence, the need that underlies the DSP is complex and multi-faceted. Reliability is an important outcome, but it is not only outcome that Toronto Hydro seeks to achieve in this plan.²⁴³

227. Some of the investments within the DSP, particularly in the System Renewal, System Access and General Plant categories, do not have a one to one relationship to reliability. The forecasted reliability improvements that Toronto Hydro seeks to achieve through this plan are tied to specific investments, most of which reside in the System Service category.²⁴⁴

228. Finally, reliability is a lagging indicator that is influenced by many factors that are unrelated to utility investments.

2.5.5 Toronto Hydro's reliability projections are based on sound methodology

229. AMPCO, Energy Probe and SEC urge the OEB to disregard Toronto Hydro's reliability forecasts.²⁴⁵ The parties rely on PEG's unsubstantiated conclusion that "it does not believe" that the Toronto Hydro's approach is sufficient to generate objective reliability projections.²⁴⁶ The intervenors' positions and PEG's commentary are not based on any analysis of Toronto Hydro's forecasting approach, or other evidence about reliability forecasting practices.

²⁴² OH Transcript Volume 5 (February 24, 2015), at page 143, lines 4-9.

²⁴³ OH Transcript Volume 5 (February 24, 2015), at pages 141-142, lines 21-9.

²⁴⁴ OH Transcript Volume 4 (February 23, 2015), at pages 138.

²⁴⁵ AMPCO Argument, at page 25; EP Argument, at page 25; SEC Argument, at page 48, paragraphs 2.9.4-2.9.5.

²⁴⁶ IR Response 1-THESL-4 (b), at page 4.

230. PEG did not ask Toronto Hydro to provide the information underlying its forecasting method. PEG's conclusion simply relies on a statement made by the utility in an undertaking response that it does not use a specific mathematical model for the reliability projects, and misleadingly ignores the remainder of the response:

As referenced in the Exhibit 2B, Section D3, pages 19-20, the Reliability Projection does not rely on a specific mathematical model. Rather, the projections constitute the results of an in-depth analysis of:

- a) The existing state of Toronto Hydro assets (asset demographics)
- b) The reliability performance of the system (historical reliability); and
- c) The expected effects of the planned programs on the future state of the system.

The actual reliability analysis is performed at the outage cause code level (e.g., defective equipment, vegetation contact etc.) using various trending and regression techniques to establish a long term trend of each cause code. The trending and reliability impacts of each program are established through an in-depth analysis of the actual work performed and the potential impacts from further work. Interdependencies between programs and benefits are combined to form an overall system-wide look at the benefit of the overall capital program.²⁴⁷

231. In the absence of any supporting evidence or analysis, Toronto Hydro submits that the OEB should give no weight to PEG's comments regarding the validity of the utility's projections, or parties' arguments in this respect.

232. Toronto Hydro's reliability projections are based on sound methodology; that does not mean that there is no room for improvement. Toronto Hydro is committed to improving its reliability forecasting capabilities, and as part of demonstrating that commitment, it proposes to commission a third-party benchmarking study to compare its SAIDI and SAIFI forecasting methods to industry best practices. Should the OEB find such an exercise useful and prudent, Toronto Hydro would aim to complete the study for 2018, and in time for presentation and discussion at the above-noted stakeholdering session. This timing would also ensure that its next rebasing application is informed by the study's findings.

²⁴⁷ TC Undertaking J2.11, at page 1, line 10.

2.5.6 The parties' suggestions to modify the proposed reliability reporting and add new measures are without merit

233. A number of parties, including SIA, AMPCO and the Society propose certain modifications to Toronto Hydro's reliability measures, or suggest that the utility report on new measures. The majority of proposals were presented for the first time in final argument. They are not supported by evidence and were never put to Toronto Hydro's witnesses. For these reasons alone, Toronto Hydro submits that the proposals are not appropriate and should be rejected. Nevertheless, in the paragraphs that follow, Toronto Hydro makes an effort to respond to the specific proposals made by the parties.

234. AMPCO suggests that Toronto Hydro should report SAIDI, SAIFI and CAIDI on the basis of excluding Major Event Days, Loss of Supply and Scheduled Outages.²⁴⁸ The utility notes that the current measure is aligned with the OEB's Filing Requirements.²⁴⁹ However, if the OEB prefers to modify the reporting requirements for Toronto Hydro in accordance with AMPCO's proposal, the utility would not have any specific concerns.

235. One proposed modification that was discussed in evidence is the proposal that Toronto Hydro should separately report the contributions from the defective equipment cause code to SAIDI and SAIFI in addition to reporting the total outages due to defective equipment as Toronto Hydro proposed.²⁵⁰ Toronto Hydro commented on the deficiencies of the proposal in two interrogatory responses and again during cross examination. The short answer is that the proposal is duplicative and masks the true impact of the utility's efforts to address defective equipment because SAIDI and SAIFI represent system averages rather than direct measures of the number of outages experienced by customers.²⁵¹

236. SIA proposes a new metric that measures the Percentage of Assets past Useful Life as a gauge of the utility's progress with respect to System Renewal investment.²⁵² While intuitively

²⁴⁸ AMPCO Argument, at page 24.

²⁴⁹ OEB Electricity Reporting & Record Keeping Requirements, section 2.1.4.2.

²⁵⁰ SIA argument, at page 23; VECC Argument, at page 21.

²⁵¹ IR Responses 2A-EP-9 and 2B-SIA-23; OH Transcript Volume 4 (February 24, 2015) at pages 144-145, lines; *compare with* Exhibit 2B, Section C4.1.1 at page 28.

²⁵² SIA Argument, at page 23.

appealing, this measure is unhelpful because it does not account for the differences between Toronto Hydro's short-term and long-term planning processes described above in section 2.2.1. While long-term planning is predicated on the age of the assets, short-term planning involves taking the identified needs and program architecture from the long-term planning process and selecting and prioritizing particular assets for replacement or reconfiguration using a broad array of sophisticated decision-support tools, including age, condition information, the FIM outputs, historical reliability, loading, configuration, and site visits by professionals. In other words, age in and of itself is not the sole driver of the short-term planning process that identifies the discrete asset investments that the utility will make in a particular year; in some circumstances, the decision-support tools mentioned above – in particular the risk-based FIM – may very well result in running an asset beyond its Useful Life or even to failure rather than proactive replacement. Therefore, Toronto Hydro submits that the proposed measure is overly simplistic and would be inconsistent the utility's risk-based, customer-value driven approach to short-term planning.

237. SIA also suggests that Toronto Hydro be required to file its annual measures updates by April 30 of every year to coincide with the RRR filing deadline, instead of June 30 as the application proposes.²⁵³ Toronto Hydro submits that SIA's suggestion is not feasible in light of the analytical work that must be completed prior to the numbers being published. This is particularly true with respect to the Construction Efficiency metric, where the analysis cannot commence until the full closeout of the previous year's capital program, and requires inputs and verification by various subject matter experts in the company.

238. The Society suggested that Toronto Hydro should be required to report its capital spending along with the units of work completed and unit costs, separating them into the work done by internal vs. external resources. For the reasons discussed above in section 2.3.7, Toronto Hydro does not track or use unit costs, and therefore strongly opposes this suggestion.

2.5.7 The proposed cost efficiency measures will drive continuous improvement over the plan

239. In developing the proposed cost-efficiency measures, the utility challenged itself to create innovative measures that enable a meaningful assessment of the implementation of its plan, and

²⁵³ SIA Argument, at page 21.

that drive continuous improvement with respect to capital costs. The result of this work are four unique capital efficiency measures that go far beyond the activity-based cost-efficiency metrics proposed by other utilities. For more information refer to section 2.4.3.254

240. With the exception of SEC, none of the parties challenged the appropriateness of the proposed cost efficiency metrics. The parties' complaints regarding these measures centered on the lack of proposed targets. As discussed, Toronto Hydro's cost efficiency measures are in a nascent stage. While the utility is prepared to develop and monitor its performance in these areas, it is certainly not in a position to set targets for these measures, for the reasons outlined above in sections 2.5.2 and 2.5.3.

241. SEC points out that the forecast for the Engineering, Design and Support Costs measure does not show improvement over the plan.²⁵⁵ Toronto Hydro notes that this forecast is based on historical experience. As discussed, over the course of the plan, Toronto Hydro intends to use this measure to drive efficiencies in its capital planning and support processes so as to improve on past performance. The productivity outcomes achieved through the proposed cost-efficiency initiatives will be shared with customers in the form of more cost-effective assets being placed into service, and re-investment into the system. Toronto Hydro's response to SEC's complaints about this approach are provided above at the end of section 2.4.3.²⁵⁶

2.5.8 The DSP Implementation Progress measure is appropriate and should be approved as proposed

242. The proposed measure reports on the utility's capital expenditures – annually as the percentage complete of the five year plan total. Toronto Hydro submits that this is consistent with the OEB's Scorecard, and ensures accountability for the execution of the DSP within the timelines set out by the OEB. In light of the execution constraints and complexities that Toronto Hydro must manage in delivering its plans, as discussed above in section 2.5.3, the proposed DSP Implementation Progress measure is a meaningful indicator of the utility's ability to execute work as planned.

²⁵⁴ See for example, EB-2013-0416, Decision and Order (March 12, 2015), at page 19.

²⁵⁵ SEC Argument, at page 50, para 2.10.10.

²⁵⁶ SEC Argument, at page 43, para. 2.5.16.

243. SEC argues that a measure based on in-service additions (ISA) would be more meaningful to the ratepayers than the capital expenditures-based measure proposed by the utility.²⁵⁷ A metric based on capital expenditures has a greater operational value to the utility, is more straightforward, and provides the OEB and stakeholders a transparent view of the total amount of work Toronto Hydro undertakes in a given year, and not merely what portion of that work is added to ratebase. It enables the utility to assess of all the work undertaken up to the reporting date, irrespective of whether that work has come into service or not, which can be a function of circumstances beyond the utility's control. In addition, the financial validation and close-out process involved in bringing assets into service introduces a timing lag between actual project completion and it being put in-service from the financial perspective.²⁵⁸

244. Finally, Toronto Hydro notes that this measure is part of the utility's regulatory Scorecard and in its report on the Scorecard, the OEB explicitly provided distributors the discretion as to how the implement the measure.²⁵⁹ For the purposes of the regulatory Scorecard, Toronto Hydro has selected a rolling capital expenditures basis, which was already submitted as part of its 2014 Scorecard. In light of these facts, Toronto Hydro submits that its proposal to track DSP progress on a rolling capital expenditures basis is appropriate and should be approved as proposed. In Toronto Hydro's respectful submission, SEC proposal would create asymmetry between OEB Scorecard reporting and reporting for this Custom IR application, and have the potential to be cause unnecessary complexity and confusion. Toronto Hydro also notes that its proposed capital-related revenue requirement variance account described in section 5.5.1 will ensure that ratepayers are kept whole and the utility remains accountable for the timing of actual assets puts in service.

245. In the context of its discussion regarding the DSP Implementation Progress measure, CCC suggests that Toronto Hydro's current Key Performance Indicators (KPI), which measure actual spending against the capital and OM&A forecasts approved by the OEB, do not incent or drive continuous improvement. CCC's assertions are incorrect, and these measures are

²⁵⁷ SEC Argument, at page 49, para 2.10.5

²⁵⁸ OH Transcript Volume 4 (February 23, 2015) at page 19, lines 6-9.

²⁵⁹ EB-2010-0379, Report of the Board, Performance Measurement for Electricity Distributors: A Scorecard Approach (March 5, 2014) at page 23.

appropriate because they discipline spending and drive internal accountability. In any event, they are only two corporate measures in the context of a much larger performance management system which incents continuous improvement. For example, in recent years, Toronto Hydro has implemented corporate KPIs intended to reduce the utility's fleet and maximize efficient use of corporate vehicles, as well as reduce the utility's footprint and square footage per employee.²⁶⁰ Toronto Hydro has also demonstrated its historical success and corporate commitment to driving continuous improvement – details of this are discussed above in section 2.4.3 and below in section 4.6.1. Finally, Toronto Hydro also notes this Application includes a suite of efficiency and performance metrics, which, if approved, will be considered during the utility's KPI review process. For more information about the proposed metrics refer to section 2.5.1 above and the Argument-in-Chief at Tab 2, pages 26-28.

2.5.9 Granular reporting and annual variance reviews is not appropriate or necessary

246. Three parties propose that the DSP Progress measure should be accompanied by an annual variance review if spending exceeds certain pre-determined thresholds.²⁶¹ CCC goes further and proposes that Toronto Hydro be ordered to report annually on forecast and actual capital spending in the same format as Exhibit 2A, Tab 6, Schedule 2.²⁶² In other words, these parties would have the utility conduct an annual ICM-like true-up process to reconcile and report the thousands of discrete projects that make up the utility's capital plan. In Toronto Hydro's submission, these proposals should be rejected. They are contradictory with the RRFE framework, go far beyond appropriate oversight under incentive regulation, are counterproductive and unnecessary, and are at odds with regulatory efficiency.

247. **These proposals are contradictory with the RRFE and go far beyond appropriate oversight for a Custom IR application.** Through the RRFE and the Chapter 5 Filing Requirements, the OEB has made it clear that it intends to manage utilities through a combination of longer plan terms, robust evidentiary requirements, detailed up-front examinations of funding proposals, and tracking of outcomes through the OEB's Scorecard and

²⁶⁰ IR Response 1B-SIA-2.

²⁶¹ AMPCO Argument, at page 26; SIA Argument, at page 22; Society Argument, at page 7.

²⁶² CCC Argument at page 16.

measures proposed by the utility.²⁶³ Toronto Hydro submits its Application satisfies these requirements. To the contrary, the proposed annual regulatory proceedings/reviews and levels of oversight suggested by the parties are at odds with the RRFE and inconsistent with the OEB's practice of not micromanaging the utility's operations.

248. Further, the proposals noted above contemplate a level of oversight that not only replicates the ICM paradigm, but that goes a step further by proposing an annual review and reporting process. The OEB has already concluded that ICM is not appropriate for utilities with multi-year capital needs, and specifically rejected ICM as an appropriate mechanism for Toronto Hydro's current capital plan going forward.²⁶⁴ More recently, the OEB stated that the ICM is intended for discrete capital projects that are by their nature, very different than what Toronto Hydro has proposed in this Application.²⁶⁵

The Board is of the view that projects proposed for incremental capital funding during the IR term must be discrete projects, and not part of typical annual capital programs. This would apply to both ACMs and ICMs going forward.

... there must be a clear distinction between a cost of service application under the Price Cap IR option (with ACM proposals beyond the test year), and the Custom IR method.

The use of an ACM is most appropriate for a distributor that:

- does not have multiple discrete projects for each of the four IR years for which it requires incremental capital funding;
- is not seeking funding for a series of projects that are more related to recurring capital programs for replacements or refurbishments (i.e. "business as usual" type projects); or
- is not proposing to use the entire eligible incremental capital envelope available for a particular year.

249. In Toronto Hydro's respectful submission, it would be inappropriate to apply the type of reporting and reconciliation applicable to an ICM to its capital plan, let alone to take that one step further as the parties suggest.

²⁶³ Report of the Board, Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach (October 18, 2012) at pages 3, 31-32 and 57-58.

²⁶⁴ EB-2012-0064, Partial Decision and Order (April 2, 2013) at pages 8 and 67;

²⁶⁵ EB-2014-0219, Report of the Board New Policy Options for the Funding of Capital Investments: The Advanced Capital Module (September 18, 2014) at pages 13-14.

250. **These proposals are unnecessary and counterproductive.** The utility has filed detailed evidence supporting its capital planning processes, investment proposals, and execution abilities. It has also proposed to track its performance and progress over the plan through a comprehensive suite of outcome-based metrics, and has offered a number of ratepayer protection mechanism, notably including the capital-related revenue requirement variance account described in section 5.5.1. This detailed application has been tested and examined since it was filed nearly eight months ago, and in Toronto Hydro's respectful submission, it has justified its funding requests and demonstrated its ability to prudently execute its capital plans. Toronto Hydro submits that the granular reporting an annual reviews proposed by the parties is unnecessary, and would ultimately be counterproductive. It would complicate utility's ability to prudently manage execution challenges and complexities as they arise, and require the utility to divert important resources away from necessary planning and execution work to perform detailed reporting and reconciliation tasks that, in the context of this plan and other reporting and ratepayer protections, offer no benefit to ratepayers.

251. **These proposals are at odds with regulatory efficiency.** For the reasons articulated in the preceding paragraphs, that it would not be an efficient use of the OEB or parties' time to implement a regulatory oversight process of the nature proposed by the parties and engage in a detailed annual review and reconciliation of the utility's five year capital program. The inevitable costs to ratepayers of additional reporting and regulatory proceedings outweigh the benefits, if any, of these proposals.

252. Finally, Toronto Hydro submits that this proposal is, in any event, unnecessary in light of the utility's proposal for a capital-related revenue requirement variance account to ensure that ratepayers do not fund capital investment that does not, in fact, materialize during the CIR Term, as well as to account for the possible shifting of in-service amounts from earlier to later years. For more information about this account, see section 5.5.1.

253. SIA and the Society argue that the utility should report its annual expenditures at the DSP category level, namely System Renewal, System Access, System Service and General Plant.²⁶⁶

²⁶⁶ SIA Argument, at page 22; Society Argument, at page 7.

While Toronto Hydro believes that a plan-wide reporting measure is consistent with the OEB's Filing Requirements and is a meaningful indicator of the utility execution performance, should the OEB feel that more granular reporting is required, Toronto Hydro proposes that this reporting be limited to expanding the DSP Implementation Progress measure to the four OEB DSP investment category levels: System Renewal, System Service, System Access and General Plant categories.

2.6 The few challenges to specific programs are based on mischaracterization and misunderstanding of the evidence and should be rejected

2.6.1 E6.1 Underground Circuit Renewal

254. Both AMPCO and SEC seek to disallow funding for Toronto Hydro's Underground Circuit Renewal (UCR) program based on the claim that assets are not in poor working condition as per the Kinectrics 2014 ACA study.²⁶⁷

255. As discussed above section 2.2, the Kinectrics' 2014 ACA study is not a comprehensive approach to assessing asset condition as it looks only at specific degradation factors and fails to take into account other factors that contribute to asset condition. The ACA study uses one input, the health index, to determine condition. In the case of underground cables, one of the most critical asset classes within the UCR program, no health index is available.

256. Toronto Hydro's comprehensive approach of determining whether an asset should be replaced uses a number of inputs such as age, condition, economic end-of-life criteria and historical data.²⁶⁸ The UCR program targets specific asset classes for replacement, including direct buried XLPE which contains a defect that makes it susceptible to failure due to "water treeing."²⁶⁹ Since the UCR program is necessary to replace end-of-life and obsolete assets that contribute to the deterioration of system reliability, it should be approved.

257. The table below shows that for most of the assets addressed by this program, the proposed replacements constitute a relatively small percentage of assets currently operating

²⁶⁷ AMPCO Argument at page 11; SEC Argument at pages 34-35.

²⁶⁸ See Exhibit D3, Section D3.1.1.3 at page 11 for a discussion on factors driving a capital investment program.

²⁶⁹ Exhibit E6, Section E6.1 at pages 25-28.

beyond useful life. The exception is XLPE cable, which, as noted above, is functionally obsolete. The significant reliability impacts from XLPE cable have necessitated an ongoing program to replace it.²⁷⁰

258. *Underground Circuit Renewal: Summary of Proposed Spending by Asset Population*²⁷¹

Assets (Units)	2015	2016	2017	2018	2019	Total Forecast Replace ments 2015- 2019	Total Assets Currently Operating Beyond Useful Service Lives	% Assets Beyond Useful Life Replaced 2015-2019
Underground Switches	84	71	74	88	88	405	1349	30%
Underground Transformer	348	291	305	362	361	1,667	7504	22%
Underground Cable (circuit km)	149	125	131	155	155	715	692	103%

259. **E6.3 UG Legacy Infrastructure – Cable Chamber Component.** SIA is generally supportive of Toronto Hydro's Underground Legacy Infrastructure program, but seeks to disallow funding for the Cable Chamber Cover component based on the claim that it is unnecessary and that any risks have been mitigated to date.²⁷² Toronto Hydro disagrees that the risk resulting from ejected cable chamber covers has been eliminated. Toronto Hydro has

²⁷⁰ Exhibit E6, Section E6.1 at page 26.

²⁷¹ Total Forecast Replacements 2015-2019: Exhibit 2B Section 6.1 page 13; Total Assets Currently Operating Beyond Useful Lives: Exhibit 2B Section 6.1 page 30. Percent Assets Replaced as a percentage of Total Assets Beyond Useful Life is calculated as Total Forecast Replacements divided by Total Assets Currently Operating Beyond Useful Lives, expressed as percentages.

²⁷² SIA Argument at page 9.

recorded twenty-four incidents involving ejected covers in the past seven years.²⁷³ The fact that the utility has been fortunate and no injuries have occurred to date, does not mean that the hazard has been eliminated. Other jurisdictions have not been as fortunate and injuries and deaths from ejected cable chamber covers have occurred.²⁷⁴ This program should be approved to ensure that cast iron covers that have a minimum mass of 150kg are not ejected creating the potential to cause injury or death.²⁷⁵

2.6.2 E6.4 Overhead Circuit Renewal

260. AMPCO suggests that a large portion of assets Toronto Hydro plans to replace should not be replaced because their condition has not been assessed as “poor” or “very poor.”²⁷⁶ This argument is also flawed, in that it focusses entirely on asset condition and ignores all other program drivers (as discussed in section 2.2.2), and in some cases, misinterprets the very asset condition data relied on to support the argument.

261. AMPCO questions the need to replace overhead switches based on their condition. However, a large portion of these overhead switches are of obsolete designs, and need to be replaced regardless of their current condition.²⁷⁷ Additionally, and in accordance with the OEB’s prior observation about operational efficiencies,²⁷⁸ Toronto Hydro will replace all associated assets when undertaking a replacement in a given area (e.g. if a number of poles are in poor condition and require replacement, Toronto Hydro may replace near end-of-life switches in the process, regardless of their current condition). Assessing asset replacement strictly on one single data parameter as proposed by AMPCO would undermine Toronto Hydro’s prudent utility practice of replacing assets on the basis of lowest lifecycle costs.

262. AMPCO makes a similar suggestion about overhead transformers, claiming that only 33 are in poor condition. In this case, however, AMPCO has entirely misstated the condition data,

²⁷³ Exhibit 2B, Section E6.3 at page 2.

²⁷⁴ Please see Exhibit 2B, Section E6.3 at page 26, footnote 2 for incidents that have occurred in other jurisdictions.

²⁷⁵ Exhibit 2B, Section E6.3 at page 27.

²⁷⁶ AMPCO Argument, at page 12

²⁷⁷ Exhibit 2B, Section E6.4, at page 1, lines 13-16.

²⁷⁸ EB-2012-0064, Partial Decision and Order (April 2, 2013), at page 17.

as the 33 referenced transformers only refer to Submersible, Vault, and Padmount transformers, not the overhead transformers that are part of this program.²⁷⁹

263. AMPCO makes a number of submissions about Toronto Hydro's use of Western Cedar wood poles. Specifically, AMPCO asserts, without any supporting evidence, that because Western Cedar is generally considered superior to other wood pole species, its useful life should be longer than the 45 years Toronto Hydro currently uses in its end-of-life projections.²⁸⁰ By extension, AMPCO suggests that assuming a longer useful life would require fewer poles to be replaced over the term of the plan.

264. AMPCO's submissions are erroneous. It is the very fact that Toronto Hydro uses Western Cedar that allows it to assume a 45 year useful life over its population of wooden poles. In Toronto Hydro's view, the use of other wood pole species would likely result in a shorter useful life for wood poles. Thus, a useful life for wood poles based on Western Cedar poles already underpins replacement projections.

265. AMPCO also notes a statement made by Toronto Hydro in discussions with PSE, in which Toronto Hydro indicated it would be willing to undertake a study "to determine if Western Cedar continues to be the best option in terms of cost, safety, and reliability."²⁸¹ Toronto Hydro intends to undertake this study.

266. In its submissions, the SIA notes its support for this program, but requests that Toronto Hydro undertake a study to examine the cost efficiency of using concrete vs. wooden poles.²⁸² Toronto Hydro does not object to including concrete poles in the study mentioned in the preceding paragraph, which should conform to the scope requested by SIA.

²⁷⁹ AMPCO Argument, at page 10.

²⁸⁰ AMPCO Argument, at page 30.

²⁸¹ Exhibit 2B, Section D, Appendix B, at page 9.

²⁸² SIA Argument, at page 10.

2.6.3 E6.10 Network Unit Renewal

267. SEC notes that Toronto Hydro's network transformers and protections category of assets currently does not have any identified assets in poor or very poor condition.²⁸³ SEC's argument discounts the importance of the negative trend in the condition of these assets deteriorating over a short period of time.²⁸⁴ Toronto Hydro submits that it is not a prudent practice to wait until an asset is in very poor condition before planning a replacement; given the substantial consequences of a network unit failure, these assets should be replaced before, not after, they actually fail.

268. SEC's observations also overlook the underlying drivers for the replacement of these assets. The Network Unit Renewal program is intended to replace obsolete and aging network units, primarily Fibertop units, and is a direct continuation of the replacement program for these units that was first undertaken by Toronto Hydro as part of its ICM application. As noted in Toronto Hydro's evidence, the Fibertop units are a reliability and safety risk due to certain inherent design flaws rather than just the actual underlying condition of these assets.²⁸⁵ These design flaws combined with the fact that these units are typically located in heavily trafficked downtown areas, significantly increase the risk of a catastrophic failure,²⁸⁶ can result in vault fires and explosions causing significant property damage,²⁸⁷ and pose a safety risk to Toronto Hydro crews and pedestrians.

269. A failure of any one of these units has a large impact on customer reliability. Outages can impact an area as large as several city blocks. Customers in the affected area can be without power for up to four hours during restoration efforts. Customers who are directly connected to the affected asset can be without power for even longer periods.²⁸⁸ Fundamentally, SEC's completely ignores the other business case drivers and risk considerations for the replacement of these assets, which go far beyond simply relying on the condition assessment data.

²⁸³ SEC Argument, page 38, section 2.3.17

²⁸⁴ Exhibit 2B, Section D, Appendix A, at page 17.

²⁸⁵ Exhibit 2B, Section 6.10, at pages 9-10.

²⁸⁶ Exhibit 2B, Section 6.10, at page 10, lines 1-17.

²⁸⁷ Exhibit 2B, Section 6.10, at page 13, Figures 6 and 7.

²⁸⁸ Exhibit 2B, Section 6.10, at page 12, lines 8-12.

2.6.4 E6.14 Power Transformers

270. OEB Staff claim that there are various tests available to further assess the state of Toronto Hydro's power transformers, specifically noting dissolved gas in oil testing, insulation system testing, and auxiliary system testing, and suggests that such tests would provide a more accurate representation of these asset's condition.²⁸⁹ However, in assessing the health of its power transformers, Toronto Hydro already undertakes the tests cited by OEB Staff, along with many other condition parameter tests (e.g. bushing condition, tank corrosion, etc.).²⁹⁰ The results of these tests are all used as inputs in determining the overall Health Index score for power transformers, which Toronto Hydro uses to prioritize replacement.

271. The argument put forward by OEB Staff is flawed because the proposed recommendations have already been incorporated by Toronto Hydro into its power transformer asset condition assessment. The results of this assessment, which shows a very negative trend in asset condition for power transformers,²⁹¹ in combination with the underlying age of the assets²⁹² and the potential impact of failure support Toronto Hydro's plan to address these assets over the CIR period.²⁹³

2.6.5 E6.15 Circuit Breaker Renewal

272. OEB Staff suggest a number of additional tests to determine the condition of circuit breakers. As with Power Transformers, Toronto Hydro already undertakes a number of these types of tests, such as evaluating the insulation integrity of the circuit breaker parts, contact resistance, and minimum trip voltage in order to determine an overall Health Index. The circuit breaker assets are then prioritized based on their Health Index score, age, and number of affected customers, in that order of importance.²⁹⁴

²⁸⁹ OEB Staff Argument, at pages 44 and 45.

²⁹⁰ Exhibit 2B, Section E6.14, at page 34, lines 18-20 and 37, lines 19-21.

²⁹¹ Exhibit 2B, Section D, Appendix A, at page 13.

²⁹² Exhibit 2B, Section E6.14, at page 1, lines 10-11.

²⁹³ Exhibit 2B, Section E6.14, at page 3, lines 1-6.

²⁹⁴ Exhibit 2B, Section E6.15, at page 19, lines 2-8.

2.6.6 E7.8 Customer-Owned Substation

273. SIA seeks to disallow funding for Toronto Hydro's Customer-Owned Substation Protection (COSP) program based on its claims that: 1) this program duplicates Toronto Hydro's Customer Advice Form, and 2) Toronto Hydro can use its disconnection powers under the Distribution System Code to disconnect customers adversely impacting the system and who fail to follow directives to repair their equipment.²⁹⁵

274. SIA's argument misses the point of this program. It is not intended to give Toronto Hydro another enforcement tool, to be used on a reactive basis after the customer-owned equipment has caused an outage.²⁹⁶ Rather, it is intended to avoid outages impacting other customers and safety risks by proactively identifying and remedying situations where Toronto Hydro protection equipment upstream of the customer-owned equipment is missing or improperly installed.²⁹⁷ The evidence establishes that between 2009 and 2013 there were 83 interruptions from customer-owned equipment and 73 of these affected upstream customers.²⁹⁸ As this program is necessary to address the demonstrated risks posed by customer-owned equipment, it should be approved.

2.6.7 E7.10 Local Demand Response

275. SIA seeks to deny funding for Toronto Hydro's Local Demand Response (DR) program based on its claim that it is a short-term solution aimed at delaying a long-term problem.²⁹⁹ SIA's characterization of the program as "short term" ignores its real benefits. Toronto Hydro conducted a detailed financial analysis on the available options and determined that the Local DR program will produce positive benefits for affected stakeholders, when compared to an immediate capital investment in station expansion.³⁰⁰ Given that the evidence shows that deferral option is more prudent and cost-effective, it should be approved.³⁰¹ In addition, Toronto Hydro

²⁹⁵ SIA Argument at pages 10-11.

²⁹⁶ See for example, Exhibit 2B, Section E7.8 at page 6, lines 14-19.

²⁹⁷ Exhibit 2B, Section E7.8 at page 2.

²⁹⁸ Exhibit 2B, Section E7.8 at pages 12-13.

²⁹⁹ SIA Argument at page 11.

³⁰⁰ See table containing the net benefits of the deferral approach in Exhibit 2B, Section E7.10 at page 36.

³⁰¹ Exhibit 2B, Section E7.10 at pages 22 and 33.

submits that this program demonstrates public policy responsiveness as it is consistent with the government's "Conservation First" framework.

2.6.8 E7.11 Energy Storage

276. Energy Probe seeks to disallow funding for Toronto Hydro's Energy Storage System (ESS) program based on the following claims: (1) the ESS cannot store enough energy to operate critical infrastructure during an outage; (2) back-up power is not included in the mandate of a distributor; (3) were distributors to get into the business of supplying backup power, they would be competing with private sector businesses; (4) stations already have battery systems for critical station service function; (5) expected life estimates are not based on in service experience; and (6) charging batteries with off-peak electricity and injecting the electricity into the system at peak times would result in a profit for Toronto Hydro that is equal to the difference between peak and off-peak rates.³⁰²

277. Energy Probe concedes that the ESS might offer some benefits, but states that Toronto Hydro has not provided the proper evidence to support its implementation.³⁰³ The SIA echoes this statement and asserts that the benefits of the ESS articulated by Toronto Hydro are "loosely defined and potentially over stated."³⁰⁴ Each of each concerns will be dealt with below.

278. Toronto Hydro disagrees with the assertion of both Energy Probe and the SIA that it has failed to provide the requisite support for the ESS program. The evidence presents a comprehensive and detailed rationale for the ESS program and a solid basis for its anticipated benefits, which include additional capabilities to address system efficiency, reliability and power quality, and enable Distributed Generation and Electric Vehicles.³⁰⁵

279. Energy Probe's contention that the ESS does not generate sufficient energy to power critical infrastructure during an outage is not accurate. In its evidence, Toronto Hydro has shown that the ESS is able to provide temporary backup power to critical infrastructure, ensuring

³⁰² EP Argument at pages 38-39.

³⁰³ EP Argument at page 39.

³⁰⁴ SIA Argument at pages 11-12.

³⁰⁵ Exhibit 2B, Section E7.11 at page 10.

continual service for critical loads (i.e. emergency services, hospitals, government buildings and financial institutions), while necessary repairs take place.³⁰⁶

280. Toronto Hydro agrees with Energy Probe that providing back-up power is not in the mandate of a distributor, but the supply of backup power to individual customers is not the function of the ESS program. Thus, Energy Probe's concerns that the ESS will compete with private sector businesses who supply back-up power for individual customers are misplaced. The ESS provides backup power for multiple customers within a targeted area with the aim of improving the operating conditions while providing load relief for the distribution system.

281. The primary driver for the ESS program is system efficiency, as ESS would store electricity at off-peak times and release it into the distribution system during peak times.³⁰⁷ This is expected to assist Toronto Hydro in managing the increasing variability of distribution system load and increase the utilization and lifespan of existing distribution assets through peak load reduction.³⁰⁸

282. The sites chosen for ESS will not duplicate the work of battery systems at stations. The ESS program sites are separate and apart from those locations that already have battery systems for critical station service functions.³⁰⁹

283. Toronto Hydro has provided expected life estimates of 10-20 years for the assets that make up an entire ESS. This is a reasonable estimate as life cycle estimates vary depending on the number of discharge cycles, discharge profile and environmental conditions. These estimates will be refined through operating experience.

284. Lastly, Energy Probe's contention that the ESS program will allow Toronto Hydro to earn a profit equal to the difference between peak and off peak rates is inaccurate. Any revenue generated by the peak/off-peak commodity price differential will be largely offset by the energy lost in the ESS charge/discharge cycle, maintenance and operating costs. More generally, since

³⁰⁶ Exhibit 2B, Section E7.11 at page 12.

³⁰⁷ Exhibit 2B, Section E7.11 at page 2.

³⁰⁸ Exhibit 2B, Section E7.11 at page 2.

³⁰⁹ See Exhibit 2B, Section E6.19 at page 6 for a map containing the battery system replacement sites.

energy commodity costs are passed through to customers, this program will reduce the overall cost of power for customers, resulting in a direct benefit to ratepayers not the utility.

2.6.9 E8.7 Voice Radio System Upgrade

285. Toronto Hydro proposes to replace its Voice Radio System because it is a critical aspect of the utility's operational safety infrastructure that is becoming obsolete and difficult to maintain. SIA asserts that a full system replacement is not justified as the current system is working adequately and the low number of system failures does not indicate the need for a full replacement.

286. SIA misunderstands Toronto Hydro's reasons for replacing its voice radio system. Contrary to SIA's claim, Toronto Hydro's objective in replacing the existing voice radio system is not based on the adequacy of the current system or the number of current system failures. A full system replacement is warranted because the existing system will become substantially obsolete in 2016 as the key infrastructure components required to support and maintain it will not be available beyond this time.

287. The existing system was installed in 2001 and spare parts for it are no longer being manufactured. The inventory of available parts is rapidly depleting. The key components of the voice radio system cannot be maintained due to their age and the lack of vendor support. These factors significantly increase the risk of system failure. To address this risk, Toronto Hydro must replace the system.

288. SIA also points out that safety is the trigger driver for this upgrade and that Toronto Hydro's safety policy, which requires that all field operations be stopped during a communication system outage and resumed only after communications are fully restored, eliminates any safety concerns associated with a voice radio system failure.

289. Toronto Hydro does indeed state in its evidence that safety is the trigger driver, but as Mr. Paradis explained during cross-examination, the trigger driver may not be the primary reason for undertaking the work.³¹⁰ Therefore although Toronto Hydro regards safety as an important

³¹⁰ OH Transcript, Volume 4 (February 23, 2015) at page 140, line 15-18.

triggering factor, other considerations such as obsolescence of the aging system in 2016 also plays a large role in the decision to upgrade.

290. Toronto Hydro's prudent safety policy does address some safety-related concerns associated with not having a fully functioning communications system. What SIA's argument fails to recognize, however, is that communications can fail when personnel are already in the field. For example, SIA fails to account for instances where an incident has already taken place and emergency response crews need to be deployed to the site. A functioning voice radio system is required to be able to contact emergency response crews in the event of an incident. This contact could mean life or death for field workers in emergency situations (such as power outages, storms and floods) when cell phone service may not be available due to overloads on telecommunication networks.

SECTION 3 – OM&A

3.1 Overview of Reply Argument on OM&A

3.1.1 Toronto Hydro's OM&A forecast for 2015 is reasonable and justified

291. **Requested Increase.** Toronto Hydro requests an OM&A budget of \$269.5 million for 2015.³¹¹ This request is based on a detailed, program-by-program review of the test year spending necessary to provide customers with safe, reliable and responsive service and support the ongoing capital program.

292. Parties recommend cuts to the proposed 2015 OM&A budget of between \$10 and \$30 million (on a percentage basis cuts of 3.7% to 11.1%).³¹² None of the recommended cuts is supported by evidence with respect to the appropriate level of OM&A expenditures in 2015 and no party has undertaken a program-by-program analysis of Toronto Hydro's request. Instead, each party has arbitrarily determined the amount of OM&A spending that it deems appropriate in light of either escalation from 2014 spending, or the magnitude of cuts it would like to see in 2015. This approach espoused by the parties is inconsistent with the RRFE and has been previously rejected by the OEB.³¹³

293. **OM&A Planning.** Toronto Hydro has explained its top down/bottom up planning process for OM&A and how capital and maintenance planning are integrated.³¹⁴ Parties' criticisms focus mainly on a perceived lack of cost control, asserting that Toronto Hydro has placed too much emphasis on system need and too little emphasis on rate impacts. This is simply inaccurate.

294. In preparing this application, every program manager was aware of the need to limit requests to what is necessary to continue operating, maintaining and administering the Toronto Hydro System for the benefit of its customers. Toronto Hydro integrated the business planning activities and preparations for this application, ensuring that those involved in the business planning process were aware of the regulatory policy context, including in particular RRFE

³¹¹ Exhibit 4A, Tab 1, Schedule 1 at page 4.

³¹² For details see section 3.3 below.

³¹³ EB-2008-0272, discussed in more detail below.

³¹⁴ Exhibit 4A, Tab 1, Schedule 1 at pages 5-11; Exhibit 2B, Section D.1.2.3 at pages 13-15.

priorities³¹⁵ which include consideration of rate impacts. Further, all requests for new initiatives and material expansions of existing work that necessitated incremental funding were scrutinized and approved for inclusion in the budget only where those expenditures were necessary to meet functional needs.³¹⁶

295. **Relationship between Capital and OM&A.** The recommendations offered by the few parties that address select individual program expenditures are unpersuasive. The conclusions they reach are unsupported and often completely inconsistent with the facts on the record. These parties generally assert that maintenance spending should go down in light of recent capital investments, without recognizing that the growth in the capital plan has complex impacts on OM&A. Overall, increased capital spending tends to increase operations and administration costs. As explained below, the effect of increased capital spending on maintenance is multi-faceted and differs for the various types of maintenance (preventative and predictive, corrective, and emergency).

3.1.2 2016-19 OM&A mechanism

296. **Formula and 2016-19 Results.** The proposed CIR rate formula caps OM&A funding at precisely the same rate that ratepayers enjoy under 4GIRM by providing adjustments to OM&A funding over the CIR term below the applicable rate of inflation regardless of actual forecast cost pressures on Toronto Hydro's OM&A costs of 2-3% per year. Submissions that seek a separate accounting for potential savings related to certain projects such as the ERP Project constitute double-counting and undermine the purpose of incentive regulation, which by its nature incorporates future unrealized savings through the use of a stretch factor in lieu of the forecasting of specific savings related to specific projects. There is no need for Toronto Hydro to have specifically forecasted OM&A budgets for the term of the plan because OM&A budgets for those years will be determined by a formula.

297. Toronto Hydro submits that its CIR formula should be approved as filed.

³¹⁵ OH Transcript, Volume 7 (February 26, 2015), at pages 77-79.

³¹⁶ Exhibit 4A, Tab 1, Schedule 1 at page 8.

3.1.3 The challenges to specific OM&A expenses are without merit

298. **Compensation.** Toronto Hydro's compensation and staffing levels demonstrate superior cost control as highlighted by the overall decrease in Toronto Hydro's compensation since 2011 and the commitment to further cost control through the CIR period. Toronto Hydro respectfully submits that the OEB should accept Toronto Hydro's evidence with respect to its compensation levels as appropriate for the purpose of supporting its requested revenue requirement.

299. **OPEBs.** Toronto Hydro disagrees with submissions to the effect that it should be required to change its accounting of OPEB obligations from the applied for accrual methodology to a cash methodology. Toronto Hydro agrees with the OEB's conclusion in the recent HONI proceeding (EB-2013-0416) to the effect that, as an industry wide issue, proposed changes to the accounting policy with respect to OPEBs would be more appropriately dealt with on a generic basis.

300. **Preventative, Predictive and Corrective Maintenance.** The evidence explains the cost drivers for these programs. Parties' arbitrary proposals to cut these budgets should be rejected.

301. **Regulatory Affairs.** This CIR Application is both one of the first to be filed under the RRFE and one of the most comprehensive distribution rate applications to have been filed before the OEB. The application has sought in good faith to meet, in both form and substance, all of the various requirements in the RRFE. In that context, Toronto Hydro submits that its regulatory costs should be approved.

302. **Billing, Remittance and Meter Data Management.** Toronto Hydro submits that the OEB should give no weight to submissions proposed by certain intervenors to the effect that the 2015 Billing, Remittance and Meter Data Management OM&A budget should be summarily reduced or is capable of sustaining a material reduction without impacting customer service. There is no evidence for their positions. The evidence which is on the record confirms the reasonableness of the proposed budget. It should be approved.

303. **Disaster Preparedness.** Energy Probe relies on assertions of fact that were either put to Toronto Hydro and rebutted, or are simply not in evidence at all, to claim that the proposed Emergency Preparedness Budget should be materially reduced. Toronto Hydro has fully and

comprehensively detailed the rationale for and the proposed costs of the proposed Disaster Preparedness budget and asks that the proposed budget be approved without modification.

3.2 The OM&A forecast for 2015 is reasonable

3.2.1 Toronto Hydro's 2015 OM&A spending are justified, and represent the amounts necessary to ensure safe, reliable and responsive service to customers

304. Toronto Hydro's requested OM&A budget is justified based on a detailed, program-by-program review of the test year spending necessary to provide customers with safe, reliable and responsive service and support the ongoing capital program. Toronto Hydro filed 19 individual OM&A programs, each with detailed justifications explaining the need/rationale for the program, drivers of historical/bridge/test year variances, and examples of completed and/or ongoing operational improvements. The utility further justified these requests through the interrogatory, technical conference and oral hearing process.

305. The relationship between capital and OM&A is complex, and as discussed further in section 3.2.4 below, some of the OM&A increase that forms part of Toronto Hydro's 2015 forecast is driven by increased capital spending. However, other aspects of the OM&A increase are driven by factors unrelated to Toronto Hydro's capital assets.

306. Toronto Hydro submits that the appropriate inquiry in the context of the proceeding is whether the utility's OM&A request is reasonable and produces outcomes for customers in terms of safe, reliable and responsive distribution service and support for ongoing capital investment over the five-year CIR period.

307. The starting point for this inquiry should be the 2015 program forecasts and supporting evidence that Toronto Hydro has provided. The next question is whether Toronto Hydro has met its burden of proof based on a critical review of these programs and forecasts.

308. It is Toronto Hydro's respectful submission that the breadth and quality of the evidence that the utility has provided fully justifies the test year OM&A forecast, and that the cuts recommended by other parties lack any basis – evidentiary or otherwise – and should be rejected.

3.2.2 The parties' recommendations to reduce 2015 OM&A spending rely on arbitrary cuts that largely fail to address, let alone refute, Toronto Hydro's forecast of necessary spending

309. Toronto Hydro's 2015 OM&A forecast was developed based on a "top down and bottom up" budget process, as has been previously endorsed by the OEB.³¹⁷ The budget represents the amount necessary to meet Toronto Hydro's operating costs in 2015. With few exceptions, parties fail to address Toronto Hydro's specific programmatic request, which the utility prepared on the basis of OEB guidance and in an effort to transparently support its revenue requirement request.³¹⁸ Rather, parties largely ignore the evidence and instead recommend various "envelope" approaches derived from either 2014 actual expenditures or the proposed 2015 OM&A budget.

310. The approaches advocated by the parties are inconsistent with the RRFE, which clearly contemplates that custom IR applications, like 4th Generation IRM applications, would be based on an initial "rebasings" year with applicants providing the information required under the guidelines for "cost of service" applications.³¹⁹

311. In essence, parties argue that the OEB should set 2015 rates by looking solely at trends and not at Toronto Hydro's evidence or specific requests. For example, AMPCO states: "THESL's 2015 OM&A amount should be set at 2014 actuals adjusted for inflation."³²⁰

312. The OEB has considered and rejected proposals like this in the past and rejected them in favour of a more focused examination. In EB-2008-0272, the OEB considered Hydro One's request for a one-year OM&A increase of more than 16%.³²¹ The OEB held as follows:

5.2 Overall OM&A

AMPCO, CCC, BOMA/LPMA, CME, SEC and VECC each argued for overall spending reductions based on trend analysis of historic spending and the consumer price index.

³¹⁷ EB-2012-0033, Decision with Reasons (December 13, 2012) at page 34.

³¹⁸ Evidence Conference Transcript at page 23, lines 22-27; Evidence Conference Presentation at page 27.

³¹⁹ Report of the Board - Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach (October 18, 2012) at page 70.

³²⁰ AMPCO Argument, at page 34.

³²¹ EB-2008-0272, Decision with Reasons (May 28, 2009) at page 16.

Hydro One stated that the proposed increases are attributable to spending on specific programs as explained in the evidence, in particular power equipment and ancillary systems.

Board Findings

The Board does not believe that a disallowance based on trend projections is appropriate in this case. While trend projections are useful as a potential trigger for an examination of changing circumstances, they cannot be used alone to justify a particular level of spending. In this case there is sufficient evidence for the Board to assess matters on a more specific basis.³²²

313. After undertaking the analysis above, the OEB ultimately approved OM&A increase of \$41.2 million for 2009, which constituted a one-year increase of more than 11%.³²³

3.2.3 OM&A Planning Approach. The forecast for 2015 was established on a top down/bottom up basis, and with emphasis on consideration for rate impacts

314. Toronto Hydro's top-down OM&A budgeting objective was to synthesize system needs and functional requirements with customer impacts.³²⁴ Senior management directed the departmental subject matter experts to bring forward anticipated current and sustained needs, but also exercise restraint in bringing forward proposals.³²⁵ Where funding was requested for new initiatives or expanded activities, senior management expected the departments to justify those requests.³²⁶

315. In response to the request for bottom-up budgets, the business units prepared detailed operational assessments of the utility's service obligations and compliance requirements. This exercise entailed analyzing ongoing needs for 2015 and justifying new initiatives and materially expanded activities. A representative example is the proposed Disaster Preparedness Management program, which responds to the recommendations of Independent Review Panel that assessed Toronto Hydro's response to the 2013 ice storm.³²⁷

³²² EB-2008-0272, Decision with Reasons (May 28, 2009) at pages 17.

³²³ EB-2008-0272, Decision with Reasons (May 28, 2009) at page 16.

³²⁴ OH Transcript, Volume 9 (March 3, 2015) at page 21, lines 6-18

³²⁵ IR Response 4A-CCC-29

³²⁶ Exhibit 4A, Tab 1, Schedule 1, at pages 7-8.

³²⁷ Exhibit 4A, Tab 2, Schedule 4, at page 2, lines 19-22

316. These operational assessments were provided to the executive leadership who made the ultimate decisions concerning the utility's funding requests.³²⁸

317. As described above, management provided specific direction on how 2015 budgets were to be established, and that budgets from 2016-2019 would be based on inflation minus a stretch factor.

318. SEC argues that, "[t]he Applicant is proposing an increase in OM&A, from 2014 to 2015, of \$28.3 million, or 11.73%. This is despite the fact that the Chief Financial Officer told the financial planning group to try to keep the OM&A increases to inflation or less."³²⁹ Contrary to SEC's claim, that was not the instruction. As Ms. Klein explained to counsel:

MR. SHEPHERD: But at no time during your budget process did you communicate that only certain levels of increase would be acceptable or reasonable? That never happened at all, right?

The only thing we heard of was Mr. Couillard saying to Mr. Jamal: Well, if you could keep it at inflation, that would be good. Ad [*sic*] then nobody ever bothered to do that; isn't that right?

MS. KLEIN: No, that's not correct. The instructions were provided by the executive that the departments should come forward with their 2015 needs, as those needs would persist for five years, and exercise some constraint before requesting increases, but where increases were requested over current levels -- this is on OM&A -- be prepared to justify those increases.

And I understand and I have confirmed with Mr. Jamal that the instruction regarding inflation that I believe you're referring to was from 2015 onwards regarding the OM&A envelope.

So we're speaking about OM&A here. Capital, the engineers have spoken to about, and I believe you also had a discussion with Mr. Jamal about.

MR. SHEPHERD: So I am right, then, that at no time did Toronto Hydro ever impose any limit on spending proposal, top-down limit: This percentage is acceptable, this is not? Anything like that? At no time?

MS. KLEIN: There was not a specific target number given. There was not a particular percentage provided.

³²⁸ OH Transcript, Volume 7 (February 26, 2015) at page 84, lines 21-28

³²⁹ SEC Argument at page 55, paragraph 4.2.2.

Again, the top-down instruction was to put forward what the expert in those areas believe is required and to exercise some constraint in doing so, and there was that iterative exercise with those requests coming in and reviewing those requests as a whole, and considering factors such as functional requirements, customer service and rate impacts, and then synthesizing the data, the analysis, the information that was received, and balancing, again, those customer needs against things like customer impacts such as rate impacts and coming forward with a proposal.³³⁰

319. Leaders in each area developed budgets for the test year that represented sustained needs for that year and the following four years.

320. As described above, the “bottom up” exercise involved functional leaders across the company assessing their budget is light of customer needs in 2015 including the anticipated level of capital investment.³³¹ As Mr. Jamal testified, this was done initially in individual areas and then jointly as a team.³³² The purpose of this exercise was to examine the interactions between individual programs and assess the overall budget of the request.

321. In essence, the goal was to answer two questions:

- (a) Could the company deliver safe, reliable and responsive service over the next five years, including meeting its statutory and regulatory requirements, with the budgets proposed?
- (b) Were there additional opportunities to find efficiencies and productivity (including cost constraint) in the budgets so as to mitigate customer impacts?³³³

322. Further, and as highlighted in Ms. Klein’s testimony above, rate impacts and cost constraint were an important consideration throughout the planning process.

323. Toronto Hydro integrated the business planning activities and preparations for this application, ensuring that those involved in the business planning process were aware of the

³³⁰ OH Transcript, Volume 9 (March 3, 2015) at page 20, line 8 to page 21, line 18.

³³¹ OH Transcript, Volume 7 (February 26, 2015) at page 92, lines 4-12.

³³² OH Transcript, Volume 7 (February 26, 2015) at pages 83-84, lines 25-28

³³³ OH Transcript, Volume 7 (February 26, 2015) at page 83-84, lines 25-28 and pages 86-87, lines 25-19

regulatory policy context, and in particular in the RRFE priorities. As Mr. Jamal – who manages the Finance group that facilitates business planning at Toronto Hydro – explained:

The RRFE requirements, or the requirements resulting from the RRFE, were communicated to -- by the regulatory team to the rest of the organization through the planning process.³³⁴

and

...me and my team were working very closely with the regulatory team, where we had a better understanding through the process and appreciation for the RRFE.³³⁵

324. In addition to cost control being a general consideration in Toronto Hydro's approach to business planning and this application, it also operated as a specific factor in how the utility selected which requests "made the cut". The utility scrutinized all requests for new initiatives and material expansions of existing work, and only approved them for inclusion in the budget only where it assessed that those expenditures were necessary to meet functional needs.³³⁶ Toronto Hydro's approach resulted in its applying budgetary constraints to the proposed expenditures, an example of which being its "just in time" workforce hiring and retirement replacement strategy.³³⁷

3.2.4 Relationship between Capital and OM&A: capital increases generally drive OM&A increases

325. A number of parties assert, incorrectly, that there is a linear relationship between capital and OM&A and an increase in capital spending should mean a decrease in OM&A. To the contrary, the relationship between OM&A and capital spending is multi-dimensional and complex.³³⁸ Increased capital spending actually tends to increase administrative and operations requirements, which in turn drives increased OM&A spending. For maintenance activities, the effect of increased capital spending may be to increase, decrease or have no impact on OM&A levels.

³³⁴ OH Transcript, Volume 7 (February 26, 2015), at page 76.

³³⁵ OH Transcript, Volume 7 (February 26, 2015), at pages 78.

³³⁶ Exhibit 4A, Tab 1, Schedule 1 at page 8.

³³⁷ Exhibit 4A, Tab 1, Schedule 1 at page 4.

³³⁸ OH Transcript, Volume 4 (February 23, 2015) at pages 69-78.

326. The fact that OM&A spending has not increased as rapidly as the ramp-up in capital spending over the past few years is a testament to Toronto Hydro's productivity efforts. While Toronto Hydro has and will continue to manage these cost pressures efficiently, prudently carrying out the operational activities that support its capital program requires increased OM&A spending. Mr. Jamal provided a good example of this relationship:

...in the finance area, that overall we have seen a significant increase in transactions that needed to be processed. For example, on the capital side, the finance team works very closely with the engineers, and as capital projects get completed, we put them into -- effectively put them into the fixed asset ledger, into services that form rate base.

And the volume of transactions has increased upwards of 40 percent since 2011, since the last rebasing year, and we as an organization, as a finance organization, have to find a way to manage that and become -- and not have the cost increase -- our costs increase at 40 percent.³³⁹

327. In other areas, such as Supply Chain, where the growing capital plan has increased the need to acquire, store and deliver materials, Toronto Hydro has faced similar cost pressures, but has been able to keep costs relatively stable despite a significant jump in the volume of work in recent years through productivity initiatives.³⁴⁰

328. The relationship between capital and OM&A spending is similar elsewhere in the utility. For example, in the Operations Support Area, which is responsible for system and reliability planning, the evidence explains: "With the intensification of Toronto Hydro's capital program in the last several years, the Planning program has been relied on heavily to investigate, analyze and produce an increasingly complex and comprehensive capital and maintenance plans."³⁴¹ While the portion of the planning effort that is directly related to specific projects can be capitalized, more general system and reliability planning are OM&A expenses.³⁴²

329. Increased capital spending can also lead to increased OM&A spending for Predictive and Preventative Maintenance when the capital investment results in an increased number of assets to be tested and maintained. For example, new developments can lead to a requirement for

³³⁹ OH Transcript, Volume 7 (February 26, 2015) at page 64, line 28 to page 65, line 11.

³⁴⁰ Exhibit 4A, Tab 2, Schedule 12 at pages 1-2.

³⁴¹ Exhibit 4A, Tab 2, Schedule 7 at page 2, lines 4-7.

³⁴² OH Transcript, Volume 7 (February 26, 2015) at page 112, lines 4-7.

additional distribution lines, which can increase the cost of line inspections and vegetation management.³⁴³

330. Toronto Hydro has identified two programs that will change the installed asset base in a way that will *reduce* OM&A costs. The first program is Rear Lot, which replaces largely overhead rear lot service with underground front lot service.³⁴⁴ The movement of distribution assets from overhead to underground reduces maintenance costs. The second is the elimination of box construction, which simplifies the maintenance of the resulting standard overhead infrastructure.³⁴⁵

331. However much of Toronto Hydro's capital program involves "like for like" replacement.³⁴⁶ In these situations, the routine predictive and preventative maintenance activities for the new assets are likely to be the same as for the assets they replaced.³⁴⁷

332. Arguments which claim that OM&A spending necessarily should decrease when capital spending increases are incorrect. BOMA argues that the large spending in asset renewal should result in decreased OM&A for maintenance.³⁴⁸ BOMA makes this argument despite citing Toronto Hydro's uncontroverted evidence that the relationship between capital spending and OM&A is complex and that there is no overall tradeoff between OM&A and capital spending in the application. As both Mr. Lyberogiannis and Mr. Walker explained, given the large backlog of assets beyond their end of useful lives on the Toronto Hydro system, asset renewal over the 2015 to 2019 period is not expected to have a material impact on the volume of repairs that are funded by emergency and corrective maintenance.³⁴⁹

333. VECC claims: "As new assets replace old ones, pre-emptive maintenance declines since newer assets require less maintenance than older ones. Vehicle maintenance is an obvious and familiar example of this phenomenon...."³⁵⁰ This claim is incorrect both as a general statement and in the specific example provided. As VECC's argument acknowledges, vegetation

³⁴³ OH Transcript, Volume 4 (February 23, 2015) at page 77, line 28 to page 78, line 6.

³⁴⁴ IR Response 2B-EP-24 at pages 1-2.

³⁴⁵ IR Response 2B-EP-24 at pages 1-2.

³⁴⁶ See for example, Exhibit 2B Section E6.4.1 at pages 1-2.

³⁴⁷ OH Transcript, Volume 4 (February 23, 2015) at page 75, lines 13- 16; IR Response 2B-OEB-34 (b).

³⁴⁸ BOMA Argument at pages 49-50.

³⁴⁹ OH Transcript, Volume 4 (February 23, 2015) at page 74, lines 17-22 and page 75, lines 14- 23.

³⁵⁰ VECC Argument at page 33.

management forms a large part of the increase in Toronto Hydro's preventative maintenance budget. Whether a line is newly replaced or was installed many years ago has absolutely no impact on the need for tree trimming, which is driven only by the proximity and growth of trees nearby.

334. The specific vehicle example that VECC puts forward is also wrong.³⁵¹ The most common type of preventative maintenance on a vehicle is to change the oil. The recommended frequency for an oil change, typically every 6,000 kilometres, is just the same for a new car as an old one. Failure to undertake required preventative maintenance, such as oil changes, on a new car may also void the warranty.

335. SEC misinterprets the evidence to come to a similar conclusion that the overall impact of Toronto Hydro's capital investments should be to reduce OM&A costs. As detailed above, this is wrong.³⁵² SEC points to the fact that Toronto Hydro has indicated that additional savings may arise to erroneously claim that the company is withholding known savings from ratepayers. This is incorrect as was explained by Mr. Lyberogiannis during SEC's cross examination:

The savings that we have included in the plan are the savings that we expect.

When you point to, I guess, the particular undertaking -- and I have lost the specific reference where there was the word "may" be other savings, there may be. However, if it was more likely than not, then we would have included those savings in the Distribution System Plan.³⁵³

336. OEB Staff cites Toronto Hydro's alleged failure to sufficiently forecast OM&A savings as a reason for disputing the proposed capital plan.³⁵⁴ This argument also ignores the evidence on the record that there is simply no direct relationship between the capital spending proposed and OM&A savings.

337. CCC seems to make the opposite claim, stating: "There should be a direct correlation between capital spend and operating and maintenance costs, but that correlation is not reflected in the 2015 budget."³⁵⁵ As established above, no such a direct correlation exists. Moreover, as

³⁵¹ VECC Argument at page 33.

³⁵² SEC Argument at page 57.

³⁵³ OH Transcript, Volume 4 (February 23, 2015) at page 76, lines 3-9.

³⁵⁴ OEB Staff Argument at page 51.

³⁵⁵ CCC Argument at page 13.

discussed further below, much of the OM&A increase is driven by factors unrelated to Toronto Hydro's capital assets.

3.2.5 Sources of OM&A Increase: Toronto Hydro's OM&A increases are driven by a combination of its increased capital program and functional requirements unrelated to capital

338. As discussed above, increased capital tends to increase certain OM&A expenditures. However, in other areas, namely Disaster Preparedness Management and Customer Care, increases are driven by other factors such as external requirements and customer needs and preferences.

339. In its Argument-in-Chief, Toronto Hydro provided a comprehensive summary of the categories and cost-drivers for increased OM&A relating to its 2015 rebasing request.³⁵⁶ Without reproducing that detail in its entirety here, among the largest expenditure increases and new programs are:

- (a) *Preventative & Predictive Maintenance expenditures* for additional:
 - (i) vegetation management to harden the system against storms;
 - (ii) maintenance and testing based on Reliability Centered Maintenance and Condition-based Maintenance principles; and
 - (iii) inspection and maintenance to address the risks posed by customer owned equipment.³⁵⁷
- (b) *Disaster Preparedness Management*, which required new expenditures to develop a more comprehensive and robust framework for disaster preparedness planning, management and operation in light of the Independent Review Panel's recommendations following the December 2013 ice storm.³⁵⁸

³⁵⁶ THESL Argument-in-Chief, Tab 3, pages 7-10, section 3.2 (March 19, 2015).

³⁵⁷ Exhibit 4A, Tab 2, Schedule 1 at pages, 3-4, lines 14 – 3.

³⁵⁸ Exhibit 4A, Tab 2, Schedule 4 at page 1. Toronto Hydro voluntarily commissioned an independent review of the utility's preparedness for, and response to an outage of the scale of the December 2013 Ice Storm.

- (c) *Customer Care* where costs increased due to increases in postage and printing, the cost of new technology and provisions for bad debt.³⁵⁹
- (d) *Streetlighting Assets* entering Toronto Hydro's rate base effective January 1, 2015, which require an additional \$3.6 million of OM&A expenditures, to be entirely recovered through revenue offsets.³⁶⁰

3.3 Parties' OM&A Proposals: The parties have proposed a range of arbitrary OM&A amounts for 2015 that were selected without regard to the amounts necessary to meet OM&A expenses in 2015 and beyond

340. The table below illustrates, the range of arbitrary OM&A recommendations:

Party	Base Year Used	Increase (Decrease) Recommended	2015 OM&A Amount Recommended	Submission page reference
OEB Staff	2014 actual	2.5%	\$247.2 million	p. 36
AMPCO	2014 actual	1.6%	\$245.1 million	p. 34
BOMA	2015 request	(\$10 million)	\$259.5 million	p. 51
CCC	2014 actual	2.0%	\$246.0 million	p. 12
Energy Probe	2015 request	(19.5 million)	\$250 million *	p. 48
SEC	2014 actual	(3.0%)	\$236.2 million**	p. 57
SIA	2015 request	(12.2 million)	\$257.3 million***	p. 20
VECC	2014 actual	2.0%	\$246.0 million	p. 35

* Energy Probe recommends a 2015 OM&A budget envelope of approximately \$250 million, but does not supply a specific derivation.

** SEC first increases the 2014 actual figure by 2.5% (\$6.0 million), but then reduces that total by \$5.7 million (to capture 25% of SEC's unsubstantiated claim of ongoing savings from the 2012 restructuring) and by a further \$2.0 million (to reflect SEC's unsubstantiated claim that the past extensive capital program should reduce OM&A).

³⁵⁹ Exhibit 4A, tab 2, Schedule 13 at pages 9-10, lines 20-13.

³⁶⁰ Exhibit 2A, Tab 5, Schedule 1, at pages 20-23.

SEC states that moving OPEB from accrual to cash will reduce OM&A by a further \$5 million, but again has provided no evidence to substantiate that claim. This estimate is incorrect. Moving OPEB from accrual to cash would reduce OM&A by \$3.3 million as noted below in section 3.5.2.

*** SIA expresses its recommendation as a reduction from the 2015 forecast, but actually derives its recommendation by escalating 2011 actuals by 2% per year.

341. As can be seen from the table above, parties propose a range of OM&A envelopes based on each party's particular view of the appropriate starting point and how that starting point should be adjusted to achieve the test year OM&A amount. Parties supply no evidence in support of their positions and little justification in argument. In particular, the escalation percentages (and in one case reduction percentage) from 2014 actual spending are without any evidentiary support; they have been plucked from the air. Similarly the proposed reductions from the 2015 forecast are not the results of a program by program analysis.³⁶¹ Instead, they represent a total amount of 2015 OM&A funding that "seems about right" to each party.

342. What no party has done is to undertake the analysis appropriate for a rebasing year. In other words, no party has examined the forecast OM&A costs in each area and opined as to whether these costs are necessary to support the outcomes that customers desire – safe, reliable and responsive electricity service and support for the ongoing capital plan. No party has comprehensively addressed the implications of its recommended 2015 OM&A budget on critical new programs, such as Disaster Preparedness, or on Toronto Hydro's ability to fund necessary cost increases in areas such as Customer Care and system Maintenance. Toronto Hydro respectfully submits the submissions of the parties provide little assistance to the OEB in determining whether the evidence establishes the need for the requested level of OM&A spending in each program.

343. Instead, the predominant rationale for the recommended reductions is the argument that 2015 expenditures are simply too high in comparison to 2014. Parties proceed as if this claim alone is sufficient justification for millions of dollars in OM&A cuts; it is not. The OEB has heard and rejected this argument before in a Hydro One re-basing application stating: "By the

³⁶¹ As is discussed in section 3.5 below, the relatively small number of program specific criticisms are without merit and in no case do the recommended cuts based on these criticisms sum to the overall 2015 OM&A disallowance recommended by the party.

same token, where the Company can show that its proposed expenditures in 2008 are justifiable in and of themselves, the fact that the overall spending exceeds historic norms is not fatal to the proposal.”³⁶²

344. Ultimately, in the HONI case, the OEB reviewed the justification for the \$46 million OM&A increase requested and approved \$45 million of it, disallowing \$1 million related to shared services costs that it viewed as excessive.³⁶³

345. The intervenors’ assertions and arguments ignore the real OM&A increases, which Toronto Hydro has justified through detailed evidence in this proceeding.

3.3.1 2012 Restructuring: The proposed reductions from 2012 restructuring wrongly portray history and ignore the ongoing benefits ratepayers are receiving from restructuring

346. A number of parties reference the 2012 restructuring to support the proposition that the 2015 OM&A costs are too high.³⁶⁴ SEC hyperbolically asserts: “Toronto Hydro seeks to deny the ratepayers any of the IRM benefit associated with the restructuring Toronto Hydro implemented in 2012.”³⁶⁵

347. These arguments are wrong on two counts. First, they mischaracterize the nature of the restructuring in 2012 and its long-term cost consequences. Second, they ignore the positive impacts that restructuring has had on Toronto Hydro’s cost structure.

348. In January 2012, the OEB issued its Decision in EB-2011-0144 rejecting Toronto Hydro’s three-year cost of service application. Based on this decision, the utility essentially downed tools on its capital program, substantially reduced internal staff and dismissed its external contractors working on the program.³⁶⁶ This was not some long planned restructuring as suggested; rather, it was an urgent response to a dramatic reduction in available funding.

³⁶² EB-2007-0681, Decision with Reasons at page 11.

³⁶³ EB-2007-0681, Decision with Reasons at pages 11-15.

³⁶⁴ Energy Probe argument at page 45; SEC Argument at pages 56-57 and Board Staff argument at page 36.

³⁶⁵ SEC Argument, at page 55, para 4.2.1(b)

³⁶⁶ Exhibit 4A, Tab 4, Schedule 3, at page 9-10, lines 23-21; OH Transcript Volume 1 (February 17, 2013) at page 116, lines 13-15.

349. Overall employment dropped by 136 FTEs in 2012 and a further 73 FTEs in 2013.³⁶⁷ To achieve these staff reductions, Toronto Hydro incurred restructuring costs of \$27.7million in 2012.³⁶⁸ Costs in 2012 were also atypical because the Common Costs and Adjustments category, which are typically a positive number (averaging \$2.4 million over the years 2011 to 2015 excluding 2012), was -\$6 million in 2012 because of the partial reversal of a previously accrued liability and a favourable PILs reassessment.³⁶⁹ Thus in no way can 2012 be regarded as a typical year for OM&A costs.

350. The level of OM&A activity supported by the 2012 budget was not sustainable. An example of this is in facilities maintenance services which had a budget of about \$10 million in 2012 that is projected to increase to \$13.5 million in 2015.³⁷⁰ Toronto Hydro described the need for this increase as follows:

In 2012 the program staffing complement was reduced by approximately 30% as a result of the Voluntary Exit Program. This reduction led to lower service levels for 2012 and 2013 (e.g., reduction in total maintenance tasks completed) and was not sustainable. The service levels were later restored through the introduction of the FMO in 2014, along with additional services described below.³⁷¹

351. In April 2013, the OEB issued its Partial Decision and Order in EB-2012-0064, largely approving Toronto Hydro's ICM application. This enabled Toronto Hydro to restart its capital program and begin returning to a more sustainable level of OM&A activity and expenditures. Contractors were re-engaged and spending increased, rising from \$238.6 million in 2011 to \$243.4 million in 2013.³⁷² Additional temporary contract staff also were engaged to support necessary activities with their numbers increasing from a low of 35.8 in 2012 to projected level of 77 in 2015.³⁷³

352. Ratepayers have and will continue to benefit from aspects of the 2012 cuts as the utility has been able to deliver the same (or higher) levels of service and capital work, with a reduced

³⁶⁷ Exhibit 4A, Tab 4, Schedule 2 at page 1.

³⁶⁸ Exhibit 4A, Tab 1, Schedule 1 at page 4, Table 1.

³⁶⁹ Exhibit 4A, Tab 2, Schedule 20 at pages 2-3.

³⁷⁰ Exhibit 4A, Tab 2, Schedule 11 at page 7, Table 3.

³⁷¹ IR Response 4A-EP-48 at pages 1-2.

³⁷² Exhibit 4A, Tab 1, Schedule 1 at page 4, Table 1.

³⁷³ IR Response 4A-Society-5(c) at page 2.

number of headcount. Total 2015 headcount is projected to be 173 FTEs lower than the 2011 headcount.³⁷⁴ Salaries and wages (including overtime and incentive pay) are forecast to be \$9.3 million less in 2015 than they were in 2011.³⁷⁵

353. The level of work and the cost pressures of doing that work did not decrease as a result of restructuring. On the contrary, these have increased since 2011 (eg. postage costs). Toronto Hydro would not have been able to put forward the constrained OM&A budget that it did for 2015, if it had "denied the ratepayers the IRM benefits associated with the restructuring."

3.3.2 Street lighting Assets: Of the requested OM&A increase, \$3.6 million relates to street lighting assets and is fully recovered through revenue offsets

354. Of the total increase in 2015 OM&A, \$3.6 million is attributable to street lighting assets.³⁷⁶ With the transfer of former street-lighting assets into Toronto Hydro's rate base, Toronto Hydro has included the contract revenue from the City of Toronto to offset the maintenance costs of these assets in its calculation of revenue offsets.³⁷⁷ Thus, while this \$3.6 million constitutes part of the overall OM&A increase in 2015, it does not represent any additional cost to ratepayers.

355. VECC's Argument states: "The one area we do think costs have justifiably increased is with respect to \$1.6 million of corrective maintenance that THESL noted was due to the inclusion of transferred street lighting assets."³⁷⁸ While \$1.6 million is the proper amount for corrective maintenance, VECC fails to acknowledge the \$1.7M in Customer Driven work, the \$0.2 million in Emergency Response and the \$0.1 million in Preventative and Predictive Maintenance that together comprise the \$3.6 million in OM&A associated with street lighting assets, all of which is in turn offset by revenues collected directly from the City of Toronto.³⁷⁹

³⁷⁴ Exhibit 4A, Tab 4, Schedule 2.

³⁷⁵ Exhibit 4A, Tab 4, Schedule 5 at page 1, Table 1.

³⁷⁶ OH Transcript, Volume 7 (February 26, 2015) at page 7, lines 2-4.

³⁷⁷ Exhibit 3, Tab 2, Schedule 1 at page 1, lines 8-10.

³⁷⁸ VECC Argument at page 33.

³⁷⁹ Exhibit 4A, Tab 2, Schedule 6 at page 12; Exhibit 4A, Tab 2, Schedule 2 at page 8; Exhibit 4A, Tab 2, Schedule 3 at page 15 and Exhibit 4A, Tab 2, Schedule 1 at page 14.

3.4 The proposed adjustment mechanism for 2016-2019 OM&A costs guarantees ratepayer savings in future years

3.4.1 Consistency with 4GIRM: The formula to adjust OM&A over the last four years of the CIR plan is identical to the OEB's 4GIRM approach

356. Toronto Hydro's approach to setting the revenue requirement for OM&A over the 2016 to 2019 period is identical to the OEB's 4GIRM formula.³⁸⁰ Toronto Hydro projects that in the ordinary course, its OM&A costs would increase at an approximate average of 2-3% year-over-year during the term of the CIR plan.³⁸¹ By proposing that rate funding for OM&A increase by the standard "I-X" formula, Toronto Hydro is committing up-front to manage within an OM&A budget that is materially lower than its expected OM&A costs. In this way, Toronto Hydro is providing guaranteed sharing of productivity savings, before they are achieved, and ensuring that the more than 40% of the revenue requirement comprised by OM&A will increase at less than inflation.³⁸²

3.4.2 ERP Savings: Parties' proposals to further reduce 2016-10 OM&A to account for potential savings from ERP implementation are inconsistent with OEB policy and would double recover the same savings

357. The savings anticipated from ERP and similar projects are necessary to allow Toronto Hydro to meet its OM&A expenses during the CIR period. As discussed above in section 3.1.2, known cost pressures will cause annual OM&A spending to rise by more than the increase produced by the proposed OM&A formula. Thus each year Toronto Hydro will need to develop and implement cost saving measures just to keep its OM&A costs within the amounts funded by rates. ERP project savings are necessary to allow the company to meet its increasing operating expenses.

358. CCC argues that the OEB should adopt a methodology which embeds the forecast savings from ERP implementation into the revenue requirement for this case or tracks these savings in a deferral account for future recovery.³⁸³ In Toronto Hydro's submission, this approach is both misguided and inconsistent with OEB policy. It is misguided because forecast savings, to the extent they materialize, are what will allow Toronto Hydro to operate within a

³⁸⁰ Exhibit 1B, Tab 2, Schedule 3 at page 15, lines 15-17.

³⁸¹ Exhibit 4A, Tab 1, Schedule 1 at pages 10-11.

³⁸² \$269.5 million / \$661.2 million = 40.8%; see Exhibit 1B, Tab 2, Schedule 3 at page 11, Table 4.

³⁸³ CCC Argument at page 14.

formula that provides annual increases that are less than general inflation and significantly less than anticipated cost increases. To both guarantee ratepayers that their exposure to increased OM&A costs will be less than inflation and then embed forecast savings from specific initiatives upfront would be, in Toronto Hydro's respectful submission, inappropriately double counting the effects of such savings to the benefit of ratepayers.

359. CCC's argument here repeats an argument CCC made with respect to Hydro One's Cornerstone project in EB 2007-0681.³⁸⁴ This argument was considered and rejected by the OEB as follows:

The intervenors take the view that the Board should impose a reduction in revenue requirement to reflect the anticipated savings associated with the project during the incentive regulation period. Otherwise, they contend, ratepayers will be denied the benefits associated with the Cornerstone project until rebasing, four years hence.

Board Findings

The Cornerstone project has been developed over a number of years and it is an accident of timing that the third-generation IRM will operate to insulate some of the savings associated with the project. As a result the Company will have a period where it alone enjoys the benefits of the efficiencies resulting from the Cornerstone project. This, however, is how incentive rate mechanisms operate. It would be inappropriate and contrary to regulatory principle for the Board to intervene a situation such as this to deny the Company this benefit prior to the next rebasing. The Board therefore will make no adjustments to the revenue requirement to account for future savings resulting from the Cornerstone project. (emphasis added).³⁸⁵

360. While the facts of the Cornerstone project and Toronto Hydro's ERP are similar, the reasons for rejecting CCC's argument here are even stronger than in the Hydro One case. In the Hydro One case, the project had been funded in prior years and was coming into service during the rebasing year. Here the project has not been funded and is not scheduled to come into service until late in 2016, with forecast partial savings beginning in 2017 and the forecast full savings not expected to be realized until at least 2019.³⁸⁶

³⁸⁴ EB-2007-0681, Written Argument of the Consumers Council of Canada at pages 10-12.

³⁸⁵ EB-2007-0681, Decision with Reasons at pages 15-16.

³⁸⁶ IR Response 2B-SEC-39, Appendix A at pages 79-82 (Note that year 0 is assumed to be 2016, the year that the project is forecast to be put in service).

3.4.3 2016 – 2019 Budgets: Toronto Hydro did not forecast 2016 – 2019 OM&A budgets because these costs will be determined by a formula

361. BOMA and OEB Staff both suggest that Toronto Hydro has an OM&A budget for 2016 to 2019 but has not provided it or, at the very least, that one should have been prepared.³⁸⁷

362. However, as Toronto Hydro clearly testified: “There is no five-year OM&A budget.”³⁸⁸ Toronto Hydro did not prepare such a document because for the period 2016-2019 it plans to manage OM&A spending in accordance with the revenues generated by the “I-X” formula it has proposed.³⁸⁹

363. As noted above, Toronto Hydro has provided information about its actual cost pressures of approximately 2-3% year over year. This demonstrates the magnitude of savings that the utility must find during the term of this Custom IR plan – savings that are shared with ratepayers upfront through the operation of the X factor. Toronto Hydro’s formulaic approach to OM&A funding for 2016 to 2019 is discussed in section 4.2.1.

364. VECC’s submission agrees with Toronto Hydro’s approach: “Board Staff has, in their argument, criticized the Applicant for failing to file a five year OM&A plan. We disagree that this is necessary. It would seem to us that such a requirement simply encourages cost of service budgeting by the applicant and a similar form of scrutiny by intervenors – neither of which is in keeping with RRFE policy.”³⁹⁰

365. Referencing BOMA interrogatory 22, BOMA states: “the applicant refused to provide the rationale for the refusing [*sic*] to provide forecast OM&A costs beyond 2015....”³⁹¹ Toronto Hydro notes that BOMA 22 does not request an OM&A forecast costs beyond 2015. In fact, BOMA never requested this information.

366. OEB Staff’s contention that a five year OM&A forecast is required under the RRFE also is addressed in section 4.2.1 below.

³⁸⁷ BOMA Argument at page 50; Board Staff Argument at page 36.

³⁸⁸ OH Transcript, Volume 7 (February 26, 2015) at page 92, line 21.

³⁸⁹ IR Response 4A-OEB-65(b).

³⁹⁰ VECC Argument at page 32.

³⁹¹ BOMA Argument at page 50.

3.5 The few challenges to specific OM&A programs are without merit and should be rejected

3.5.1 Compensation: Toronto Hydro's compensation and human resource policies are appropriate

367. While no party has recommended any specific disallowances with respect to compensation, staffing and human resources costs, several parties commented on these areas and made policy recommendations that Toronto Hydro opposes. These are addressed below.

368. **Toronto Hydro's compensation is appropriate at all levels.** It is not surprising that no party recommended a disallowance with respect to compensation. The total cost of Toronto Hydro's wages, salaries and benefits drop by \$9.3 million between 2011 and the 2015 test year forecast.³⁹² Moreover, benchmarking results support the reasonableness of Toronto Hydro's compensation at all levels including Named Executive Officers.³⁹³ Finally, Toronto Hydro's collective agreements contain reasonable wage increases for represented employees with the CUPE contract, for example, providing an average increase of 1.75% per year from February 2014 through January 2018.³⁹⁴

369. OEB Staff mistakenly inflates the percentage of OM&A that is made up of compensation when it states that: "Employee costs and compensation are a very significant component of OM&A expenses across all programs comprising over 80% of the total 2015 OM&A expenses."³⁹⁵ This calculation omits the fact that \$84.3 million of the \$225.3 million in total test year compensation and benefits is capitalized.³⁹⁶ The remaining \$141 million that is expensed comprises 52% of total 2015 OM&A expenses.

370. **Executive Compensation: Toronto Hydro has reduced total executive compensation.** Despite the fact that Toronto Hydro's executive compensation is shown to be at or below market competitive levels, OEB Staff Argument states: "However, OEB Staff would note that the total increase in management costs over the three-year period from 2012 to 2015 is just over \$1.6

³⁹² Exhibit 4A, Tab 4, Schedule 2.

³⁹³ Exhibit 4A, Tab 4, Schedule 6 at pages 8-11; IR Response1B-SEC-8, Appendices N and O.

³⁹⁴ Exhibit 4A, Tab 4, Schedule 5 at page 10, Tables 3 and 4.

³⁹⁵ OEB Staff Argument at page 34.

³⁹⁶ TC Undertaking J2.4, Appendix A.

million, which on an annual basis is below Toronto Hydro's materiality threshold."³⁹⁷ As previously discussed, Toronto Hydro submits that the appropriate comparator is the last re-basing year - 2011. Since 2011, Toronto Hydro has reduced the number of executives by 35% and overall executive compensation by 15%.³⁹⁸

371. While not recommending a disallowance related to compensation, SEC asserts that the increase in average executive compensation reveals "questionable priorities" and is poorly timed.³⁹⁹ As fully explained during the oral hearing, the increase in average compensation is appropriate given the fact that Toronto Hydro has cut the number of executives by about 35% thereby requiring the remaining executives to assume increased responsibilities.⁴⁰⁰ Toronto Hydro respectfully submits that reducing overall executive compensation and recognizing the increased span of control of remaining executives who have taken on additional responsibilities are exactly the priorities that benefit ratepayers.

372. **Employment Policies: The OEB should reject invitations to micromanage Toronto Hydro's employment policies.** Just in time hiring is beneficial to ratepayers. CUPE and the Society both urge the OEB to order Toronto Hydro to abandon its "just in time" approach to hiring.⁴⁰¹ In Toronto Hydro's submission, the unions' criticisms of "just in time" hiring do not accurately present Toronto Hydro's plans and granting their requested order would involve the OEB in exactly the type of micromanagement that the OEB has consistently rejected.⁴⁰²

373. Contrary to the unions' suggestion, Toronto Hydro plans to increase the number of apprentices it hires in recognition of the ongoing level of retirements that the company is already experiencing and will continue to experience over the CIR term.⁴⁰³ Outside of the apprenticeship program, the company also plans to continue to invest in hiring new entrants and facilitating co-op programs and in-house training.⁴⁰⁴ Through these plans and others discussed in the evidence,

³⁹⁷ OEB Staff Argument at page 35.

³⁹⁸ IR Response 4A-VECC-48, Appendix A; OH Undertaking J7.9 at page 1.

³⁹⁹ SEC Argument at para. 4.3.4.

⁴⁰⁰ OH Undertaking J7.9 at page 1.

⁴⁰¹ CUPE Argument at page 6; Society Argument at page 3.

⁴⁰² EB-2012-0033, Decision with Reasons (December 13, 2012) at page 34.

⁴⁰³ Exhibit 4A, Tab 4, Schedule 3 at pages 24-25, Table 8.

⁴⁰⁴ IR Response 4A-CCC-41.

Toronto Hydro is confident that it can continue to meet its workforce needs and avoid the risks asserted by the unions in their arguments.⁴⁰⁵

374. While SEC does not take a position on this issue, it does criticize Toronto Hydro's workforce planning as inadequate.⁴⁰⁶ This criticism is without merit. The extensive evidence on workforce planning and staffing fully demonstrates the degree of attention the company has devoted to this issue.⁴⁰⁷

375. SEC also states incorrectly that the data in Undertaking J7.8 shows that: "There may be less urgency to the aging workforce issue than was initially thought."⁴⁰⁸ SEC asked for the year-by year age breakdown in Toronto Hydro's employees ostensibly to see if the age distribution among 45 to 54 year olds was skewed more to the younger workers in this cohort so as to determine how pressing is the need for Toronto Hydro to address retirements over the next five years.⁴⁰⁹ The data in Undertaking J7.8 clearly show that while workers aged 45 through 49 make up about 16% of Toronto Hydro's workforce, those aged 50 to 54 make up about 26.3%. This data along with the fact that about 18% of Toronto Hydro's employees are between 55 and 64 years old confirm the ongoing need to plan for significant retirements in the coming years as stated in the evidence.⁴¹⁰

376. **The proposed "cooling off period" is contrary to the interests of ratepayers.** CUPE and the Society argue that Toronto Hydro would benefit from a policy that prevents the external contractors it employs from hiring ex-Toronto Hydro employees to work on the Toronto Hydro system for three years after they retire ("cooling off period").⁴¹¹ Even if such a policy were legally permissible, and it is unclear that it would be, it would work to the detriment of Toronto Hydro's ratepayers.

⁴⁰⁵ Exhibit 4A, Tab 4, Schedule 3 at pages 17-25.

⁴⁰⁶ SEC Argument at paragraphs 4.3.9 through 4.3.13.

⁴⁰⁷ Exhibit 4A, Tab 4, Schedule 3.

⁴⁰⁸ SEC Argument at para. 4.3.12 (a).

⁴⁰⁹ OH Transcript, Volume 7 (February 26, 2015) at pages 131-132.

⁴¹⁰ Exhibit 4A, Tab 4, Schedule 3 at pages 11-17.

⁴¹¹ CUPE Argument at page 8; Society Argument at page 4.

377. The CUPE/Society position is premised on the view that the prospect of going to work for an external contractor is leading Toronto Hydro employees to retire earlier than they would otherwise. However, there is absolutely no evidence to support this assertion.

378. Employees retire for a host of reasons, and those who wish to continue working generally have skills and work experience that is in high demand. Precluding these ex-employees from taking jobs with contractors employed by Toronto Hydro for three years would serve only to ensure that retired ex-employees worked elsewhere, including for neighbouring utilities, and not in the Toronto Hydro service territory where their knowledge of the system and experience with Toronto Hydro standards and work practices would be particularly valuable. Clearly, the proposed approach would not in any way be in the best interests of ratepayers.

379. Restrictions on contracting out engineering are unnecessary and counter to ratepayer interests. “The Society urges the OEB to direct Toronto Hydro to increase its Society engineer headcount by between 10 to 15 staff through the CIR period and reduce its contracted out engineering services by an equivalent amount.”⁴¹² For the reasons already provided with respect to “just in time” hiring and the proposed “cooling off period,” the OEB should deny this request. To grant it would represent an unprecedented level of micro-management and directly counter Toronto Hydro’s efforts to drive performance and improve productivity for the benefit of ratepayers. The cost efficiency of using contractors is discussed in more detail in section 2.4.2.

380. **Response to Panel Questions.** During Argument-in-Chief, the Panel noted that non-management non-union staff increased from 462.4 FTEs in 2011 to 533.5 FTEs in 2015 and asked for an explanation for the increase. Toronto Hydro confirms the answer given by counsel: the increasing capital program over that period necessitated increases in the non-union, supporting costs related to Toronto Hydro’s IT and Finance departments.⁴¹³ The increasing OM&A needs in relation to the increasing support costs for Toronto Hydro’s capital program are discussed above in section 3.2.4, which details how increased activities with respect to capital investment drive influences OM&A costs.

⁴¹² Society Argument at page 3.

⁴¹³ OH Transcript, Volume 10 (March 19, 2015) at page 45 to 46.

381. The Panel also asked about contracting out of labour related to OM&A; in argument, Toronto Hydro explained, by way of example, how some engineering services were subject to competitive procurement and that a portion of those costs would be included as OM&A (to the extent they could not be capitalized).⁴¹⁴ Toronto Hydro further refers the Panel to the utility's response to Technical Conference Undertaking J2.29-CUPE-14, which summarizes the specific categories of OM&A that are performed, in whole or in part, by contractors, including the total cost within each category from 2011 to 2015. This response shows that the external OM&A costs increased from 25% in 2011 to 33% in 2015.

3.5.2 OPEB: The OEB should continue to approve OPEB on accrual basis pending a generic review of the issue

382. Toronto Hydro submits that it should recover Other Post-Employment Benefits (OPEB) pursuant to the accrual method of accounting, where OPEB expenses are recognized and funded when the entitlement is earned, rather than when the utility actually pays out the benefit to retirees. This method is consistent with Article 470 of the OEB's Accounting Procedures Handbook (APH). Under this method for the test year 2015, Toronto Hydro would recover approximately \$12.5 million in OPEB, of which \$2.2 million would be capitalized and \$10.3 million would be expensed.⁴¹⁵

383. OEB Staff suggests that the OEB should consider requiring Toronto Hydro to recover OPEB using the cash method.⁴¹⁶ Under the cash method, expenses would be recognized and funded as the benefits are actually paid out to retirees. Toronto Hydro forecasts paying out approximately \$8.5 million in OPEB costs in 2015, of which approximately \$1.5 million would be capitalized and \$7.0 million would be expensed.

384. SEC estimates that the cash basis of accounting for OPEB would reduce operating costs by \$5 million per year, and capital costs by about \$3 million per year.⁴¹⁷ The OEB should not rely on SEC's estimates, as these numbers are inaccurate and irreconcilable to the evidence.⁴¹⁸

⁴¹⁴ OH Transcript, Volume 10 (March 19, 2015) at page 46 to 47.

⁴¹⁵ IR Response 4B-OEBStaff-79(b) Appendix A.

⁴¹⁶ OEB Staff Argument at page 65.

⁴¹⁷ SEC Argument, at page 60, para. 4.3.15.

⁴¹⁸ SEC fails to provide a citation or explanation of how the estimates were derived.

Toronto Hydro forecasts that the cash basis of accounting for OPEB would reduce operating costs \$3.3 million and capital costs by \$0.7 million. The differences are summarized below:⁴¹⁹

	2015 OM&A	2015 Capital	Total
Accrual Basis	\$10.3M 82%	\$2.2M 18%	\$12.5M
Cash Basis	\$7.0M 82%	\$1.5M 18%	\$8.5M
Difference	\$3.3M	\$0.7M	\$4.0M

385. OEB Staff urge the OEB to consider changing its approach to OPEB from accrual to cash in the current application.⁴²⁰ SEC supports this recommendation.⁴²¹ Toronto Hydro respectfully submits that such a change would be premature in light of the OEB's direction in the recent Hydro One distribution rates decision:⁴²²

The OEB agrees that this issue is more appropriately dealt with on a generic basis. A generic proceeding could enhance understanding of the different rate making options, establish policy and decide on how best to apply that policy to Hydro One and other Board-regulated entities.

386. OEB Staff takes issue with the fact that Toronto Hydro has not set aside in a separate fund the amounts necessary to fund the liability for future OPEB payments, and that it does not have a plan on how it intends to treat the difference between cash paid out and accrued amounts going forward.⁴²³ Consistent with prior practice, these amounts will be spent on funding the utility's ongoing operations.⁴²⁴ Toronto Hydro submits that this is a prudent and efficient approach from a cash management and ratepayer protection perspective because: (a) it allows Toronto Hydro to save, and pass on to its customers, approximately \$1 million a year in financing costs; and (b) the company's strong balance sheets provides sufficient confidence in its ability to meet its future liabilities. Toronto Hydro does not intend to request recovery of the costs of meeting these liabilities from ratepayers again.

⁴¹⁹ IR Response 4B-OEBStaff-79(b); Exhibit 4A, Tab 4, Schedule 7.

⁴²⁰ OEB Staff Argument, at page 63.

⁴²¹ SEC Argument, at page 60, para 4.3.15.

⁴²² EB-2013-0416, Decision and Order (March 12, 2015), at page 25.

⁴²³ OEB Staff Argument, at page 64.

⁴²⁴ IR Response 4B-OEBStaff-79(c).

- (a) *Cost Savings:* If a cash reserve was created to cover the future liability, Toronto Hydro could reasonably expect to earn interest at approximately 1.00% per annum on funds set aside. Given the long term nature of OPEB plans, the cash short fall resulting from the creation of such a reserve would be funded by issuing long term debt. Toronto Hydro has a weighted average cost of long-term debt of 4.31%.⁴²⁵ Therefore, by not maintaining a cash reserve to fund OPEB, Toronto Hydro is able to save approximately \$1 million a year in financing costs, calculated as the difference between the 4.31% interest expense on long term debt that it would have to issue and the 1% expected return on investment, multiplied by \$36 million, the 2013 actuarial valuation of the liability.⁴²⁶
- (b) *Funding the Future Liability:* As evidenced by the independent credit ratings,⁴²⁷ Toronto Hydro has historically maintained a strong balance sheet, and believes that its balance sheet will be sufficient to fund the liability when it needs to be paid out in the future. Toronto Hydro notes that rating agencies, bondholders and the shareholder expect appropriate leverage and liquidity ratios to be maintained over the long run in order to fund future liabilities. In addition, the company has a rigorous multi-faceted financing strategy which allows the company to meet its liquidity requirements,⁴²⁸ and a strong credit profile⁴²⁹ that enables the utility to readily access credit markets to finance its operations and meet its obligations.

387. Below Toronto Hydro sets out an number of its concerns with respect to changing the OPEB accounting method from accrual to cash for regulatory purposes. The utility submits that these and other potential implications should be thoroughly considered before such a policy change is implemented. Given the complexities of the issues, and their applicability to the utility sector as a whole, Toronto Hydro agrees with the OEB's conclusion in the recent Hydro One distribution rates decision that a change in the OPEB accounting policy would be more appropriately dealt with on a generic basis. Toronto Hydro respectfully submits that it should be

⁴²⁵ Exhibit 5, Tab 1, Schedule 3.

⁴²⁶ Exhibit 9, Tab 1, Schedule 1, at page 21.

⁴²⁷ Exhibit 1B, Tab 4, Schedule 7.

⁴²⁸ Exhibit 5, Tab 1, Schedule 1.

⁴²⁹ Exhibit 1B, Tab 4, Schedule 7.

allowed to continue the accrual method of accounting pending that generic proceeding for the following reasons.

- (a) If Toronto Hydro were required to implement a cash method of accounting for OPEB, Account 1508 – Impact for USGAAP Deferral Account would need to be written off for external reporting purposes. This would likely result in a corresponding write-down of equity and would therefore increase Toronto Hydro's debt-to-equity ratio. A negative change in the capital structure could adversely affect the corporation's credit profile, and could consequently reduce the corporation's borrowing flexibility, increasing financing costs to detriment of ratepayers.
- (b) The accrual method of recovery better reflects the true cost of delivering electricity. Ratepayers who are receiving electricity service today should pay their fair share of the associated OPEB entitlements earned by the employees that enable Toronto Hydro to provide the service. The application of the cash method of recovery result in intergenerational inequity because it burdens future ratepayers with costs that reflect the current period of employee service. In Toronto Hydro circumstances the magnitude of the inequity is significant, given that over 60% of Toronto Hydro's employees are over the age of 45.⁴³⁰ Under the cash method of recovery, future ratepayers would have to pay OPEB costs associated with these retirees, despite the fact that current ratepayers received the service provided by these employees.
- (c) The cash method of accounting does not necessarily mean that rates will be relatively stable. Since incorporation in 1999, annual cash payments have more than doubled, ranging from \$4.5 million to \$10.4 million. Cash payments are based on a number of factors including demographics and plan data.

388. OEB Staff suggest that the OEB may wish to consider treating OPEB in a similar fashion to the approach approved in Ontario Power Generations (OPG) 2014 and 2015 payment amounts

⁴³⁰ OH Undertaking J7.8.

decision (EB-2013-0231). Toronto Hydro submits that this not necessary or appropriate for the following reasons:

- (a) The materiality of the potential “over-recovery” (\$29 million for 2000-2013⁴³¹) is significantly lower than in the recent OPG proceeding (\$752 million for 2008-2013⁴³²), and is also lower than in the recent Hydro One’s case (\$217 million for 2000-2013⁴³³) where the OEB declined to move to a cash approach.
- (b) Unlike in the OPG proceeding, the evidence in this case had not raised any doubt about Toronto Hydro’s ability to fund the liability going forward. On the contrary, the evidence demonstrates that Toronto Hydro has a strong credit rating that enables the utility to readily access to credit markets to finance its operations and meet its obligations.

3.5.3 Maintenance: Forecast Preventative, Predictive and Corrective Maintenance Programs are necessary and should be funded as requested

389. While agreeing that these programs are a necessary part of a well-run utility, VECC nevertheless argues for a \$5 million reduction in their combined cost.⁴³⁴ Energy Probe states that while it has no submissions on these programs, the forecast increases should be offset from other programs.⁴³⁵ Toronto Hydro submits that the forecast expenditures are necessary to inspect, maintain and fix its distribution assets and should be fully funded.

390. VECC’s argument that these costs should be decreasing because of the capital program has already been addressed above.

391. VECC’s argument related to vegetation management is that: “we do not find an increased vegetation management program to be compelling given the massive “forced” pruning that occurred as part of the 2013 ice-storm. The fact is, that over the past two years the City of

⁴³¹ IR Response 4B-OEBStaff-79(b) Appendix A.

⁴³² EB-2013-0321, Decision with Reasons (November 20, 2014), at page 84.

⁴³³ EB-2013-0416 Exhibit TCJ1.19 at page 2.

⁴³⁴ VECC Argument at pages 32-33.

⁴³⁵ Energy Probe Argument at page 47.

Toronto's canopy has been significantly reduced. Again, intuitively, one would expect these costs to be in decline."⁴³⁶

392. VECC's intuition is wrong. Toronto Hydro confirmed that VECC's intuition is incorrect in response to the following VECC interrogatory: "If there is a projected increase in the 2015 vegetation management budget from 2014 please explain this in light of the extraordinary amount of tree trimming that was done due to the 2013/14 ice-storm."⁴³⁷ In response, Toronto Hydro indicated that the cost increase was due to an increase in market prices associated with the competitively bid vegetation management contract (the bidding process took place before the ice storm) and the need to "mitigate safety, system reliability and financial risks, especially during severe weather."⁴³⁸

393. In direct response to VECC's claim that the impacts of the ice storm reduced the need for vegetation management, Toronto Hydro stated:⁴³⁹

The forestry work that was executed in response to the 2013 ice storm can be categorized as follows: (1) removal of fallen tree limbs and branches on primary conductors, secondary buses and service wires, and (2) cutting and removal of damaged tree limbs and branches that may have broken and further impacted the overhead distribution system. The work performed was of emergency nature and focused exclusively on the trees that sustained damage. No cycle pruning activities that comprise typical vegetation maintenance work took place as part of the ice storm response. The increase in the 2015 budget is not related to the ice storm.

394. In fact, the effect of the ice storm was not to reduce the need for vegetation management as VECC claims, but rather to emphasize the importance of vegetation management in hardening the system against storms and improving reliability. Toronto Hydro's evidence indicates that: aside from an increase in unit costs described above, the 2015 expenditures are greater than those in prior years due to plans to increase tree pruning accomplishments by approximately 30% over historic averages and to "storm harden" the system.⁴⁴⁰

⁴³⁶ VECC Argument at page 33.

⁴³⁷ IR Response 4A-VECC-37(a).

⁴³⁸ IR Response 4A-VECC-37.

⁴³⁹ *Ibid.*

⁴⁴⁰ Exhibit 4A, Tab 2, Schedule 1 at page 34.

395. Storm hardening is also discussed in The Independent Review Panel (IRP) report entitled “The Response of Toronto Hydro-Electric System Limited to the December 2013 Ice Storm.”

The IRP concluded that:

- (a) Toronto Hydro maintains its circuit clearances on a three-year average cycle, meaning that circuits are pruned every two to five years, depending on their reliability performance, which considered a leading industry practice.
- (b) Over the past six years, Toronto Hydro has maintained a consistent scope of the vegetation management program (e.g., clearances, miles completed) while reducing the cost of the program.

396. The IRP also concluded that the current clearances being achieved (i.e., 3 feet for primary lines and 1 foot for secondary lines) are “not sufficient to protect the lines during major weather incidents”, which results in the need to either trim more frequently or achieve greater clearances to effectively storm harden the system.⁴⁴¹

3.5.4 Regulatory Affairs: The program should be funded as requested and proposed reductions in spending should be rejected

397. Parties argue for various reductions in the Regulatory Affairs budget. These arguments are all without merit and should be rejected. Arguments for reductions to the CIR costs are premised on assertions that have no foundation, conclusions which are contradicted by the evidence, or a misunderstanding of eligible costs pursuant to the Filing Requirements. Arguments for reductions related to the Wireless Forbearance application costs are misplaced as they ignore the important policy reasons that Toronto Hydro brought this application – namely, ratepayer interests.

398. **CIR Application costs are reasonable to comply with RRFE guidance and assist the OEB, as well as reflect the five year nature of the application.** The RRFE remains a new policy framework in Ontario, with the CIR framework representing a new ratemaking paradigm, and a longer application term. Toronto Hydro set out to adopt the RRFE in letter and spirit and to put forward an application that respected and reflected the priorities, guidance and

⁴⁴¹ Exhibit 4A, Tab 2, Schedule 4, Appendix A at page 94-95.

components envisioned by the RRFE and associated guidance (e.g. the Filing Requirements). The utility brought forward one of the first CIR applications that the OEB has seen, and in Toronto Hydro's submission, one that complies with the OEB's intended framework. In doing so, Toronto Hydro retained experts and consultants in key areas which it assessed would be helpful to the OEB – areas such as benchmarking, customer engagement, and review of capital plan and planning approaches.

399. CCC claims that the OEB should disallow half the consulting costs incurred and consider other unspecified reductions based on the assertion that consultant reports were not valuable and were not procured through an RFP, and that the overall application costs are excessive when compared to those of other applicants.⁴⁴² As explained below, none of these claims has merit.

400. On the first issue, the OEB has had the opportunity to observe the high quality of the consultants Toronto Hydro presented in this proceeding and can readily assess their value. On the second issue, Toronto Hydro has justified its use of sole source procurement for this application. Finally, CCC led no evidence on the costs and complexity of this application compared to others. As this claim appears for the first time in argument and has no evidentiary basis, it should be ignored.

401. In contrast to CCC, Toronto Hydro submits that reports such as those of the Innovative Research Group on customer engagement or Power System Engineering on benchmarking, both of which received considerable scrutiny, are of the highest quality and have been valuable in the proceeding. The fact that CCC disagrees with the evidence is not a basis on which to disallow any portion of the consultants' costs.

402. In response to a CCC interrogatory, Toronto Hydro explained the reasons why consultants were retained on a sole source basis. These include that the vendor had previous experience working with Toronto Hydro, the ability to complete the work on the timelines necessitated by the application and unique qualifications.⁴⁴³ As required by Toronto Hydro's procurement policy,⁴⁴⁴ a Sole Source Justification Report was prepared for each consultant.⁴⁴⁵

⁴⁴² CCC Argument at pages 12-13.

⁴⁴³ IR Response 1A-CCC-3(d) at page 4.

⁴⁴⁴ Exhibit 4A, Tab 3, Schedule 2.

Given that the consultants were retained pursuant to the procurement policy and provided valuable evidence, CCC's argument should be rejected.

403. CCC's requests an unspecified disallowance based on its claim that Toronto Hydro has spent too much on its application in comparison to other utilities. This claim appears for the first time in argument. No evidence was presented, let alone tested, on the relative cost or complexity of this application compared to those of other companies. Toronto Hydro respectfully submits that the OEB should ignore this claim.

404. VECC endorses CCC's submissions on regulatory costs and then goes on to state: "We note that in 2013 the OEB approved \$4.8 million for these activities. In 2015 this amount has increased to \$7 million."⁴⁴⁶ VECC provides no citation for this claim and it is wrong. The actual 2013 Rates and Regulatory affairs expenses were \$8.4 million not \$4.8 million.⁴⁴⁷ Given Toronto Hydro's proposal to amortize the cost of this application over the 5-year CIR period, the forecast 2015 expenses for ratemaking purposes are \$8.4 million – the exact amount of the 2013 actual expenses.⁴⁴⁸

405. SIA argues that costs incurred for the CIR application in 2013 and 2014 should not be recovered because they are out-of-period costs and Toronto Hydro has not shown that they are incremental to the amounts contained in approved rates.⁴⁴⁹ Neither argument has merit.

406. The RRFE expects applicants to include substantial additional information related to the Distribution System Plan, customer engagement and benchmarking.⁴⁵⁰ In recognition of the anticipated cost consequences of these requirements, the OEB issued section 2.7.3.5 of the Filing Requirements (July 17, 2013) which states that:⁴⁵¹

The applicant must provide a breakdown of the actual and anticipated regulatory costs, including OEB cost assessments and expenses for the current application

⁴⁴⁵ Exhibit 4A, Tab 3, Schedule 2, Appendix B at pages 1-2.

⁴⁴⁶ VECC argument at page 34.

⁴⁴⁷ Exhibit 4A, Tab 2, Schedule 17, at page 1, Table 1.

⁴⁴⁸ Exhibit 4A, Tab 2, Schedule 17, at page 1, footnote 1.

⁴⁴⁹ SIA Argument at pages 18-19.

⁴⁵⁰ The RRFE Report notes that: "much of the material in Cost of Service Filing Requirements will be relevant for Custom IR filers." See Report of the Board, Renewed Regulatory Framework for Electricity Distributors: A Performance –Based Approach (October 18, 2012) at page 70.

⁴⁵¹ OEB Filing Requirements for Electricity Distribution Rate Applications, Section 2.7.3.5 at page 31.

such as legal fees, consultant fees, costs awards, etc. Appendix 2-M must be completed. The applicant must provide information supporting the level of the costs associated with the preparation and review of the current application. In addition, the applicant must identify how such costs are to be recovered (i.e., over what period the costs are proposed to be recovered). For distributors, the recovery period would normally be the duration of the expected cost of service plus IRM term under the 4th generation option.

407. The instructions in Appendix 2-M state: “Please fill out the following table for all one-time costs related to this cost of service application to be amortized over the test year plus the IRM period.”⁴⁵² Given that the referenced table includes columns for both historical and bridge year costs, it is beyond dispute that the OEB intended that applicants to recover these costs over the IRM period. SIA’s claim that these are out of period costs that cannot be recovered is simply wrong.

408. The argument that these costs are not incremental ignores the fact that the costs in question are specifically identified as “one-time costs related to this cost of service application.”⁴⁵³ Thus, by definition they are incremental. The amounts contained in approved rates were approved and used to fund other applications (such as Toronto Hydro’s 2012-2014 ICM application, the EB-2013-0287 Smart Meter Clearance Application), not this one.

409. **Wireless Forbearance Application: The OEB should approve recovery of the Toronto Hydro’s Wireless Forbearance Application (EB-2013-0234) costs as these costs were incurred for the benefit of ratepayers.** CCC and SIA argue that Toronto Hydro should not be allowed to recover the costs of the Wireless Forbearance Application because these are historical costs that are not covered by a deferral account.⁴⁵⁴ Toronto Hydro submits that these cost should be recovered for policy reasons. The wireless proceeding was brought in the interest, and for the benefit, of ratepayers. The sole purpose of that application was to seek the necessary approvals to allow Toronto Hydro to explore a new potential revenue stream so that would generate net revenues for ratepayers.

410. Given that the application was undertaken for the benefit of ratepayers, and for no other reason, Toronto Hydro believes that the incremental costs of this application should be recovered

⁴⁵² Exhibit 4A, Tab 2, Schedule 17, Appendix A.

⁴⁵³ *Ibid.*

⁴⁵⁴ CCC Argument at page 13; SIA Argument at page 19.

in rates. If those costs are not recovered, then the utility would be forced to absorb them, which would tend to discourage similar applications in the future. As a matter of general policy, Toronto Hydro submits that utilities should be encouraged to bring applications clearly intended to benefit ratepayers.

411. Toronto Hydro observes that shortly following the conclusion of its Wireless Forbearance Application, the OEB began an industry consultation on the issue of whether the model that applies to Toronto Hydro in respect of wireless telecommunications attachments should apply to all LDCs in Ontario.⁴⁵⁵ Toronto Hydro respectfully submits that, in addition to being for the benefit of its ratepayers, its application is demonstrably of assistance to general OEB and provincial policy development on the issue.

3.5.5 Billing, Remittance and Meter Data Management: The program should be funded as requested and proposed reductions in spending should be rejected

412. Energy Probe argues that none of the cost increase for this program between 2014 and 2015 should be approved.⁴⁵⁶ VECC claims that \$3-4 million can be removed in billing costs without impacting customer service.⁴⁵⁷ The OEB should reject both of these positions because Toronto Hydro has fully justified the requested increases.

413. The reason offered for Energy Probe's proposed disallowance is that the description for the cost increases between 2014 and 2015 are unclear except for the increase in postage.⁴⁵⁸ Despite this supposed lack of clarity, Energy Probe did not ask a single interrogatory in this area. Nor did it ask a single cross examination question of Ms. Kirk, the Manager of Customer Care. Toronto Hydro submitted 28 pages of evidence on Customer Care, answered the interrogatories it received in this area and presented the Manager of Customer Care as a witness. On this basis, Toronto Hydro submits that Energy Probe's claim that the evidence is unclear should be given no weight.⁴⁵⁹

⁴⁵⁵ EB-2014-0365, OEB Letter December 11, 2014.

⁴⁵⁶ Energy Probe Argument at pages 47-48.

⁴⁵⁷ VECC Argument at page 34.

⁴⁵⁸ Energy Probe Argument at pages 47-48

⁴⁵⁹ Exhibit 4A, Tab 2, Schedule 13; IR Response 4A-CCC-35.

414. With respect to the postage increase, Energy Probe argues that other Ontario distributors face similar increases during IRM. This argument misses the fact that this is a CIR application that starts with a rebasing year. The fundamental purpose of rebasing is to allow a utility to realign its rates with its costs prior entering the period, now four years, where rates are set by formula. Here, Energy Probe does not dispute that postage costs have increased, it just asks the OEB to ignore this fact when setting rates. As discussed above, this approach is both inconsistent with the RRFE and the notion of a rebasing year, as well as past OEB practice.

415. VECC's sole justification for its recommended \$3-4 million dollar disallowance is "What we find interesting [*sic*] that billing costs continue to increase so dramatically after the implementation in 2011 a new customer information system (CIS)."⁴⁶⁰ Again, VECC did not ask any questions about the relationship between the new CIS system and costs in the Customer Care area, many of which have nothing to do with the CIS system (e.g. Collections, Customer Relationship Management and Communications & Public Affairs). VECC's argument provides no basis for any disallowance, let alone one of the magnitude recommended.

3.5.6 Disaster Preparedness: Energy Probe's challenge to the Disaster Preparedness Program ignores the evidence

416. Energy Probe argues that Toronto Hydro's requested budget for Disaster Preparedness Management is excessive and should be cut from \$2.4 million to \$1 million and specifically recommends that the OEB "should not approve incremental dedicated staffing for the DP Plan."⁴⁶¹ Despite the fact that Energy Probe did not offer any evidence on the appropriate size of Toronto Hydro's Disaster Preparedness function, it has concluded that the requested budget is "a significant overreach."

417. The reasons Energy Probe offers for its proposed 60% cut are that: (1) Toronto Hydro benchmarked the appropriate size of its Disaster Preparedness function against leading U.S. utilities rather than Canadian utilities; (2) Toronto Hydro has failed to demonstrate which other Canadian Utilities have dedicated Disaster Preparedness staffing (as opposed to a Coordinator and including Disaster Preparedness in the job descriptions of existing key staff); (3) Toronto Hydro is already aligned to best practices with respect to the current Incident Management

⁴⁶⁰ VECC Argument at page 34.

⁴⁶¹ Energy Probe Argument at pages 46-47.

System (“IMS”) and Incident Command System (“ICS”) components of the Disaster Preparedness Plan; (4) Toronto Hydro did not hire experts to first prepare/update the Disaster Preparedness Plan and then proceed to address any resulting staffing requirements; and (5) Toronto Hydro has not properly explained what the dedicated Disaster Preparedness employees would do other than planning and exercises and why existing staff cannot perform the function in whole or at least in part.⁴⁶²

418. None of these arguments individually, nor all of them together, support the requested 60% cut. They are not based on testimony given under oath by a qualified expert. In fact, they are not based on evidence at all. They are simply a request that the OEB ignore the actual evidence on this issue in favour of the erroneous submissions by Energy Probe. This request should be denied.

419. Energy Probe did test some of these submissions with the responsible Toronto Hydro witness, but none of that cross-examination is cited in its Argument. The reason is that the Toronto Hydro witness rejected the conclusions that Energy Probe was attempting to draw and corrected the errors that now resurface in Energy Probe’s argument.

420. Mr. Lyberogiannis explained that in developing its Disaster Preparedness function Toronto Hydro selected companies that are widely regarded as industry leaders so that it could adopt industry best practices.⁴⁶³ He also explained that the number of full time disaster preparedness personnel at Consolidated Edison (New York) and Commonwealth Edison (Chicago) ranges between 23 and 33, but Toronto Hydro determined that 8 staff was the appropriate figure for a utility of its size.⁴⁶⁴ Finally he indicated that Toronto Hydro did not rely solely on U.S. companies for its comparison, it also looked at BC Hydro, which had 10 full time disaster preparedness personnel.⁴⁶⁵

421. In short, every one of the issues that Energy Probe put to the Toronto Hydro witness generated a response that contradicts Energy Probe’s argument here. Yet, Energy Probe has

⁴⁶² *Ibid.*

⁴⁶³ OH Transcript, Volume 5 (February 24, 2015) at page 103, line 7-13.

⁴⁶⁴ OH Transcript, Volume 5 (February 24, 2015) at page 103, line 14-28.

⁴⁶⁵ OH Transcript, Volume 5 (February 24, 2015) at page 104, line 10-26.

determined to forge ahead, advancing its preconceptions as fact and ignoring the sworn evidence it elicited on cross examination.

SECTION 4 – RRFE COMPLIANCE

4.1 Overview of Reply Argument on RRFE Compliance

422. In this section, we address parties' arguments in relation to Toronto Hydro's compliance with the RRFE as well as Chapters 2 and 5 of the OEB's Filing Requirements for Electricity Distribution Rate applications issued July 17, 2013 (Filing Requirements).

423. Also included in this Chapter is Toronto Hydro's reply to parties' complaints relating to (1) PSE's independent, expert econometric total cost benchmarking evidence; and (2) Toronto Hydro's customer engagement efforts. Lastly, we discuss any new tracking and performance measures proposed by the parties (which, in most cases appear for the first time in their arguments).

424. For the reasons that follow and those set out in its Argument-in-Chief, Toronto Hydro continues to submit that:

- the application, including the proposed rate-setting framework, complies with the RRFE and all related OEB guidance;
- PSE's econometric benchmarking evidence, along with the extensive evidentiary record submitted by Toronto Hydro, supports the reasonableness of the utility's proposed spending;
- Toronto Hydro engaged appropriately with its customers regarding the utility's capital plans including through the engagement work undertaken by Innovative Research Group and that these customers accept the need for the proposed capital plan; and that,
- the measures proposed by Toronto Hydro are appropriate and sufficient to provide meaningful review and tracking of Toronto Hydro's performance throughout the CIR term.

4.2 Toronto Hydro has complied with the RRFE

425. In preparing its application, Toronto Hydro considered and applied the RRFE and the Filing Guidelines. As the OEB outlined in the RRFE, CIR is appropriate for distributors with “significantly large multi-year or highly variable investment commitments with relatively certain timing and level of associated expenditures.”⁴⁶⁶ That is Toronto Hydro.

426. In the main, parties accept that Toronto Hydro has complied with the RRFE. For example, while Toronto Hydro disagrees with much of SEC’s submission, it does agree with the following: “to their [its] credit, the Applicant has sought to implement the spirit, as well as the letter, of the RRFE.”⁴⁶⁷

427. To the same effect, SIA says:

Generally, the SIA is supportive of THESL’s interpretation of the RRFE guidelines, and believes its evidence presentation and proposed rate setting methodology largely satisfy the Board’s RRFE requirements, and specifically satisfy the particular elements relevant to the CIR rate setting option.⁴⁶⁸

428. OEB Staff says, “Toronto Hydro’s proposed rate-setting model conforms in general terms with the framework outlined for Custom IR application in the RRFE Report with one exception [discussed below].”⁴⁶⁹

4.2.1 Complaints relating to RRFE compliance are without merit

429. To the extent some parties complain about Toronto Hydro’s compliance with the RRFE, their complaints are fundamentally misplaced. In the main, the complaints have nothing to do with whether the form or result of Toronto Hydro’s application complies with the RRFE. Indeed, they are not really complaints about *compliance* with the RRFE at all. Rather, they are complaints *about* the RRFE. What these parties are saying is that they do not like the Custom IR form of application because it is different from the 4th Generation IRM approach. They are, effectively, arguing against the option of a CIR application.

⁴⁶⁶ Report of the Board, Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach (October 18, 2012) at page 19.

⁴⁶⁷ SEC Argument, at page 5, para 0.2.7

⁴⁶⁸ SIA Argument, at page 3

⁴⁶⁹ OEB Staff Argument, at page 6

430. BOMA says that Toronto Hydro has failed to comply with the RRFE in part because PEG disagrees with PSE's benchmarking work and PEG has already established a standard approach to benchmarking within 4th Generation IRM.⁴⁷⁰ BOMA also complains that Toronto Hydro has failed to comply with the RRFE because, "in that [the application] treats OM&A and capital expenditures differently."⁴⁷¹ In a nutshell, BOMA complains that unlike OM&A, capital is not is subject to "a conventional fourth generation IR (i-x) index."⁴⁷²

431. Energy Probe makes essentially the same argument as BOMA. It says that the OEB should adopted all of the "PEG proposed adjustments to the proposed THESL CIR Formula. Otherwise comparability to 4GIRM THESL will be lost..."⁴⁷³

432. For its part, CCC says that Toronto Hydro has failed to comply for no other reason than because, in its' view, the rates proposed in the application are "too high."⁴⁷⁴

433. None of these criticisms goes to whether the application is compliant with the RRFE, and each should be rejected by the OEB. Toronto Hydro addresses the matter of consideration for rate impacts throughout its Application, its Argument-in-Chief and this Reply Argument.

434. With respect, the availability of CIR applications is a matter of settled policy. With the RRFE, the OEB took an important step in recognizing that electricity distributors with large multi-year capital needs may require somewhat different regulatory treatment than what standard IRM provides. To this end, it provided those distributors with the option of filing something other than a standard IRM application: this "other option" is a CIR application. The essence of CIR is that it is intended to address utilities with large and variable capital needs, and so by definition will differ from a fourth generation IRM application regarding at least the capital component. As a utility with large, multi-year capital needs, Toronto Hydro has followed the OEB's RRFE guidance and brought forward a CIR application. In that context, it is hardly

⁴⁷⁰ BOMA Argument, at page 20.

⁴⁷¹ BOMA Argument, at page 3.

⁴⁷² BOMA Argument, at page 3

⁴⁷³ EP Argument, at page 32

⁴⁷⁴ CCC Argument, at page 3.

surprising that Toronto Hydro has proposed to fund OM&A and capital at different levels (though it has nevertheless proposed a comprehensive custom index to address both).⁴⁷⁵

435. Further, in preparing and proposing its CIR plan, Toronto Hydro adopted much of the 4th Generation IRM approach and principles.⁴⁷⁶ Toronto Hydro's is the only custom application received by the OEB to date in which the applicant has proposed a price cap index in relation to OM&A. The custom PCI formula further reflects the OEB's productivity and inflation factors.⁴⁷⁷ The proposed stretch factor is "custom" only in the sense that it is based upon PSE's econometric benchmarking work but the factor itself follows the OEB's policy and demarcation points. The application further adopts the OEB's standard treatment of revenue offsets, its approach to deferral and variance accounts and Z-factor criteria.⁴⁷⁸

436. Moreover, consistent with RRFE guidance, in addition to PSE's benchmarking reports, Toronto Hydro filed evidence reviewing the utility's past productivity achievements;⁴⁷⁹ examples of current and anticipated productivity/efficiency plans and initiatives for all major functional areas, as well as the utility's corporate culture of productivity;⁴⁸⁰ and a benchmarking study undertaken by UMS to assess Toronto Hydro's productivity across all of its major functions against utilities in Canada and the US.⁴⁸¹

437. Where Toronto Hydro departed from 4th Generation IRM, it did so only to the extent that was contemplated by the OEB – that is, to address the level of capital investment that the utility needs to maintain its system and serve its customers in accordance with good utility practice – and as required in order for the utility to satisfy the RRFE outcomes.⁴⁸²

438. As discussed throughout the evidence, the Argument-in-Chief and this Reply Argument, the application is aligned with customer expectations, containing a capital plan aimed specifically at serving their service-level expectations and the core operational needs of the

⁴⁷⁵ Exhibit 1B, Tab 2, Schedule 3, at page 14.

⁴⁷⁶ Exhibit 1B, Tab 2, Schedule 3, at page 12.

⁴⁷⁷ Exhibit 1B, Tab 2, Schedule 3, at page 12.

⁴⁷⁸ Exhibit 1B, Tab 2, Schedule 3, at page 15-18.

⁴⁷⁹ Exhibit 1B, Tab 2, Schedule 5, Appendix A at page 5.

⁴⁸⁰ Exhibit 1B, Tab 2, Schedule 5 at pages 12, 17-18.

⁴⁸¹ IR Response 1B-SEC-8, and Appendix A.

⁴⁸² Exhibit 1B, Tab 2, Schedule 3, at page 15.

utility, such as asset management, maintenance, and staffing requirements, in an efficient and productive manner.⁴⁸³ Further, the investments reflected in the application are what will enable Toronto Hydro to respond to mandated service requirements, as well as public policy requirements such as regional planning and the connection of distributed generation and renewables.⁴⁸⁴ Finally, the application includes upfront sharing of benefits with ratepayers, and challenges the utility to continue to find savings throughout the term of the plan (through the operation of the PCI formula) while at the same time ensuring that Toronto Hydro's financial viability will be maintained.⁴⁸⁵

439. For its part, OEB Staff, despite its general support, identifies “one exception” to Toronto Hydro’s compliance with the RRFE. It argues that Toronto Hydro ought to have filed a five year OM&A forecast as part of the application. Staff says that, in its view, this is required by the RRFE report.⁴⁸⁶ Toronto Hydro disagrees.

440. In relation to OM&A, Toronto Hydro’s application is governed by a price cap index that is substantially aligned with the OEB’s 4th Generation IRM framework. Indeed, with the exception of the value of the stretch factor, Toronto Hydro proposes to adopt 4th Generation IRM for OM&A.

441. The reference in the RRFE report to five year forecasts relied upon by OEB Staff follows shortly after the passage cited above that “Custom IR method will be most appropriate for distributors with significantly large multi-year or highly variable investment commitments that exceed historical levels.”⁴⁸⁷ Put together, the RRFE contemplates the need for forecasts in relation capital spending. What is not required are five year forecasts where, as here, OM&A is governed by a 4th Generation IRM price cap index.

442. This conclusion is reinforced by the Filing Requirements. Electricity distributors that file under 4th Generation IRM are not required to file any forecast of OM&A spending beyond the

⁴⁸³ For example, Exhibit 1A, Tab 2, Schedule 1.

⁴⁸⁴ Exhibit 1A, Tab 2, Schedule 1, at page 10.

⁴⁸⁵ Exhibit 1B, Tab 2, Schedule 5 at page 14.

⁴⁸⁶ OEB Staff Submission, at page 36.

⁴⁸⁷ Report of the Board - Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach (October 18, 2012), at page 19.

test year.⁴⁸⁸ As Toronto Hydro has effectively adopted IRM for OM&A, no different requirement should apply here. Forecasts of specific spending beyond the 2015 test year would provide no value to the OEB or parties, just as they provide no value in the 4th Generation IRM rate-setting context. The relevant fact is that regardless of any forecast, the test period amount in combination with the price cap index will determine that portion of Toronto Hydro's OM&A related revenue requirement.

443. This is so despite the fact that the evidence demonstrates that Toronto Hydro's actual OM&A cost pressures year-over-year are in the range of 2-3%⁴⁸⁹ as compared with the proposed formula which is expected to provide Toronto Hydro with funding in the range of 1.6% year-over-year.⁴⁹⁰

444. VECC's position in relation to RRFE compliance is difficult to discern. VECC says that Toronto Hydro's DSP "is forward looking and is integrated in the sense that it provides for setting distribution in accordance with the requirements of the RRFE..."⁴⁹¹ VECC also says, in discussing the rate framework, that:

The reason we support, with qualifications, Toronto Hydro's proposal because it is, in design, a true custom incentive rate plan. It delinks cost of capital and load and revenue forecasts from rates. It provides for the setting of rates that the utility reap benefits [if] it is able to operate more efficiently, while – capital issues aside – keeping rates below inflation.⁴⁹²

445. Overall, VECC's main complaint appears to be that the "risks associated with the DSP fall disproportionately on ratepayers."⁴⁹³ Toronto Hydro disagrees. This is less a complaint about RRFE compliance in general terms and more a question of the particular components of the rate framework and reporting mechanism. VECC's proposals in relation to these issues are dealt with elsewhere in this reply argument.⁴⁹⁴

⁴⁸⁸ OEB Filing Requirements for Electricity Distribution Applications (July 18, 2014), Section 2.4.2E, at page 11.

⁴⁸⁹ Exhibit 4A, Tab 1, Schedule 1 at pages 10-11.

⁴⁹⁰ 1.6% is based on the OEB's current inflation factor, which is subject to annual update.

⁴⁹¹ VECC Argument, at page 3.

⁴⁹² VECC Argument, at page 12.

⁴⁹³ VECC Argument, at page 3.

⁴⁹⁴ Reply Argument, section 5.3.

4.3 Benchmarking

446. A significant portion of the hearing was dedicated to the issue of benchmarking. This is reflected in parties' arguments. In broad terms, two issues arise. First, what is the proper role of benchmarking evidence and how should it be used by the OEB in this case. This is SEC's issue. Fundamentally, SEC argues (wrongly) that the OEB should fix rates for the CIR term based entirely a predicted benchmarking trendline, without any regard for Toronto Hydro's unique and pressing capital needs.⁴⁹⁵ Second, do parties' specific criticisms of PSE's benchmarking evidence have merit. They do not.

447. Following a brief overview of Toronto Hydro's benchmarking evidence, each of these issues is discussed in turn below.

4.4 Overview of Toronto Hydro's Benchmarking evidence

448. Toronto Hydro's application features a comprehensive total cost and reliability benchmarking study prepared by PSE, a recognized expert in the field of utility performance measurement.⁴⁹⁶ PSE also prepared a reply report which responds, and makes necessary adjustments to the report filed by PEG on behalf of the OEB Staff.⁴⁹⁷

449. Contrary to OEB Staff's argument,⁴⁹⁸ PSE grounded its total cost benchmarking work in the OEB's own approach and methods. As Mr. Fenrick testified, PSE used an econometric approach based on sophisticated translogarithmic (translog) modelling that is equivalent to the OEB's approach in the way it determines expected efficient cost levels for a utility with Toronto Hydro's business conditions.⁴⁹⁹

450. PSE compared Toronto Hydro against both a combined US/Ontario sample and a US only sample. In doing so, PSE captured the effects of operating in Ontario's economic and

⁴⁹⁵ SEC Argument, at page 6, Section 0.2.14

⁴⁹⁶ Exhibit 1B, Tab 2, Schedule 5, Appendix B.

⁴⁹⁷ Exhibit 1B, Tab 2, Schedule 5, Appendix C.

⁴⁹⁸ OEB Staff Argument, at page 10.

⁴⁹⁹ OH Transcript, Volume 2 (February 19, 2015) at pages 10-29; Exhibit 1B, Tab 2, Schedule 5, Appendix B at pages 11, 36, 40; Exhibit 1B, Tab 2, Schedule 5, Appendix C at pages 4-6, 11, 15.

regulatory environment as well as other important business conditions Toronto Hydro shares with dense, large, and mature urban utilities.⁵⁰⁰

451. In Toronto Hydro's submission, PSE's total cost benchmarking evidence demonstrates the reasonableness of the utility's past and projected cost levels by demonstrating that they are within +/- 10% of the benchmark. This evidence empirically supports the assignment of the middle (0.3%) stretch factor.⁵⁰¹

452. The PSE evidence, prepared using industry best practice, confirms, at a 99% confidence level, that serving a dense urban core is a major cost driver that distinguishes Toronto Hydro from other Ontario distributors, appropriately placing it into the same cohort as major North American urban centres like New York and Chicago.⁵⁰²

453. Even following conservative cost definition adjustments (e.g. including \$50 million in annual CDM expenditures to Toronto Hydro's costs), the utility's benchmarking results over the 2015-2019 timeframe remain within the range of the OEB's middle efficiency cohort.⁵⁰³

454. Not to be lost in the focus on PSE and PEG are the further benchmarking studies filed by Toronto Hydro. These are listed in the Interrogatory response to 1B-SEC-8.⁵⁰⁴ The studies received almost no attention at the oral hearing, and are similarly ignored in parties' arguments. They should not be. These reports paint a comprehensive picture of strong performance and commitment to continuous improvement, and which compares well to other utilities. The UMS report, referred to above, is a good example.⁵⁰⁵ UMS was retained by Toronto Hydro to conduct a utility-wide productivity benchmarking study, comparing Toronto Hydro's total and department-level costs, business processes and service levels to other Canadian and US distribution utilities. As UMS concluded, its study:

[F]ound Toronto Hydro to be among the more competent utilities in the industry, noting that a number of recommendations were aimed at helping Toronto Hydro

⁵⁰⁰ Exhibit 1B, Tab 2, Schedule 5, Appendix B at pages 3-4.

⁵⁰¹ Exhibit 1B, Tab 2, Schedule 5, Appendix C at pages 11, 15.

⁵⁰² Exhibit 1B, Tab 2, Schedule 5, Appendix C at page 6.

⁵⁰³ Exhibit 1B, Tab 2, Schedule 5, Appendix C at page 11, Table 2.

⁵⁰⁴ See the complete list of studies in the IR Response 1B-SEC-8, at pages 1-2.

⁵⁰⁵ IR Response 1B-SEC-8, Appendix A.

achieve the “Best in Class” status among its peers. In particular, UMS noted that Toronto Hydro’s capital investment portfolio reflects balance of a broad range of factors included in an overall Grid Modernization strategy, the utility’s maintenance practices reflect a balance between interval, condition, risk and criticality-based approaches with “run-to-failure” part of an overall asset management strategy, and that maintenance of assets is based on analysis of risk, cost and service level to optimize financial and commercial performance. In the consultant’s opinion each of these characteristics are reflective of a utility industry leader.⁵⁰⁶

455. SEC says that Toronto Hydro wants to “de-emphasize benchmarking”.⁵⁰⁷ SEC also says that Toronto Hydro’s cost of service and benchmarking evidence conflict.⁵⁰⁸ Both propositions are false. As discussed above, Toronto Hydro has filed in this application no fewer than 15 benchmark reports ranging from PSE’s total costs econometric benchmarking reports to more specific, topical reports (e.g. the Towers Watson HR compensation report).⁵⁰⁹ Collectively, and in conjunction with the thousands of pages of other evidence adduced in the application, these reports support the reasonableness of Toronto Hydro’s requests.

4.5 Benchmarking is an important part of the application, but it is not the only part

4.5.1 SEC’s invitation to disregard the evidentiary record should be rejected

456. Benchmarking is an important part of any application, CIR or otherwise. But not the only part. SEC’s suggestion, supported by AMPCO and CCC, that the OEB set rates based on a rate of increase that “is exactly equal to the forecast increase in the US cost benchmark for the same period.” is without merit, contrary to policy, contrary to the law relating to just and reasonable rates, and disregards substantially all of the evidentiary record in his case.⁵¹⁰ It should be rejected by the OEB.

457. The RRFE Report is clear on the proper use of benchmarking evidence. It states that a distributor’s rate trend will be set on the basis of a combination of: (1) a distributor’s cost,

⁵⁰⁶ IR Response 1B-SEC-8, Appendix A, at page 1.

⁵⁰⁷ SEC Argument, at page 24, para 1.7.5.

⁵⁰⁸ SEC Argument, at page 5, para 0.2.8.

⁵⁰⁹ Exhibit 4A, Tab 4, Schedule 6.

⁵¹⁰ SEC Argument, at page 12, para 0.3.3.

inflation and productivity forecasts; (2) the OEB's productivity analysis; and, (3) benchmarking to assess the reasonableness of a distributor's forecasts.⁵¹¹

458. More recently, in its decision on HONI's Custom IR Application, the OEB held that it, "uses benchmarking as a tool to focus and prioritize its attention on certain costs. Benchmarking increases the efficiency of regulatory oversight. It does not replace the need for substantiating evidence in support of spending levels."⁵¹²

459. The OEB's conclusion in HONI is consistent with the test for "just and reasonable" rates. The meaning of just and reasonable has long been established at law. As the Supreme Court of Canada held in 1929, just and reasonable rates are "rates, which, under the circumstances, would be fair to the consumer on the one hand, and which, on the other hand, would secure to the company a fair return for the capital invested."⁵¹³

460. Fair compensation to the utility comprises two legal entitlements: (1) the right to recover all prudently incurred costs; and (2) the right to a fair return on invested capital. Fairness to the consumer is met by ensuring that the utility recovers no more than these two entitlements.⁵¹⁴ This is the balancing of interests – the "regulatory compact" – referred to in the case law.

461. The simple point here is that only by having regard to the totality of the evidence can the OEB ensure that rates are just and reasonable. Clearly, this includes the thousands of pages of capital related evidence which fully explains Toronto Hydro's pressing, and substantial capital investment needs.⁵¹⁵

462. SEC's myopic focus on benchmarking is best reflected in its para. 1.17.19. There, it says: "Any distributor that seeks greater increases in revenue requirement or rates than the norm should be in a position to file benchmarking evidence consistent with those greater levels. If they

⁵¹¹ Report of the Board, Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach (October 18, 2012), at page 13.

⁵¹² EB-2013-0416 Decision, at p. 24

⁵¹³ *Northwestern Utilities Ltd. v. Edmonton (City)*, [1929] S.C.R. 186 at 192-193.

⁵¹⁴ *Enbridge Gas Distribution Inc. v. Ontario Energy Board*, [2006] O.J. No. 1355 at para. 8 (C.A.); *Advocacy Centre for Tenants-Ontario v. Ontario Energy Board*, [2008] O.J. No. 1970 at paras. 19-20 (Div. Ct.); *TransCanada Pipelines Limited v. National Energy Board*, 2004 FCA 149 at paras. 13, 33-36.

⁵¹⁵ Exhibit 2B and associated Interrogatory Responses.

cannot, then in our submission their additional spending requirements are *prima facie* not valid. If the additional spending is reasonable, then proper benchmarking should bear that out. If it does not, then there is a legitimate question as to reasonableness.”⁵¹⁶

463. In other words, in SEC’s view (at least in this case), the only thing that justifies a departure from the median benchmarking result is more cost benchmarking.

464. Not only is SEC’s position contrary to OEB policy and recent decisions, the example it uses to bolster its position runs directly contrary to the evidentiary record. At para. 1.7.17, SEC says that it, “would expect a utility in that situation [required to spend money on infrastructure] to provide vintage information as to the age and cost of their assets, and benchmark that data to their peer group.”⁵¹⁷

465. There is no factual basis for SEC’s “expectation”. On the contrary, SEC was told, in cross-examination, that this sort of vintage information could not be adduced.

MR. SHEPHERD: And then the third is aging infrastructure, and there are ways to test that, right? Test aging infrastructure? You can look at -- you can do a vintage analysis of the utilities, right?

MR. FENRICK: How are you suggesting doing that?

MR. SHEPHERD: In the same way as you do depreciation analysis, you do a vintage analysis, where you look at the average age of cost of assets and the shape of the age distribution. It's a common thing that's done, right?

MR. FENRICK: Right. But getting that data for the US utilities or other utilities, to me, I don't believe that is publicly available information to do any sort of benchmarking analysis on.⁵¹⁸

466. Tellingly, SEC did not ask Dr. Kauffman whether asset vintage information was publicly available and it did not, otherwise, suggest that it was, either in the PEG report, interrogatories or oral evidence.

⁵¹⁶ SEC Argument, at page 26.

⁵¹⁷ SEC Argument, at page 26.

⁵¹⁸ OH Transcript, Volume 3 (February 20, 2016, at pages 16-17, lines 19-3.

467. If conducting a vintage analysis were feasible, it would provide a variable to capture the different investment requirements of different utilities based on the age profile of their assets, such that companies with needs like Toronto Hydro would not be unfairly treated by the benchmarking analysis.

468. Unfortunately, as noted, the data required to incorporate the issue of aging infrastructure into a benchmarking analysis is not available, particularly with respect to the US utility dataset. Without the data to support the incorporation of an “aging infrastructure needs” variable, it is entirely expected that utilities required to make substantial investments in order to renew aging infrastructure would benchmark poorly compared to the average, benchmark utility as a result of those investment needs, even if the utility were otherwise operating efficiently (as is indicated by the various other benchmarking data put forward by Toronto Hydro in this proceeding).

469. SEC’s position is also contrary to its own earlier submission in the *Enbridge* case. There, and reflecting our submission above, SEC correctly said:

Neither method based solely on forecasts, nor a method based solely on statistical analysis, will produce just and reasonable rates. The Board has advanced well beyond this simplistic approach. Custom IR uses multi-year forecasts, but requires benchmarking and analysis against inflation and productivity factors, or it doesn't work.⁵¹⁹

4.5.2 SEC’s focus on the rate of change of benchmark costs is misplaced

470. Compounding SEC’s benchmarking error is its further focus on the rate at which Toronto Hydro’s costs are changing relative to the benchmark US utility.⁵²⁰ SEC’s arguments in this respect are without merit.

471. First, the fact that Toronto Hydro’s cost are anticipated to increase faster than the US benchmark utility over the CIR term is entirely consistent with the main concern expressed by Toronto Hydro in this application; namely, its need to invest to replace aging infrastructure. The benchmark is an average utility. That is not Toronto Hydro’s situation. It has aging infrastructure that must be replaced.⁵²¹ In the result, there is nothing wrong about the fact that

⁵¹⁹ EB-2012-0459, SEC Argument, at page 27, para 3.7.3.

⁵²⁰ SEC Argument, at page 10, para 0.2.23.

⁵²¹ Exhibit 2B, Section E6, Chapters 1-22.

Toronto Hydro's costs are increasing faster than the benchmark utility; it would be surprising if they were not. Benchmarking evidence alone will not tell the OEB anything about the need to address Toronto Hydro's backlog of aging assets or the cost of doing so.

472. Second, SEC's argument again runs contrary to OEB policy. That policy is to set the stretch factor based on a point in time assessment of a utility's costs relative to the benchmark. As Dr. Kaufmann testified:

MR. SMITH: And Mr. Shepherd was putting to the witnesses, I believe it is, table 2 from the PSE reply report. Do you recall that?

DR. KAUFMANN: Vaguely, yes.

MR. SMITH: It will come back to you when I say this. There were a series of questions about the rate of change.

DR. KAUFMANN: Yes.

MR. SMITH: You recall that?

DR. KAUFMANN: I do.

MR. SMITH: And I'm correct, sir, that the Board's cohort designation is not in any way based upon the rate of historical change in cost performance, is it?

DR. KAUFMANN: The cohort designation is not, that's correct.⁵²²

473. Finally, SEC's argument overlooks entirely the fact that Toronto Hydro has historically been a superior cost performer, only moving to average throughout the CIR term. It is expected by PSE to remain average (within 10%) throughout the CIR term.⁵²³ The implication of SEC's argument is to punish Toronto Hydro for its superior historic total performance.

4.6 No Merit to Specific Criticisms of PSE Benchmarking Evidence

474. To varying extents, most parties complain about PSE's benchmarking work. Their specific complaints are discussed and rebutted in detail below. In broad terms, the complaints begin from a false premise (Toronto Hydro has historically been a below average cost performer), then proceed to unfairly malign the quality of PSE's work relative to PEG,

⁵²² OH Transcript, Volume 3 (February 20, 2015), at page 161, lines 15-17.

⁵²³ Exhibit 1B, Tab 2, Schedule 5, Appendix C, at page 11.

exaggerate the material differences between the two experts, and end by preferring an analytical approach (PEG's) that plainly departs from best practice.

4.6.1 Benchmarking and productivity evidence confirms Toronto Hydro as a historically superior cost performer

475. BOMA and VECC sprinkle throughout their arguments the claim that Toronto Hydro has historically been an inferior cost performer.⁵²⁴ The evidence adduced in this case debunks that widely-held myth. As shown in Table 2 of the PSE reply report, Toronto Hydro was a superior cost performer in every year from 2002 to 2012, becoming average only in 2013 (and remaining so throughout the CIR term). Even PEG's results reveal Toronto Hydro to be a superior cost performer over the historical period.⁵²⁵

476. Toronto Hydro's past productivity evidence reinforces the benchmarking conclusions. Few parties cross-examined in relation to this evidence. It includes a review and quantification of Toronto Hydro's significant productivity accomplishments over the history of the utility's amalgamated existence. Examples of areas where Toronto Hydro and ratepayers have already benefitted from, or can expect to benefit from further savings and efficiencies include the following:

- third-party warehouse outsourcing that drives both operating and capital efficiencies;⁵²⁶
- a new warehouse management software that saves time and improves order accuracy;⁵²⁷
- automating low-value supply ordering and dispensation activities that allows staff to focus on value-added activities;⁵²⁸

⁵²⁴ For example, BOMA Argument at pages 22-23; VECC Argument, at page 10.

⁵²⁵ Exhibit 1B, Tab 2, Schedule 5, Appendix C Table 2 at page 11, OH Undertaking J3.7.1 (PEG).

⁵²⁶ Exhibit 4A, Tab 2, Schedule 12, at pages 9-12

⁵²⁷ Exhibit 4A, Tab 2, Schedule 12, at page 2

⁵²⁸ Exhibit 4A, Tab 2, Schedule 12, at page 14

- the Supplier Alliance program that continuously drives improvements in the timeliness and accuracy of materials and supplies delivery;⁵²⁹
- the vehicle reduction program and a variety of externally procured vehicle maintenance activities to reduce costs and improve service levels;⁵³⁰
- IT server virtualization to improve the density and use of available computer resources and reduce software licensing costs;⁵³¹
- outsourcing of routine contact centre and clerical tasks and the expansion of online self-service tools to manage customer care expenditures;⁵³²
- consolidating facilities management contracts to streamline administrative activities, improve service quality and obtain more competitive prices for services;⁵³³ and
- increasingly sophisticated activity-based performance measurement;⁵³⁴

4.6.2 No merit to suggestion that PSE made “mistakes”

477. OEB Staff, SEC, BOMA and VECC all suggest that PSE made “mistakes” in its analysis and that PEG did not.⁵³⁵ There are, at least, three responses to this complaint. First, the suggestion is simply wrong. Second, it fails to recognize that PSE, to be helpful to the OEB, focused its reply report on areas of material disagreement with PEG. In other areas, PSE adopted PEG’s approach as a result of the iterative process that took place during the proceeding. But PSE’s choice should not be confused with agreement or correction of an earlier error. Third, the complaint is misguided in that it fails to appreciate that the development of a robust econometric

⁵²⁹ Exhibit 4A, Tab 2, Schedule 12, at page 4

⁵³⁰ Exhibit 4A, Tab 2, Schedule 10, at page 5

⁵³¹ Exhibit 4A, Tab 2, Schedule 16, at page 14

⁵³² Exhibit 4A, Tab 2, Schedule 13, at page 22

⁵³³ Exhibit 4A, Tab 2, Schedule 11, at page 6

⁵³⁴ Exhibit 1B Tab 2, Schedule 5, at pages 24-25.

⁵³⁵ Parties making this submission generally overlook that PEG filed a “correction” to its report not long after it was initially filed.

benchmarking model, like PSE's, is necessarily an iterative process which should be encouraged by the OEB and parties alike. As the PSE Reply report says:

As the experience of incentive regulation in Ontario has shown, benchmarking tends to be an iterative process. Putting together data sets, explanatory variables, and models takes time and requires input from multiple stakeholders. Throughout this process, benchmarking evaluations tend to become more accurate, comprehensive, and trustworthy, resulting in improved evidence to better inform decisions.⁵³⁶

478. OEB Staff points to 6 errors it says PEG corrected.⁵³⁷ Each of these alleged "errors" is discussed below.

- (i) "Beginning the analysis with THESL's benchmarking-based costs measure rather than the TFP-based cost measure PSE incorrectly selected."⁵³⁸ This alleged "error" is a distraction; it amounts to nothing more than an attempt (beginning with the PEG report) to create the appearance of confusion and disagreement through the use of labeling where very little, if any, of either exists in substance.

The only difference between the two measures is in the initial treatment of contribution in aid of construction (CIAC) costs, smart meter and high voltage transformer costs. Both PSE and PEG made adjustments. In the end, they arrived at the same conclusion.

The risk of confusion is so great that it catches OEB Staff. As set out in item (v) below, Staff suggests that PSE failed to exclude CIAC costs.⁵³⁹ It did not. None of the three expert reports, the initial PSE report, the PEG report or the PSE reply report, include these costs.

In the same vein, there is no merit to SEC's related criticism (again echoing PEG's report) that there is no value in PSE's Ontario benchmarking (the combined dataset), because PSE selected the TFP-based cost measure for THESL

⁵³⁶ Exhibit 1B, Tab 2 Schedule 5, Appendix C, at page 4.

⁵³⁷ OEB Staff Argument, at page 11, footnote 10.

⁵³⁸ *Ibid.*

⁵³⁹ *Ibid.*

while the Ontario distributors were intentionally benchmarked using a different, benchmarking-based cost measure.⁵⁴⁰ On the contrary, as PSE explained, it used the same cost definition for Toronto Hydro as it did for the rest of the Ontario distributors.⁵⁴¹

In the result, and as discussed further below, the only areas of real disagreement relate to the urban core variable, the treatment of CDM costs and the capital cost escalator.⁵⁴²

- (ii) [Not] “appropriately controlling for mergers”.⁵⁴³ In its initial report, PSE included all US utilities for which it had data. PEG, on the other hand, excluded 7 utilities which had earlier gone through a merger. It took this approach notwithstanding its own stated practice of aggregating the results of merged utilities and its admission in answer to an interrogatory that it failed to conduct any analysis as to whether mergers actually affect utility results.⁵⁴⁴ In the result, given the immateriality of the issue, PSE simply agreed to exclude the 7 utilities in its reply report.
- (iii) Not, “excluding the cost of bad debt for US utilities.”⁵⁴⁵ In its reply report PSE agreed that costs associated with bad debt should be removed from the US data set.⁵⁴⁶ This was less a correction than a function of the iterative process: PSE was not aware that bad debt had been excluded from the Ontario data in the 4th Generation IR model.⁵⁴⁷

⁵⁴⁰ SEC Argument, at page 8, para 0.2.20.

⁵⁴¹ OH Transcript, Volume 2 (February 19, 2015), at page 18, lines 1-8.

⁵⁴² PSE agreed to smart meters and high voltage not because PEG’s adjustment was correct, but in an attempt to narrow the scope of the issues for the discussion at the Oral Hearing.

⁵⁴³ OEB Staff Argument, at page 11, footnote 10.

⁵⁴⁴ IR Response 1-THESL-26 (PEG).

⁵⁴⁵ OEB Staff Argument, at page 11, footnote 10.

⁵⁴⁶ Exhibit 1B, Tab 2, Schedule 5, Appendix C, at pages 4-5.

⁵⁴⁷ This result is hardly surprising. As the OEB will be aware, there is currently an OEB Staff initiated working group, whose mandate is to decipher the cost definition used in PEG’s 4GIRM model sufficiently to enable distributors to understand the results.

The real error in relation to this issue was made by PEG. Notwithstanding its comment that bad debt should be removed from the US data set it failed – at least initially – to remove Toronto Hydro’s own forecast bad debt costs for the period 2013-2019.⁵⁴⁸ When confronted with this issue in interrogatories, PEG maintained: (1) that it had “implicitly” removed Toronto Hydro’s forecast bad debt costs and (2) that had these costs been explicitly excluded Toronto Hydro’s benchmarking results would likely have been worse.⁵⁴⁹ Both propositions were proven wrong. Bad debt costs had not been excluded and when, ultimately, they were and cost comparability achieved, Toronto Hydro’s benchmarking performance improved.⁵⁵⁰

- (iv) Not “eliminating customer service and information costs (CIS)” from the US data set.⁵⁵¹ This is not an error but rather one of the few remaining areas of dispute between PSE and PEG. It is discussed below.
- (v) Not eliminating CIAC costs. As set out in item (i) this statement is simply wrong. In both its initial and reply reports PSE’s cost definitions excluded CIAC costs.
- (vi) Not “controlling for high voltage expenses”. This is another example of form over substance in relation to an immaterial issue. As set out above, PEG began its review by reference to the benchmark-based cost measure which excludes Toronto Hydro’s high voltage expenses.⁵⁵² PSE initially included these costs because they are used in the TFP-based cost definition. In PSE’s view, including these costs created a higher degree of cost comparability to the U.S. data relative to the benchmark-based cost definition.⁵⁵³ In the result, given the immateriality of the issue, PSE simply agreed not to dispute the point in its reply report and excluded these costs.

⁵⁴⁸ Exhibit 1B, Tab 2, Schedule 5, Appendix C, at page 5.

⁵⁴⁹ IR Response 1-THESL-23(a) at page 27 (PEG).

⁵⁵⁰ OH Undertaking J3.5 (PEG).

⁵⁵¹ OEB Staff Argument, at page 11, footnote 10.

⁵⁵² Except PEG elected to exclude CIAC costs which are typically included.

⁵⁵³ OH Transcript Volume 2 (February 19, 2015), at page 32, lines 1-7.

479. SEC claims that the PSE study, was, “apparently designed to show that Toronto Hydro is not as bad on costs as they appear...”⁵⁵⁴ Here again, the “example” relied upon by SEC demonstrates the hollow nature of its claim. SEC says, “an excellent example is the unwillingness to show the PSE results for Ontario only...”⁵⁵⁵ The evidence, which SEC fails to refer to in its argument on this point, is as follows:

MR. SHEPHERD: Okay. Why didn't you do Ontario alone?

MR. FENRICK: The reasons why we didn't do Ontario alone were kind of put forth in our original report, how the Ontario -- the Ontario industry is certainly not comparable, or does not encompass Toronto Hydro's conditions, most notably number of customers, which is a huge driver of cost, the urban characteristics.

Furthermore, you know, the Ontario data set has already been vetted in the fourth-generation IR proceeding, and frankly there's not much more that can be done with that data set because you can't include an urban variable. You can't have -- you can't add a bunch of distributors that have the same size and characteristics to that data set, unfortunately.

So there is kind of no way forward as far as an accurate -- performing an accurate, trustworthy benchmarking comparison to Toronto Hydro using the Ontario data set.

MR. SHEPHERD: Are you suggesting that the Ontario fourth generation comparison is not done properly, or just is not applicable to Toronto Hydro?

MR. FENRICK: As we said in the original report, the fourth-generation IR model is perfectly appropriate for the vast majority of distributors.

It only is not applicable or not -- does not portray an accurate performance evaluation for a large-type utility like Toronto Hydro with urban characteristics. That's an extreme outlier within the sample.

.....

MR. SHEPHERD: I'm a little confused. Are you saying that when you ran the combined US/Ontario data set and produced some results, and you then rank the - only the Ontario participants in that, if you ran Ontario alone, are you saying it would get the same result? Toronto would be 15th?

MR. FENRICK: Are you asking if the US data was excluded, and we only ran on Ontario distributors?

⁵⁵⁴ SEC Argument, at page 27, para 1.8.3.

⁵⁵⁵ SEC Argument, at page 27, para 1.8.4.

MR. SHEPHERD: Would it be the same result?

MR. FENRICK: No. It would likely be much more in the line with the fourth-generation IR results of -- you know, because, simply, you cannot create a fair and accurate model for Toronto Hydro using the Ontario-only data set.⁵⁵⁶

480. The ultimate irony of SEC's complaint is that PEG appears to agree with PSE that an Ontario only sample of distributors is an inappropriate comparator group for Toronto Hydro. Whatever other criticisms PEG makes in its report, nowhere does it argue that Toronto Hydro should not be compared to US utilities, nor did Dr. Kauffman make such a claim in evidence.

4.6.3 Including the Urban Core Variable is consistent with econometric best practices. PEG's high voltage variable is not

481. OEB Staff, BOMA, SEC, and Energy Probe all complain about PSE's urban core variable.⁵⁵⁷ Primarily these parties point to PEG's statistically insignificant, allegedly "properly-measured, comprehensive urban core dummy variable that applies to 26 different large city utilities" to justify their position. The parties argue that the OEB should prefer PEG's high voltage business condition variable instead.⁵⁵⁸

482. There is no good, econometric reason to prefer an improperly signed, statistically insignificant variable (the high voltage variable)⁵⁵⁹ over a properly signed, objectively based, and statically significant variable (PSE's urban core variable).⁵⁶⁰ Frankly, is contradictory to PEG's "best practice" and its own 3rd Generation benchmarking report to the OEB and results in "omitted variable bias", as discussed below.

483. To begin, the urban core variable is based on a sound engineering study. Mr. Sonju's report, "Capital Requirements for Serving Developed Environments" explains that utilities have different cost challenges based on the development characteristics of their service territories.

⁵⁵⁶ OH Transcript, Volume 2 (February 19, 2015), at pages 156-158.

⁵⁵⁷ EP Argument, at page 19; SEC Argument, at page 26, para 1.8.4; OEB Staff Argument, at page 13; BOMA Argument, at page 26.

⁵⁵⁸ For example, OEB Staff Argument, at page 14.

⁵⁵⁹ Revised Table 3 from the PEG Report, as updated by the OEB Staff Letter, December 17, 2014, Attachment.

⁵⁶⁰ Exhibit 1B, Tab 2, Schedule 5, Appendix C, at page 6.

Costs to provide a kW of power in urban service territories are double those to provide service in a suburban territory.⁵⁶¹

484. No party successfully challenged Mr. Sonju's evidence. In its argument, BOMA complains that PSE ought to have focused on metropolitan areas, including suburbs, rather than city centres, on the basis that these represent "the relevant economic unit[s]".⁵⁶² This might be true if the focus of the exercise were on where to locate a professional sports team. The complaint disregards the fact, set out above, that suburban areas are the least expensive to serve.

485. The urban core variable also has an objective basis. In order to capture truly urban centres, PSE applied a minimum city population threshold of 1M residents.⁵⁶³ In comparison, Dr. Kaufmann selected his 26 utility variable based on his "sports criteria". As he said (for the first time in oral evidence), he looked at whether "there are cities in the territories of these utilities that either have a major league baseball team, a major league football team, or both?"⁵⁶⁴

486. Contrary to Staff's argument, there is nothing "properly-measured" or "comprehensive" about Dr. Kaufmann's criteria.⁵⁶⁵ It is purely arbitrary. By Dr. Kaufmann's admission, a city such as Green Bay, which otherwise met his criteria, was excluded based on his subjective assessment that "Green Bay is not a big urban area. That's an exception to the rule."⁵⁶⁶ Other cities however, such as Buffalo, were included notwithstanding that it (like many rust belt cities) has experienced a hollowing out of its urban core with the result that its population now stands at fewer than 260,000 residents, or less than half of its population in the 1950s.⁵⁶⁷ Detroit is another example. As noted by SIA, PEG's expanded urban core sample contains such smaller cities as St. Petersburg, FL, Cleveland OH, Tampa FL, St. Louis, MS, all of which have populations under 400,00, thereby distorting the effect of the urban cost variable as constructed

⁵⁶¹ Exhibit 1B, tab 2, Schedule 5, Appendix B, PSE Engineering Study at page 2-1 (table).

⁵⁶² BOMA Argument, at page 27.

⁵⁶³ OH Transcript, Volume 2 (February 19, 2015), at page 50, lines 22-26.

⁵⁶⁴ OH Transcript, Volume 3 (February 20, 2015), at page 110, lines 6-11.

⁵⁶⁵ OEB Staff Argument, at page 12.

⁵⁶⁶ OH Transcript, Volume 2 (February 19, 2015), at page 114, lines 3-7.

⁵⁶⁷ United States Census Bureau, <http://quickfacts.census.gov/qfd/states/36/3611000.html>

by PSE.⁵⁶⁸ In fact, nowhere does Dr. Kaufmann set out the population of any of the “urban cores” captured by his sports criteria.

487. Not only is the criteria arbitrary but in failing to differentiate between truly urban and metropolitan areas, Dr. Kaufmann’s variable ignores the different costs associated with serving urban suburban areas, as explained above.

488. In place of PSE’s urban core variable, PEG’s proposes a high voltage variable which is incorrectly signed (it should be positive, but is negative in the PEG report, as corrected) and statistically insignificant at even the 90% confidence level. (Indeed, as PEG itself noted, it has a statistical significance of 41%).⁵⁶⁹ Business condition variables that are incorrectly signed or statistically insignificant are not included in econometric benchmarking models. PEG’s use of this variable, and its exclusion of the urban core variable, are not in-line with benchmarking best practices. PEG confirmed that business condition variables be correctly signed, statistically significant and predicted by theory in a report to its report to the OEB dated March 20, 2008 “Benchmarking the Costs of Ontario Power Distributors”. At p. 52 of that report, PEG stated:

All included business conditions were required to have elasticity estimates that were plausible (e.g. sensibly signed) and significantly different from zero. All variables found to be statistically significant were included in the final model. Since, additionally, we consider for inclusion only variables that are predicted by theory or that seem relevant on the basis of our industry experience, the model is not a ‘black box’ that confounds attempts at earnest appraisal.⁵⁷⁰

489. Ultimately, albeit reluctantly, Dr. Kaufmann conceded that standard practice is to exclude statistically insignificant business condition variables.⁵⁷¹

490. As its final argument, OEB Staff submits that PSE’s urban core variable should be excluded, as the PEG model already contains “variables that control for higher costs of serving urban environments.”⁵⁷² This argument fails to appreciate that each of these variables is also

⁵⁶⁸ SIA Submission, at page 4.

⁵⁶⁹ Transcript, OH, Volume 3 (February 20, 2015), at page 167.

⁵⁷⁰ PEG Report, Benchmarking the Costs of Ontario Power Distributors (April 2007) at page 52.

⁵⁷¹ OH Transcript, Volume 3 (February 20, 2015), page 164.

⁵⁷² OEB Staff Argument, at page 12.

included in the PSE model and yet the urban core variable remains statistically significant. As Mr. Fenrick testified (in response to questions from OEB Staff):

Mr. Fenrick:....So while these construction cost indexes do pick up, you know, the labour wage differences or material price differences, they're not picking up the different processes that an urban core utility needs to undertake relative to its peers that are not urban core.

I would also like to mention that PSE's model also has these construction cost indexes in them, exact same -- exact same construction cost indexes, same mapping, same everything.

So we're also accounting, in our model, for these differences. I mean, this is one area of agreement between PSE and PEG, that these construction cost indexes should be included in the benchmarking.

However, the urban core variable is also coming in statistically significant, which tells us these are just measuring the labour wages. They're not getting at the processes of serving an urban core environment. You need an explicit variable to do that.

And that comes out in our engineering study, showing substantially more costs serving an urban core environment. And it comes out statistically in our models as well. (Emphasis added.)⁵⁷³

491. In the result, PSE's urban core variable meets each of the requirements set out by PEG in its 2008 report: it is "sensibly signed", "statistically significant" and "supported by theory" (the Sonju report and PSE's engineering expertise).⁵⁷⁴ PSE was correct to include the variable.

4.6.4 PSE's approach to CDM costs should be preferred because as it takes a comprehensive approach to cost comparability

492. OEB Staff, BOMA and SEC all argue that PEG's approach to CDM costs should be preferred over PSE's.⁵⁷⁵ Toronto Hydro disagrees.

493. The issue is relatively straightforward. PEG removed all CIS costs from the US data set on the basis that these included some portion of CDM costs which were not included in the

⁵⁷³ OH Transcript, Volume 3 (February 20, 2015), at pages 45-46.

⁵⁷⁴ PEG Report, Benchmarking the costs of Ontario Power Distributors (March 2008).

⁵⁷⁵ OEB Staff Argument, at page 15; BOMA Argument, at page 25; SEC Argument, at page 31, para 1.11.2.

Ontario cost definition.⁵⁷⁶ PEG, however, did not remove Toronto Hydro's CIS costs, thus creating a cost comparability problem.⁵⁷⁷ PEG's adjustment also eliminated a large expense category making the total cost definition less comprehensive, despite the OEB's stated preference for comprehensive total cost benchmarking.⁵⁷⁸

494. PSE solved for these problems by including all CIS costs as well as Toronto Hydro's CDM costs. In fact, given the uncertainty associated with whether CDM costs are included in the US data set, PSE's adjustment was highly conservative and likely unfavourable to Toronto Hydro.⁵⁷⁹ As Mr. Fenrick explained the issue and PSE's adjustment:

MR. FENRICK: By subtracting out all of the customer service and information expenses, the US data does not have customer service and information expenses in their cost definition.

Conversely, Toronto Hydro does have those customer service and information expenses in its cost definition. And we know that because in the fourth-generation IR, the cost definitions certainly did include customer service functions within Toronto Hydro and the rest of Ontario.

So PSE looked at the situation and said: Okay, how can we get costs to be comparable between the US sample and the Toronto Hydro -- in the Toronto Hydro and the rest of Ontario, for that matter?

The way to do it is quite simply just add the CDM expenses back into Toronto Hydro's definition, and then leave the CSI -- the customer service information -- expenses in the US sample.

.....

So now we have more cost comparability, with the caveat we're not exactly sure -- it's very likely that's unfavourable to Toronto Hydro.

We contacted the FERC Form 1 team, as far as how CDM expenses are actually accounted for in the US, and it's unclear if all of those expenses are actually in the US cost definition.

⁵⁷⁶ Eb-2014-0116, PEG Report, Toronto Hydro Electric System Limited Custom IR Application and PSE Report "Econometric Benchmarking of Toronto Hydro's Historical And Projected Total Cost And Reliability Levels" (December 2014), at page 25.

⁵⁷⁷ Exhibit 1B, Tab 2, Schedule 5, Appendix C, at pages 5-6.

⁵⁷⁸ Report of the Board, Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach (October 18, 2012), at page 18.

⁵⁷⁹ Exhibit 1B, Tab 2, Schedule 5, Appendix C, at page 6.

But in an effort to avoid kind of gray area issues that we could quibble over, but it is hard to come with a true and fast realization or conclusion to them, we said: Okay, we'll just agree with PEG all of the CDM expenses are in the US data set, and add Toronto Hydro's CDM expenses to those to create a cost comparability issue.

That also makes the cost definitions far more comprehensive as well.⁵⁸⁰

495. The justifications offered by the parties for preferring PEG's approach to CDM costs do not withstand scrutiny. OEB Staff's main argument is that because CDM costs are not included in distribution rates they should not be included in the cost definition.⁵⁸¹ Respectfully, this hardly justifies an "apples to oranges" approach to benchmarking that unfairly includes for Toronto Hydro CIS costs which have been excluded from the US data set. OEB Staff also overlooks the fact that PEG's own 4th Generation benchmarking work includes cost items not included in distribution rates; namely CIAC costs.⁵⁸²

496. BOMA's argument on this issue is confused. It begins by misstating the efforts made by PSE to understand FERC treatment of CDM costs. It then appears to claim that because PSE chose to benchmark Toronto Hydro against US utilities, any issues relating to how CDM costs are recorded in the US amounts to a basis to prefer PEG's approach⁵⁸³. Ultimately, BOMA's argument fails to address the core issue of cost comparability.

497. SEC offers nothing more than "on balance SEC believes that the PEG solution is the more rigorous."⁵⁸⁴ No explanation is given as to how or why this is said to be the case. Based on the evidence, no cogent explanation could be given; PSE's approach is manifestly better. Its approach achieves cost comparability and PEG's does not.

498. In relation to OM&A, SEC's rate of change argument is even weaker. Over the CIR term, OM&A will be governed by the price cap index at a rate less than inflation regardless of how Toronto Hydro's actual costs increase relative to the benchmark.

⁵⁸⁰ OH Transcript, Volume 2 (February 19, 2015), at pages 22-24.

⁵⁸¹ OEB Staff Argument, at page 15.

⁵⁸² PEG Report, Productivity and Benchmarking Research in Support of Incentive Rate Setting I Ontario: Final Report to the Ontario Energy Board (November 2013), at page 29.

⁵⁸³ BOMA Argument, at page 25.

⁵⁸⁴ SEC Argument, at page 30, para 1.11.2.

4.6.5 PSE applied the correct capital cost escalation rate

499. This issue relates to the correct projection to apply in relation to capital cost inflation for the period 2015-2019. OEB Staff says in its submission that this is a third difference between “the PEG and PSE models”.⁵⁸⁵ That statement is wrong. Prior to the oral hearing, PEG and PSE applied the same inflation rate; their models were the same. (It bears mentioning that at PEG and OEB Staff’s request, and well before interrogatories, PSE provided all of its models, data and computer code to PEG.) PEG did not raise the issue in its report, in interrogatories or at the technical conference where Dr. Kaufmann asked questions directly on behalf of OEB Staff.

500. The issue only arose in answer to undertakings given by Dr. Kaufmann to SEC (J3.6 and 3.7) after Mr. Fenrick had testified.

501. In those answers, PEG claims (for the first time) that the capital asset growth rate should be 2% per year over the CIR period.⁵⁸⁶ PEG bases its new assumption on the 2003-2013 average annual growth rate of the Canadian Electric Utility Construction Price Index (EUCPI). PSE, on the other hand, based its assumption on the long-term (40-year) average annual growth rate of the EUCPI and the Constant Interest Rate Assumption, which produced a result of about 4.5%.⁵⁸⁷

502. There are three main reasons why PEG’s 2003-2013 growth rate assumption is inappropriate and should be rejected by the OEB. These reasons are:

- (a) The EUCPI Index used by PEG includes financing costs, which can distort construction prices if they are not properly controlled for, which PEG did not do. The 2003-2013 timeframe used by PEG as the basis for its 2015-2019 capital price inflation rate featured rapidly declining interest rates, which materially understates PEG’s inflation assumptions.⁵⁸⁸
- (b) Even if the most recent 10-year period were an appropriate basis for the inflation forecast, the appropriate index is the Handy-Whitman Index of Public Utility Construction Costs – an authoritative U.S. source on utility construction prices,

⁵⁸⁵ OEB Staff Argument, at page 15.

⁵⁸⁶ OH Undertaking J.3.6 (PEG) at page 1.

⁵⁸⁷ OH Undertaking J9.2 (PSE) at page 2.

⁵⁸⁸ OH Undertaking J9.2 (PSE) at page 2.

which isolates the effect of financing costs on utility construction prices. Using the Handy-Whitman Index for electric distribution construction prices, PEG's future capital construction assumption would be set at 6.1%/year – significantly higher than PSE's current assumptions. 589

- (c) Engineering experience in producing cost estimates and construction work plans suggests that over the next five years the capital asset inflation can be expected to fluctuate around 4-5%. This assessment is based on PSE's review of recent project construction close-out costs, shortages of specialized labor, and levels of demand for transmission and distribution materials driven by emerging economics and aging North American infrastructure. 590

503. Each of the above reasons is discussed further below.

504. **Weakness of the EUCPI index.** The EUCPI Index includes financing costs which drives down the growth rate embedded within the index during periods of declining interest rates.⁵⁹¹

505. The relationship between the EUCPI Index and interest rates can be shown by including the interest rate changes into a table with the EUCPI changes. In PEG's response to J3.6, Dr. Kaufmann showed the historical growth rates of the EUCPI from 1973-1983, 1983-1993, 1993-2003, and 2003-2013. The implication appears to be that PSE included the 1970s time period because of the rapid increase in the EUCPI so as to artificially drive up the EUCPI growth rate.⁵⁹² That implication would be incorrect. Instead, PSE included the 1970s time period because 40 years is sufficiently long to include periods of rapid interest rate increases and periods of rapidly declining interest rates. Additionally, PSE used the 40-year period because this was the assumption used by PEG in 4th Generation IR regarding the useful life of assets.⁵⁹³

⁵⁸⁹ *Ibid.*

⁵⁹⁰ OH Undertaking J9.2 (PSE), at page 3.

⁵⁹¹ OH Undertaking J9.2 (PSE), at page 4.

⁵⁹² OH Undertaking J3.6 (PEG), at page 4.

⁵⁹³ OH Undertaking J2.9 (PSE), at page 4.

506. Below is a table of EUCPI growth rates produced by PEG in J3.6 but now augmented with the interest rate growth rates inserted for those same time periods and the 40-year growth rates also calculated.⁵⁹⁴

	<u>EUCPI Annual Average Growth Rate (includes financing costs)</u>	<u>Interest Rate Annual Average Growth Rate (10-year U.S. Treasury)</u>	
1973-1983	9.6%	4.8%	Increasing interest rate period
1983-1993	3.2%	-6.4%	Declining Interest rate period
1993-2003	2.4%	-3.8%	Declining Interest rate period
2003-2013	2.0%	-5.3%	Declining Interest rate period
1973-2013	4.3%	-2.7%	Declining Interest rate period

507. Using PEG's suggestion of considering only the 2003-2013 EUCPI growth rate of 2.0% would artificially reduce growth due to the substantial decline in the interest rates during that period. Embedding this decline into the projected data is tantamount to assuming interest rates will continue to decline by 5.3% per year over the next five years, which is unrealistic.⁵⁹⁵

508. **The Handy-Whitman Index.** The Handy-Whitman construction cost indices for electric distribution assets are not influenced by financing costs. As reflected in these indices, electric utility capital asset inflation has far outpaced general economy-wide inflation trends for the last ten years.⁵⁹⁶ This divergence in the electric distribution asset inflation rate corresponds to the growth in emerging global economies, efforts to address aging infrastructure resulting from the build out of capital infrastructure in the post-World War II era that now requires replacement, and the lack of an adequate supply of specialized labor within the industry.⁵⁹⁷

509. The table below sets out how capital asset inflation has increased over the 2003-2013 time period; that is, the period of time chosen by PEG.⁵⁹⁸

⁵⁹⁴ PSE's 4.55% assumption does not match the 1973-2013 number exactly because it used the 1972-2012 time period as that was the most recent information available at the time of the original research. PSE use these time periods to align with what PEG showed in response J3.6.

⁵⁹⁵ OH Undertaking J2.9 (PSE), at page 4.

⁵⁹⁶ Please see a newsletter article, entitled "Uncharted Waters," authored by Mr. Sonju regarding the divergence of general economy-wide inflation and recent capital asset inflation, which can be located at <http://www.powersystem.org/media/articles/pse-spring13-web.pdf>

⁵⁹⁷ OH Undertaking J2.9 (PSE), at page 6.

⁵⁹⁸ OH Undertaking J2.9 (PSE), at page 7.

		2003-2013 Handy Whitman Indexes for Total Distribution Electric Plant Average Annual Growth Rate (does not include financing costs)
North Atlantic		6.3%
South Atlantic		6.3%
North Central		5.8%
South Central		6.2%
Plateau		6.2%
Pacific		5.9%
U.S. Average		6.1%

510. It is worth noting that had PEG used the North Atlantic index its model would show Toronto Hydro in the 0.3% stretch factor range during the historical time period (recall its finding is +8.0% during that time period) and only move Toronto Hydro to Group 4 during the Custom IR period with a stretch factor of 0.45%, rather than 0.6%.⁵⁹⁹

511. **PSE Experience with Electrical Construction Projects.** PSE conducts a large number of engineering studies for electric utilities. PSE typically uses a capital asset price inflation assumption between 4% and 5% in its engineering and design work. This rate assumes some slow-down in inflation from the last ten years, and reflects the most realistic expectation of capital asset inflation over the CIR term.⁶⁰⁰

512. In the result, Toronto Hydro submits that PEG's newly introduced capital asset inflation assumption should be rejected by the OEB, along with the results set out in J3.7.

4.7 Customer Engagement

4.7.1 Toronto Hydro Consulted Comprehensively and Appropriately with its Customers

513. Toronto Hydro undertakes customer engagement work in the ordinary course of its business.⁶⁰¹ Toronto Hydro maintains regular contact with residential and small business customers around issues such as billing, service requests, conservation and demand management,

⁵⁹⁹ OH Undertaking J2.9 (PSE), at page 6.

⁶⁰⁰ *Ibid.*

⁶⁰¹ Exhibit 1B, Tab 2, Schedule 7 at pages 1-12.

and local capital projects. For commercial customers, Toronto Hydro is active in presenting to trade and industry associations. Finally, for large volume commercial and institutional customers that are covered by the “key accounts” program, engagement includes periodic visits aimed at understanding these customer’s need and issues. For key accounts, Toronto Hydro prioritizes its contacts to meet with customers who face significant reliability or service quality issues.⁶⁰²

514. In this case, Toronto Hydro’s customer engagement evidence also includes a report and supporting materials from Innovative Research Group discussing customer engagement on the proposed DSP.⁶⁰³

515. This engagement took multiple forms including a comprehensive workbook, focus groups, a voluntary on-line survey and a statistically valid telephone survey of residential and small volume commercial customer.

516. As set out in Toronto Hydro’s Argument-in-Chief, customers surveyed in Toronto Hydro’s most populous rate classes – the residential and small business classes – gave qualified acceptance to the proposed plan at the proposed bill increases.⁶⁰⁴ While few welcome an electricity price increase, Toronto Hydro’s customers ultimately felt that the proposed increases were necessary.⁶⁰⁵ The results of the customer engagement exercise confirm that Toronto Hydro has struck a reasonable balance that is aligned to customer needs and preferences.

4.7.2 Other than Toronto Hydro, no party adduced any customer engagement related evidence

517. A number of parties claim that Toronto Hydro’s customer engagement efforts were somehow deficient. As discussed below, overwhelmingly, their complaints are not borne out by the evidence. In many cases, the evidence flatly contradicts their position.

518. Perhaps the most glaring weakness of the parties’ positions is their complete failure to adduce any affirmative customer related evidence. SEC tries to address this by offering reasons

⁶⁰² OH Transcript, Volume 9 (March 3, 2015) at pages 113-116

⁶⁰³ Exhibit 1B, Tab 2, Schedule 7, Appendix B.

⁶⁰⁴ Argument-in-Chief, Tab 4, at page 6.

⁶⁰⁵ OH Transcript, Volume 9, (March 3, 2015) at pages 88, 100-102, 130; Exhibit 1B, Tab 2, Schedule 7, Appendix B at pages 10-11.

why it did not contact any of the 15 large customers that wrote letters to Toronto Hydro notwithstanding SEC's earlier stated position that it would.⁶⁰⁶ Whatever persuasive value these reasons might have (Toronto Hydro submits, none), they fail to explain why SEC, or any other party, called no evidence at all; not even from their own clients. In fact, Energy Probe makes the remarkable assertion that: "the Board should place no weight on the customer survey and rather should be informed by the clear strong opposition of intervenors to THESL's proposed Rebasing, CIR Plan and associated rate impacts."⁶⁰⁷

519. In Toronto Hydro's submission, the OEB should prefer actual evidence, from actual customers, actually adduced in the hearing.

4.8 No Merit to Parties' Criticisms of Customer Engagement Evidence

520. Parties complaints regarding Toronto Hydro's customer engagement concern the following: (1) the range of bill impact options given to customers; (2) the timing of Toronto Hydro's customer engagement activities; and (3) allegations of bias in relation to the engagement activities as well as the individuals involved in those activities. None of these criticisms withstands scrutiny.

4.8.1 Bill information was appropriate

521. OEB Staff, SEC and Energy Probe argue that information on bill increases presented by Innovative was at too high a level and did not provide customers with a range of options.⁶⁰⁸ Although it failed to put the example to any of the witnesses called at the hearing, OEB Staff cites the customer engagement exercise carried-out by Festival Hydro as an example of a utility that provided these ranges.⁶⁰⁹

522. Toronto Hydro and Festival bear no resemblance to one another, in size or service territory.⁶¹⁰ The comparison is inapposite. In any event, based on its filing, it appears that the extent of residential and small business engagement was limited to a 10 question survey, with no

⁶⁰⁶ SEC Argument, at page 23, para 1.5.5.

⁶⁰⁷ EP Argument, at page 32.

⁶⁰⁸ OEB Staff Argument, at page 23; SEC Argument, at page 19, para 1.3.17; EP Argument, at page 52.

⁶⁰⁹ OEB Staff Argument, at page 23.

⁶¹⁰ Festival serves 20,000 customers, with a rate base of ~\$39 million, in the municipalities of Stratford, Brussels, Dashwood, Hensall, St. Marys, Seaforth and Zurich.

bill impact information, no reliability statistics, and very little in the way of contextual information about the system. There is also no clear indication as to whether the survey, which appears to have been administered both online and through the mail, is statistically valid. In terms of providing customers with a “range of options” on bill impacts, OEB Staff could only be referring to question Q1 in the Festival Hydro survey:

Q1. We understand that a reliable supply of electricity is important to our customers, and the primary focus of our construction and the reliability of our system. However, we recognize that customers are also concerned about rising electricity prices. With this in mind, please select a statement that best represents your view:

- (i) Festival Hydro should be spending more to decrease the frequency and duration of outages and I understand this will increase my monthly hydro bill.
- (ii) I find the existing level of reliability is acceptable.
- (iii) Festival Hydro should be spending less and I would be willing to tolerate increased outages if it meant a decrease in my monthly hydro bill.⁶¹¹

523. There is no quantification of bill impacts or reliability outcomes offered to customers, and no contextual information regarding system needs in the above question. Not only did Innovative’s survey instrument for Toronto Hydro include this and other detailed information, but Toronto Hydro in fact asked essentially the same question for both outage duration and frequency.⁶¹²

4.8.2 Customer Engagement was appropriately timed

524. SEC and others complain that Toronto Hydro’s engagement was “merely” a validation exercise for the proposed DSP.⁶¹³ These parties complain that Toronto Hydro ought to have gone to its customers first, before it had developed a DSP.

525. The obvious problem with parties’ criticisms is that it relies on some sort of disconnect between the DSP and what customers told Toronto Hydro. In fact, there is no such disconnect.

⁶¹¹ EB-2014-0073, Exhibit 2, Tab 2, Schedule 1, Appendix 2.

⁶¹² Exhibit 1B, Tab 2, Schedule 7, Appendix B, at page 165.

⁶¹³ SEC Argument, at page 21, para 1.4.1.

As stressed throughout the evidence, while customers do not relish any rate increase, overall they understand the need to invest in the system and are prepared to pay for those investments.⁶¹⁴ Far from a disconnect, the results of Toronto Hydro's customer engagement activities confirm that it has struck a reasonable balance that is aligned to customer needs and preferences. As Toronto Hydro learned:

- while customers expect the utility to make prudent investment decisions, the majority accept the need for timely renewal of the distribution system, while acknowledging that this will mean an increase in their monthly bills;
- most customers would invest in the distribution system today in order to avoid paying more later;
- customers believe they have an obligation to maintain the distribution system for future generations;
- while customers are generally satisfied with Toronto Hydro's response to major weather events, they would like to see enhanced communications;
- most residential customers say that they are able to pay more for electricity, but are concerned about the potential effect that increased rates may have on vulnerable ratepayers;
- customers also expect the utility to make prudent investments in new technologies, and that new technologies can make the distribution system more efficient and, ultimately, save ratepayers' money;
- customers accept that Toronto Hydro should be making investment in IT systems, fleet and facilities;

⁶¹⁴ OH Transcript, Volume 9 (March 3, 2015), at page 150.

- a large number of customers believe Toronto Hydro should have increased rates more in the past to create a “reserve fund” to cover capital renewal investments required today.⁶¹⁵

526. Toronto Hydro’s customer engagement activities in connection with this application significantly exceed any past application-related consultation that it had undertaken. The results of this consultation will continue to inform the utility’s capital work over the five-year term of the DSP. They will also inform subsequent customer consultations.

527. Finally, in any event, contrary to parties’ complaints, in Toronto Hydro submission, meaningful, utility-specific customer engagement exercise for a significant Custom IR application should be based on a relatively detailed and mature DSP, with associated bill impacts and forecasted outcomes (including alternative investment options).

4.8.3 Bias allegations rely on incomplete and inaccurate references to the evidentiary record

528. SEC claims that bias infected Toronto Hydro’s customer engagement efforts.⁶¹⁶ While put in less offensive terms, VECC makes the same complaint.⁶¹⁷ Their arguments are without merit. In substantial part, they rely on incomplete references to the evidence.

4.8.4 The SEC bias argument

529. **First plank in the bias argument: the alleged “backstory” problem.** The starting point for SEC’s argument is its entirely incorrect assertion that Innovative chose as a “straw man” the run to failure option against which to assess customer attitudes.⁶¹⁸

530. SEC begins by overlooking the fact that run-to-failure option was not a feature of the statistically significant telephone survey. It was presented in the workbooks, where customers had time to consider the details of the plan and the consequences of spending more or less than proposed during 2015-2019.

⁶¹⁵ Exhibit 1B, Tab 2, Schedule 7, at pages 10-11.

⁶¹⁶ SEC Argument, at pages 14-22.

⁶¹⁷ VECC Argument, at ages 5-6.

⁶¹⁸ SEC Argument, at page 15, para 1.3.5.

531. SEC then relies on a misstatement of the evidence. At para. 1.3.5 SEC includes an incomplete extract of Mr. Lyle's evidence to suggest that it was Innovative that chose the run to failure option as the alternative.⁶¹⁹ Innovative did not. In the portion of Mr. Lyle's evidence omitted by SEC, he makes clear that it was customers who chose that option:

MR. LYLE: [...] before we put together the workbook we did an exploratory group, and we said: This is a pretty complicated area. What are the sort of things you need to know in order to come up with some type of intelligent response?

And one of the things they said is: Tell us what the minimum is. What do you have to absolutely do?

And the minimum was the run-to-failure approach. That is the minimum.⁶²⁰

532. SEC compounds its misstatement in the next paragraph of its argument (para. 1.3.6). There, it "submits that this [run to failure] is not how utilities are run."⁶²¹ No reference is given by SEC for this submission, nor could one have been given because the actual evidence is to the opposite effect. At the hearing, counsel for SEC proposed to Mr. Lyle that the run-to-failure approach presented to customers in the workbook was unrealistic. Mr. Lyle disagreed. As he testified:

MR. SHEPHERD: Okay. Is that how anybody runs a utility?

MR. LYLE: Well, for instance, pad-mounted transformers and pole-mounted transformers. There are utilities in this province that run to failure. And people in different parts of Ontario have different views about that. Some places they think that is a good idea. Other places they think that is a bad idea.⁶²²

533. Mr. Lyle also explained what, in fact, was meant by "run-to failure". As he testified:

MR. LYLE: But let's just add to the explanation. What it said in the run-to-failure approach was with this approach Toronto Hydro would only replace equipment as it fails, with the exception of critical assets such as stations equipment. Right?

⁶¹⁹ *Ibid.*

⁶²⁰ OH Transcript, Volume 9 (March 3, 2015), at page 131, lines 14-15.

⁶²¹ Sec Argument, at page 16.

⁶²² OH Argument, Vol 9, at page 132, lines 10-15.

So we weren't saying wait until something that 8,000 people depend upon breaks and then fix it depending on whether it is on hand.⁶²³

534. Mr. Lyle's evidence and the workbook mirror the DSP, which characterizes the run-to-failure model as "executing a capital expenditure plan with minimal proactive asset replacement."⁶²⁴ While proactive work would be minimized in this scenario, reactive work would continue to follow the same definition as provided in the Reactive Capital program description:

Reactive work is unplanned, and either occurs in response to an asset failure or to the detection of a severe asset deficiency (e.g., a severely cracked pole) that cannot be addressed by planned capital replacement procedures and timelines and must be reactively replaced to ensure the safety of the public and Toronto Hydro employees. Reactive work is usually executed on the same day, following the detection of an asset requiring replacement. The scope of all reactive work covers Toronto Hydro's entire distribution system and affects all asset classes.⁶²⁵

535. In the result, the run-to-failure scenario is, in fact, the realistic 'bare bones' baseline option that customers wanted to consider.

536. In any event, and again contrary to SEC's argument, the workbook did not present the two options (run-to-failure and Toronto Hydro's plan) as the only two options, with one of them being a "straw man." In fact, before asking the final survey question regarding the balance of bill impacts and outcomes, Toronto Hydro added the following context:

As seen in the table above, Toronto Hydro estimates that a "run-to-failure" approach, when compared to the proposed plan, would result in double the average duration of outages across the system and more than double the percentage of customers on poor performing feeders. Because of the aging system, Toronto Hydro would expect reliability to continue worsening well beyond 2019 if the utility stuck with a "run-to-failure" approach.

Of course, the two plans presented here are not the only options for pacing system investment. Toronto Hydro can invest more or less capital to achieve a wide variety of outcomes.⁶²⁶

⁶²³ OH Argument, Vol 9, at pages 1310132, lines 24-3.

⁶²⁴ Exhibit 2B, Section 00, at page 7, lines 4-5.

⁶²⁵ Exhibit 2B, Section E6.20, at page 4, lines 4-10.

⁶²⁶ Exhibit 1B, Tab 2, Schedule 7, Appendix B1, at page 32.

537. SEC next suggests that there was generally a bias in the customer engagement materials in favour of supporting Toronto Hydro's proposed plan, as a result of a hard sell on reliability.⁶²⁷ This argument is predicated on the notion that Toronto Hydro focused only on system pressures and wrongly told customers that they would have to pay more to maintain reliability. SEC refers to Mr. Lyle's evidence as follows:

The point is -- is that they [the respondents] are put in the boat that Toronto Hydro was trying to understand where consumers were coming from. If they looked at those challenge and they look at their pocket book, what is the balance? Are they prepared to have a few more outages and keep their bills down, or is it important to maintain the current reliability there is and pay some more? [SEC's emphasis]⁶²⁸

538. From this and the use of the run-to-failure scenario (in the workbook), SEC's draws the conclusion that "The story told to the respondents thus forced them to agree with the plan."⁶²⁹ There is no logic to this complaint. As demonstrated by SEC's own proposal for a 3% year-over-year increase to revenue requirement, Toronto Hydro's prices are set to rise above inflation even in an extreme scenario where capital expenditures are reduced by the irresponsible amounts implicit in SEC's proposal.⁶³⁰ This is directionally consistent with the fact that, in the customer engagement workbook, the forecasted average annual bill increases for the run-to-failure scenario were modeled at \$1.24 on the monthly bill for the average residential customer.⁶³¹ The question for customers was therefore whether they were willing to accept more outages in order to keep bill increases down, or whether they were willing to pay the amount necessary to maintain reliability, as determined by Toronto Hydro's DSP. While the parties and Toronto Hydro may continue to disagree about the cost increases required to maintain system performance, Toronto Hydro submits that there was no logical reason to present customers with information that deviated from the utility's prudent asset management policies and the outcomes of the DSP.

539. Mr. Lyle expanded on this trade-off:

⁶²⁷ SEC Argument, at page 16, para 1.3.7

⁶²⁸ SEC Argument, at page 17, para 1.3.8.

⁶²⁹ SEC Argument, at page 17, para 1.3.9.

⁶³⁰ SEC Argument, at page 11, para 0.2.29

⁶³¹ Exhibit 1B, Tab 2, Schedule 7, Appendix B1, at page 33.

MR. LYLE: [...] I mean, if you take a look at how people responded, what you see when you look at all the reports that are there is that essentially consumers are conflicted. No one wants to pay more for anything, right?

But also electricity plays a key role in their life, one that they don't normally think very much about.

And so when they have a chance to see the situation in terms of where the grid is and then they're given choices -- and the workbook was interesting in this, in that they were able to see two scenarios with a firm entity in terms of what the different worlds looked like that weren't starkly different, right? There was clearly more reliability if you look at the plan that Toronto Hydro was putting forward than in the run-to-failure plan, but it wasn't the lights were going to go out if you didn't do what they said. It was just you were going to have more problems with reliability if you paid less. If you paid more, you would have less problems with reliability, and then you would also have some other benefits, increased modernization.⁶³²

540. **Second plank in the bias allegation: The alleged failure to show rates and benchmarking information.** The second plank in the bias argument is the suggestion that Toronto Hydro ought to have presented customers with cost and reliability benchmarking information.⁶³³ There are at least two main problems with this argument. First, it relies on SEC ignoring PSE's total cost benchmarking work which shows Toronto Hydro to be an average cost performer. Second, it omits that comparative age and reliability information is not available (something SEC knew from its earlier cross-examination of PSE). Again, as Mr. Lyle testified:

MR. LYLE: What we were trying to -- to do what you are suggesting, if you're going to bring in a comparative information about the finances, you also need to bring in a comparative information about reliability and the aging quality of the system.

And one of the things that I think has been relatively clear in the discussion today, and that we had become aware of through our work through the Central Toronto Regional Resource Plan, was that it's very, very hard to find clear and definitive information that compares systems in terms of age and reliability.

So it was hard for us to write a section like that.

MR. SHEPHERD: But you were able to tell them a story about a system that was totally broken and needed money to fix it, right?

⁶³² OH Transcript, Volume 9 (March 3, 2015), at page 130, lines 1-21.

⁶³³ Sec Argument, at page 18, para 1.3.13.

MR. LYLE: Well, in fact it didn't say it is totally broken. That is your characterization.

MR. SHEPHERD: We're going to --

MR. LYLE: What it did say is that 30 percent of the infrastructure is beyond the age of which it was expected to continue performing, and that another roughly third was going to age out over the course of the plan that they were putting together.(Emphasis added.)⁶³⁴

541. **Third plank in the bias argument: The alleged failure with the multiple choice answers.** The third and final plank in SEC's bias argument relates to the multiple choice answers. SEC says Toronto Hydro "stacked the deck", by asking customers their preferred spend trajectory, since, in SEC's interpretation, three of the four answer options effectively authorized the utility to proceed with the program, and only one stated that the proposed spend was inappropriate.⁶³⁵

542. The response options actually given to customers regarding the outcomes of the DSP were phrased as follows:

- (a) Plan higher outcomes even if rates go up;
- (b) Satisfied with balance [of rates and outcomes];
- (c) Don't like the increase but feel it is necessary;
- (d) Bill impact is too high, scale back plan;
- (e) Don't know / refused to answer (the fifth option that SEC ignores in spite of its importance of providing a customer with an option to avoid answering the question if they felt insufficiently informed).⁶³⁶

543. As pointed out by Mr. Lyle in evidence (correcting SEC), there are, in fact, two answers that disagree with the proposed plan, not one:

⁶³⁴ OH Transcript, Volume 9 (March 3, 2015), at pages 110-111

⁶³⁵ SEC Argument, at page 20, para 1.3.20.

⁶³⁶ Exhibit 1B, Tab 2, Schedule 7, Appendix B at page 10

MR. SHEPHERD: Indeed. But I guess you split it up as -- there's three answers that say the plan is okay, and one that says it's not.

MR. LYLE: Well, the first answer actually says it is not okay. The first answer says they should do more. So it is a criticism from the other end. One criticism says you're not doing enough in terms of outcome. The other criticism says you're not doing enough in terms of keeping prices down. And then there are two in the middle, one of which is someone who thinks it is the right balance and they're happy with it, and one is someone who is frustrated with the price increase but thinks they have to do it.⁶³⁷

544. Mr. Lyle underscored the importance of providing customer with options that include qualified responses, such as the option (c) above. He also flatly disagreed that customers have any trouble disagreeing with rate increases if that is how they feel:

MR. SHEPHERD: So isn't it unusual to have a set of answers in which three of the answers approve at least as much as the person wants, and only one is opposed?

MR. LYLE: No, because if you just ask people: Do you support or oppose an increase, people get frustrated, because they say: I don't want to say yes to a price increase. I don't want a price increase.

If I look at it and I say: Well, I think it's necessary, then I might go along with it. But don't ask me to say I think it's a good idea. So "support/oppose" leaves people frustrated and not feeling they can totally express their view. One way to look at that: I don't like the rate increase, but I think it is necessary, that is like an orange light. It says: Okay, I will go along with this. You have made the case. But you need to pay attention to how much you're asking me to pay because I can't keep paying forever at these sort of rates. So they're saying: Pay attention to my need to keep spending under control.⁶³⁸

.....

MR. SHEPHERD: Again, we're back to the same thing. You gave them three green lights and a red light. No surprise that the palest green light is the one they chose. Is it?

MR. LYLE: With all due respect, people usually don't have a hard time saying no to price increases if they really don't want to pay them.⁶³⁹ (Emphasis added.)

⁶³⁷ OH Transcript, Volume 9 (March 3, 2015), at page 138, lines 4-16

⁶³⁸ OH Transcript, Volume 9 (March 3, 2015), at pages 138-139, lines 26-17.

⁶³⁹ OH Transcript, Volume 9 (March 3, 2015), at pages 146-147, lines 26-4

545. **The attack on Mr. Lyle.** Not content to complain about Toronto Hydro and Innovative's customer engagement activities, SEC suggests that parties were "prevented" from asking Mr. Lyle about his other work as a "spin doctor".⁶⁴⁰

546. The idea that SEC was prevented from asking Mr. Lyle anything is ridiculous. SEC had Mr. Lyle's CV. Counsel cross-examined Mr. Lyle's panel for over 4 hours. Over the entire time, no objection was taken to any question asked by SEC. SEC should now not be heard to complain about questions its counsel did not ask. No other party makes this complaint and it should be rejected out of hand

547. Moreover, the premise of SEC's argument – that some inference should be drawn from the Mr. Lyle being called as a fact witness – fundamentally misunderstands the distinction between fact and opinion witnesses at law. Mr. Lyle was properly called as a fact witness because he was directly involved in the who, what, where, why and how of Toronto Hydro's customer engagement activities. In the circumstances, it would have been inappropriate to tender him as an opinion witness, notwithstanding his obvious experience.

4.8.5 The VECC argument

548. For its part, VECC argues that the nature of customer responses in support of the plan were in large part influenced by the recent experience of major outages.⁶⁴¹ Mr. Lyle clearly and unequivocally rejected this argument:

MR. JANIGAN: And I believe your question on system reliability had, in fact, in it a preamble that dealt with those matters, did it not?

MR. LYLE: Well, what we actually did was we separated out people's reaction to day-to-day reliability from their experience with the major events, because we wanted people to look at the two differently.

And that actually was something we had to change, because the outage happened between when we were preparing the workbook in the fall of 2013 and when we started the consultation in the winter of 2014.⁶⁴²

549. And later:

⁶⁴⁰ SEC Argument, at page 21, para 1.3.24

⁶⁴¹ VECC Argument, at page 5.

⁶⁴² OH Transcript, Volume 8 (February 27, 2015), at pages 90-91

MR. JANIGAN: ... I mean, to some extent, it is like canvassing on the desirability of sunshine after two weeks of rain. So is it possible that some of the results could be skewed by the fact of the presence of outages in their mind?

MR. LYLE: Well, we looked at these numbers over time. So this is a study that was done at a particular point in time. But we're active in the sector all of the time, and we did not see this being in any way fundamentally out of step with the numbers we had seen the previous fall.⁶⁴³

4.9 Toronto Hydro's Proposed Measures, Metrics and Reporting are Appropriate and Sufficient

550. In recognition of the OEB's focus on performance measure and continuous improvement, Toronto Hydro's application includes a framework of 12 capital performance measures that the utility proposes to track and report on over the 2015-2019 timeframe.⁶⁴⁴

551. The proposed performance measurement framework addresses all three OEB-mandated categories (i.e. customer oriented performance, cost efficiency and effectiveness with respect to planning and implementation, and asset/system operations performance) and includes a number of innovative measures.⁶⁴⁵ Particularly, a subset of the measures will track Toronto Hydro's efficiency with respect to capital costs that are not determined by the competitive market.

552. In Toronto Hydro's submission, the proposed measurement framework is appropriate, sufficient and accords with the RRFE. The issue of metrics is discussed above more fully in section 2.5.

553. Several parties suggest that the OEB impose specific reporting requirements on Toronto Hydro, in addition to reporting annually on capital expenditures pursuant to the RRFE.⁶⁴⁶ Their suggestion should be rejected; in the main, the reporting these parties seek is already reflected in existing reporting or has been committed to by Toronto Hydro in the context of this application. In other cases, the need for the requested reporting or what it would entail was not discussed in evidence. The reasonableness of such requests cannot properly be assessed.

⁶⁴³ OH Transcript, Volume 8 (February 27, 2015), at pages 91-92

⁶⁴⁴ Exhibit 2B, Section C.

⁶⁴⁵ OEB Filing Requirements for Distribution Applications (July 17, 2013), Section 5.2.3.

⁶⁴⁶ Report of the Board, Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach (October 18, 2012), at page 20.

554. BOMA argues that there should be an “annual review proceeding” in which Toronto Hydro would report on OM&A savings for each capital program, ratepayer value generated (as measured by service quality / reliability improvements, lower costs and improved convenience), and the results of the 12 proposed measures. BOMA does not say what the OEB would be asked to decide in that proceeding.

555. Energy Probe proposes that Toronto Hydro host annual meetings with residential and commercial ratepayer groups to meet its continued customer engagement requirements. VECC states more generally that absent a mechanism for annual capital reporting/adjustments, it would support CCC’s proposal of limiting the term of the plan to 3 years. VECC also suggests that Toronto Hydro, OEB Staff and intervenors jointly retain a third-party consultant to undertake an in-depth analysis of Toronto Hydro capital plan. Beyond assessing Toronto Hydro’s capital planning practices, VECC suggests that the study’s findings could be used as an “industry-wide capital planning standard.”

556. In Toronto Hydro’s submission the aggregate amount of annual reporting information committed to by the company in this proceeding and otherwise available through externally-mandated reporting instruments exceeds the OEB’s RRFE reporting requirements and provides a sufficiently detailed account of Toronto Hydro’s annual operations. These include:

- (a) reporting on annual capital expenditures by four major DSP categories;
- (b) reporting on the 12 DSP performance measures;
- (c) reporting on the 20 performance measures comprising the Distributor Scorecard and the associated Regulatory MD&A;
- (d) reporting provided in Toronto Hydro’s annual financial disclosures, including:
 - (i) the Audited Financial Statements;
 - (ii) the Management Discussion & Analysis; and
 - (iii) the Annual Information form.

- (e) a mid-term 2018 performance measurement workshop with the intervenors and OEB Staff to discuss the utility's experience with the proposed measures and evaluate potential alternatives for the next CIR period.

557. This above range of reporting provides the OEB and parties with significant financial and operational details against which to assess Toronto Hydro's performance throughout the term of the plan. Toronto Hydro will also maintain ongoing engagement with its customers.

558. As addressed in detail in Section 2, Capital, Toronto Hydro's capital evidence includes thousands of pages of detailed information that in Toronto Hydro's submission is more than sufficient for the OEB to draw all the appropriate conclusions about the proposed Distribution System Plan investments and the comprehensive and sophisticated planning processes that underlie them.

SECTION 5 – REVENUE REQUIREMENT AND RATE FRAMEWORK

5.1 Overview

559. In this section, Toronto Hydro addresses parties' arguments in relation to the proposed rate framework and specific aspects of the associated revenue requirement.

560. As it relates to the rate framework, it remains Toronto Hydro's position that the individual elements of the rate framework, and the values of those elements, are reasonable, consistent with OEB policy and should be approved. In brief:

- (a) The rate framework is an appropriate, customized modification of the OEB's 4th Generation IR framework which relies upon the OEB's inflation and productivity factors in relation to OM&A, and treats a number of other inputs in the standard IRM fashion;⁶⁴⁷
- (b) The stretch factor (0.30%) to be applied to OM&A is based upon sound econometric benchmarking;
- (c) The use of the C-factor to reflect the revenue requirement impact of capital spending over the term of the CIR plan is appropriate; and,
- (d) No stretch factor should be applied to capital (the C-factor) because there is already sufficient productivity built into Toronto Hydro's capital plans.

561. Toronto Hydro agrees that growth should be addressed by the rate framework, but it must be done properly.

562. It is further Toronto Hydro's position that the OEB should approve a capital related revenue requirement variance account to address any concerns relating to the company's ability to place capital in-service over the CIR term. The OEB should reject requests for an earnings sharing mechanism. If an ESM is approved, it should be symmetrical. This issue is discussed further below in section 5.5.2.

⁶⁴⁷ In addition to the productivity and inflation factors, OM&A, Revenue Offsets, growth, Z-factor, and off-ramps.

563. A number of parties propose change to Toronto Hydro's proposed rate framework. These range from wholesale rejection of the framework by SEC, AMPCO and CCC in favour of "revenue requirement" based proposals to less dramatic, but still inappropriate, changes to individual elements of the framework. None of these changes should be approved by the OEB; each is without merit.

564. Many of the proposed changes appear for the first time in argument. This is procedurally and substantively unfair to Toronto Hydro. It also is of no assistance to the OEB. The proposed changes have not been tested in evidence and no consideration has been given to their overall impact on the application. Worse, in the few cases where parties do purport to discuss the expected impact of their proposals, they are wrong, and by a wide margin. For example, SEC suggests its revenue requirement proposal would be sufficient to fund its proposed OM&A budget (which cannot be justified in any event) with the balance, "available to fund rate base and the capital program." In fact, SEC's proposal would result in no capital budget in 2017. Absolutely none. The average capital budget over the term of the plan that is funded using SEC's proposal is just \$234 million, or less than half what Toronto Hydro has sought in the application.

565. Unfortunately, because of the manner and timing – that is, for the first time in argument – in which parties have raised their proposed changes it is necessary for Toronto Hydro to model, explain and rebut them in this reply.

566. Following discussions of the rate framework, we discuss specific challenges to aspects of the Toronto Hydro's proposed revenue requirement relating to rate base, cost of capital, and PILs and Revenue Offsets.

5.2 Parties' criticisms of specific elements of the rate framework and the framework itself are without merit

567. As discussed above, parties' complaints can be grouped into two broad categories: (1) complaints regarding elements of Toronto Hydro's proposed rate framework; and (2) complaints regarding the rate framework itself. In what follows, Toronto Hydro responds to parties' specific criticisms within these two categories.

5.3 Specific elements of the framework: complaints regarding the inflation, productivity, stretch, C-factors and growth are all misplaced

5.3.1 The inflation factor

568. Toronto Hydro's approach to inflation mirrors the OEB's, applying each year's forecast of inflation to that year's rate determination. For example, 2016 rates will be based upon the OEB's 2016 inflation forecast. This would continue for every year through 2019; that is, 2017 rates would be determined using the OEB's 2017 inflation rate and so on. In its submission, OEB Staff suggests that 2016 rates should be determined using the 2015 inflation factor.⁶⁴⁸ This appears to be a mistake in Staff's submission and would, in any event, be contrary to the OEB's standard approach. It should not be adopted.

5.3.2 The Productivity factor

569. No party specifically objected to Toronto Hydro's proposed adoption of the OEB's standard productivity factor and its use should be approved.

5.3.3 The stretch factor

570. Toronto Hydro has proposed a stretch factor of 0.30% based upon the results of PSE's total cost benchmarking work. This produces a 0.3% stretch factor for each of the four years of the Custom IR term beyond the base year. The reasons why PSE's total cost benchmarking work should be preferred by the OEB are discussed in Section 4 RRFE and are not repeated here.

571. All parties oppose Toronto Hydro's request. Many propose a stretch factor that is higher than has ever been applied by the OEB. SEC⁶⁴⁹, AMPCO⁶⁵⁰ and, CCC⁶⁵¹ each propose a stretch factor of 1.0%. Energy Probe⁶⁵² and OEB Staff propose an unspecified figure up to that amount.⁶⁵³ BOMA suggests 0.80%⁶⁵⁴, while VECC⁶⁵⁵ and SIA⁶⁵⁶ propose 0.6% and 0.45%,

⁶⁴⁸ OEB Staff Argument, at page 18.

⁶⁴⁹ SEC Argument, at page 58, para.4.2.18, footnote 152.

⁶⁵⁰ AMPCO gives its support to SEC's position. See AMPCO Argument, at page 35, second-last bullet.

⁶⁵¹ CCC gives its support to SEC's position. See CCC Argument, at page 20, final bullet.

⁶⁵² Energy Probe Argument, at page 32, para. 5.

⁶⁵³ OEB Staff Argument, at page 17, para. 1.

⁶⁵⁴ BOMA Argument, at page 8, section 2.2.

⁶⁵⁵ VECC Argument, at page 10.

⁶⁵⁶ SIA Argument, at page 5.

respectively. Each of these parties points in whole or in part to PEG's work in support of its position.

572. OEB policy in relation to the appropriate stretch factor is perfectly clear: there are five cohorts and designation in any particular cohort is based upon a utility's total cost benchmarking performance at a point in time (or here, over the term of the CIR plan). The highest (or worst) cohort is Group V. Utilities in that cohort are assigned a stretch factor of 0.60%. As the OEB has said, "the Board has determined that the appropriate stretch factor values range from 0.0% to 0.6%"⁶⁵⁷ and "determined an approach to assigning stretch factors to distributors on a distributor's actual costs relative to its predicted costs".⁶⁵⁸ PSE's work places Toronto Hydro in Group III.⁶⁵⁹

573. Other than VECC and SIA, all other parties effectively suggest that the OEB create, ad-hoc and without analytic or evidentiary basis, a new sixth cohort. They do so without any transparent criteria of what qualifies a utility for such a cohort, whether it applies to other utilities at all or how this would interact with the existing 4th Generation IRM cohort assignments. In Toronto Hydro's submission, adopting any stretch factor greater than 0.60% would be contrary to OEB policy, arbitrary and, in any event, based upon a false premise in relation to Toronto Hydro's reliability performance.

574. Contrary to OEB policy, total cost is not the basis for PEG's position. In its report, despite acknowledging OEB policy (i.e. cohort designation should be based on cost benchmarking) PEG says "since THESL displays poor cost performance and average to poor reliability performance....a stretch factor in excess of 0.60% is defensible..."⁶⁶⁰ No indication is given by PEG (or any party) as to:

- (a) when reliability should be considered by the OEB in assigning a stretch factor;

⁶⁵⁷ EB-2010-0379, Report of the Board (2013, as corrected), at page 20.

⁶⁵⁸ Ibid.

⁶⁵⁹ EB-2010-0379, Report of the Board (2013, as corrected), Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors, at page 21, Table 3.

⁶⁶⁰ PEG report, p. 50

- (b) which utilities this consideration will apply to (will Algoma Power, Hydro One, West Coast Huron Energy and Woodstock Power also be subjected to a stretch factor of up to 1%);
- (c) what reliability metrics will be considered by the OEB;
- (d) how, if at all, these reliability metrics will be weighted;
- (e) what are the cohorts for performance and how will these be assigned.
- (f) how are cost and reliability weighted in the determination of the stretch factor.

575. In fact, given the OEB's cohort designations, PEG was asked how it arrived at an additional reliability based stretch factor of 0.40%. Remarkably, PEG failed to acknowledge that it had even made such a proposal: "PEG has not proposed an "incremental 0.4% stretch factor".

576. In the result, there is no way for Toronto Hydro (or any utility) to determine even the most basic questions: "how was my stretch factor determined?" and, "what do I need to do to improve that stretch factor and by how much?"

577. PEG also fails to cite a single relevant, timely precedent for its position. When asked, PEG gave two examples. These come from the natural gas sector from over a decade ago – Southern California Gas, a six year plan that began in 1997; and Berkshire Gas in Massachusetts, a ten year plan that began in 2001.⁶⁶¹ PEG was not able to provide any example of a 1.0% stretch factors applied in electricity regulation in North America.

578. Finally, the premise of parties' positions, that Toronto Hydro's reliability related performance is wrong, or at least overstated. It is fair to say that on a benchmark basis, Toronto Hydro's SAIFI performance is above benchmark, but its SAIDI performance is below. Moreover, as the PSE Reply Report illustrates, through 2019, the PSE reliability model shows improved SAIFI performance over the term of the CIR plan.

579. In the result, the PEG proposal is not a "stretch" incentive at all – it is merely punitive. It is subjective. Parties' submissions which rely on PEG should be rejected.

⁶⁶¹ IR Response 1-VECC-2.

580. As it relates to VECC and SIA's positions, as they are based on cost benchmarking, Toronto Hydro relies on its discussion as to the reasons why the OEB should prefer PSE's total cost benchmarking work.

5.3.4 The stretch factor should not be applied to the C-Factor

581. OEB Staff⁶⁶², BOMA⁶⁶³ and Energy Probe⁶⁶⁴ argue that the stretch factor should apply to both capital and non-capital costs. SEC also takes this position⁶⁶⁵, though Toronto Hydro notes that SEC's "revenue requirement" based rate frameworks proposal is in no way dependent on – and is arguable at odds with – this recommendation.

582. Capital productivity is discussed in Section 2, Capital Investment. In brief, it is Toronto Hydro's submission that productivity is sufficiently reflected, and appropriately embedded, in Toronto Hydro's capital plan and the rate framework. Toronto Hydro's competitive, market-based procurement practices, the mechanism through which approximately 80% of its capital costs are spent, extracts productivity benefits from other sectors and embeds them in Toronto Hydro's own costs. Further, Toronto Hydro is proposing to report on metrics that track a significant portion of the remaining 20% of its capital costs. Finally, the incentives created in Toronto Hydro's proposed rate framework to obtain incremental operational efficiencies have carry-over impacts into the capital program.

583. Even if the OEB were inclined to apply a stretch factor to capital (which Toronto Hydro submits it should not), the parties proposed approach is wrong. Here again, parties rely on the PEG report. Respectfully, the manner in which the PEG Report purports to incorporate a stretch factor to the capital related revenue requirement aspect of Toronto Hydro's proposed CIR Formula is incorrect.

584. PEG starts with the base CIR formula expressed as follows:

$$PCI = (1 - Scap) * (I - X) + Cn$$

⁶⁶² OEB Staff Argument, at page 17.

⁶⁶³ BOMA Argument, at page 9.

⁶⁶⁴ EP Argument, at page 32.

⁶⁶⁵ SEC Argument, at page 42, paragraph 2.5.14.

585. PEG then adds an adjustment that reinserts the capital share of the X-factor, resulting in a revised formula:

$$PCI = (1 - \text{Scap}) * (I) - X + Cn$$

586. This methodology is fundamentally flawed, in that it fails to apply the X (or “stretch”) factor to capital costs in the same fashion as inflation is applied to capital costs. Toronto Hydro notes that implicit in the standard PCI formula “I - X” is the balancing of inflationary impacts against a stretch factor intended to drive the regulated entity to find savings.

587. By way of example, using the assumptions set out in Table 8 of the PEG Report, Toronto Hydro’s assumed inflationary factor of 1.7% is offset by a stretch factor of 0.3%, producing a net escalator of 1.4%. This is the amount of annual incremental funding that is provided to fund OM&A and revenue offset increases.

588. PEG’s formulation incorrectly assumes that a similar net escalator of 1.4% can be applied by reinserting the capital share of the stretch factor directly against Cn. . However, the Cn Factor is calculated on a revenue requirement basis, not a capital expenditure basis. This creates a disconnect between Toronto Hydro’s treatment of inflation on capital costs, which accounts for inflation in the forecast of the relevant capital budget, before the capital budget is translated in to a revenue requirement. In the result, a 0.6% stretch factor applied directly to the Cn factors approximately over five times larger than if it was applied against capital expenditure. A more detailed analysis of this effect is found in section 5.4.2 and Appendix A.

589. Moreover, because the Cn factor also covers the costs associated with CWIP accruing prior to 2015, applying the stretch factor to the Cn-factor would require Toronto Hydro to find efficiencies in relation to work that has already occurred. Of course, this is not possible. The result is simply an unsubstantiated, and effectively retroactive cut to the capital plan. Section 5.4.2 quantifies this effect with regards to OEB Staff’s proposed rate framework.

5.3.5 The C-Factor is appropriate as proposed

590. Other than argue that a stretch factor should apply to capital, few parties took issue with the determination of the C-factor itself.

591. OEB Staff, despite stating that it is not opposed to the overall concept of the custom capital factor, expresses concern that for the purposes of calculating the correct Cn value, I – X is a “very rough” approximation for forecasts of OM&A and revenue offsets.⁶⁶⁶ Toronto Hydro disagrees. The Cn formula is largely insensitive to the rate of increase of OM&A and revenue offsets. In fact, inflation in 2016 would have to be higher than approximately 7.5% for there to be a material impact on Cn.⁶⁶⁷

592. VECC argues that the C-factor should be scaled relative to Toronto Hydro’s performance in relation the Planning, Engineering & Support Cost Efficiency metric (PESCE). Toronto Hydro disagrees.

593. VECC’s proposal was not raised in evidence. There is no indication from VECC whether the metric is symmetrical; for example, would superior performance result in an increase in Cn? More fundamentally, basing Cn on one performance metric is unreasonable. In this case, Toronto Hydro has proposed the PESCE metric as one of 12 metrics, and is committed to continuing to report on the OEB’s regulatory scorecard. Tying Cn to a single metric works at cross-purposes to the OEB’s preferred scorecard-based approach focused on multiple outcomes.⁶⁶⁸

594. Moreover, placing such a focus on PESCE could lead to inefficient outcomes. As Mr. Walker agreed: “sometimes spending a little bit more on design upfront might result in spending less money on capital because you might do the work more efficiently installing it.”⁶⁶⁹

⁶⁶⁶ OEB Staff Argument, at page 20.

⁶⁶⁷

$$\begin{aligned}
 \$1 \text{ million} &= BRR_{2015} \times (C_n - C_{n, \text{revised}}) \\
 \$1 \text{ million} &= BRR_{2015} \\
 &\times \left(\frac{(CRRR_{2017} - CRRR_{2016})}{CRRR_{2016} + (1 + 0.017 - 0.003) * (OMA_{2015} + RO_{2015})} \right. \\
 &\quad \left. - \frac{(CRRR_{2017} - CRRR_{2016})}{CRRR_{2016} + (1 + 0.075 - 0.003) * (OMA_{2015} + RO_{2015})} \right)
 \end{aligned}$$

This determination uses values from Table 3 and Table 5 from Exhibit 1B, Tab 2, Schedule 3, at pages 10 and 13 respectively and assumes a materiality threshold of \$1 million of revenue requirement. The formula provided is solved with a 2016 inflation value of 7.5%.

⁶⁶⁸ To the same effect, tying outcomes to funding in such an explicit and material fashion could negatively impact the OEB’s own efforts in developing the regulatory Scorecard if it is the OEB’s intent to use that document for such a purpose going forward.

⁶⁶⁹ OH Transcript, Volume 6 (February 25, 2015), at page 51, line 14, to page 52, line 3.

5.3.6 Parties' proposals to account for billing determinants are wrong. Toronto Hydro proposes an appropriate mechanism

595. A number of parties propose a “growth” factor to account for changes in billing determinants be included in the price cap formula. Toronto Hydro does not object to including a growth factor, but it should be done properly. Parties' growth proposals should be rejected.

596. First, including a growth factor in the custom PCI formula that seeks to account for all incremental revenue from changing billing determinants is to use a blunt tool that amounts to nothing more than an additional, punitive stretch factor. As Toronto Hydro has said in evidence: “It is reasonable to expect that a utility's costs will tend to correlate with changes in billing determinants (e.g., costs tend to increase as the number of customers increases). It is therefore critical that the proposed [custom] PCI retain the characteristic of varying with billing determinants, which it shares with the OEB's 4th Generation IR PCI.”

597. Second, it is unknown what growth values the parties believe should be included. In the main, the values proposed are either unclear or are set on an approximated basis. SEC's rate proposal, supported by AMPCO and CCC, is inclusive of growth but fails to specify an expected or proposed rate of increase. OEB Staff, Energy Probe and VECC all advocate for PEG's proposed growth factor of 1.5%. Even this, however, is nothing more than an estimate in that it relies on two conditional statements that are not substantiated with evidence⁶⁷⁰: “If kWh per customer and kW per customer remain constant for all customer classes over 2016-2019, then a revenue-weighted index of billing determinants will grow at approximately the same rate as customer growth, or by 1.53% per annum.”

598. Third, Toronto Hydro provided a detailed forecast of its loads and customers, by class, for the 2015 to 2019 period.⁶⁷¹ PEG's use of the total customer growth to infer revenue growth of 1.5% plainly ignores this evidence and the difference in growth for different rate classes. Had PEG avoided approximations and instead relied upon the evidence, Toronto Hydro submits that PEG would have calculated average growth factor closer to 0.3%.

⁶⁷⁰ EB-2014-0116, PEG Report, Toronto Hydro Electric System Limited Custom IR Application and PSE Report “Econometric Benchmarking of Toronto Hydro's Historical And Projected Total Cost And Reliability Levels” (December 2014) at page 54.

⁶⁷¹ Exhibit 3, Tab 1, Schedule 1, at Appendix B-1 and C-1.

599. Fourth, Toronto Hydro, in fact, forecasts essentially no growth over the term in any billing determinant aside from customers in the CSMUR class. In this class, Toronto Hydro actively competes with unit sub-meter providers. It is entirely possible, therefore, that growth in billing determinants over the term could be zero or even slightly negative.

600. In the result, it is Toronto Hydro's position that the growth factor be calculated on an actual, and not a forecast or proxy-estimate basis, and that it should be appropriately scaled.

601. The growth factor should be determined by applying the current approved distribution rates (excluding rate riders) to the most recent 12-month change in billing determinants. For example, in November 2015, the growth rate to be applied for 2016 Price Cap Index would be calculated by the following:

$$\frac{\text{Nov 2014 to Oct 2015 Billing Units}}{\text{Nov 2013 to Oct 2014 Billing Units}} * \text{Current Distribution Rates}$$

602. Toronto Hydro submits that using the most recent estimates of growth would be a reasonable up-to-date proxy for forecast growth in the rate year. Toronto Hydro also submits that impacts of changes in weather between years are likely to be offset over the term of the CIR (eg: data does not need to be weather normalized) and thus normalization of the data would be an unnecessary complication.

603. A growth factor calculated on an actual basis would remove forecasting uncertainty and, in the case of PEG's recommendation, would remove any need to use approximations or assumed conditions and is therefore a more reasonable basis on which to set its value.

604. The value of the growth factor ("g"), calculated as above, should be scaled by "(1 – S_{OMA})".

605. The effect of this scaling factor is to include the full value of the growth factor into the formula and then back out the OM&A component. Scaling the growth factor in this fashion would allow Toronto Hydro to retain the appropriate share of any incremental "growth" revenue to fund the incremental OM&A activities necessary to service those new demands.

606. The revised PCI would therefore become:

$$PCI = I - X + C - (1 - S_{OMA}) * g$$

where,

$$C = C_n - S_{cap} * (I - X)$$

5.3.7 The cost of capital should not be adjusted throughout the term of the CIR plan

607. For the purpose of forecasting capital related revenue requirement necessary to calculate C_n , Toronto Hydro has proposed to retain the 2015 cost of capital for the duration of the plan.⁶⁷²

608. Energy Probe argues that a material change in debt rates could result in differences in the actual cost of capital during the CIR plan period. This aspect of Energy Probe's argument is addressed later in this Section. Energy Probe further argues that the OEB consider making an annual adjustment, subject to a materiality threshold, to the cost of debt on actual debt issues.⁶⁷³ OEB Staff also suggests that there is precedent for varying the cost of capital.⁶⁷⁴

609. The reference to the HONI and Enbridge cases by OEB Staff and Energy Probe is inapposite. Unlike those cases, Toronto Hydro's framework largely adopts the OEB's 4th Generation IR framework; it is not a "custom cost of service" framework. Under 4th Generation IRM, the cost of capital is set for the duration of the term at the outset through the rebasing process; other than the ROE figure, it is not adjusted annually. This is another standard IRM aspect that Toronto Hydro has voluntarily adopted and respectfully submits that the OEB should accept it as filed.

5.4 Parties' rate framework proposals are unreasonable and result in no, or substantially reduced, capital funding

610. As discussed in the overview to this Section, parties suggest in argument rate framework proposals that were not put to Toronto Hydro's in evidence. Witnesses were denied the opportunity to comment on the record or set out the implications of the proposals. Toronto Hydro is therefore required to undertake this work in reply.

⁶⁷² Exhibit 1B, Tab 2, Schedule 3, at page 8, lines 21-22.

⁶⁷³ Energy Probe Argument, at page 51.

⁶⁷⁴ Energy Probe Argument, at page 51. OEB Staff Argument, at page 7.

611. In what follows, we set out this work. We further discuss the overall implications of the more specific proposals referred to in Appendix A.

5.4.1 SEC's proposal results in no capital funding in 2017 and less than half of what is needed by Toronto Hydro over the plan

612. SEC proposes that rates be set on a series of revenue requirements beginning in 2015. In brief, SEC suggests that rates increase by 3.1% per year over the term of the plan beginning with an increase over 2014. SEC's proposal is supported by AMPCO⁶⁷⁵ and CCC.⁶⁷⁶

613. SEC's proposal is unreasonable on its face: it results in no capital funding in 2017 and average funding over the life of the plan of \$234 million, less than half what is contemplated in the DSP.

614. To begin, SEC's starting point, a revenue requirement of \$614.7 million, is wrong.⁶⁷⁷ This figure claims to represent "revenue requirement"; however, from its description⁶⁷⁸, it includes an amount for growth in billing determinants over 2014. Growth is not a component of revenue requirement and because SEC does not provide its assumption in relation to growth, it is not possible to determine precisely what SEC is proposing with respect to actual revenue requirement going forward. On the assumption that SEC forecasts positive growth, its statement that the proposal would represent a 3.1% increase in revenue requirement is wrong – the actual figure is less.

615. Fundamentally, SEC's proposal fails to appropriately recognize the three primary drivers of changes in capital related revenue requirement. Using 2015 as an example, these components are: (1) 2015 opening net fixed assets (spending that occurred prior to 2015 on projects that came into service prior to 2015); (2) 2015 additions from CWIP (spending that occurred prior to 2015 on projects that come into service in 2015); and (3) 2015 additions from 2015 projects (this is the corollary to the second point: a portion of a year's spending comes into service in that year).

⁶⁷⁵ AMPCO Argument, at page 35.

⁶⁷⁶ CCC Argument, at page 20.

⁶⁷⁷ In addition to concerns regarding growth, Toronto Hydro notes, as it did during the hearing, that it did not have a "revenue requirement" in 2014 per se as it was on IRM.

⁶⁷⁸ SEC Argument, at page 11, para. 0.2.29.

616. In the result, SEC fails to provide adequate revenue requirement for all three components. Again taking 2015 as the example, while SEC's "capital service" amount of \$378.5 (\$614.7M minus its proposed OM&A of \$236.2M, reflective of the proper correction for SEC's OPEB proposal in section 3.5.2 is sufficient to fund Toronto Hydro's forecasts of the first two categories, the residual funding is estimated to fund a 2015 capital budget of just \$139M.

617. Because of the dramatically smaller capital program in 2015, CWIP would absorb far less of SEC's capital service amount in 2016, and capital spending could return closer to the required level proposed by Toronto Hydro. But SEC's rigid escalator, devoid of any influence from Toronto Hydro's forecasts, produces a result in the year following that surpasses ratcheting in 2015 – in fact, the budget for 2017 would be zero.⁶⁷⁹

618. Indeed, Toronto Hydro cannot rule out that in 2017 it would trigger the 300 basis point off-ramp. Without a capital program, a significant amount of labour that would normally be capitalized would instead have a dollar-for-dollar impact on OM&A. This would have significant negative implications for Toronto Hydro's return on equity.

619. Admittedly, the above calculations are complicated. They are set out in full in Appendix A to this Reply Argument. Obviously, it would have been preferable for SEC to have put forward its proposal during the evidentiary portion of the proceeding, either through interrogatories, at the technical conference or to a witness in examination. As this did not happen, Toronto Hydro has made its best effort to address SEC's proposal in this reply argument.

5.4.2 The implications of parties' specific proposals are unreasonable

620. Those parties that suggest changes to the specific elements of Toronto Hydro proposed rate framework nowhere discuss the overall implication of their changes.

621. To demonstrate the interrelationship of the elements of the framework and the implication of changing those elements, we use OEB Staff's proposal as representative of all parties. (Given the time permitted in reply, it is not practical to model each party's position.)

⁶⁷⁹ This incremental pressure makes SEC's OM&A proposal even more untenable.

622. In its argument, OEB Staff proposes an annual capital budget of \$400 million capital, and 2015 OM&A of \$247.2M. OEB Staff further proposes that the custom PCI include a growth factor of 1.5%, at least a 0.6% stretch factor, and that the stretch factor be applied to capital costs (in the incorrect manner proposed by PEG discussed earlier in this Section).⁶⁸⁰

623. Toronto Hydro argues above why applying the stretch factor bluntly to capital costs, as opposed to capital expenditures, would be inappropriate. This is further apparent from a review of Staff's proposal. The specific effect can be forecast by estimating the amount of revenue requirement associated with the "Scap * X" that is added back in – the stretch factor now applies to capital costs. In 2016, Toronto Hydro estimates this to be \$2.2 million in revenue requirement..

624. In the result, that amount of revenue requirement would no longer be available to fund capital investment in 2016. Reflecting the facts discussed in relation to SEC's proposal – only a certain amount of capital spending comes into service in a given year, and that amount is subject to the half-year rule – OEB Staff's stretch factor proposal would reduce funded capital expenditures from \$400 million to approximately \$316 million. The effect would be greater with a 1.0% stretch factor.

625. Further, OEB Staff's stretch factor proposal amounts to an annual capital expenditure cut of \$32 million on average between 2016 and 2019, oscillating wildly between under and over-funding due to the interactions between opening net fixed assets, CWIP and capital expenditures, as seen in the discussion of SEC's proposal above. This compares to the result of applying the same 0.6% stretch factor to capital expenditure, which amounts to an annual capital expenditure reduction of \$6 million on average between 2016 and 2019.

626. The effect of including a 1.5% growth factor is even more severe. See Appendix A for more detail.

⁶⁸⁰ OEB staff also adopts Toronto Hydro's forecast of revenue offsets.

5.5 Other Issues

5.5.1 The OEB should approve a capital variance account

627. SEC and AMPCO argue that Toronto Hydro should be required to establish a variance account to “protect ratepayers” from the possibility that the forecast level of capital related revenue requirement that is embedded in the 5 year term of the CIR Application.⁶⁸¹

628. The intent of the SEC and AMPCO proposals is to capture any negative variance between the assumed capital related revenue requirement and the actual capital revenue requirement during the CIR term. Toronto Hydro would then refund any negative variance to ratepayers so that they are protected against paying capital related revenue requirement amounts for capital that is not in fact placed in-service during the CIR term if Toronto Hydro underperforms with respect to the forecast level of capital investment.

629. Although they do not make specific submissions with respect to the establishment of a variance account to track negative capital related revenue requirement variances, other parties and OEB Staff raise similar issues.⁶⁸²

630. The common thread throughout this submissions is a concern that, once the OEB has embedded an assumed level of capital related revenue requirement within the CIR structure used to calculate Toronto Hydro’s rates for the CIR term, ratepayers face a material risk that they will fund, through rates charged to them during the CIR term, a level of capital investment that Toronto Hydro will not be able to achieve.

631. As set out above, and as expressed by its witnesses, Toronto Hydro is confident in the need for the proposed level of capital investment described in this application, the appropriateness of the proposed pace of that investment, and the ability of Toronto Hydro as an organization to execute the proposed level and pace of investment as detailed in the DSP.

⁶⁸¹ SEC Argument at page 52 paragraph 2.11.8; AMPCO Argument at pages 31 to 32.

⁶⁸² CCC notes a perceived lack of ratepayer protection in Toronto Hydro’s CIR proposal with respect to forecast risk (page 3). BOMA. notes the lack of any true up with respect to the capital driven components of the revenue requirement, asserting the risk to ratepayers that they “may be out of pocket” with respect to consistent under-spending (pages 38-39). At pages 45-46 that BOMA submits that the OEB should, similar to what was proposed by CCC, impose an Earnings Sharing Mechanism. OEB Staff raises a concern with respect to the ability of Toronto Hydro to put into service the requested level of capital spending over the CIR Term (page 50).

632. Toronto Hydro is mindful, however, of the concern raised by intervenors and OEB Staff with respect to risk to ratepayers of potential “overfunding”, given that Toronto Hydro is one of the first tranche of distributors to seek to have its rates set in accordance with the RRFE; an OEB policy which, for the first time, requires distributors to forecast their capital needs for a period of five years and aspires to set rates on the basis of that five year forecast.

633. Accordingly Toronto Hydro, agrees that the OEB should approve a variance account to track the variance between:

- (a) the cumulative capital related revenue requirement implicitly embedded in rates through the setting of the 2015 base year and the approval of the CIR Formula used to generate rates for the 2016 to 2019 rate years; and
- (b) the actual, cumulative capital related revenue requirement in the 2015 to 2019 rate years,

as a measure to address concerns that ratepayers may, for any reason, be asked to fund capital investment that does not, in fact, materialize during the CIR Term, as well as to account for the possible shifting of in-service amounts from earlier to later years.

634. **The Proposed Account.** The specifics of the proposed account (referred to by Toronto Hydro as the Capital Related Revenue Requirement Variance Account or “CRRRVA”) are as follows:

- (a) The CRRRVA would track the variance between the cumulative 2015 to 2019 capital related revenue requirement that is embedded in the approved 2015 to 2019 rates and the actual 2015 to 2019 capital related revenue requirement;
- (b) The variance analysis would track the impact of two changes on the capital related revenue requirement;
 - (i) the actual level of annual in-service additions relative to what was included for the purpose of setting rates for 2015 to 2019, and

- (ii) the depreciation rates and resulting depreciation cost associated with the actual in-service additions relative to the assumed average depreciation rates and resulting depreciation costs used to set 2015 to 2019 rates.

635. In the above way, to the extent that the level of actual in-service additions varies from what was forecast for the purpose of setting rates for 2015 to 2019, and to the extent that the assets put into service have a different average depreciation rate and resulting depreciation cost, Toronto Hydro will calculate the actual capital related revenue requirement for each year of the CIR Term using the actual in-service amounts and actual depreciation cost and determine the cumulative variance in the capital related revenue requirement over the 5 year CIR Term.

636. **The CRRRVA Must Operate on a Cumulative Basis.** It is critical to Toronto Hydro that the CRRRVA operate on a cumulative basis rather than annually, as it is only if it operates on a cumulative basis that Toronto Hydro can maintain the required flexibility to plan and execute its capital investment strategy in response to the various factors that may require the shifting of projects and project spending earlier or later in the CIR term. To that end Toronto Hydro notes that SEC specifically endorses the “cumulative” approach:

. . . This account would record the revenue requirement difference between the approved in-service amount and actuals, if it was less. It will also allow Toronto Hydro to catch up in subsequent years, as long as it does not go over the cumulative total. . . .⁶⁸³ (emphasis added)

637. **The Impact of Assumptions other the In-Service Amounts and the Related average Depreciation Rate.** In performing the variance calculation Toronto Hydro would, for all other parameters, use the same values as are included in the 5 year CIR Formula. For example, the cost of capital parameters (return on equity, cost of long term debt, cost of short term debt) would not vary.

638. Similarly the PILS impact of the actual in service amounts would be calculated based on the same PILS framework embedded in the CIR Term. Toronto Hydro does note however that to the extent its PILS obligations should change during the course of the CIR Term such changes

⁶⁸³ SEC Argument at page 52, paragraph 2.11.8.

would be tracked separately in account 1592. To the extent that there are PILS costs or savings to be recorded in account 1592, those costs or savings would be impacted by any negative variance tracked in the CRRRVA.

639. In the event the OEB approves the use of a CRRRVA as proposed, Toronto Hydro would, as part of the Draft Rate order, provide an analysis showing both the capital related revenue requirement amounts that are embedded as a result of the OEB's decision, against which the variance would be tracked, as well as a scenario illustrating a hypothetical variation in the in-service amounts and related average depreciation amounts to illustrate how the variance analysis would operate.

640. **Review and Disposition of the CRRRVA.** As the CRRRVA is intended to track the cumulative 5 year variance related to capital related revenue requirement amounts between 2015 and 2019, it would not be disposed of until after the completion of the 2019 rate year. If, at the end of the 2019 rate year, there is a negative variance in the account, that amount would be disposed to the credit of ratepayers.

641. Review of the CRRRVA would be limited to ensuring that the variance between the embedded and actual capital related revenue requirements was properly calculated. This reflects the sole rationale behind the creation of the CRRRVA, which is to protect ratepayers from funding levels of capital related revenue requirement during the CIR Term that, while approved, were not achieved.

642. It is not the intent of Toronto Hydro, in endorsing the use of the CRRRVA, to unduly fetter its discretion with respect to the timing or level of its capital investments during the CIR Term beyond that which is already imposed by the RRFE. Accordingly the CRRRVA does not directly track variances in capital spending or in-service amounts; it only tracks the variance between the assumed capital related revenue requirement and the actual capital related revenue requirement over the CIR Term.

643. It is Toronto Hydro's submission that issues concerning the nature and level of actual capital spending and in-service amounts would continue to be considered by the OEB in the context of the OEB's review of Toronto Hydro's performance relative to the approved

parameters of its DSP; the operation of the proposed CRRRVA to the benefit of ratepayers would not add to or detract from that review.

5.5.2 The OEB should reject an ESM. If approved, it should be symmetrical

644. In Toronto Hydro's submission the OEB should reject requests to approve an earnings sharing mechanism. Toronto Hydro agrees that these mechanism are largely not effective at encouraging efficiencies.⁶⁸⁴

645. Nevertheless, if the OEB were to approve an ESM, Toronto Hydro submits that the mechanism should be symmetrical and that a 100 basis point deadband is appropriate having regard to the explicit benefit sharing mechanism (the stretch factor) already embedded in the rate framework. Earnings in excess of the 100 basis point deadband but below the 300 basis point off-ramp would be split on a 50/50 basis with customers.

646. Further, having regard to the discussion above relating to the CRRRVA, any ESM would necessarily only track the variance between the non-capital related revenue requirement embedded in rates and the actual non capital related revenue requirement.

5.5.3 The OEB should provide the requested z-factor guidance

647. No party objects to Toronto Hydro's request for approval of the OEB's standard z-factor. Parties do argue that the OEB should refuse Toronto Hydro's request for guidance from the OEB as to what events might qualify for z-factor treatment. For the reasons set out in the Argument in Chief, Toronto Hydro requests that guidance be provided.

5.6 Revenue Requirement

648. Toronto Hydro has calculated the 2015 rebasing year revenue requirement according to the OEB's requirements and using the Revenue Requirement Workforms. The components of revenue requirement are ratebase, cost of capital, OM&A, PILS, and revenue offsets.

649. Parties generally did not object to Toronto Hydro's calculation of revenue requirement, and specifically expressed support for the company's updated Working Capital Allowance calculation. The concerns which were raised are discussed below.

⁶⁸⁴ EB-2013-0416, OEB Staff Argument, at page 16; IR Response 3-BOMA-22.

5.7 Rate Base

5.7.1 Claims to disallow 715 Milner costs are without merit

650. CCC seeks to disallow amounts related to the purchase of property at 715 Milner Avenue. VECC supports CCC, although it seeks to disallow half of the relevant amounts. There is no proper basis for these parties' positions. The purchase was prudent and there is no evidence to the contrary.

651. The test for prudence is well-established

- Decisions made by the utility's management should generally be presumed to be prudent unless challenged on reasonable grounds.
- To be prudent, a decision must have been reasonable under the circumstances that were known or ought to have been known to the utility at the time the decision was made.
- Hindsight should not be used in determining prudence, although consideration of the outcome of the decision may legitimately be used to overcome the presumption of prudence.
- Prudence must be determined in a retrospective factual inquiry, in that the evidence must be concerned with the time the decision was made and must be based on facts about the elements that could or did enter into the decision at the time.

652. In support of its claim, CCC and VECC offer the following alleged justifications:

- (a) The assessments of the property (\$16.0 million and \$14.8 million) were lower than the "purchase price" of \$17.3 million.
- (b) Toronto Hydro has not vacated 601 Milner and 715 Milner is not yet occupied.
- (c) Toronto Hydro forecasts needing to perform assessment work with respect to the property.

- (d) Toronto Hydro could continue to operate out of 601 Milner and complete renovations to that property for less than the required investment at 715 Milner.

653. *The assessments.* CCC is simply wrong as to the purchase price. The purchase price of the property was actually \$15.6 million. This amount falls between the two valuations demonstrating the reasonableness of the price. The remaining costs relate to fixtures, and closing costs.⁶⁸⁵

654. *601 Milner has not been vacated/715 is not yet occupied.* This is a classic, hindsight-based argument. At the time of purchase, Toronto expected to vacate the 601 Milner property shortly after 715 was acquired. In any event, this is not a basis to deny recovery – Toronto Hydro, not ratepayers, has borne the carrying costs of 715 Milner property to date and it expects to occupy the property and terminate the lease at 601 Milner by the end of Q1 2016.⁶⁸⁶ It is perfectly reasonable for a company, in transitioning from one property to another, to occupy both for a brief period.

655. *The need to perform assessment work.* CCC argues that because Toronto Hydro forecasts a need to perform assessment work with respect to the property, the purchase must have been imprudent. It claims that checking for water tightness, contaminants and energy efficiency should have been conditions of sale. In fact, Toronto Hydro did undertake such assessments. The forecast work is only to confirm that, prior to completing necessary renovations, no changes have taken place which would affect those renovations.

656. *Toronto Hydro could operate out of 601 Milner.* CCC claims that Toronto Hydro could continue to operate out of 601 Milner and complete renovations to that property for less than the required investment at 715 Milner. No evidence is cited in support of this. Further, CCC and VECC both overlook that this phase of the OCCP has a net positive business case.

⁶⁸⁵ Exhibit 2A, Tab 7, Schedule 1, Appendix A, page 5; TC Undertaking J2.1, Appendices A and B.

⁶⁸⁶ Exhibit 2B, Section E8.3 at page 18.

5.7.2 Toronto Hydro has correctly applied the “used or useful” principle

657. SEC and BOMA object in general to the addition of assets to rate base unless they are “energized”, or conveying electricity to ratepayers.⁶⁸⁷ They do so based on their interpretation of the notion of “used or useful” in reference to the OEB decision in EB-2012-0064 dated April 23, 2013 at pages 13 to 14.

658. The one exception these parties concede to that general objection is for assets that are “ready to convey” electricity but are prevented to do so as a result of the actions or inactions of a third party to prevent such conveyance, a concession that is made with specific reference to the OEB Decision in EB-2012-0064.⁶⁸⁸

659. Given this understanding of how the notion of “used or useful” operates to define what assets are eligible for addition to rate base, both SEC and BOMA specifically object to the inclusion of “civil work”⁶⁸⁹ or “civil assets”⁶⁹⁰ in rate base prior to the addition of components to the civil work or assets capable of conveying electricity.

660. Although SEC makes reference to “what the Board has stated in the past”⁶⁹¹ with respect to the proper interpretation of the term “used or useful” and BOMA asserts that Toronto Hydro’s has “misinterpreted the law,”⁶⁹² makes a reference to what practice the gas utilities follow, and suggests that Toronto Hydro’s approach is “wrong, and likely illegal”⁶⁹³, the only jurisprudence referred to by either SEC or BOMA in support of their view is the OEB Decision in EB-2012-0064.

661. In Toronto Hydro’s view both SEC and BOMA have materially misinterpreted the OEB’s Decision in EB-2012-0064. Toronto Hydro respectfully submits that a review of that decision and the context within which it was made demonstrates that SEC and BOMA are attempting to advance the same incorrect, restrictive definitions of the term “used or useful” that they

⁶⁸⁷ SEC Argument at page 46 paragraph 2.8.2 and BOMA Argument at pages 38 to 39.

⁶⁸⁸ SEC Argument at page 39, SEC Argument at page 46, para. 2.8.2.

⁶⁸⁹ SEC Argument at page 46 para. 2.8.1

⁶⁹⁰ BOMA Argument at page 39.

⁶⁹¹ SEC Argument at page 47 para. 2.8.5.

⁶⁹² BOMA Argument at page 38.

⁶⁹³ BOMA Argument at page 29.

advanced in their arguments in Phase 1 of EB-2012-0064, definitions that the OEB expressly rejected in its decision.

662. In Toronto Hydro's submission the correct interpretation of "used or useful" in the context of recording assets in rate base is expansive, and contemplates the addition of civil assets that are completed in advance of any electrical components as "useful" assets in the context of a distribution utility.

663. Toronto Hydro submits that it is critical to a proper understanding of the OEB's EB-2012-0064 Decision to recall the two specific issues that the OEB was addressing in relation to the notion of assets that were either "used or useful".

664. **Spend vs. In-Service Approach.** In the EB-2012-0064 Phase 1 Decision the primary threshold issue was the determination of the nature of the OEB's framework for funding under the Incremental Capital Module ("ICM"). The OEB summarized the issue in its decision:

Spend versus In-service

Background

THESL requested recovery under the ICM model of \$283 million of capital expenditures in 2012 and \$579 million in 2013. This was submitted on a "spend basis". On an "in-service basis" the request for 2012 was \$116 million and for 2013 was \$424 million. The difference between these models is explained below. The "spend approach" used by THESL assumes that recovery is based on THESL's expenditures in each year on the approved work program. This approach does not include any adjustment to end of 2011 rate base to account for the application of the half year rule in 2011, nor does it include any provision to account for pre-2012 CWIP. If the entire work program (excluding Bremner) is approved this approach will require recovery \$90.9 million through rate riders. Additional rate riders will be required for Bremner – these are discussed later in this decision.

In support of its position that this is the appropriate approach, THESL pointed out that the Board's guidelines and workforms are laid out on that basis.

The alternative approach, as described by Board staff and supported by the intervenors, is to allow recovery at the time the assets are "in-service". This approach is based on recovery of only the in-service portion of 2012 and 2013 capital expenditures related to the approved work program.

As this phase of the application applies to 2012 and 2013, it includes recovery of 2012 capital expenditures that come into service in 2013, as well as in-service 2012 and 2013 assets, but does not include the portion of 2013 spending that does not come into service until 2014. These assets would be dealt with in the next phase of this proceeding which will consider the 2014 portion of the work program. (Emphasis added)⁶⁹⁴

665. Toronto Hydro had advanced its understanding of the OEB's guidelines and workforms to provide ICM funding on the basis of the total capital spending within the relevant year (the "Spend" Model") regardless of whether that spending was tied to assets that were placed in service within the same year, whereas OEB Staff and intervenors submitted that ICM funding was properly based on in-service additions (the "In-service Model").

666. In its reply, Toronto Hydro addressed the arguments made by parties (specifically, as in this proceeding, SEC and BOMA) with respect to an incorrectly restrictive notion of assets that are "used and useful" read conjunctively, as opposed to the correct and much more expansive notion of assets that are "used or useful".

667. In their various arguments in support of the In-service Model SEC and BOMA had made several sweeping, unsubstantiated statements concerning the eligibility of investments for inclusion in rate base on the basis of what they referred to as the "used and useful" rule. These are summarized at paragraph 326 of Toronto Hydro's reply. There, the company argued:

A major element of the reasoning that underlies the intervenors in-service additions approach is their perception of what they call the "used and useful" rule. SEC says that the "used and useful" rule has a long history and universal acceptance. BOMA argues that assets in-service, rather than "capital expenditures per se", are the basis for "an ICM treatment" because the Board's ICM policy should be read in light of the "long established" used and useful principle.

668. Toronto Hydro took issue with the intervenors' restrictive mischaracterization of what they referred to as the "used and useful" principle (read by them conjunctively), and set out the actual history of the term. In summary, Toronto Hydro described the regulatory jurisprudence underpinning the term, culminating in the paragraph 332 which concluded that:

As a result, the "used and useful" formulation of the test may be viewed as both conjunctive and disjunctive. In the words of the Alberta Court of Appeal, the

⁶⁹⁴ EB-2012-0064, Partial Decision and Order (April 2, 2013) at pages 11-12.

phrase “used and useful” has come to import a measure of flexibility in determining when assets may be brought into the rate base. The flexibility of the “used and useful” formulation of the test was expanded upon by an American commentator, who said:

This study ... shows how flexibly the standard is applied. Used and useful no longer requires that there be a direct and immediate benefit to identifiable ratepayers. ... The criteria of used and useful broadened while its constitutional meaning diminished. It continued to be invoked to protect consumers from bearing certain risks associated with speculative investments and providing profits on prudent investments gone sour, but used and useful ceased to deny utilities access to the ratepayer’s purse simply because a utility asset was not actively employed and no immediate service or benefit was being supplied.⁶⁹⁵

669. In addressing the submissions of the parties with respect to the Spend Approach vs. the In-service Approach, the OEB expressly agreed with Toronto Hydro that the intervenors’ term “used and useful” was not in accordance with the term to be used in Ontario:

The Board notes that in putting forward the “in-service” approach, the parties refer to capital additions as qualifying under the “used and useful” rule. The Board agrees with THESL that the traditional and long established test in Ontario has been the “used or useful” rule. Therefore, the “in-service” approach should more properly be described as the “used or useful” approach.⁶⁹⁶

670. In confirming Toronto Hydro’s analysis of the correct use of the term “used or useful” the OEB explicitly rejected, Toronto Hydro submits, the overly restrictive interpretation put forward by intervenors.

671. A review of the history of the permissive use of the notion of “used or useful” demonstrates that the term is designed not only to describe assets that are, at the moment they are added to rate base, used to convey electricity to ratepayers, but also assets that are useful for that purpose in the future even when, as noted above, that asset is not actively employed and no immediate service or benefit is being supplied.

672. Accordingly, Toronto Hydro respectfully submits, it is entirely appropriate for discrete projects establishing identifiable civil assets to be added to rate base as they are completed, as

⁶⁹⁵ EB-2012-0064, Toronto Hydro Reply Argument (January 29, 2013) at page 88.

⁶⁹⁶ EB-2012-0064, Partial Decision and Order (April 2, 2013) at pages 11-12.

they are assets that are useful within the context of a distribution utility even if they are not, immediately upon completion, used for the distribution of electricity.

673. **The Bremner Issue.** In agreeing with Toronto Hydro's review of the "used or useful" principle the OEB, as both BOMA and SEC note, went on to provide specific direction as to a particular circumstance where a project could not be completed:

However, in some cases, it may be that THESL's work has been completed on a project but it is not yet "in service" as work which is the responsibility of other parties has not been completed. In these circumstances, the Board finds that THESL may consider the work to be completed and hence "useful", even if it is not yet being "used".

674. Both BOMA and SEC take this aspect of the decision to provide a single exception to their (incorrect) general rule that only assets that are actually conveying electricity to ratepayers are eligible to be placed "in-service", that exception relating to the splitting of a project between, in this case, Toronto Hydro and a 3rd party, such that if Toronto Hydro has completed its portion of the project and must wait for work that is the responsibility of others to be completed before actually using their assets to convey electricity, they can partake in this one exception to the BOMA/SEC view of "used or useful" to place the project in service.

675. In Toronto Hydro's view the narrow reading of the decision proposed by both SEC and BOMA takes the decision inappropriately out of context; it must be recalled that at the same time the Board was engaged in determining the appropriate ICM approach, the OEB was confronted with the approval of spending specific to the Bremner (now referred to as Copeland) Project.

676. As was noted by the OEB, one of the major issues in terms of providing ICM related relief for the Bremner Project was whether it would be placed in-service prior to the end of 2014, since ICM relief was only relevant to amounts that were placed in Service in ICM years (the OEB having determined to apply an In-Service Approach).⁶⁹⁷

⁶⁹⁷ EB-2012-0064, Partial Decision and Order (April 2, 2013) at pages 50 and 52.

677. At the time of the ICM proceeding Toronto Hydro had forecast in service additions related to Bremner over the 2012-2014 period of \$124.1M, with all of that spending forecast to go into service in the 4th quarter of 2014.⁶⁹⁸

678. The issue that had been specifically raised, as noted by the OEB, was that the Bremner Project could not be used to convey electricity at all until Hydro One provided a line connection, and Hydro One had committed only to a fourth quarter 2014 line Connection at the earliest⁶⁹⁹; accordingly there was an issue with respect to whether Bremner spending could be prevented from being placed “in-service” in 2014 despite Toronto Hydro having completed, from their perspective, the entire project, because it could not be “energized” as a result of delays related to Hydro One.

679. Toronto Hydro respectfully submits that on the face of the Decision it is clear that the OEB was providing additional guidance with respect to the ability of Toronto Hydro to put capital investment spending into service despite the inability to, itself, energize the equipment, in order to allay concerns about having to forecast the timing of the connection of Bremner to Hydro One. The OEB was not, Toronto Hydro respectfully submits and despite what BOMA and SEC would suggest, providing a single exception to their restrictive notion of “used or useful”, as the OEB had already endorsed Toronto Hydro’s view of the principle as set out in the jurisprudence and literature.

680. In all cases, civil infrastructure must be completed before the electrical work can be done, and when completed the civil infrastructure is useful for delivering electricity. Sometimes, during the course of planning, the investment in civil infrastructure must necessarily be completed in advance of and separately from the investment in “electric” assets; in Toronto Hydro’s view that does not diminish the “usefulness” of the civil asset.

681. With the exception of major projects like Copeland, the temporal relationship between when the civil asset is put into service and the electrical work is completed is, as noted by the

⁶⁹⁸ EB-2012-0064, Partial Decision and Order (April 2, 2013) at page 44.

⁶⁹⁹ EB-2012-0064, Partial Decision and Order (April 2, 2013) at page 50.

OEB, fairly short,⁷⁰⁰ although it does exist and is the driver for treating, in some cases, the accounting for civil assets separately and in advance of any related “electrical” assets.

682. Civil assets, when built, and regardless of when any associated “electrical” assets are installed, are exposed to the elements and begin to deteriorate (in accordance, generally, with the assumptions that underpin their associated depreciation rates) once the construction is complete; it is therefore entirely appropriate, in Toronto Hydro’s view, to put the assets in-service and start depreciating them once the construction is complete.

683. Toronto Hydro’s practice is further supported by the accounting standards that it is required to follow. Toronto Hydro notes that International Financial Recording Standards (“IFRS”) require that it start to record depreciation on assets as soon as they are available for use:

. . . depreciation of an asset begins when it is available for use, i.e., when it is in the location and condition necessary for it to be capable of operating in the manner intended by management.⁷⁰¹

684. Toronto Hydro respectfully submits that this direction under IFRS clearly requires assets, such as civil infrastructure, which are completed and ready to be used for their intended purpose, in this case to house or support electrical components, to be depreciated. In Toronto Hydro’s submission it would be inappropriate for Toronto Hydro to be forced to record depreciation on discrete assets that are in place and complete, such as civil infrastructure, and deny the addition of those assets to rate base during the same period in which they are being depreciation.

5.7.3 The streetlighting assets should be included in rate base as proposed.

685. Pursuant to the OEB’s 2010 and 2011 decisions in the Street Lighting proceedings⁷⁰² Toronto Hydro proposes to transfer the street lighting assets that were deemed by the OEB to be distribution assets (“the former street lighting assets”) into the utility’s 2015 opening rate base.⁷⁰³

⁷⁰⁰ EB-2012-0064 Partial Decision dated April 2, 2013 page 12.

⁷⁰¹ IFRS (IAS16.55)

⁷⁰² EB-2009-0180 *et. al*, Decision and Order (February 11, 2010) [2010 Decision] and Decision and Order (August 3, 2011) [2011 Decision].

⁷⁰³ Exhibit 2A, Tab 5, Schedule 1.

686. Following the OEB's 2011 Decision, Toronto Hydro undertook a detailed analysis of the net book value of the assets to effect the sale and purchase of the assets in accordance with the decision. This analysis resulted in an updated, and more accurate, valuation of the assets to be transferred from TH Energy to the utility. Toronto Hydro proposes to transfer the former street lighting assets into the utility's rate base at the updated value of \$39.8 million, which represents the opening net book value of the assets in 2015.⁷⁰⁴ No parties opposed this proposal. SIA acknowledged that:⁷⁰⁵

In reviewing THESL's evidence on this matter, it appears clear that the valuation presented in this application is a more accurate representation of the value of the assets than that put forward before the Board in the [2011 Decision].

687. The evidence filed by Toronto Hydro, including detailed maintenance and capital forecasts, demonstrates that the utility needs a service revenue requirement of \$8.1 million dollars to serve the former street lighting assets in 2015.⁷⁰⁶ No parties challenged this evidence. To offset the revenue requirement, the utility proposes to transfer \$8.1 million from the contract revenues received by TH Energy from the City of Toronto for maintaining and operating the street lighting and expressway system in Toronto.⁷⁰⁷ This approach is reasonable because (a) it is consistent with utility rate making principles, and (b) neutralizes the rate impact of the asset transfer on all classes except Streetlighting and USL, which Toronto Hydro believes is consistent with the OEB's 2010 Decision.⁷⁰⁸

688. OEB Staff note a concern about cross-subsidization between Toronto Hydro and TH Energy due to being unable to confirm whether the portion of revenue to be allocated from TH Energy to Toronto Hydro is proportional to the assets being transferred.⁷⁰⁹ Toronto Hydro submits that the risk of cross-subsidization between the two entities (if any) is very small because the utility has evaluated the costs of serving the transferred assets and proposes to offset the costs with a corresponding portion of revenue from the City of Toronto contract. In addition,

⁷⁰⁴ Exhibit 2A, Tab 5, Schedule 1, at page 7, lines 3-4. For a reconciliation of the updated valuation to the amount presented to the OEB in the prior application, please refer to IR Response 2A-VECC-11.

⁷⁰⁵ SIA Argument, at page 25.

⁷⁰⁶ Exhibit 2A, Tab 5, Schedule 1, at pages 19-22, lines 15-1.

⁷⁰⁷ This is a commercial agreement entered into between TH Energy and the City of Toronto.

⁷⁰⁸ EB-2009-0180 *et. al.*, Decision and Order (February 11, 2010) at page 20.

⁷⁰⁹ OEB Staff Argument, at page 78.

Toronto Hydro respectfully submits that a proportionality-based allocation method of the contract revenue is not appropriate for two reasons:

- (a) this approach assumes that the costs of owning and maintaining the asset are directly proportional to asset value, but the evidence shows that different assets attract different costs;⁷¹⁰
- (b) this approach would constitute a departure from the OEB's established revenue requirement methodology, and does not ensure that the rate impacts of the asset transfer on other classes are neutralized;⁷¹¹

689. While SIA agreed that the current valuation is "undoubtedly more accurate", it also noted a concern about departing from the OEB's 2011 Decision.⁷¹² Toronto Hydro submits that the SIA concern is unjustified, and in any event, does not outweigh the merits of approving the transfer on the basis of the most accurate information available.

690. The evidence justifies the need for the detailed analysis that led to the updated valuation and the sequence of events surrounding that analysis.⁷¹³ It also outlines the methodological differences that resulted in the updated value of the assets and includes an independent assessment of that methodology by PricewaterhouseCoopers LLP.⁷¹⁴ In addition, Toronto Hydro notes that the OEB concluded in the 2011 Decision that the rate base, revenue requirement, and rate consequences of the street lighting transfer would be determined in the context of Toronto Hydro's next cost of service based rate application.⁷¹⁵

691. Toronto Hydro submits that the proposed adjustment to the value of the former street lighting asset is entirely justified by the evidence, and consistent with the OEB's 2011 Decision to defer the assessment of the rate base, revenue requirement and rate consequences until the

⁷¹⁰ For example, overhead assets (e.g. poles) require predictive and preventative maintenance in the form of Line Patrols and Pole Inspections, while underground assets (e.g. cable) assets do not. Underground assets, however require cable locating where overhead assets do not. The costs to perform these activities are different. See Exhibit 2A, Tab 5, Schedule 1, at pages 20-21.

⁷¹¹ OH Undertaking J6.7.

⁷¹² SIA Argument, at page 26.

⁷¹³ Exhibit 2A, Tab 5, Schedule 1, at pages 2-5

⁷¹⁴ Exhibit 2A, Tab 5, Schedule 1, at pages 7-8; Exhibit 2A, Tab 5, Schedule 2.

⁷¹⁵ EB-2009-0180 *et. al*, Decision and Order (August 3, 2011), at page 15.

next rebasing application. Therefore, the addition of the former street lighting assets to 2015 opening rate base should be approved at \$39.8 million, as proposed by Toronto Hydro.

5.7.4 The ERP will be in service in 2016

692. SIA argues that that the ERP should be assumed to come in-service in 2017, as opposed to 2016 as forecast. It says that the current forecast is ambitious and that Toronto Hydro's experience with Copeland is a relevant consideration. Toronto Hydro disagrees.

693. Toronto Hydro has already undertaken a significant amount of effort in relation to the ERP, as evidenced in the DSP business case and the considerable documentation filed in response to interrogatory 2B-SEC-39.⁷¹⁶

694. In any event, given Toronto Hydro's CRRRVA proposal, this is a non-issue; in the event the ERP Project were to go into service later than forecast the revenue requirement impact of that shift would be entirely credited in the proposed CRRRVA Account.

5.7.5 Other Issues

695. Energy Probe, in its argument, and without an evidentiary reference, states that "the Average 2015 Rate Base is increased by \$1.070 Billion over 2014"⁷¹⁷. This statement is incorrect. As shown in Exhibit 2A, Tab 1, Schedule 1, page 1, Table 1, Rate Base increased from \$2,774.9 million in 2014 to \$3,312.4 million in 2015, an increase of \$537.5 million. Energy Probe also quotes, again without evidentiary reference, year-end rate base numbers which are not rate base, but are net Property Plant & Equipment. Ultimately, not only is Energy Probe's argument unclear, its figures are simply incorrect.

696. BOMA claims that "The Company is requesting the Board to allow it to place the full amount of capital expenditure incurred in 2015 into service in that year, in other words, to change the half year rule"⁷¹⁸. Respectfully, this is wrong. Toronto Hydro has properly applied the half-year rule to in-service amounts for 2015. Toronto Hydro believes BOMA may be confusing this with the company's request for recovery of amounts related to the operation of the

⁷¹⁶ Exhibit 2B, Section E8.6; IR Response 2B-SEC-39.

⁷¹⁷ EP Argument, page 35

⁷¹⁸ BOMA Argument, page 39

IRM mechanism over the 2012-14 period. This request and parties' arguments are addressed in section 7.4.

5.8 ICM True-up

697. A number of parties have made submissions with respect to the treatment of 2015 rate base in light of the ICM true-up process⁷¹⁹. As described in section 6.2.5 of this Reply Argument, Toronto Hydro has proposed a variance account to deal with differences between amounts approved by the OEB for 2015 rate base in this proceeding, and the results of the ICM True-up process. Toronto Hydro submits that this fully, and effectively addresses this issue.

5.9 Cost of Capital

698. Toronto Hydro's evidence on Cost of Capital for the 2015 rebasing year is filed in Exhibit 5, Tab 1, Schedules 1-3. The evidence provides the proposed capital structure and cost of capital. The evidence was filed in accordance with the Report of the Board on the Cost of Capital for Ontario's Regulated Utilities issued December 11, 2009.

699. The only issues raised by parties is in relation to the cost of short-term and long-term debt.

700. With respect to the short-term debt rate proposed by Toronto Hydro, OEB Staff notes that the rate forecast (1.43%) was below the prescribed short-term debt rate (2.16%) found in the OEB's 2015 Cost of Capital Parameter Updates issued November 20, 2014⁷²⁰. Toronto Hydro's based its short-term debt rate on a forecast of 30-Days Bankers Acceptance rates. Toronto Hydro submits that the forecast rate in evidence represents a reasonable estimate of the short-term debt costs for 2015, despite it being below the deemed short-term debt rate.

701. With respect to the overall long-term debt rate proposed by Toronto Hydro, OEB Staff expresses concerns regarding the overall proposed rate (4.31%) and one of the debt issues that makes up the overall rate⁷²¹.

⁷¹⁹ SEC Argument, page 44, section 2.6.6, SIA Argument, page 25, CCC Argument, pages 17-18

⁷²⁰ OEB Staff Argument, pages 81-82

⁷²¹ OEB Staff Argument, pages 80-81

702. On the issue of the overall rate, as noted by OEB Staff, Toronto Hydro's original evidence included an estimate for overall cost of long-term debt of 4.34%. Toronto Hydro's updated evidence, filed September 23, 2014 indicated an overall cost of long-term debt of 4.31%. This reduction in the overall cost of long-term debt was due to two components to the update: 1) an update to reflect the actual coupon rate for the Series 10 debentures, which were issued on September 16, 2014 (which reduced the rate on this individual debt issue to 4.13% compared to the previously forecast 4.74%); and 2) correction to a number of other components of the calculation of overall cost of long-term debt, including correcting for the original omission of amortization costs in the original schedule⁷²².

703. The net impact of this update was a reduction in the overall cost of long-term debt for 2015 from 4.34% to 4.31%.

704. OEB Staff also notes that the updated Table 3 in Exhibit 5, Tab 1, Schedule 1 shows an overall debt rate of 3.94% compared to the originally filed 4.30%. Regrettably, Toronto Hydro acknowledges that the 3.94% shown in the updated Table 3 is a calculation error. The value should have been corrected to 4.28% to reflect the updated costs in the schedule. This table, which shows existing 2014 debt (not 2015 forecast debt), does not include amortization costs, and is not directly comparable to the calculation of the 2015 overall long-term debt costs.

705. With respect to the \$45 million promissory note due to THC, Toronto Hydro's response to the undertaking⁷²³ clearly indicates that the 6.16% is reflective of the related THC debt issued in 2003, at market rates at that time. Since the rate is based on market rates, it is appropriate to reflect this amount for this particular component of Toronto Hydro's debt.

706. Toronto Hydro submits that it has calculated its debt costs in accordance with the OEB Cost of Capital methodology. The OEB should accept the evidence as filed and updated.

5.10 PILS

707. No parties commented on Toronto Hydro's calculation and application of PILS for the 2015 rebasing year.

⁷²² The corrections are clearly indicated in the revised Exhibit 5, Tab 1, Schedule 3, OEB Appendix 2-OB.

⁷²³ OH Undertaking J7.10

5.11 Revenue Offsets

708. Toronto Hydro has included in its 2015 Base Revenue Requirement amounts for Revenue Offsets. Other than wireline pole attachment revenues, which are subject to a continuation of the hearing, parties that commented on Toronto Hydro's proposed Revenue Offsets were supportive of the forecast amount. A number of parties provided submissions on Specific Service charges, which are used to determine the Revenue Offset amounts, and these are addressed in Section 7.8 of this Reply Argument.

SECTION 6 – DEFERRAL AND VARIANCE ACCOUNTS

6.1 Overview

6.1.1 New Deferral and Variance Accounts

709. Toronto Hydro seeks approval to establish seven new Deferral and Variance (DVA) accounts:

- (a) a variance account for externally driven capital;⁷²⁴
- (b) a variance account for derecognition amounts;⁷²⁵
- (c) a variance account for renewable enabling investments;⁷²⁶
- (d) a deferral account for the mandatory transition to monthly billing;⁷²⁷
- (e) a variance account for difference between the actual and forecasted net gains on sale price of properties that are part of the Operating Centers Consolidation Program;⁷²⁸
- (f) a variance account for 2015 opening rate base to capture prudence-based ICM disallowances;⁷²⁹ and
- (g) a variance account for Capital Related Revenue Requirement to capture the revenue requirement implications of shortfalls in capital spending over the 2015-2019 period relative to amounts approved in this application. This account is described in more detail in section 5.5.1 of this Reply Argument.

710. With the exception of (d), the account relating to monthly billing, and (g), the CRRRVA, the proposed new DVA accounts were not opposed by parties that made submissions on these

⁷²⁴ Exhibit 9, Tab 1, Schedule 1, at pages 26-28.

⁷²⁵ Exhibit 9, Tab 1, Schedule 1, page 28.

⁷²⁶ Exhibit 9, Tab 1, Schedule 1, pages 28-30.

⁷²⁷ Exhibit 9, Tab 1, Schedule 1, at page 30.

⁷²⁸ Exhibit 8, Tab 1, Schedule 1, page 13.

⁷²⁹ OH Transcript, Volume 7 (February 27, 2015), at page 156-157, lines 10-14.

proposals. Toronto Hydro submits that the proposed accounts are appropriate and should be approved.

6.1.2 Existing Deferral and Variance Accounts

711. Toronto Hydro's seeks the following approvals with respect existing DVA accounts:

- (a) to clear balances in a number of existing DVA accounts;
- (b) to close Account 1508 – Transit City; and
- (c) to be exempted from recording amounts in Accounts 1514 and 1548.

712. Each of these proposals is addressed below, with the exception of the request to close Account 1508 – Transit City. OEB Staff is the only party that commented on this proposal, and supported Toronto Hydro's request.

6.2 New Deferral and Variance Accounts

6.2.1 To manage unpredictability and protect ratepayers, Toronto Hydro requests a new variance account for externally driven capital

713. In this account, Toronto Hydro proposes to capture the difference between the amounts included in rates related to capital spending on third party initiated relocation and expansion project and the amounts actually spent over the 2015-2019 period. Toronto Hydro proposes to create this account for two reasons: (1) to manage the uncertainty and volatility surrounding these type of projects, and (2) to protect ratepayers from potential over recovery. Toronto Hydro has no discretion in making these investments.

714. Energy Probe⁷³⁰, BOMA⁷³¹ and SIA⁷³², accept the need for an account, but indicate that the amounts included in rates (\$4 million annually) were too small based on historical and forecast amounts for this program. Toronto Hydro agrees that the forecast is conservative, but submits that this approach will allow it to fund necessary, non-discretionary work while at the same time holding ratepayers harmless in the event that a portion of the forecasted third party

⁷³⁰ Energy Probe Argument, at page 56.

⁷³¹ BOMA Argument, at pages 18-19.

⁷³² SIA Argument, at page 17.

work does not materialize, due to the unpredictable nature, costs and timing of such projects.⁷³³

Toronto Hydro is not opposed, however, to including a higher level of capital spending in rates, if the OEB believes that \$4 million forecast is too conservative.

715. Energy Probe also submits that the amounts to be recorded in the variance accounts should have materiality threshold for each relocation project of 10-15% of the approved project cost.⁷³⁴ Toronto Hydro submits that this proposal is potentially confusing and would likely require an unnecessary level of detail to this account. More importantly, the proposal should be rejected because it would be unfair to require Toronto Hydro to bear costs below the threshold, which could collectively add up to a significant amount. Toronto Hydro has demonstrated that the work is non-discretionary and unpredictable.⁷³⁵ None of the parties challenged this evidence. Toronto Hydro should therefore be allowed to recover all of the prudently incurred costs. The treatment proposed by Toronto Hydro is the best approach to hold both the utility and ratepayers whole.

716. In addition, Energy Probe suggests that the OEB should set a threshold of \$10 million for clearing this account and a true-up each year starting in 2016.⁷³⁶ BOMA submits that the OEB should leave open the issue of how and when the account will be disposed.⁷³⁷

717. It is unnecessary for the OEB to comment on either of Energy Probe or BOMA's proposals. If the amounts in the account becomes material (keeping in mind that it would be the revenue requirement impacts of the capital spending, not the capital itself, that would be cleared), Toronto Hydro will bring an application to clear the balance in this account, as required. The disposition of the account will be dealt with in the normal course.

6.2.2 A variance account should be approved to allow Toronto Hydro to track differences with respect to derecognition amounts

718. Toronto Hydro requests a new variance account to record costs associated with derecognition of assets as a result of accounting treatment under IFRS.⁷³⁸ Due to the dynamic

⁷³³ Exhibit 2B, Section E5.3, at pages 16-17.

⁷³⁴ Energy Probe Argument, at page 56

⁷³⁵ Exhibit 2B, Section E5.3.

⁷³⁶ Energy Probe Argument, at page 56.

⁷³⁷ BOMA Argument, at page 18.

nature of Toronto Hydro's capital program and operating environment, the utility is likely to experience significant ongoing volatility in year over year losses on derecognition over the 2015-2019 rate period. To manage this volatility prudently, Toronto Hydro requests a variance account to track the actual costs associated with derecognition of assets.⁷³⁹

719. The parties that commented on this proposal accepted the need for this variance account. SEC indicated that a policy review of the accounting treatment related to derecognition should be established by the OEB.⁷⁴⁰ Toronto Hydro notes that the OEB considered the impact of derecognition expenses in its IFRS Report Addendum, and that Toronto Hydro's proposal is consistent with the OEB's guidance in that report.⁷⁴¹ Should the OEB decide to hold a consultation, Toronto Hydro would participate. However, this is not a reason to deny Toronto Hydro's request for this account as part of this proceeding, particularly since none of the parties raised any concerns about the need for this variance account.

6.2.3 The OEB should approve a new deferral account to capture the costs and benefits associated with the mandatory transition to monthly billing

720. On February 5, 2015, the OEB issued a Notice of Proposal to make changes to the Distribution System Code requiring all distributors to transition customers in the Residential and GS<50kW rate classes to monthly billing by December 31, 2016. Contrary to VECC's implication that Toronto Hydro has not yet been directed to implement monthly billing,⁷⁴² Toronto Hydro believes that this a firm requirement, and that the notice of proposal only relates to the language of the proposed amendments.

721. OEB Staff supports this account. VECC and CCC are the only intervenors that argued against it. CCC suggests Z-factor treatment is available if the costs meet the materiality threshold.⁷⁴³ VECC suggests that the OEB must first order Toronto Hydro to move to monthly billing as part of its decision in this case. If the OEB makes such an order, it should include the

⁷³⁸ Exhibit 9, Tab 1, Schedule 1, at page 28.

⁷³⁹ Exhibit 4B, Tab 1, Schedule 2, at page 3.

⁷⁴⁰ SEC Argument, at page 66, para. 9.1.5.

⁷⁴¹ EB-2008-0408, Addendum to Report of the Board: Implementing International Financial Reporting Standards in an Incentive Rate Mechanism Environment (June 13, 2011), at page 23.

⁷⁴² VECC Argument, at page 40.

⁷⁴³ CCC Argument, at page 17.

requirement to “make the appropriate adjustments to [the] operating and capital budgets and include the accompanying change in working capital requirements.”⁷⁴⁴

722. Z-factor treatment is for unexpected events. The transition to monthly billing is a known and expected event. In addition, CCC’s suggestion also fails to consider regulatory efficiency. CCC would rather have Toronto Hydro bring another application to deal with an issue that can and should be addressed within the context of the current proceeding. Toronto Hydro submits that this would not be an efficient way to proceed.

723. CCC wrongly claims that there is no evidence on record in this proceeding related to cost and benefits of the transition.⁷⁴⁵ In fact, Toronto Hydro provided this information in response to a CCC interrogatory. That response shows that the costs of the transition are likely to be material to Toronto Hydro, and outweigh expected benefits, with a forecast net cost well in excess of the materiality threshold applicable to Toronto Hydro.⁷⁴⁶ No parties challenged this evidence during the hearing.

724. OEB has mandated that all distributors move to monthly billing. VECC’s suggestion to include estimated costs and benefits as part of revenue requirement determination in this application is not appropriate. Toronto Hydro notes that the estimates provided in the interrogatory response were prepared for the purposes of a policy submission, and were not meant to be detailed cost forecasts for setting rates.⁷⁴⁷ For these amounts are to be embedded in rates, a more detailed analysis would be required, which is simply not possible at this stage of the proceeding.

725. In light of the submissions made by CCC and VECC, Toronto Hydro submits that the most reasonable approach is to establish the proposed account as part of this application, and to review and test the appropriateness of the amounts at time of clearance, which may take place at or before Toronto Hydro’s next rebasing application, depending on the materiality of the amounts.

⁷⁴⁴ VECC Argument, at page 40.

⁷⁴⁵ CCC Argument, at page 17.

⁷⁴⁶ IR Response 4A-CCC-34, Appendix A.

⁷⁴⁷ See IR Response 4A-CCC-34, Appendix A.

726. Energy Probe suggests that this account may need to be generic to all distributors.⁷⁴⁸ Toronto Hydro has no objection.

727. Finally, OEB Staff suggest that amounts recorded “only be for OM&A expenses as any capital costs incurred will ultimately go into rate base and the revenue requirement impact of such costs is likely to be small.”⁷⁴⁹ Toronto Hydro disagrees. The evidence indicates the capital costs are expected to be material (approximately \$3 million). Because these amounts would not be added to rate base until 2020, the revenue requirement implications could also be material. Toronto Hydro submits that including capital costs in this account is appropriate.

6.2.4 The OEB should approve a variance account to capture difference in the sale price of properties that are part of the Operational Centers Consolidation Program

728. Toronto Hydro proposes to clear the forecast proceeds from the gains on sale of properties as part of its Operational Centers Consolidation Program (OCCP) through a rate rider.⁷⁵⁰ In its evidence, the utility indicated that differences between the amounts approved for clearance through the rate rider, and amounts actually received for the sales of the properties be tracked for future disposition.⁷⁵¹ The proposed variance account provides the regulatory mechanism for tracking these amounts.

729. None of the parties opposed this request. SEC, in its submissions related to sale of properties and revenue offsets, suggests the OEB should establish a deferral account “to which the difference between sale price and net book value is credited.”⁷⁵² SEC’s submission is inconsistent with the proposed treatment of the account. The requested variance account is meant to capture the difference between the forecasted proceeds from the net gains on sale of the properties, which will be credited to ratepayers through the proposed rate rider,⁷⁵³ and the actual proceeds obtained once the properties are sold. The OEB should approve the account on the basis that the OCCP rate rider provides an immediate benefit ratepayers and helps smooth the rate impact for 2015.

⁷⁴⁸ EP Argument, at page 7.

⁷⁴⁹ OEB Staff Argument, at page 55.

⁷⁵⁰ Exhibit 8, Tab 1, Schedule 1, at page 13; see also Exhibit 2B, Section E8.3.

⁷⁵¹ Exhibit 8, Tab 1, Schedule 1, at page 13, lines 7-9.

⁷⁵² SEC Argument, at page 54, para. 3.4.3

⁷⁵³ Exhibit 8, Tab 3, Schedule 3.

730. Consistent with OEB Staff's submission, Toronto Hydro will include a draft accounting order for this account as part of the full Draft Rate Order that will be filed following the OEB's decision on this application.

6.2.5 Toronto Hydro proposes a variance account to capture any prudence-based adjustments made to the 2015 opening rate base through the ICM true-up process

731. The true-up process is a revenue reconciliation exercise between the 2012-2014 capital related revenue requirement approved as in the ICM proceeding (EB-2012-0064) and the actual ICM-eligible work completed by the utility over this period. However, Toronto Hydro acknowledges the interrelation between this process and the approval of 2015 opening rate base: to the extent that the OEB finds any of the ICM work to be imprudent, it would impact the 2015 opening rate base.

732. This issue received a measure of attention during the Oral Hearing.⁷⁵⁴ As a result, on Day 7 of the Oral Hearing, Toronto Hydro offered to create a variance account to capture any differences between amounts approved to be included in 2015 rate base related to ICM work during the 2012-2014 period, and any disallowance based on prudence that may result from the ICM true-up process.⁷⁵⁵

733. The intervenors that commented on this proposal in their argument⁷⁵⁶ generally support this account. Toronto Hydro disagrees with CCC's interpretation of how the ICM true-up should work, but given CCC's statement that: "The Council recognizes that the ICM amounts will be dealt with in a future proceeding," Toronto Hydro will leave this matter for the True-up proceeding where it belongs. Toronto Hydro does not have an issue with the asymmetric nature of the account proposed by SEC. this account is intended to capture differences between the ICM work included in the proposed 2015 opening rate base and ICM work found to be imprudent by the OEB at the time of true-up. This account is not intended to capture funding differences between the revenues collected from the ICM rider and the revenues actually owed for the ICM work.

⁷⁵⁴ For example, IR Responses 1A-CCC-10 and 1A-CCC-18; OH Transcript, Volume 4 (February 23, 2015), at pages 102-104; OH Transcript, Volume 7, (February 26, 2015), at pages 154-157.

⁷⁵⁵ OH Transcript, Volume 7 (February 26, 2015), at page 156-157, lines 10-14.

⁷⁵⁶ CCC Argument, at page 17; EP Argument, at page 34; SEC Argument, at page 24, para. 2.6.6; SIA Argument at page 25.

6.3 Existing Deferral and Variance Accounts

6.3.1 Toronto Hydro's seeks approval to clear the balances in a number of existing DVA accounts

734. Toronto Hydro filed evidence detailing the balances, allocation methodology and resulting rate riders of the DVA accounts proposed for clearance in the current application.⁷⁵⁷

735. The initial evidence included a proposal to clear a number of RSVA balances, which were the subject of an OEB Audit in 2014. On January 15, 2015, Toronto Hydro updated its evidence requesting that the OEB approve a deferral of the clearance of these accounts until the balances were determined and reviewed by OEB Audit Staff.⁷⁵⁸ OEB Staff filed a letter supporting this request.⁷⁵⁹ No parties oppose Toronto Hydro's request.

736. The total net balance in the DVA accounts that Toronto Hydro is requesting to clear in this application is \$53.7 million debit to customers, including carrying charges calculated out to April 30, 2015. The details for each account are summarized the following table, reproduced from evidence⁷⁶⁰.

⁷⁵⁷ Exhibit 9, Tab 1, Schedule 1, at pages 1-25.

⁷⁵⁸ Exhibit 9, Tab 1, Schedule 1, at pages 4-A and 4-B.

⁷⁵⁹ Exhibit 9, Tab 1, Schedule 1, Appendix C.

⁷⁶⁰ Exhibit 9, Tab 1, Schedule 1, page 23, Table 9

Table 9: Summary of Proposed Disposition (\$ millions)

	Principal Balance as at December 31, 2013¹	Adjusted balances²	Carrying Charges till April 30, 2015	Balance for Clearance as at April 30, 2015 Including Carrying Charges
Smart Metering Entity Charge (1551)	0.4		0.0	0.4
Low Voltage Variance (1550)	1.2		0.1	1.2
PILs & Tax variance for 2006 & subsequent years)	(2.3)		(0.2)	(2.5)
PILs & Tax variance for 2006 & subsequent years, Sub account HST/OVAT Input Tax credits (ITCs)	(1.1)		(0.1)	(1.2)
Gain on sale - Named properties (1508)		5.8	0.0	5.8
Stranded meters (1555)	16.9	(1.1)		15.8
Hydro One Capital Contributions Variance (1508)		1.9	0.0	1.9
RARA variances (1595)	(2.8)		1.0	(1.8)
LRAMVA (1568)	0.0	3.5	0.1	3.6
IFRS-CGAAP Transitional PP&E Amounts (1575)		30.5		30.5
Total DVA Amount Requested for Disposition	12.3	40.6	0.9	53.7

¹ Balances as per December 2013 Financial Statements² Balances not in December 2013 Financial Statements; proposed to be booked in 2014.

737. In allocating the balances in these accounts to rate classes, Toronto Hydro followed the OEB's guidance in the EDDVAR report (EB-2008-0046). The utility developed the proposed rate riders based on different clearance periods, taking into account the magnitude of the account balances and the desire to smooth the overall rate impacts over the 2015-2019 rate term, as much as possible.

738. None of the parties oppose the balances in these accounts, the proposed allocation methodology, or the resulting rate riders.

739. OEB Staff provided submissions on Toronto Hydro's calculation of amounts in Accounts 1592 (HST/OVAT Input Tax Credits)⁷⁶¹ and 1575 (IRFS-CGAAP Transitional PP&E),⁷⁶² but ultimately concluded that differences in the methodologies resulted in immaterial differences in the balances sought for clearance.

740. OEB Staff also provided submissions on Toronto Hydro's LRAMVA accounts, and agreed that Toronto Hydro's approach to calculating the balances is "a more precise approach than the standard one but is not contradictory with the standard approach from the point of view of the overall principles behind it."⁷⁶³

741. Toronto Hydro submits that the proposed balances, allocation methodology and the consequent rate riders should be approved by the OEB as filed.

6.3.2 Toronto Hydro requests relief from recording amounts in Accounts 1518 and 1548

742. Toronto Hydro requests relief from recording amounts related to the retail market in Accounts 1518 and 1548 on the basis of its interpretation of a previous OEB decision and the materiality of amounts to be recorded in these accounts.⁷⁶⁴

- (a) In the OEB's Regulatory Assets Phase Two proceeding, Toronto Hydro presented evidence that the variance between the costs of serving the retail market and the revenues received through the approved charges to retailers did not meet the materiality threshold. In its decision, the OEB acknowledged the relative insignificance of the balance in the RCVA accounts, and decided that it will not require recording and filing of the this information if a distributor has not already done so.⁷⁶⁵
- (b) The amounts to be tracked in this account are immaterial. For example, from 2011 and 2013, the amounts ranged from \$5,000 to \$130,000.

⁷⁶¹ OEB Staff Argument, at pages 57-59.

⁷⁶² OEB Staff Argument, at pages 59-62.

⁷⁶³ OEB Staff Argument, at page 68.

⁷⁶⁴ Exhibit 9, Tab 1, Schedule 1, at pages 19-20.

⁷⁶⁵ RP-2004-0117 *et al.*, Decision with Reasons (December 9, 2004).

743. OEB Staff was the only party that made submissions on this issue. OEB Staff acknowledge that the amounts that would be recorded in this account are not material and that Toronto Hydro's proposal to include the costs and revenue offsets as part of the Base Revenue Requirement holds ratepayers harmless. However, OEB Staff proposes that for consistency, Toronto Hydro should be ordered to track variances in these accounts.⁷⁶⁶

744. Toronto Hydro respectfully submits that while consistency is valuable, it is not a sufficient reason to require Toronto Hydro to expend the resources necessary to track and record amounts in these accounts, and report on them quarterly under the RRR. Toronto Hydro notes that there are numerous other USoA accounts that only some distributors use to record costs. Toronto Hydro submits that its proposal is both efficient and fair, and that the OEB should grant the relief requested.

⁷⁶⁶ OEB Staff Argument, at page 57.

SECTION 7 – CUSTOMER AND LOAD FORECAST, RATES, AND RATE RIDERS

7.1 Overview

745. Toronto Hydro has proposed rates, rate riders, and specific service charges based on its evidence of the OM&A and capital requirements that are necessary for the safe and efficient operation of the utility over the 2015-19 period.

746. The distribution rates, rate riders, and specific service charges were all developed based on OEB policy and models (i.e. the Cost Allocation Model used to allocate revenue requirement, the EDDVAR guidance used to develop rate riders by class, and the methodology used to update Specific Service Charges). Most parties accepted or did not oppose the company's methodologies, with any exceptions noted and addressed below.

7.2 Customer and Load Forecast

747. Toronto Hydro provided detailed evidence on the data and methodologies used to develop its customer and load forecasts.⁷⁶⁷ Toronto Hydro submits that its forecasts rely on sophisticated data analysis and modelling techniques that have proven to be reliable and accurate since Toronto Hydro's first Cost of Service filing in 2006.

748. Only OEB Staff and VECC addressed the company's customer or load forecast.

749. OEB Staff's concern is with respect to the load forecast for 2015. OEB Staff compared the load growth forecast contained in Exhibit 3 against descriptions of economic activity contained in evidence supporting Customer Connections and the overall Asset Management process.⁷⁶⁸ Their conclusion is that there is an anomaly between the descriptions of economic growth in some parts of the evidence and the forecast of energy consumption.

750. Toronto Hydro submits that there is no anomaly.

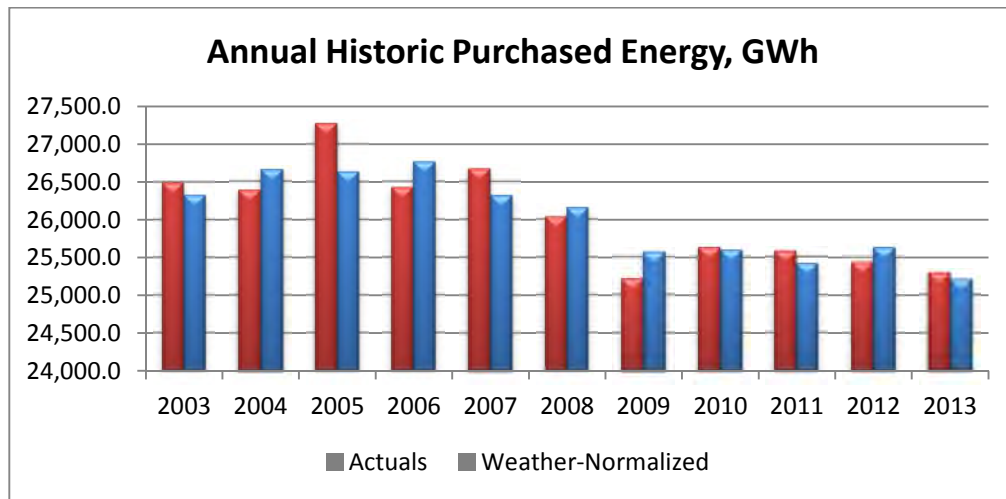
751. OEB Staff makes the inappropriate assumption that the connection of customers and economic activity referred to in the evidence will necessarily result in overall increases in energy consumption; that is not necessarily correct, depending on the rate at which the existing energy

⁷⁶⁷ Exhibit 3, Tab 1, Schedule 1 including Appendices

⁷⁶⁸ OEB Staff Argument, pages 87-88

consumption is changing. In the case of Toronto Hydro, the effect of customer connections and economic growth is properly incorporated into its total load forecast for 2015.

752. Figure 1 in Toronto Hydro's evidence, reproduced below, illustrates the longer-term and recent trends in actual energy consumption. Between 2006 and 2009 the overall decrease in total energy consumption was dramatic leading into the economic downturn that peaked in 2008-09. Since 2010, despite the fact that Toronto was growing out of the economic downturn, total energy consumption has been either relatively flat or declining.



753. Toronto Hydro's multivariate regression load models incorporate multiple variables to capture economic activity, as described in Exhibit 3, Tab 1, Schedule 1, page 6. These objective models employ forecasts of economic activity variables that are consistent with the descriptions of economic activity contained in the evidence cited by OEB Staff.⁷⁶⁹ Put more plainly, the economic growth and increase in customer connections cited by OEB Staff are accounted for by Toronto Hydro in its forecast methodology; it is simply the case that overall decreases in energy consumption are largely if not entirely offsetting that economic growth and increase in customer connections.

754. As further evidence of the robustness of Toronto Hydro's load forecasting models, page 15 of Exhibit 3, Tab 1, Schedule 1 details the accuracy of past load forecasts compared to OEB

⁷⁶⁹ Forecasts of input variables are found in Exhibit 3, Tab 1, Schedule 1, Appendix A-1

approved loads. On a weather normalized basis, the models have provided forecasts that are less than 1% different than actual.

755. Accordingly Toronto Hydro submits that its load forecast and load forecasting methodologies produce robust forecasts of loads that should be accepted by the OEB for the purpose of setting 2015 rates. In Toronto Hydro's submission the OEB should not give weight to OEB Staff's submission that the forecasting methodology employed by Toronto Hydro over the course of several years, a methodology with a record of commendable forecasting precision, should be summarily abandoned in favour of Toronto Hydro's actual 2013 load as the forecast of load for 2015.⁷⁷⁰

756. VECC's only objection to Toronto Hydro's load forecast is VECC's proposed use of Net CDM savings rather than Toronto Hydro's use of Gross CDM savings in the forecasting methodology.⁷⁷¹

757. A summary of the results of the two methodologies for purchased energy by rate class is shown in the table below.⁷⁷² The overall impact on the energy forecast is an increase using the Net CDM methodology, although it should be noted that on a class basis the results vary (Residential and CSMUR class show lower loads using the Net CDM models while the GS and Large Use rate classes show higher loads).

⁷⁷⁰ OEB Staff's submission also ignores the need to establish appropriate CDM levels in the 2015 forecast for purposes of future LRAMVA calculations

⁷⁷¹ VECC Argument, pages 49-52

⁷⁷² Data is from Exhibit 3, Tab 1, Schedule 1, Appendix B-1, and 03-VECC-22g data file

	2015 Load Forecast (GWh)		
	CDM GROSS based models (Filed)	CDM NET based models	Difference
Residential	4,909.9	4,866.5	-43.4
Competitive Sector Multi-Unit			
Residential (CSMUR)	213.1	212.6	-0.5
GS <50 kW	2,118.4	2,119.3	0.9
GS 50-999 kW	9,848.6	10,003.5	154.9
GS 1000-4999 kW	4,654.5	4,734.1	79.6
Large Use	2,228.4	2,236.2	7.8
Street Lighting	114.1	114.1	0.0
Unmetered Scattered Load	41.1	41.1	0.0
Total	24,128.2	24,327.5	199.3

758. Toronto Hydro believes using Gross CDM to model and forecast loads is more accurate is because it represents the real impact of CDM activity.⁷⁷³ VECC does not dispute this, but suggests that because gross CDM only picks up a portion of the “natural conservators”, and that “natural conservators” include those customers that are conserving even without CDM activity related to a CDM program, Toronto Hydro’s approach is inconsistent, suggesting that while it is accounting for “natural conservators” that are captured within a CDM program as free riders it is not picking up “natural conservators” that are conserving in ways that do not happen to be captured within the scope of the CDM program.⁷⁷⁴

759. In fact, the “natural conservators” that are conserving outside of a CDM program are reflected in the metered loads that Toronto Hydro uses as the base to add the CDM impact to; in this way, both “natural conservators” captured as free riders in a CDM program as well as “natural conservators” captured in the metered load are both properly reflected in the load forecast. Accordingly, Toronto Hydro submits that there is no inconsistency in its approach.

760. VECC additionally points out that the models using the Net CDM for four out of five classes performed better than the models using Gross CDM. With respect, the variances between the two sets of results are well within the model errors for both, such that it would be inappropriate for the OEB to infer anything from those particular variances.

⁷⁷³ Interrogatory 03-VECC-22e

⁷⁷⁴ VECC Argument, page 51

761. Ultimately, the difference between the two approaches for Total Purchased Energy is less than 1%, which is well within the margin of error for this type of modelling. For all these reasons, Toronto Hydro submits that the OEB should accept the model and resulting forecasts as filed, based on the use of Gross CDM to adjust loads.

762. As a separate issue, VECC notes in its argument an apparent anomaly between the difference in the energy forecast when using Net CDM rather than Gross CDM, and the difference in the resulting demand forecasts for the Large User class.⁷⁷⁵

763. On review of the issue, Toronto Hydro notes that the load forecast includes the effects of reclassification between rate classes. In the case of the Large User class, as a result of reclassification of load occurring in 2014, which carried through to 2015, the net impact was a slight downward change in the demand for the class. Overall, for the Large User class the variances between the gross CDM and net CDM approaches are minimal for both energy and demand. Accordingly, Toronto Hydro submits that there is no anomaly attributable to the use of Gross CDM rather than Net CDM.

764. With respect to Toronto Hydro's forecast of customers, VECC is the only intervenor to provide submissions. VECC is concerned with the use of Toronto Hydro's extrapolation models for forecasting customer numbers.⁷⁷⁶

765. Toronto Hydro provided details on its customer forecast extrapolation models for each rate class in Interrogatory 03-VECC-31. As described in that response, Toronto Hydro fit and tested different extrapolation models to the complete historical data set for each rate class, and supplemented this analysis with data on historical and forecast customer reclassification.

766. VECC's argument is that historic extrapolation may not be best suited if conditions in the forecast period are different from conditions in the historic period. To that end, VECC provided the company's witness with a table summarizing customer and population data for 2009, 2013 and 2019.⁷⁷⁷ Based on that table, VECC has argued that the population trends shown in that

⁷⁷⁵ VECC Argument, page 52. The Large User class is the only class demonstrating this "anomaly"

⁷⁷⁶ VECC Argument, page 45

⁷⁷⁷ Exhibit K8.1, page 4

table indicate that Toronto Hydro's forecast for customers in all rate classes are too low. They propose an arbitrary – and untested – adjustment to Toronto Hydro's forecast customer classes by applying selected ratios of population growth to customer growth.⁷⁷⁸

767. Toronto Hydro's witness, during the oral hearing, agreed that there would be a relationship between population growth and customer growth. The witness also explained some of the ways in which population growth might not be reflected in customer numbers.⁷⁷⁹

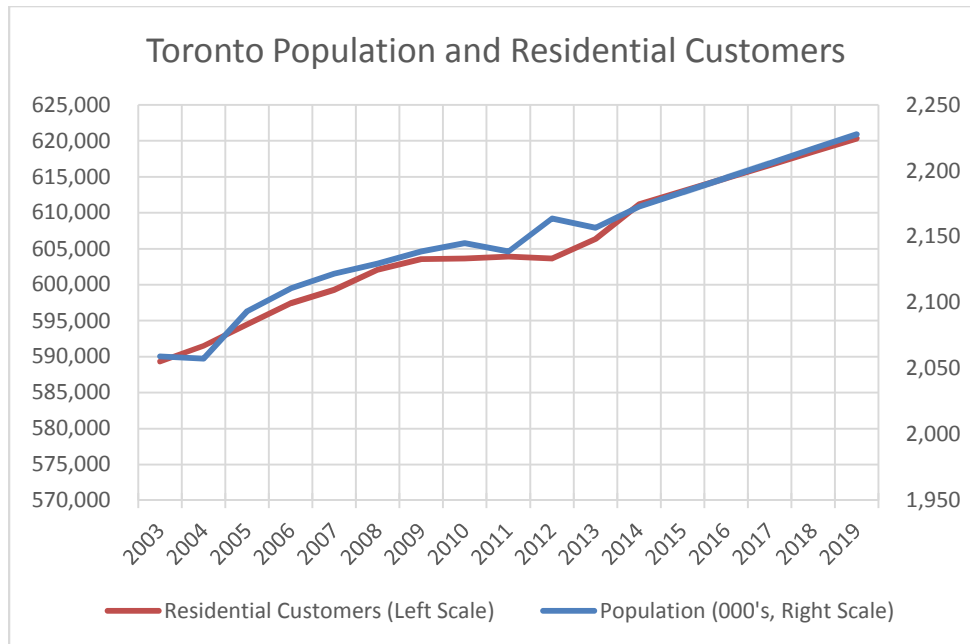
768. The following table presents customer numbers, population and unemployment rates from 2003 through the forecast for 2019.⁷⁸⁰ Toronto Hydro uses the full historical data for its extrapolation models. As can be seen from this data the full 2003-13 historical period shows average population growth of 0.46%, similar to the population growth forecast for the CIR period of 0.54%. This compares with growth in residential customers of 0.29% historically compared to 0.38% forecast. The historic and forecast customer numbers for Residential and the total GS Class are also graphed.

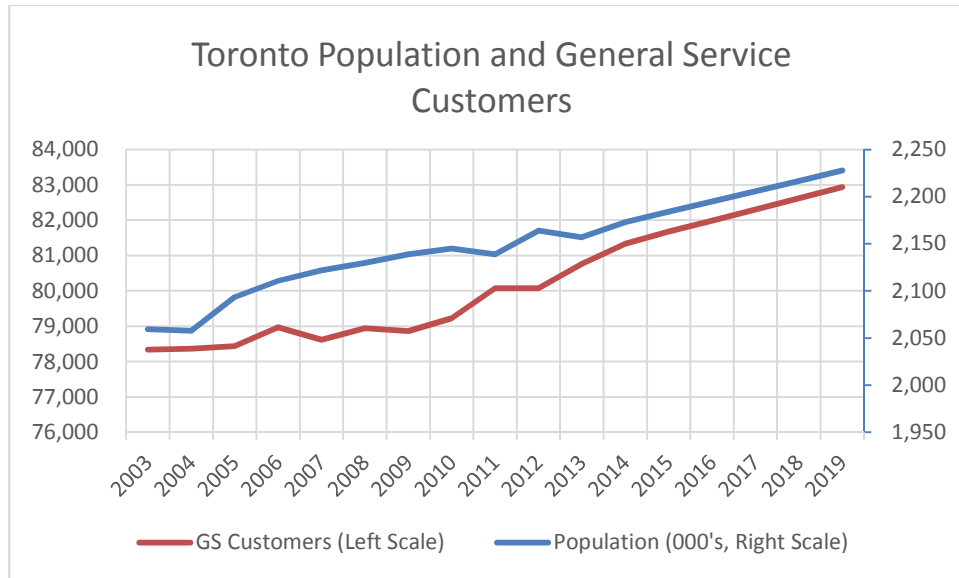
⁷⁷⁸ VECC Argument, pages 46-47, and page 48

⁷⁷⁹ OH Transcript 7 (Feb 27, 2015), pages 54-55 and pages 60-61

⁷⁸⁰ For all but the Residential and CSMUR customer number, values are from Exhibit 3, Tab 1, Schedule 1, Appendix A-1. Residential customers for the period 2003-2008 are from EB-2009-0139.

Population, Unemployment Rate, and Customers										
	Toronto Population (^{'000})	Toronto Unemplo yment Rate	RES (excl. CSMUR)	CSMUR	Residential + CSMUR	GS<50 kW	GS 50-999 kW	GS 1000- 4999 kW	Large Use	Total GS and Large Use customers
2003	2,059	8.7	589,308	-	589,308	66,958	10,845	489	46	78,338
2004	2,058	8.2	591,523	-	591,523	66,789	11,038	494	47	78,368
2005	2,093	8.6	594,499	-	594,499	66,668	11,214	507	47	78,436
2006	2,111	7.1	597,435	-	597,435	67,004	11,397	521	48	78,970
2007	2,122	8.1	599,298	504	599,802	66,617	11,440	517	49	78,623
2008	2,130	8.3	602,075	2,007	604,082	66,311	12,066	520	49	78,946
2009	2,139	11.2	603,560	5,879	609,439	66,074	12,231	515	47	78,867
2010	2,145	10.3	603,665	12,729	616,394	65,799	12,873	509	47	79,228
2011	2,139	9.5	603,896	20,753	624,649	66,681	12,845	503	50	80,079
2012	2,164	10.0	603,644	28,503	632,147	67,401	12,129	496	52	80,078
2013	2,157	8.5	606,350	36,156	642,506	68,312	11,885	516	52	80,765
2014	2,173	8.8	611,150	43,591	654,741	68,891	11,957	439	48	81,335
2015	2,184	8.1	612,985	54,122	667,107	69,131	12,054	440	49	81,674
2016	2,195	7.9	614,819	65,384	680,203	69,266	12,233	442	49	81,990
2017	2,206	7.6	616,654	73,991	690,645	69,402	12,412	443	50	82,307
2018	2,217	7.5	618,488	83,099	701,587	69,537	12,591	444	50	82,622
2019	2,228	7.3	620,322	92,706	713,028	69,673	12,770	445	51	82,939
Growth Rates										
2003-13	0.46%		0.29%	n/a	0.87%	0.20%	0.92%	0.54%	1.23%	0.31%
2013-19	0.54%		0.38%	16.99%	1.75%	0.33%	1.20%	-2.44%	-0.32%	0.44%





769. Toronto Hydro submits that its forecast of customers is well supported when the full data picture is used, rather than the subset used by VECC, as demonstrated both by the population to customer growth comparisons over the full historical and forecast period as noted in the preceding paragraph, and by the forecast relationship as demonstrated in the graphs.

770. As further evidence that Toronto Hydro's customer forecast models produce reasonable results, the response to VECC Interrogatory 03-VECC-31 part d provided the actual 2014 mid-year customer number. The following table compares them with the forecast as provided in Exhibit 3, Tab 1, Schedule 1, Appendix C-1; this comparison shows the forecasting of Toronto Hydro's models to have been extremely accurate.

Customer class	2014 Customers		Difference	
	Forecast	Actual		
Residential	611,150	609,928	-1,222	-0.2%
Competitive Sector Multi-Unit Residential	43,591	43,022	-569	-1.3%
GS<50 kW	68,891	69,078	187	0.3%
GS 50-1000 kW	11,957	11,852	-105	-0.9%
GS 1-5 kW	439	447	8	1.8%
Large Users	48	47	-1	-2.1%
USL (customers)	898	888	-10	-1.1%
Total Customers	736,974	735,262	-1,712	-0.2%

771. Finally, Toronto Hydro points out that for the purposes of rate setting, the forecast of load and customers for 2015 is the only forecast used to determine rates. For the 2016-19 period,

rates are proposed to be set using the Custom Price Cap Index, which will be applied to the 2015 base distribution rates, as adjusted by actual growth in billing units, if any, as described more fully above.

7.3 Cost Allocation Model

772. Toronto Hydro has applied the OEB's most recent Cost Allocation Model in determining the Revenue to Cost ratios in the current application. Parties generally accept the resulting Revenue to Cost ratios proposed by Toronto Hydro with the following exceptions.

773. SEC suggest the OEB should order Toronto Hydro to file a plan to bring all rate classes to within the 90%-110% range approved by the OEB in Hydro One EB-2013-0416.⁷⁸¹ Toronto Hydro does not agree.

774. Toronto Hydro's proposed ratios are all within the current guidelines and the OEB does not currently have any policy requiring LDC's to narrow those ranges. At this time, Toronto Hydro has not proposed narrowing the ranges, as Hydro One had done in its application. Given other changes happening with respect to Cost Allocation (the review of Streetlighting allocation and further OEB refinements to the Cost Allocation model as suggested by VECC below) as well as changes to the fixed/variable split recently ordered by the OEB, Toronto Hydro believes that current ratios are appropriate and that consideration with respect to further adjustments to the ranges should be part of Toronto Hydro's next rebasing application.

775. VECC, while accepting Toronto Hydro's proposal, submits that Toronto Hydro should be required to file in its next rebasing a new Minimum System Study in support of its demand/customer allocation split.⁷⁸² Toronto Hydro's view, a study is unnecessary. The OEB may wish to undertake such a study itself, in order to update the allocation factor within the Cost Allocation model, and provide for a more fine grained application of the density factor. This would likely benefit all LDCs, rather than simply Toronto Hydro.

776. VECC also note a concern that the Cost Allocation Model, which is used by most if not all LDCs in Ontario, may have a flaw in its allocation of composite allocators in the treatment of

⁷⁸¹ SEC Argument, page 64, section 7.2.3

⁷⁸² VECC Argument, page 56

directly allocated costs and expenses.⁷⁸³ Toronto Hydro agrees that the OEB may wish to consider this issue in future versions of the Cost Allocation Model.

777. A number of parties have arguments related to the Revenue to Cost ratio for the Streetlighting class; these are addressed separately in section 7.6 below.

778. Toronto Hydro submits the OEB should approve Toronto Hydro's application of the Cost Allocation model and resulting Revenue to Cost ratios.

7.4 Rate Riders (OCCP, Tax Savings, Lost Revenue)

779. Toronto Hydro proposed rate riders to refund to or collect from customers amounts related to the sale of properties related to its Operations Center Consolidation Program, a re-assessment of taxes, and lost revenue associated with the IRM framework over the 2012-14 period⁷⁸⁴. Of these, the only rider that was opposed by parties was the last.

780. OEB Staff⁷⁸⁵, CCC⁷⁸⁶, Energy Probe⁷⁸⁷, SEC⁷⁸⁸ and VECC⁷⁸⁹ all oppose Toronto Hydro's proposal with respect to the recovery of lost revenue associated with the failure of the 3rd Generation IRM structure to account for the revenue requirement impact of approved test year capital spending on subsequent IRM years on the basis that the request would amount to retroactive ratemaking. OEB Staff's argument reproduced the OEB's decision on this issue in the EB-2012-0064 case and asserts that "a reading of the complete OEB finding in EB-2012-0064 makes it quite clear that the OEB had in fact made a finding on Toronto Hydro's request".⁷⁹⁰

⁷⁸³ VECC Argument, page 57

⁷⁸⁴ Exhibit 8, Tab 1, Schedule 1, page 13

⁷⁸⁵ OEB Staff Argument, pages 71-73

⁷⁸⁶ CCC Argument, page 19

⁷⁸⁷ Energy Probe Argument, page 54

⁷⁸⁸ SEC Argument, page 73

⁷⁸⁹ VECC Argument, page 41

⁷⁹⁰ OEB Staff Argument, page 72

781. The salient parts of that excerpt with respect to whether an application at a later date would be appropriate (and hence not represent retroactive ratemaking) are the parts Toronto Hydro referred to in its evidence on this issue.⁷⁹¹

782. VECC makes the additional submission that Toronto Hydro sought the IRM ratemaking treatment for 2012-14 of its own volition.⁷⁹² The OEB will recall that Toronto Hydro's original rate application was based on Cost of Service treatment in EB-2011-0144 (within which no such issue would have arisen) and that the subsequent IRM application was only made – in order to receive new rates – once the OEB denied the cost of service application. Accordingly it is incorrect to suggest, as VECC appears to through its submission, that the lost revenue was somehow a result of Toronto's Hydro choice of ratemaking model.

783. SEC refers to the current consultation on this issue in its argument.⁷⁹³ Here, it recommends that it would be “premature for the Board to allow half-year adjustment” and “If and when it changes that policy, it will be appropriate for Toronto Hydro's situation to be considered”. Toronto Hydro submits that it has provided full evidence on this issue as part of this proceeding and that SEC's proposal should be rejected by the OEB.

784. Toronto Hydro notes that no parties took issue with the amounts calculated by Toronto Hydro with respect to the lost revenue.

785. Toronto Hydro submits that it has provided sufficient evidence and justification for the OEB to approve the proposed rate rider.

7.5 Monthly Fixed Charge

786. Toronto Hydro's application maintains the 2014 fixed/variable split for rate design, for all rate classes. As a result of this, the proposed fixed rates for the Residential and CSMUR classes are higher than the ceiling fixed charge as calculated by the Cost Allocation Model.⁷⁹⁴

⁷⁹¹ Exhibit 8, Tab 1, Schedule 1, page 14, lines 1-12

⁷⁹² VECC Argument, page 41, section 4.4, third bullet

⁷⁹³ SEC Argument, page 73 section 12.4.7 and page 74 sections 12.4.8 and 12.4.9

⁷⁹⁴ Exhibit 8, Tab 1, Schedule 1, pages 5-6

787. VECC⁷⁹⁵ and EP⁷⁹⁶ argue that the fixed rates for these two classes should not exceed the ceiling rates set out in accordance with the OEB's EB-2007-0667 Report on Cost Allocation.

788. While Toronto Hydro acknowledges that the fixed rates proposed do exceed the existing ceiling rates, Toronto Hydro also notes the OEB's recent EB-2012-0410 Policy - A New Distribution Rate Design for Residential Electricity Customers issued April 2, 2015. This policy will require all distributors to structure residential rates that are 100% fixed by 2019. Toronto Hydro submits that the proposed fixed rates for the Residential and CSMUR classes are in general conformance with this newer policy and are therefore appropriate.

7.6 CSMUR and StreetLighting Rates

789. The rates proposed by Toronto Hydro result in Revenue to Cost ratios for all classes that are within the OEB's current guidelines. The only classes where Toronto Hydro made specific adjustment to rates outside of those provided by applying the results of the Cost Allocation Model were the CSMUR class and the Streetlighting class.⁷⁹⁷

790. For the CSMUR class, rates were adjusted bring the Revenue to Cost ratio exactly to 1.0, as directed by the OEB in their EB-2010-0142 decision as it related to this new rate class. No parties objected to this adjustment.

791. For the Streetlighting class, as described in Toronto Hydro's evidence,⁷⁹⁸ Toronto Hydro proposed to maintain the current 2014 rates for this class, in light of: 1) the OEB's ongoing consultation with respect to the allocation of costs within the Cost Allocation Model to the Streetlighting class, and 2) the significant increase in the Revenue to Cost ratio – and the revenues collected - for this class over the period from 2006 to today, based on the Cost Allocation Model as currently applied. In 2006, the revenue to cost ratio was slightly over 10%, with total distribution revenue collected from the Streetlighting class of \$1.7 million. By

⁷⁹⁵ VECC Argument, page 62

⁷⁹⁶ Energy Probe Argument, page 52

⁷⁹⁷ Rates for classes where the Revenue to Cost ratio was below 1.0 were adjusted only as a consequence of the noted adjustments to the CSMUR and Streetlighting classes, to maintain recovery of the full revenue requirement

⁷⁹⁸ Exhibit 8, Tab 1, Schedule 1, pages 4-5

2011 (Toronto Hydro's last rebasing year) the revenue to cost ratio was 71.4% resulting in distribution revenues of \$12.0 million, a 600% increase.⁷⁹⁹

792. SIA, Energy Probe, and VECC were the only parties opposed to Toronto Hydro's proposal.

793. All three parties argue that the OEB's current policy is that movement of Revenue to Cost ratios further away from 1.0 than those produced by the Cost Allocation model should not be entertained. Toronto Hydro disagrees that OEB policy doesn't allow for movement away from 1.0.

794. Toronto Hydro provided an excerpt from the OEB's policy in the undertaking response, which was quoted by VECC in their argument.⁸⁰⁰ A section of that is reproduced below (emphasis added).

The Board has concluded that an incremental approach is appropriate in light of the influencing factors identified below, and that a range approach is preferable to implementation of a specific revenue-to-cost ratio. Influencing factors aside, **a revenue-to-cost ratio of one may not be achievable or desirable for other reasons (for example, to accommodate different rate design objectives)**. In addition, as a practical matter there may be little difference between a revenue-to-cost ratio of near one and the theoretical ideal of one.⁸⁰¹

795. Toronto Hydro submits that the section emphasized above explicitly allows for the type of proposal Toronto Hydro makes in this case for Streetlighting rates. Toronto Hydro has stated that its design objectives are to recognize both the significant increase in Revenue to Cost ratio that has occurred for this class already, and to recognize the OEB's current review of the Cost Allocation Model as it applies to the Streetlighting class. Since the Revenue to Cost ratio determined in this hearing will effectively apply for the next 5 years, and since the proposed rates result in a Revenue to Cost ratio for this class that is significantly more than when last

⁷⁹⁹ Some portion of the increase would be attributed to the overall increase in Revenue Requirement, but the largest component was due to the required increase in the revenue to cost ratio based on the outputs from the Cost Allocation Model

⁸⁰⁰ OH Undertaking J8.8

⁸⁰¹ EB-2007-0667, Report of the Board, Application of Cost Allocation for Electricity Distributors (November 28, 2007) at section 2.1, page 4.

approved while still well within the OEB's guidelines, Toronto Hydro submits that its proposal is appropriate.

796. VECC and SIA compare Toronto Hydro's proposal with the argument made by the City of Hamilton in Hydro One's EB-2012-0416/EB-2014-0247 case to make rates interim until such a time as the OEB's review of the Cost Allocation model for Streetlighting is completed. With respect, and as already noted in an interrogatory response,⁸⁰² Toronto Hydro is not seeking interim rates, but final rates. If the result of the OEB's review of the Cost Allocation Model results in a Revenue to Cost ratio that is above 1.0 for this class, Toronto Hydro will not be seeking to change rates to reflect this result. Rather, Toronto Hydro is recognizing both the significant increase in revenue to cost ratio and rates that has already occurred for this class (using the current Cost Allocation Model) and the fact that the proposed rates result in a Revenue to Cost Ratio well within the OEB's guidelines.

797. Energy Probe submits that on this issue there is "a major conflict of interest,"⁸⁰³ presumably as result of the affiliation between Toronto Hydro and the sole Streetlighting customer, the City of Toronto. Toronto Hydro respectfully submits that its proposal for rates is not developed on the basis of its ownership relationship with customers in any classes, and notes that the City of Toronto is a customer in many of the other rate classes that the extra revenue responsibility is assigned to due to the Streetlighting rate proposal.

798. Finally, VECC notes that Toronto Hydro's proposal will result in a materially different rate impact for the Streetlighting class than other classes. With respect, this argument should bear no weight; the rate impact for every class may vary in relation to the unique circumstances that each class faces. By way of specific example, the rate impacts for the CSMUR class are different from other classes for reasons related to the competitive market for such customers and the OEB's direction on revenue to cost ratios related to that issue.

⁸⁰² Interrogatory 8-VECC-58

⁸⁰³ Energy Probe Argument, page 53

7.7 Standby Rates

799. Toronto Hydro has requested that its Standby rates, which have been interim since 2006, be declared final for the period 2006 to 2014.⁸⁰⁴ For the proposed 2015 Standby Rates, Toronto Hydro has indicated that it will accept them as interim.

800. Both OEB Staff⁸⁰⁵ and VECC⁸⁰⁶ addressed this request in Argument. Both parties opposed the requested treatment for historical rates on the basis that the generic review of this issue remains ongoing.

801. OEB Staff have stated “It is not clear from the application the extent to which Toronto Hydro has engaged with customers for whom the standby charge is applicable to ensure the OEB has all applicable information”.⁸⁰⁷ With respect, Toronto Hydro’s response to 03-VECC-35 clearly indicates that historically Toronto Hydro has not actually applied standby rates to any customers, as customers that could potentially be subject to standby rates have always used the standby supply facilities, and therefore have been billed under normal distribution rates for the class in which they reside.

802. Accordingly, with all due respect to OEB Staff and VECC, there is no practical reason to maintain Toronto Hydro standby rates from 2006 to 2014 as interim rates, as there is no instance of those rates having been charged to any customer to trigger a need to, possibly, track a variance in respect of. As already noted, Toronto Hydro is content to maintain the rate on an interim basis from 2015 forward, in the event there is an instance of the rate being charged some time in the future.

⁸⁰⁴ Exhibit 8, Tab 1, Schedule 1, pages 7-8

⁸⁰⁵ OEB Staff Argument, pages 89-90

⁸⁰⁶ VECC Argument, page 63

⁸⁰⁷ OEB Staff Argument, page 90

7.8 Specific Service Charges

803. Toronto Hydro proposes a number of updates to its specific service charges.⁸⁰⁸ The SIA is supportive of Toronto Hydro's proposed changes.⁸⁰⁹ AMPCO, BOMA, CUPE, CCC, and SEP take no position on this issue.

804. OEB Staff submits that Toronto Hydro has appropriately justified the changes to its proposed service charges, with the exception of two concerns with disconnect/reconnect charges.⁸¹⁰ First, citing the magnitude of the proposed increase, OEB Staff question whether factors other than full cost recovery should be considered for reconnections in non-payment situations. Secondly, OEB Staff are concerned that higher reconnection charges may discourage customers from requesting a disconnection in order to perform maintenance on their own equipment, thereby raising potential safety issues.

805. On the first point, OEB Staff do not propose an alternative basis for setting these charges, and the OEB's Distribution Rate Handbook does not contemplate a discounted rate be applied. To the extent that any service charge does not reflect cost recovery, the costs of performing those services will necessarily need to be recovered through distribution rates and subsidized by all other customers, which Toronto Hydro does not believe to be appropriate. Additionally, Toronto Hydro does not believe it could justify charging its customers different rates for the exact same service depending only on the circumstances through which that service was requested.

806. On the second point, Toronto Hydro already fully addresses OEB Staff's concern through an existing policy of permitting one annual disconnection to be performed free of charge, if requested by the customer specifically for equipment maintenance purposes.⁸¹¹ The proposed increase in the charge therefore does not create a disincentive to Toronto Hydro's customers to perform maintenance on their equipment.

⁸⁰⁸ Exhibit 8, Tab 1

⁸⁰⁹ SIA Argument, at page 26

⁸¹⁰ OEB Staff Argument, at page 97

⁸¹¹ Exhibit 4A, Tab 2, Schedule 6, at page 13, lines 16-18.

807. VECC, supported by SEC⁸¹² and EP,⁸¹³ has a concern with Toronto Hydro's proposed Missed Appointment Charge. VECC believes that the charge should be either reciprocal (such that Toronto Hydro be required to pay its customers if it missed any of its appointments), that the charge should be waived in the first instance of a missed appointment, or otherwise that the OEB should deny the charge entirely.⁸¹⁴

808. Toronto Hydro does not believe any of VECC's proposals to be appropriate. Fundamentally, Toronto Hydro believes that it is important to note the intended application of this charge. First, it is only applied if the appointment is missed and the customer did not provide advance notice. This excludes the vast majority of missed appointments during which customers make good faith efforts to notify Toronto Hydro in order to reschedule. Second, Toronto Hydro does not in any way plan to apply this charge aggressively, forecasting only token revenues from its application.⁸¹⁵ Toronto Hydro requires this charge only to address extreme or blatant scenarios, and expects it to mostly function as a deterrent.

809. Toronto Hydro does not believe there is any reason for this charge to be applied reciprocally. Toronto Hydro is already subject to a number of regulations that govern its performance with regard to appointment scheduling and attendance, some of which are tracked, reported, and monitored as part of ongoing RRRs.⁸¹⁶ Additionally, Toronto Hydro has only missed a single appointment in each of the last three years for which it has also failed to provide its customer with advance notice;⁸¹⁷ accordingly the performance problem which VECC is implicitly attempting to solve does not exist.

810. Toronto Hydro also disagrees with VECC's suggestion that the charge should not be applied in the first instance of a missed appointment. In order to properly implement such an approach, Toronto Hydro would need to track every first missed appointment for every customer (in order to know when the second missed appointment occurs). A tracking requirement, both in

⁸¹² SEC Argument, at page 65

⁸¹³ Energy Probe Argument, at page 55

⁸¹⁴ VECC Argument, at pages 64-65

⁸¹⁵ IR Response 3-SIA-30, at page 3

⁸¹⁶ IR Response 8-VECC-64, at page 1

⁸¹⁷ Exhibit 2A, Tab 10, Schedule 1, at page 2

terms of cost and ongoing effort, would far exceed any value (or revenue) from the introduction of this charge, and ultimately defeat its intended purpose.

811. Energy Probe notes a general concern with approving "custom distributor-specific service charges".⁸¹⁸ Toronto Hydro does not believe this concern to be warranted. Specifically, such a process is already contemplated by the OEB within the Distribution Rate Handbook, in which the OEB allows for a number of methods by which specific service charges can be set.⁸¹⁹ These methods include using the standard OEB amounts, the standard OEB formula with adjustments (as Toronto Hydro has done for the majority of its proposed charges), or a level determined on a basis other than the standard formula (the method used by Toronto Hydro in establishing its proposed "Account Setup" and "Temporary Service Install & Remove - No Transformer" charges).

812. For all these reasons Toronto Hydro asks the OEB to approve its Specific Service Charges as proposed.

7.9 Rate Mitigation/Smoothing

813. Toronto Hydro's application results in the rate impacts that are detailed for each rate class in the filed Bill Impact schedules,⁸²⁰ and were summarized during the Oral Hearing in Exhibit K7.5.

814. In many of the arguments, intervenors referred to rate impacts that are "unprecedented" and rate increases of greater than 40%.⁸²¹

815. Toronto Hydro acknowledges the annual rate increases resulting from its application. However, the annual overall total bill increases for every year are well below the OEB's guidelines requiring mitigation, and are not unprecedented. A review of applications approved by the OEB for 2015 rates (as of March 19) shows twenty applications with approved bill impacts on the Delivery line greater than the average annual impact proposed in Toronto Hydro's

⁸¹⁸ EP Argument, at page 55

⁸¹⁹ 2006 Electricity Distribution Rate Handbook (May 11, 2005), at page 107.

⁸²⁰ Exhibit 8, Tab 7, Schedule 1

⁸²¹ For example CCC Argument, page 3, AMPCO Argument, page 1, and BOMA Argument, page 10, Energy Probe Argument, page 29

application of 6.1%⁸²². On a Total Bill basis, Toronto Hydro's average annual total bill impact as proposed is 2.4%.

816. Energy Probe submitted that the rate impacts for 2015 should be amortized over the term of the CIR to mitigate the bill impacts in 2015.⁸²³ As noted previously, the total bill impacts for 2015 are well within mitigation requirements. Toronto Hydro notes that the application of the proposed OCCP rate rider was one of the ways that Toronto Hydro proposes to mitigate the 2015 bill impacts.

817. BOMA expresses concern over the volatility of the proposed rate increases and the difficulty this poses for major landlords and commercial building owners.⁸²⁴ With respect, the distribution rate impact in dollar terms for customers in the GS 50-999kW class are in the magnitude of \$150-350 on a typical monthly total bill of about \$25,000. Toronto Hydro has noted in its evidence its attempts to smooth bill impacts by spreading out clearance of certain rate riders⁸²⁵ and respectfully suggests that the volatility issue that BOMA raises is immaterial.

7.10 Rate Year Synchronization

818. Toronto Hydro's proposal to synchronize its rate year with its fiscal year beginning Jan 1, 2016, was addressed by a number of parties. OEB Staff, BOMA and VECC support Toronto Hydro's proposal. Both Energy Probe⁸²⁶ and SEC⁸²⁷ argue that the proposal does not conform to the RRFE guidelines on the basis that the proposed rates would only be in effect for 4 years and 8 months.

819. Toronto Hydro's application covers a full five year time period. The detailed costs in evidence for the 2015 rebasing year are full year costs. The remainder of the application covers the 2016-19 calendar years. The rates put in place over the term of the plan will cover the costs incurred over the full five year term. In fact, the reality is that the rates put in place effective

⁸²² Data from the OEB's estimated 2015 Bill Impacts for Residential customers, OEB Website, http://www.ontarioenergyboard.ca/oeb/_Documents/2015EDR/bill_impacts_2015.pdf

⁸²³ Energy Probe Argument, at page 29

⁸²⁴ BOMA Argument, page 10

⁸²⁵ Exhibit 8, Tab 1, Schedule 1, page 17

⁸²⁶ Energy Probe argument, page 58

⁸²⁷ SEC Argument, pages 69-70

May 1st 2015 will not recover the full costs, since they will only be in place for the last eight months of the year, before the 2016 rates (recovering costs for 2016) are put in place. Toronto Hydro has explicitly acknowledged in its evidence that it “is not requesting any special treatment for the calculation of 2015 rates (i.e., it is not calculating rates based on recovering the full year of revenue requirement over an eight-month May to December period).”⁸²⁸

820. SEC suggests three alternatives if the OEB decides that the synchronization proposal does not meet RRFE compliance: (1) allow the proposal “but with a stern warning”⁸²⁹; (2) Defer the custom plan until 2016 and apply Annual IR for the 2015 period; or (3) approve as filed, but require Annual IR for its 2020 filing. With respect, the second two options have no foundation and would be punitive, as well as appear to represent a thinly-veiled effort to arbitrarily stretch out the plan term. They are simply Toronto Hydro’s proposed plan with Annual IR plans tacked on the beginning or end.

821. What is perhaps most confusing about SEC’s position is that, aside from being based on an incorrect assumption about the plan term, it effectively criticizes Toronto Hydro for seeking the enhanced transparency and simplicity that January 1st rates would have for the public and customers. As a public issuer under the Ontario Securities Commission rules, Toronto Hydro prepared and reports publicly on its financial results on a calendar year basis. Rate synchronization would also synchronize Toronto Hydro’s annual reporting with the rate year, meaning the period for rates is the same as the period for reporting. Toronto Hydro submits that rate synchronization has the virtue of financial transparency and customer simplicity, which reflects the priorities of the OEB in the RRFE and more generally. Toronto Hydro accordingly submits that SEC’s proposals should be rejected, and the utility’s proposal to synchronize rates should be approved by the OEB.

822. Toronto Hydro submits that its proposal to synchronize rates conforms with the RRFE guidelines and should be approved by the OEB.

⁸²⁸ Exhibit 8, Tab 1, Schedule 1, page 8 lines 27-28 and page 9 lines 1-2

⁸²⁹ SEC Argument, page 69, section 11.3.7 (a)

7.11 Loss Factors

823. No parties were opposed to Toronto Hydro continuing with the current approved loss factors. Toronto Hydro reiterates its commitment to bring forward, as part of its proposal to clear the RSVA accounts currently subject of continued analysis and review by OEB Audit Staff, updated loss factors as may be necessary as a result of that analysis.

824. OEB Staff submits that Toronto Hydro incorporate into their updated loss factor the impacts of the capital work as described in this application.⁸³⁰ With respect, the linkages are not as simple as Board Staff would believe. The implications for loss factors of the work proposed by Toronto Hydro are complex. Toronto Hydro notes that the current loss factors are among the lowest in the province. The loss factors to be brought forward with the updated RSVA factors will reflect the latest information from Toronto Hydro's system. At the next rebasing, Toronto Hydro will have the most recent experience with losses, which incorporate the work that will have been undertaken, and can update the loss factors at that time.

7.12 Effective Date

825. Toronto Hydro has requested that rates determined in this application be made effective May 1, 2015. In the event a Decision is not rendered in time to implement rates as of May 1, 2015, Toronto Hydro has requested that current distribution rates and charges are declared interim as of May 1, 2015 and the OEB establish an account to recover any differences between the interim rates and the actual rates effective May 1, 2015 based on the OEB's Decision and Order⁸³¹.

826. Two parties commented on the effective date: SEC was supportive of a May 1, 2015 date⁸³², while CCC was opposed⁸³³.

827. Toronto Hydro submitted its CIR application for 2015-19 distribution rates to the OEB on July 31, 2014, ahead of the OEB's schedule for rebasing filings. The application complied

⁸³⁰ OEB Staff Argument, at page 98.

⁸³¹ Exhibit 1B, Tab 1, Schedule 1, page 2, lines 13-19

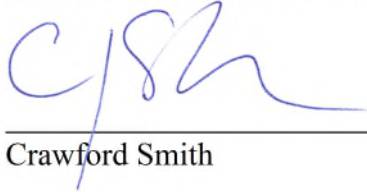
⁸³² SEC Argument, page 68, section 11.2.5

⁸³³ CCC Argument, page 20

with OEB Filing Requirements, and throughout the course of the proceeding, Toronto Hydro met every procedural deadline set by the OEB.

On this basis, Toronto Hydro submits that its request to make rates effective May 1, 2015, and allow for recovery of lost revenues due to a later implementation through development of a foregone revenue rate rider (to be determined as part of the Draft Rate Order) is appropriate. Toronto Hydro submits that there will be no rate retroactivity⁸³⁴ as a result of the requested declaration of interim rates pending the OEB's decision, and that it has been common in the past for Toronto Hydro and other LDCs that were justifiably delayed in implementing OEB Approved distribution rates to be granted effective dates that reflected a date earlier than the implementation date.

ALL OF WHICH IS RESPECTFULLY SUBMITTED



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⁸³⁴ Rates will not be applied retroactively to customer's bills.

APPENDIX A – SCENARIOS

1. To estimate the implications of SEC's proposal put to Toronto Hydro in argument, Toronto Hydro undertook a three-step process:

- (a) As a starting point, Toronto Hydro took its proposed 2015 capital related revenue requirement to ensure the results of this analysis are traceable back to the record.
- (b) Using the same methodology, Toronto Hydro then estimated what its proposed 2015 capital related revenue requirement would have been in the absence of any new capital spending in 2015. This the "base case".
- (c) Toronto Hydro followed SEC's proposal and assumed that any incremental capital related revenue requirement could be used to fund new capital expenditures.

2015 Capital Related Revenue Requirement (CRRR)

2. In its Application, Toronto Hydro provided detailed evidence in support of its proposed rate framework. The starting point for its analysis is rooted in this evidence:

- (a) Rate Base (Exhibit 2A), including:
 - (i) Opening Net Fixed Assets (Exhibit 2A, Tab 2, Schedule 1)
 - (ii) CWIP (Exhibit 2A, Tab 2, Schedule 1)
- (b) Depreciation and PILs/Taxes (Exhibit 4B), including:
 - (i) Depreciation (Exhibit 4B, Tab 1)
 - (ii) PILs an Taxes (Exhibit 4B, Tab 2)
- (c) Cost of Capital (Exhibit 5)

3. Toronto Hydro provides the following summary of the evidence:

(\$M)	Application
Opening Net Fixed Assets	2,849
Rate Base	3,246
Depreciation	206
ROE	121
Interest	80
PILs and Taxes	24
CRRR	432

2015 CRRR: Base Case

4. Toronto Hydro used standard ratemaking mechanics and the methodology underpinning the above-mentioned pre-filed evidence to remove the estimated effects of the entirety of Toronto Hydro's proposed 2015 capital plan, aside from investments related to the previously-approved Copeland Transmission Station.⁸³⁵ These effects include ISA reductions, derecognition, and effective PILs rates. The remaining CRRR corresponds to opening net fixed assets and additions from CWIP. The following table summarizes the net effects on Toronto Hydro's rate base and CRRR for 2015.

(\$M)	Application	Base Case
Opening Net Fixed Assets	2,849	2,849
Rate Base	3,246	3,141
Depreciation	206	167
ROE	121	117
Interest	80	78
PILs and Taxes	24	15
CRRR	432	376

⁸³⁵ Exhibit 2B, Section E7.9, at page 41, Table 17.

Implicit capital funding from the SEC proposal

5. Toronto Hydro submits that, absent any new capital expenditure in 2015, its CRRR is estimated to be \$376 million. SEC's proposal contemplates a "capital service" amount in 2015 of \$378.6 million, adjusted for the appropriate OPEB's correction as noted in section 3.5.2.

6. Toronto Hydro submits that SEC's proposal provides approximately \$2.6 million in revenue with which to fund new capital expenditures. Toronto Hydro submits that SEC's proposal could reasonably fund only as much as \$139 million in capital expenditures.⁸³⁶ This value is generous in that, in the real-world, a significant amount of Toronto Hydro's labour costs that would normally be capitalized no longer would be. The revenue requirement impact of Toronto Hydro's work force is therefore conservative, and so \$139 million in capital expenditure represents a top-end estimate.

7. Nevertheless, to estimate the impact of SEC's proposal over the duration of the term, Toronto Hydro ignores that the revenue requirement impact of its labour force may change and assumes that it would spend the capital budget that is funded by SEC's proposal.

8. In cutting Toronto Hydro's capital plan by such an amount in 2015, there is a carry-over effect to 2016. Recall that not all of Toronto Hydro's capital projects come into service in the year the spending occurs. Consequently, the significantly reduced 2015 capital plan infers that in 2016 there will be far fewer additions from CWIP that require funding. The funded capital expenditures in SEC's proposal therefore increase to approximately \$271 million, but far short of Toronto Hydro's proposal.

9. However, the reverse effect occurs in 2017. In that year, SEC's rigid application of its escalator does not provide enough funding to accommodate 2017 additions from CWIP. In that year, Toronto Hydro's capital related revenue requirement is estimated to be \$417, and SEC's proposal is \$416.1. On that account, SEC's proposal would not fund a single dollar of capital expenditure in 2017.

⁸³⁶ \$139 million is inclusive of the Copeland TS expenditure. Capital expenditure in addition to Copeland is therefore less than \$100 million.

10. Toronto Hydro respectfully submits that the SEC proposal results in a highly-variable and dramatically reduced capital program, that includes a full-stop in 2017.

CAPEX (\$M)	2015	2016	2017	2018	2019	5-yr avg
SEC	139	271	0	456	303	234
TH	531.1	518.8	467.4	470.1	502.2	497.9
Difference	-392.1	-247.8	-467.4	-14.1	-199.2	-263.9

OEB Staff Proposal Implications

11. Toronto Hydro took the following steps to estimate the impact of OEB Staff's proposal. In effect, the purpose was to determine the level of capital expenditure that the proposal would fund given Toronto Hydro's critique of applying the stretch factor against Cn.

- (a) Used OEB Staff's proposal to restrain capital expenditure to \$400 million per year to estimate C-factor values.
- (b) Used those C-factor estimates with OEB Staff's proposed changes to the custom PCI formula (a 0.6%⁸³⁷ stretch factor applied against Cn, and a 1.5% growth factor) to estimate the custom PCI values.
- (c) Converted the custom PCI escalators into effective revenue requirement amounts.
- (d) Subtracted OM&A and Revenue Offsets to determine the actual capital related revenue requirement provided for in the proposal and, like in SEC's proposal, estimate the amount of capital funding this provides.

⁸³⁷ The results of this analysis will be conservative as OEB Staff have recommended the Board consider a stretch factor of up to 1.0%.

12. The result of this analysis is detailed below and demonstrates that OEB Staff's proposal would fund capital expenditures less than its proposal and far less than Toronto Hydro's proposal.

CAPEX (\$M)	2015	2016	2017	2018	2019	5-yr avg
Proposal	400	400	400	400	400	400
Stretch on Cn	-	-84	39	-107	23	-26
Growth @ 1.5%⁸³⁸	-	-269	162	-328	114	-64
Proposal-funded	400	47	601	-35	536	336
TH	531.1	518.8	467.4	470.1	502.2	497.9
Difference	-131.1	-471.8	133.6	-505.1	33.8	-161.9

13. Toronto Hydro notes that the proposed rate framework provides for funding in excess of Toronto Hydro's request in 2017 and 2019, but provides essentially no funding in 2016 and literally no funding 2018.

14. Toronto Hydro estimated that the effect of applying OEB Staff's stretch factor to Cn would amount to an impact over five times that of applying the stretch factor against capital expenditure (consistent with the application of inflation). This is determined by comparing the "Stretch on Cn" line in the table above against the result of multiplying \$400 million by 0.6% incrementally for 2016 to 2019.

CAPEX (\$M)	2016	2017	2018	2019	Avg.
Stretch on	-84	39	-107	23	-32

⁸³⁸ To estimate the effects of OEB Staff's proposed growth factor, Toronto Hydro compared this to a baseline scenario of a 0.3% growth factor, which is supported by evidence, scaled as per Section 5.3.6.

Cn					
Stretch on CAPEX	2.4	4.8	7.2	9.6	6

APPENDIX B

Appendix B – Issues Concordance Table		Reference
1. GENERAL		
1.1	Has Toronto Hydro responded appropriately to all relevant Board directions from previous proceedings?	N/A ⁸³⁹
1.2	Do any of Toronto Hydro's proposed rates require rate smoothing?	Reply Argument, at section 7.9.
2. CUSTOM APPLICATION		
2.1	Is the proposed rate framework appropriate in light of Toronto Hydro's capital needs and operating circumstances and the Board's policies as set out in the RRFE Report?	Reply Argument , at sections 2 to 5.
2.2	Is the proposed CIR formula, including the stretch factor and custom capital factor appropriate?	Reply Argument, at sections 5.1 to 5.4
2.3	Will Toronto Hydro's Custom Application produce acceptable outcomes for existing and future customers (including, for example, cost control, system reliability, service quality, and bill impacts)?	Reply Argument, at sections 1 to 4 and 7.
2.4	Are Toronto Hydro's monitoring and reporting proposals adequate to track and assess the utility's performance during the 2015-2019 rate period?	Reply Argument, at sections 1, 2.5 and 4.9
2.5	Are Toronto Hydro's proposed off-ramps, annual adjustments and annual adjustments outside the normal course of business appropriate?	Reply Argument, at section 1.
3. PROPOSED PROGRAMS AND EXPENDITURES		
3.1	Are the planned OM&A programs and expenditures appropriate?	Reply Argument, at section 3.
3.2	Is the DSP and the planned capital programs and expenditures for the 2015-2019 period appropriate?	Reply Argument, at section 2.
4. DEFERRAL AND VARIANCE ACCOUNTS AND RATE RIDERS		
4.1	Should Toronto Hydro's existing deferral and variance accounts proposed for continuation be continued, and should those	Reply Argument, at section 6.3.

⁸³⁹ For more information, refer to Exhibit 1A, Tab 3, Schedule 1 at pages 5-6.

Appendix B – Issues Concordance Table		Reference
proposed for termination be terminated?		
4.2	Are the new deferral and variance accounts proposed by Toronto Hydro appropriate?	Reply Argument, at sections 6.2.
4.3	Are the accounts, balances and the proposed methods of disposition for deferral and variance accounts appropriate?	Reply Argument, at section 6.
4.4	Are Toronto Hydro's proposed rate riders appropriate?	Reply Argument, at sections 7.1 and 7.4
5. REVENUE REQUIREMENT		
5.1	Is the rate base component of the revenue requirement for 2015 appropriate?	Reply Argument, at sections 5.6 to 5.8.
5.2	Is Toronto Hydro's proposal for the transfer of streetlighting assets appropriate?	Reply Argument, at section 5.7.3.
5.3	Is the capital structure and cost of capital component of the revenue requirement appropriate?	Reply Argument, at section 5.9.
5.4	Is the depreciation component of the revenue requirement appropriate?	N/A ⁸⁴⁰
5.5	Is the taxes / PILs component of the revenue requirement appropriate?	Reply Argument, at section 5.10
5.6	Is the revenue offset component of the revenue requirement appropriate?	Reply Argument, at section 5.11.
6. LOAD FORECAST, COST ALLOCATION AND RATE DESIGN		
6.1	Is the load forecast appropriate?	Reply Argument, at section 7.2.
6.2	Are the rate classes and their definitions proposed by Toronto Hydro appropriate?	N/A ⁸⁴¹
6.3	Are the inputs to the cost allocation model appropriate?	Reply Argument, at section 7.3.

⁸⁴⁰ The depreciation component of the revenue requirement is dependent on the approved level of capital expenditures. Please see section 3 of this Reply Argument. For more information about the depreciation component of revenue requirement, refer to Table 3 in Exhibit 1B, Tab 2, Schedule 3, at page 10, and Exhibit 4B, Tab 1.

⁸⁴¹ Toronto Hydro did not propose any changes to the rate classes approved in its 2011 rebasing application (EB-2010-0142). For more information about Toronto Hydro's rate classes, refer to the proposed Tariff of Rates and Charges at Exhibit 8, Tab 3, Schedule 3.

Appendix B – Issues Concordance Table		Reference
6.4	Are the proposed revenue-to-cost ratios for all rate classes appropriate?	Reply Argument, at section 7.3.
6.5	Are the proposed fixed and variable charges for all rate classes appropriate?	Reply Argument, at section 7.5.
6.6	Are the proposed charges for specific and miscellaneous services appropriate?	Reply Argument and section 7.8.
6.7	Are the proposed line losses appropriate?	Reply Argument, at section 7.11.
7. RATE IMPLEMENTATION		
7.1	Is Toronto Hydro's proposal to implement rate and fiscal year synchronization effective January 1, 2016 appropriate?	Reply Argument, at section 7.10.