

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 June 1, 2012, May 1, 2013 and May 1, 2014.

BOMA's Argument

1. **Introduction and Summary of the Company's Proposal**

Toronto Hydro is requesting the Board's approval for a three year IRM program covering the years 2012, 2013, and 2014. The proposal contains a single Incremental Capital Module (ICM), covering capital expenditures for the years 2012, 2013, and 2014, but with the incremental revenue requirement needed to fund the forecast ICM eligible capital expenditures for each of those years recovered through a separate rate rider. Toronto Hydro requested, and the Board agreed, that the revenue requirement for 2014 capital expenditures be dealt with in a second phase of this proceeding, which will be heard in 2013. In addition, the Board has established a separate proceeding for one part of the proposal, the Bremner project. The base rates for which the IRM application is founded are the rates set in EB-2011-0144 for 2011. The 2011 rates were determined based on a cost-of-service submission from the company.

The company is proposing total capital expenditures of \$283 million in 2012, and \$579 million in 2013 (J2.1). The expenditures above the ICM materiality threshold in 2012 are

about \$133 million and in 2013, \$434.1 million. The company proposes to recover incremental revenue requirements flowing from these capital expenditures, in rate riders effective as of June 1, 2012 (for 2012 capital expenditures) and June 1, 2013, for 2013 capital expenditures. However, it proposes that the adders will actually be added to rates and commencing on June 1, 2013 for both 2012 and 2013 capital expenditures and terminating on April 30, 2015.

2. Fundamental Principles

Before discussing the details of the proposed ICMs for 2012 and 2013, BOMA wishes to provide context for its arguments by briefly summarizing (a) what it understands to be some basic principles of cost of service rate-making, which have implications for this case, (b) third generation incentive rate mechanism, under which the Toronto Hydro IRM proposal is made, and (c) the Board's existing ICM policy, as set out in EB-2007-0673 Supplemental Report of the Board, on 3rd Generation Incentive Regulation for Ontario's Electricity Distributors (September 17, 2008 "Supplementary Report", at p22, and subsequent Board decisions.

Under cost of service rate-making, it has been established practice for many years that the Board decides, inter alia, on a rate base, a capital structure, and a return on equity and recovery of the actual interest charges for the test year in question. Those amounts, together with sum of depreciation (return of capital), taxes and OM&A expenses constitute the revenue requirement for the test year, which is the amount that the proposed rates are designed to recover from ratepayers. The rate base on which the depreciation and the return capital is based, is calculated on average-of-monthly-average

basis, or the more or less mid-point between the opening cost of the assets in-service and the start of the year, and the closing cost of the assets in-service at the end of the year. Depreciation is calculated each year on the rate base for the year in question, according to established accounting principles, including percentages of original cost, approved by the Board, and is deducted from the rate base in that year. In Toronto Hydro's case, 2011 was a cost of service year, the depreciation for 2011, which was part of the revenue requirement for 2011, was under cost of principles regime, calculated on the rate base for 2011. The rate base (net utility assets in-service plan plus allowance for working capital) is calculated the way it is to reflect the fact that capital expenditures are started, completed and placed in-service at different times during the year, so some assets are in-service for almost all of the year, while others may only be in-service for one or two months. Given this, only one-half of the capital expenditures made in any given year is included in that year's rate base (the "half year rule"). That rule is fair to both the utility, which needs to begin earning a return on its investment assets, and the ratepayers, who do not want to be charged in rates for assets that are not yet providing a service, otherwise stated as the "used and useful" principle. It is well-established in Ontario that both the rate base and the depreciation are calculated on the basis of historic costs, that is the actual cost incurred over the years to put that rate base in place. The Courts and regulators decided long ago that the rate base does not get "bumped up" to reflect the current replacement value of the assets in question on any variant of current value approach.

For example, in a recent Union Gas case involving assets that constituted Union's St. Clair line, that were temporarily removed from its rate base due to the fact that the utility

had agreed to dispose of those assets, and two years later, when the deal failed to close, were returned to rate base, the Board found that the depreciated (book) value of the assets at the time the assets were reinstated was the rate base should be used; as depreciation obviously continued to accrue on the assets, while they were held by utility outside its regulated rate base.

Finally, at the end of most years, utilities will have construction work in progress ("CWIP"), which has not yet resulted in completed projects, any part of which have yet been put in its rate base. (The used and useful principles precludes the inclusion of CWIP in rate base). The utility is allowed to recover in rates interest on the amount of CWIP at the current approved short term debt rate, but not earn a return on such assets, as they are not yet in-service. The utilities generally finance the construction work in progress by means of bank debt or other short term debt, and/or equity, neither of which are recorded books of the utility. Once the work is completed and the assets become part of rate base, which is funded by both long term debt and equity that is part of the regulated utility's capital structure, and the long term interest payments and approved return on equity related to the assets in question become part of the revenue requirement and are funded through rates.

Certain distributors, including THESL, are currently working under 3rd generation incentive rate-making regime. When a utility moves from a year in which it's filed a cost of service application, a "rebasings year", in THESL's case, 2011, to an incentive rate-making regime beginning in 2012, the components of the cost of service are no longer used to calculate the utility's rates. Instead, the utility receives an annual rate adjustment, based on an inflation – a productivity formula (CPI-X) formula. In the first year of the

IRM (price cap) regime, the adjustment is made to the base rates of the utility, in this case, Toronto Hydro's 2011 rates. In the second year of the IRM program, the rate adjustments are made to the first year rates, and so on. After the end of the final year of the IRM program, the utility is required to make a second cost-of-service filing. The purpose of that rebasing year is to determine fair rates for that year and as a base for the next generation IRM program, which is presumed to begin in the following year. THESL's rebasing year will be 2015.

In its next cost of service proceeding in 2015, THESL will present a new rate base which consists of its 2011 rate base plus increased net assets placed in-service in each of the IRM years less the depreciation of those assets in each of the years, in effect the net asset in-service additions during the IRM years. In the rebasing year, the company requests a return on the new rate base.

The half year rule is reviewed by the Board during the IRM years, except for the final year. In addition, the CWIP is allowed into rate base in the rebasing year, to the extent that construction work has been completed and the resulting assets have been put in-service during the IRM period.

The key point here is that every utility that enters an IRM regime starts with the rate base for its base year. There is no such thing as an end of year rate base; there is just a rate base. THESL's notion of being able to start its IRM with a different number is not logical, nor is it in keeping with established practice. It has nothing whatsoever to do with an ICM module application, but is merely a transparent attempt to sidestep the IRM

rules without any reason as to why it should get special treatment. BOMA is strongly opposed to that proposal.

As noted above, the Board introduced the ICM in as part of the 3rd generation IRM. The Board's view of the purpose of the ICM is set out at pp. 24-34 of the Report, pp. 22-33 of the Addendum, and pp. (iii)-(vi) of Appendix B to the Addendum. Subject to some modest modifications in subsequent cases, that policy remains in effect.

The Board stated that there should be an incremental capital module in 3rd generation IRM and noted:

"That the incremental capital module described in this report is intended to address concerns over the treatment of incremental capital investment needs that may arise during the IRM term" (Report, p32).

The Board then set out its general understanding of the role of an ICM as follows:

"The Board notes that there are clearly differences in perception as to the purpose of the incremental capital module. Ratepayer groups perceive the capital module as a mechanism aimed solely at addressing extraordinary or special CAPEX needs by distributors. The distributors, on the other hand, perceive the module as a special feature of the 3rd Generation IR architecture which would enable them to adjust rates on an on-going, as-needed basis to accommodate increases in rate base.

In the Board's view, the distributors' view is not aligned with the comprehensive price cap form of IR which has been espoused by the Board in its July 14, 2008 Report. The distributors' concept better fits a "targeted OM&A" or "hybrid" form of IR. This alternative IR form was discussed extensively in earlier consultations but was not adopted by the Board. The intent is not to have an IR regime under which distributors would habitually have their CAPEX reviewed to determine whether their rates are adequate to support the required funding. Rather, the capital module is intended to be reserved for unusual circumstances that are not captured as a Z-factor and where the distributor has no other options for meeting its capital requirements within the context of its financial capacities underpinned by existing rates".

The Board also decided that a materiality threshold using a standard formula should be calculated for each ICM application (Supplemental Report, p33). Only capital expenditures that are in excess of the materiality standard, and meet the other eligibility criteria for an ICM would qualify for ICM treatment and an ICM rate rider. A dead band of 20% would be part of the materiality threshold.

The Board set out the eligibility criteria for an ICM as follows:

"Materiality: The amounts must exceed the Board-defined materiality threshold and clearly have a significant influence on the operation of the distributor; otherwise they should be dealt with at rebasing".

In the EB-2011-0144 decision, the Board stated, with respect to the ICM, that:

"The Board's thinking in this area has evolved and in the recent ICM decisions, the Board has granted rate relief for discrete, material, and non-discretionary projects, which cannot be funded through the normal operation of the 3rd generation IRM mechanism".

It further noted, referring to Toronto Hydro's evidence in that case (a cost of service proposal) that:

"While the Board cannot determine at this time the level of spending under THESL's capital plan that would be eligible for the ICM, it appears that the projects, the Bremner station and contributions to Hydro One Networks for the Leaside-Birch transmission reinforcement (which together total \$86.6 million in 2012) [under Toronto Hydro's proposal in "0144"] are directly analogous to projects that the Board has previously approved under the ICM for the distributors" [p22].

In that same decision, the Board also mentioned several cases, including its 2011 IRM decisions for Guelph Hydro and Oakville Hydro where it had allowed municipal transformer stations to be funded by ICM adders and Oshawa, where it provided relief

(through a deferral account) for its concrete pole replacement project, all of which it judged non-discretionary.

3. In both prior and subsequent cases to EB-2011-0144, the Board has flushed out the meaning of the ICM module eligibility criteria.

In both the Oakville Hydro (EB-2010-0104) and Guelph Hydro (EB-2010-0130) cases, the Board decided that new municipal transformer stations could be funded through ICM.

As part of its 2011 IRM application, filed September 2010, Guelph Hydro requested ICM treatment for \$10.9 million incremental capital costs for the design and construction of a municipal transformer station. The station cost constituted over 50% of the total proposed capital costs, and exceeded the materiality threshold of \$7 million. Guelph established need to the Board's satisfaction, as the evidence was that demand would exceed the capacity of the existing transformer station by the end of 2016, and that Guelph had determined that the new MS was the most cost effective solution for ratepayers. The intervenors were generally supportive of Guelph's proposal. The Board agreed that the proposed rate rider would commence May 1, 2011 and end on April 30, 2012. The Board also stated that since 2012 was a rebasing year for Guelph, the half year would apply for the calculation of rate base and depreciation for ICM purposes.

The facts in the Oakville Hydro case were somewhat similar. As part of its IRM rates case filed September 17, 2010 for 2011 rates, Oakville asked for ICM treatment for the \$21.4 million cost of design and construction of new MTS in North Oakville. The project cost exceeded the materiality threshold of \$13.6 million and accounts for about two-thirds of Oakville's total forecasted 2011 CAPEX. Scheduled in service date for the

plant was June 2011. The proposed three year rate rider would take effect May 2011. The northern part of Oakville was a rapidly expanding part of the community. The Board found that Oakville met the Board's eligibility criteria of need, prudence, and materiality. The Board approved ICM treatment and approved the proposed three year rider.

In an earlier decision involving the Oshawa PUC, issued on June 10, 2009 (EB-2008-0205), the Board panel stated that:

"the incremental capital model was intended to address, in a prospective manner, extraordinary spending requirements that were identified during the course of the incentive rate mechanism term" (EB-2008-0205, page 3).

The Oshawa PUC had asked for ICM treatment for four projects, concrete pole replacement, LTFT, Feeder Replacement, and mobile workforce software, in total, \$2.2 million in capital, against a total proposed 2009 capital budget of \$11.8 million. Intervenors and Board staff were generally opposed to the request.

Of the four projects, the Board found only the replacement of forty defective concrete poles to be non-discretionary for 2009. The other three projects did not rise to non-discretionary status, either from a safety, or reliability point of view.

The Board found that the feeder replacement project was discretionary for 2009, that the LTFT was not required in 2009 for reliability reasons, and that the mobile workforce software program was an efficiency initiative, rather than a reliability or safety driven initiative (EB-2008-0205, pages 13-14, Ibid, page 14).

More recent rate cases (cases since the EB-2011-0144 Board decision) dealing with ICM matters have included Centre Wellington, Kingston PUC, and Woodstock.

Centre Wellington filed an IRM application for 2012 rates on September 28, 2011, in which it requested ICM treatment for two projects, or \$1.2 million rehabilitation of one of its municipal transformer stations, which it supported by third party expert advice, and \$64,000 to install a fully functional SCADA system.

There was no dispute as to the materiality of the expenditure. The Board found the proposal to refurbish the Fergus Municipal Transformer substation to be non-discretionary and, therefore, eligible, but did not approve the SCADA system, as it was not clear that it was non-discretionary, in part because most benefits of the SCADA system would not be realized until the remaining municipal transformer stations were rehabilitated.

In the Woodstock case (EB-2011-0207), Woodstock Hydro Services Inc. applied for IRM rates on September 22, 2011, to be effective May 1, 2012. Woodstock proposed to recover, under an ICM, capital costs of \$4.4 million associated with a \$4.1 million capital contribution to Hydro One Networks for the Commerce Way TS and \$1.3 million for wholesale metering assets for the station. The facility came into service early in 2012.

Intervenors and Board staff generally supported the application. The Board decided that need for, and prudence of, the station were established in the relevant Hydro One Networks leave to construct and rate applications, and found accordingly that the expenditures were non-discretionary in 2012 and incremental. The Board found that the maximum amount eligible for recovery under ICM would be the difference between the total non-discretionary capital expenditures of \$7.4 million, and the threshold which was agreed at \$4.2 million.

In the Kingston Hydro Corporation case (EB-2011-0178), Kingston applied under the IRM regime on November 30, 2011 for rates effective May 1, 2012. Kingston Hydro applied for ICM treatment of \$3.5 million for the cost of four projects; a 44 kv underground cable rebuild, a transformer vault TV6 rebuild, substation #15 Circuit Breaker Retrofit, and Transformer Vault TV11 rebuild. The proposed vault rebuilds (2 of 4 projects) were supported by a structural engineer's report. The four projects constituted over 50% of Kingston's proposed 2012 capital budget of \$6 million. The materiality threshold was agreed at \$2.6 million, including the growth rate and the GCDP-IPi (inflation) rate approved by the Board for January 1, 2012.

The Board noted that Kingston PUC provided:

"a detailed description of the work".

The Board found that:

"the applied for projects are consistent with the purpose of the ICM (our emphasis) and that it is appropriate to evaluate the former projects using the incremental capital investment eligibility criteria" (page 18).

The Board found:

"that the need for, and prudence of, each of the four projects has been established".

Later, on the same page, the Board noted that:

"The Board is of the view that Kingston Hydro has also adequately demonstrated that its 2012 capital budget of \$6 million is non-discretionary".

The Board noted that one of the two transformer rebuild projects was planned to coincide with the City's work on Princess Street, and that Kingston had demonstrated the other two

projects dealt with assets that had reached the point where they posed substantial reliability and/or safety risks and needed to be replaced in 2012.

Hydro One Distribution made an IRM application in mid-2012 for 2013 rates (EB-2012-0136). As part of that application, it requested incremental revenue of \$27 million in 2013 associated with required 2013 in-service capital additions, and that a 2013 rate rider be established to recover the revenue requirement. Hydro One demonstrated to parties that it had passed the threshold test, including the 20% dead band. In that event, the parties agreed to a Settlement Agreement which was approved by the Board, as filed (EB-2012-0136) December 10, 2012.

Of particular relevance to this case, in BOMA's view, is that Hydro One took the position in applying for an increase in revenue requirement during an IRM program, on the basis of an ICM, that it is the in-service assets resulting from the capital expenditures that determines the incremental revenue requirement for the year in question, not the amount of the capital expenditures, in that year.

Hydro One stated that:

"The amount of revenue requirement that a utility requires to recover its capital investments in a particular year results from the in-service capital additions in the year, not the capital expenditures in the year as some projects require several years before they are completed. The in-service capital additions in the year are added to rate base and therefore are included for recovery in rates. The in-service capital additions in 2013 for the Typical capital are \$414 million" [ExB, T1, Sch 1, p1].

In other words, the assets must be providing a service to ratepayers, or be "used and useful", before the ratepayer can be expected to pay for them via increased rates. This approach is consistent with well established regulatory practice in Canada. For example,

the Board's practice is not to recognize construction work in progress ("CWIP") in rate base. However, in this case, Toronto Hydro has asked for this treatment in its "alternative proposal", but BOMA is opposed to allowing CWIP in rate base, without a full debate on the issue. Toronto Hydro based their claim on capital expenditure rather than assets in-service in 2012 and 2013. So the alternative is not only based on an incorrect premise, it in itself runs counter to the used and useful principle.

In almost all the other cases, the Board has approved of an incremental revenue in respect of capital projects have been in respect of projects which have been placed in-service either prior to or coincident with the year for which the incremental revenue was requested. BOMA is of a similar view. It is assets in-service, rather than capital expenditures per se, that are the basis for an ICM treatment. In other words, the Board's ICM policy should be read in light of the long established used and useful principle.

For example, in the recent Woodstock case, the Board allowed an incremental revenue rider beginning on May 1, 2012, in relation to a required capital contribution by Woodstock Hydro to HONI to build the "Commerce TS", which was forecast to go in-service in December 2012.

The previous case also underlines the need to determine the incremental revenue for ICM related assets in-service separately for each year, as the revenue is in respect of assets placed in-service in a particular year.

With respect to criteria around the type of asset that qualifies, the Board has made it clear, by amending the 2012 distribution filing guidelines, that the capital expenditures no

longer need to be "extraordinary" or "unusual" in order to qualify for ICM treatment. The Kingston decision also clarified that point.

In other words, the fact that the expenditures in question are similar in nature to expenditures that the utility makes from time to time, is not an absolute to them being included, if the other criteria of need (non-discretionary) materiality, and prudence, are met. However, the Board has emphasized repeatedly that the measure must be non-discretionary, and must be commenced in the year for which the rider is being sought. Otherwise, ratepayers are paying for assets from which they obtain no benefit. Almost all of the projects that have resulted in approved ICM related revenue requirements to date have been larger, discrete projects, which represent a large percentage, often 50% or more of the utility's total capital budget for the year in question, for example, as in the Guelph and Oakville decisions, as well as the projects the Board singled out for potential ICM coverage in EB-2011-0144. These are projects where the utility cannot readily finance from its existing business-as-usual capital budget, due to their size, and the individual, or collective (Kingston) importance relative to the remainder of the capital budget.

Toronto Hydro's proposed ICM projects are very different from those in most earlier cases, in the sense that they are for the most part, two year tranches of work that are very similar to work that has been ongoing for several years, and/or is simply, as in the case of THESL, of activities that have been going on for some years, as part of the implementation of THESL's Ten Year Capital Plan. THESL's attempt to downgrade the importance of the Ten Year Plan was somewhat disingenuous, in BOMA's view. While THESL presented and justified their collection of jobs in a somewhat different way and

in more detail than previously, the substance of the work and the method of carrying it out has not changed. For example, THESL has been replacing an underground direct buried XPLE cable with ducted TRXPLE cable since 2007 [see below]. Furthermore, the proposed Bremner TS aside, the individual projects are not that large in relation to THESL's overall capital budget. This feature bears on whether all the proposed jobs in several of the CAPEX segments are truly non-discretionary or can be phased in over a period of time.

Further, Hydro One has, in its evidence, conflated the idea of discretionary versus non-discretionary expenditure with the idea of prudence. This is wrong, in BOMA's view. Prudence is a well defined concept in regulatory law and practice, and deals with the issue of whether the expenditure in question was reasonable at the time the utility made it, given the information the utility had available to it or ought to have had available to it at that time; and was the project executed in a way that did not result in a waste of utility funds and unnecessary costs being visited on the ratepayer, for example, were the contracts used to implement the project, well conceived, drafted and enforced? Did the utility consider reasonable, plausible alternatives? The prudency analysis is done after the project is completed (it will be due in this case during the rebasing proceeding in 2015). The focus of the prudency review is both broader and narrower, than whether a project was non-discretionary or discretionary, in the year in which it was authorized. Broader in that it looks at the quality of the implementation, and broader in that it takes into account what the utility ought to have known at the time it made the decision. Both attributes are often matters of judgment.

THESL's analysis of whether the project can be done more cost effectively in 2012 than the next year, or the year after, or five years later, based on the Feeder Investment Model, is a different exercise. It is an exercise that attempts to determine the best (optimal) time to replace a particular asset. It compares the likely savings realized by not replacing agency assets immediately but in a later year with an increasing likelihood of failure prior to that time, based on assumptions about the likelihood of failure of the asset over the next several years due to internal or external risk causes (which risk cause is defined as causes of failure other than the failure of the equipment itself) the cost of replacement, the consequence of failure, including the cost to customers. The customer costs are calculated based on the likely outage times necessary to repair or replace the asset in the event of failure, and the number of customers impacted, and the cost of the electricity the customer received. It also uses a discount rate equal to the prevailing relevant interest rate with a term, eg. which is currently close to zero. The costs of repair or replacements done in future years will be less in today's dollars. How much less will, of course, depend on the discount rate chosen. The difference can be substantial.

Leaving aside, for the moment, questions about THESL's methodology, the fact that the model seems to show that in every case, it makes more sense to do the projects now, is not particularly helpful. They obviously cannot all be done now. The real question is how they should be sequenced. How should priorities be assigned?

BOMA has concerns about THESL's FIM methodology, including:

- the use of peak power rates in the calculation of the costs of focused outages to customers; not all outages occur at peak, and THESL found no evidence on how much of CH1 or SAIDI was in peak hours;
- how the discount rate was chosen;
- the impact of the discount rate chosen was not in the evidence;
- the assessment of non-asset risk;
- the lack of clarity in the evidence between like for like comparisons, and reconfiguration of assets solutions (relative costs of ownership);
- the refusal of THESL to include all viable options in their analysis, for example, the refusal to evaluate and consider leaving back lot assets in place while replacing bare conductors with TRXPLE cable and enhanced animal protectors, as a valid option;
- BOMA has carefully reviewed the submissions of AMPCO on this issue, and supports those comments.

The eligibility criteria also talk in the context of need of the CAPEX about having a material influence on the operation of the utility. Clearly, the larger the utility becomes, and THESL is a very large utility, all else equal, the more difficult it is to say that a single CAPEX project or job has a material influence on its operations. However certain measures that have important safety ramifications, though relatively small expenditures, would probably qualify, as would assets that, if they failed, would certainly or likely have "catastrophic" consequences.

Parties have raised the letter from the Coalition of Large Distributors, that requested a generic hearing on the ICM issue, alleging that the Board has sent out too many inconsistent signals. BOMA is of the view that the Board has articulated a coherent policy in the cases it has described to date. However, BOMA suggests that the Board not contemplate any decision related to ICMs that would override more basic principles of public utility regulation, such as the used and useful rule, or, the reintroduction of the rate base concepts into IRM regimes, without a broader review.

Finally, THESL has not dealt with the discretionary versus non-discretionary aspects of its "below the line" capital expenditures. For example, it has not examined its portfolio capital to determine whether any of that expenditure is discretionary and can be reduced to make room for, say, the newer ICM related requirements. THESL is assuming that all of the capital expenditures that are not part of its ICM related package, are also non-discretionary, which at the same time, maintaining that the only distinction between the two categories of capital expenditures is that the portfolio capital did not meet the materiality threshold. BOMA points out some apparent overlaps in its discussion of these expenditures below.

4. Use of 2011 Year End Rate Base

As noted above, THESL asked to use its 2011 "year end rate base" as the starting point for making adjustments to the 2012 rate base to justify its calculations of new 2012 and 2013 rate riders, on the basis that otherwise, it would have capital expenditures and ultimately assets in-service that would not be funded until the next rebasing proceeding of \$38 million over the 2012-2014 period.

To repeat, BOMA does not support this proposal. The proposed treatment runs directly counter to the Board's existing IRM policy and its policy for the calculation of rate base generally, which is that you use the base year rate base and the rates derived from that rate base (and other base year renewal requirement components) as the starting point for rates under IRM. The base year rates are then escalated by the IRM factors. There is no such thing as "the end of year rate base" in regulatory law or practice; there is just the "rate base". Every utility when making the transition from cost of service to IRM is subject to the same regulatory requirements. THESL has not justified exceptional treatment. Furthermore, the Board has stated on more than one occasion that it is not appropriate to adjust the rate base during the term of an IRM regime, and that includes the beginning of the term. Most recently, in the Enersource decision, EB-2012-0133 (page 5), the Board stated:

"Multi-year incentive schemes are established without an annual recalibration of rate base. The Board recently affirmed this long-standing approach in its Report on the Renewed Regulatory Framework for Electricity ("RRFE Report"):

The Board's rate-setting policy in this Report represents a further development of the approach adopted by the Board when it first established Performance Based Regulation ("PBR") for electricity distributors in its January 18, 2000 Decision with Reasons:

... PBR is not just light-handed cost of service regulation. For the electricity distribution utilities in Ontario, PBR represents a fundamental shift from the historical cost of service regulation. It provides the utilities with incentives for behaviour which more closely resembles that of competitive, cost-minimizing, profit-maximizing companies. Customers and shareholders alike can gain from efficiency enhancing and cost-minimizing strategies that will ultimately yield lower rates with appropriate safeguards for service quality. Under PBR the regulated utility will be responsible for making its investments based on business conditions and the objectives of its shareholder within the constraints of the price cap, and subject to service quality standards set by the Board.

Going into PBR, distribution rates are set based on a cost of service review. Subsequently, rates are adjusted based on changes to the input price index and the productivity and stretch factors set by the Board. PBR decouples the price (the distribution rate) that a distributor charges for its service from its cost. This is deliberate and is designed to incent the behaviours described by the Board in 2000. This approach provides the opportunity for distributors to earn, and potentially exceed, the allowed rate of return on equity. It is not necessary, nor would it be appropriate, for ratebase to be re-calibrated annually".

5. True-Up Mechanism

If the Board approves an increase on the revenue requirement to fund ICM related in-service capital additions in 2013, it will be based on THESL's forecasts of capital expenditures and assets in-service. Given that in-service CAPEX for 2013 will almost certainly be more or less than forecast, THESL should have proposed a specific true-up mechanism in its evidence; it did not. However, it did note that:

"THESL is committed to implementing the time-up mechanism the Board approves in an efficient and cooperative manner, and is receptive to working with the OEB staff and intervenors to develop a detailed proposal in this regard".

The Board has also expressed particular interest in this proceeding in having this matter addressed in this proceeding and parties submissions.

In EB-2007-0673, the Supplemental Report of the Board, the Board stated:

"Distributors that receive rate relief through this module will be required to report to the Board annually on the actual amounts spent. At the time of rebasing, the Board will carry out a prudence review to determine the amounts to be incorporated in rate base. The Board will also make a determination at that time regarding the treatment of differences between forecast and actual capital spending during the IR plan term. Overspending or underspending will be reviewed at the time of rebasing".

BOMA would like to see THESL also report on the maintenance repair and other OM&A costs that will be reduced because of the purchase of new equipment or refurbishment of

existing equipment under the ICM related CAPEX. Examples range the savings in maintenance and future repair costs for the replacement of direct buried cable with concrete ducted cable, enhancement of the SCADA system, replacement of air-insulated pad mounted switches with better insulated switches, to name only a few. THESL (and other utilities) should be able to identify consequent OM&A savings. THESL has indicated maintenance savings for only two of the twenty-two segments. It is not clear how maintenance fits into its FIM model.

The capital spending reports should be on a segment and job basis, with any replacement jobs from those identified in the application, noted.

There should be no true-up for overspending, since increasing the revenue requirement and collection from ratepayers would be for the entire IRM period and would amount to retroactive ratemaking. THESL should be allowed to substitute jobs, within segments, if they are essentially similar.

The reports should be made available to intervenors as well as the Board, and should be reviewed as part of each IRM year's proceeding to update the rates, as well as during the rebasing.

Underspending should result in a credit to ratepayers as the adder was calculated based on the forecast expenditures.

THESL should not be able to transfer revenues from one segment to another without obtaining Board approval, after consultation with intervenors.

Thus, separate Distribution Rates (based on the Separate Adders for 2012, 2013, 2014).

6. Proposed Capital Expenditures for 2012-2013, including the Incremental Capital Modules

General Overview

THESL has forecast capital expenditures for 2012 of \$283.4 million and \$579.1 million in 2013. The capital expenditures include a forecast Incremental Capital Module Amount ("ICM Amount") of \$125.5 million in 2012, and \$434.1 million in 2013 (Tab 2, Addendum, page 14), in addition to non-ICM capital expenditures (see below). These numbers include the construction of the Bremner Transformer Station, at \$8.5 million in 2012 and \$81.0 million in 2013, the approval for which is the subject of a separate procedure, per the Board's Procedural Order No. 3. In 2012, the Company also forecasts expenditures of approximately \$150 million in "other capital expenditures in 2012", and \$133.6 million in 2013 (in both years). The amounts are described as "operations portfolio capital", "information technology capital", "fleet capital", and "building and facilities capital"; Addendum T2, p13 (for 2012).

The 2013 forecast CAPEX of about \$579.1 million is a sharp increase from the approved \$378 million in 2011 [Settlement Agreement]. THESL spent \$445 million in 2011 (Tab 6G, Sch 11-112) and \$381.1 million in 2010, \$247.7 million in 2009, and \$205 million in 2008 (Tab 6B, Sch 6-9, page 2). Even for allowing for the carryover amounts on projects initially proposed to be spent in 2012 of \$44.9 million into 2013, the remaining amount is very large.

The total 2013 budget (\$579.1 million) exceeds the Board approved 2011 budget (\$378 million) by \$200.0 million, an increase of over fifty percent. Even after subtracting the \$44.9 million deferred from 2012 (and BOMA does not agree to measure the increase in

that way), the ensuing 2013 budget of \$535 million is a very large increase over the 2011 approved budget of \$378 million.

The approved numbers provided above as well as the "as filed" numbers for 2008 through 2011, of \$294.4, \$301.5, \$423.8, and \$498.0, respectively [T7, Sch 2-14] demonstrates that in each of those years, the Board did not approve substantial portion of the applied for capital budgets. In tabular form, the results are:

| | 2011 | 2010 | 2009 | 2008 |
|---|-------------|-------------|-------------|-------------|
| Filed | \$498.0 | \$423.6 | \$301.5 | \$294.4 |
| Approved or as part of a Settlement Agreement | \$378.0 | \$350.0 | \$247.7 | \$205.4 |
| Difference | \$120.0 | \$42.5 | \$53.8 | \$89.0 |

THESL repeatedly was unable to make the case for the amount of capital expenditures it stated that it needed. Interestingly, in EB-2010-0142 (2011 rates), the capital budget was settled, except for some relatively minor items of storage, vehicle charging, and "green vehicle purchases", for an amount of \$378.0 million. In the Settlement Agreement, THESL stated:

"THESL agrees that, based on the agreed capital budget, it can continue to operate its system in a safe and reliable manner in the test year" (EB-2010-0142, Settlement Proposal, page 13).

Furthermore, in EB-2009-0139, when the capital budget was again the subject of a Settlement Agreement, the Agreement stated:

"As part of this Settlement Proposal, THESL agrees to reduce its 2010 capital budget from \$423.6 million, originally requested in the Application to \$350 million" [with an additional amount of up to \$27.8 million of expenditures actually issued for its proposed Transit City Program] (EB-2009-0139, Settlement Agreement, page 11).

On page 12 of that Agreement, THESL stated:

"THESL will accommodate the reduction in its capital budget by slowing down the pace of non-critical renewal and new emerging capital programs. THESL will review its prioritization schedule to ensure that it yields the maximum benefits for its customers. THESL believes that the level of capital expenditures agreed to as part of this settlement will still allow for the majority of the required capital projects to proceed, avoiding material adverse effects to customers or the system in the Test Year".

7. Operations Portfolio Capital Overview

Before looking at the ICM related capital expenditures, BOMA urges the Board to have a critical look at the non-ICM related capital expenditures. They are substantial. THESL has proposed for 2012 and 2013, respectively, \$120.5 million and \$121.63 million of "operation capital", \$22.0 million and \$15.0 million of "IT capital", and \$0.8 million and \$2.0 million of "fleet capital", and buildings and facilities capital of \$5.0 million and \$5.0 million; a total of \$148.31 million and \$133.63 million forecast for 2012 and 2013, respectively. Actual expenditures of this non-ICM related capital to August 31, 2012 were about \$89.0 million. None of these capital expenditures were included in the incremental capital modules, although THESL states that the operations portfolio capital was in part at least to address:

- A large quantity of aging or deteriorating infrastructure (T4, C1, p1).
- Legacy assets that are no longer standard due to inherent safety and/or reliability issues (T4, C1, page 1).

These are also among the objectives of the ICM related capital expenditures. This has led to duplication and redundancies among programs.

The first example of overlap is the Worst Performing Feeder Program ("WPF") (4.9 m in 2012, 5.44 m in 2013). This program, which has been underway for several years, is no longer required since the feeders in which are selected on the basis of frequency of outages, are precisely the feeders that would be addressed by the underground direct buried cable segment, and the overhead infrastructure segment, both of which are prioritized on the basis of frequency and duration of unplanned outages.

Customer connection capital, net of customer contributions, are forecast to increase sharply from 2012 to 2013 (25.0 to 37.4), as capital contributions are shown to decline sharply (17.1 to 11.9) on a larger amount of gross connection capital. No explanation is provided in the prefiled evidence for the decline.

Almost half of the operations portfolio capital budget is labeled Continuing Projects and Emergency Issues Portfolio, which are budgeted at 55.7 and 40.0 in 2012 and 2013, respectively (T4, Sch C, page 1). The evidence describes emerging projects for 2012 as follows:

"Emerging projects for 2012 consists of programs which include direct buried cable replacements, overhead rebuilds, and external plant relocations" (T4, Sch C, page 3).

And for 2013, as follows:

"THESL anticipates that the emerging projects for 2013 will be related to reliability, safety, external plant relocation requests, XLPE cable in direct, underground residential distribution (URD) system, egress cable with infrastructure and/or cable chambers" (Ibid).

But these categories of projects address overlap almost entirely with projects addressed by the ICM related projects and segments. They are simply more of the same. Why have they not been incorporated into the ICM related segment jobs priorities, which are based largely on reliability data. In BOMA's view, the emerging projects are simply another window through which THESL wishes to continue to access funds for jobs for similar projects. When asked about the distinction between these projects and the ICM module projects, the answer was they were not ICM eligible (V1, page 46). The Company did not explain why. While some elements of the portfolio capital are clearly non-discretionary, eg. reactive (repair) capital and connection capital, subject to the caveat about declining percentage capital contributions on the previous page, much of it appears to be no more or less non-discretionary than the projects contained in the ICM modules. The company has not produced evidence to support the non-discretionary nature of much of the work and to prioritize that work relative to the work contemplated in the ICM modules. BOMA suggests that the "emerging projects" budgets be reduced by two-thirds in each of 2012 and 2013, allowing for some funding for projects that are really different from the ICM related projects.

8. Organization of the ICM

The proposed ICM amounts for 2012 and 2013 are broken down into ten project areas, which THESL calls "projects", which are further divided into twenty-two segments. For example, the Underground Infrastructure and Cable "project" is divided into three segments: "Underground Infrastructure", "Paper Insulated Lead Covered Cables – Piece Outs and Leakers", and "Handwell Replacements". Table 2 at page 14, Manager's

Summary, shows the forecast 2012 and 2013 expenditures for each Project and Segment, the Manager's Summary; Addendum (the "Addendum").

Each segment is in turn divided up into a number of jobs, which one might also describe as "projects" (using the accepted use of the term). A segment consists of anywhere from two or three to thirty separate "jobs". Some of these jobs are implemented over a period of more than one year, eg. 2012 and 2013, and 2013 and 2014.

The evidence shows each job, including both the civil and electrical work, broken down between labour and equipment.

The segments vary widely in the total costs for 2012 and 2013, from \$87.7 million for underground infrastructure, to "Station-Control and Communication" \$1.1 million (all updated numbers). The largest three segments (excluding Bremner) are underground infrastructure, rear lot construction and overhead infrastructure. Many of the segments are for a few million dollars; on the other hand, a few segments constitute a very large percentage of the total proposed expenditure, for example, underground infrastructure, overhead infrastructure, and rear lot construction account for about \$225 million or just over 50% of the 2013 proposed ICM of \$434 million.

Before considering each of the segments, BOMA wishes to make a few more general points.

9. 2012 Expenditures vs. 2013 Forecast Expenditures

First, given the timing of the application and of this proceeding (we are now in January 2013), BOMA is of the view that only 2012 actual expenditures should be considered for

ICM eligibility. There is no point in dealing with forecasts of projects that may never materialize.

10. 2012 Experience

Of THESL's forecast capital expenditures for 2012 of \$283 million, approximately \$116.3 million (40%) is forecast to be in-service in 2012; \$166.6 million will remain in CWIP on December 31, 2012 (JT2.10). In BOMA's view, the amount (if any) to be included in an ICM for 2012 should be that the amount of qualified capital expenditure, which resulted in in-service plant on December 31, 2012, if any, that exceeds the 2012 ICM threshold of \$172 million. None does. So, there should be no capital module in respect of 2012.

On January 9, 2012, four days after receipt of the Board's EB-2011-0144 decision, THESL issued a Stop Work Notice to its trade contractors (J1.3, Appendix A). It, therefore, seeks to shift the shortfall for its ICM eligible capital expenditures ("2012 CWIP") forward into 2013. It increased its proposed 2013 ICM related capital expenditures from \$389.5 million, \$434.1 million (Addendum, Table 2, p14). This action was very disruptive to both its contractors and its equipment suppliers. THESL evidence was that it decimated its contractor base and damaged its supply lines. In BOMA's view, THESL's decision was a preemptory response to the decision. The Chair of the Board wrote the Chair of Toronto Hydro on January 13, making it clear that the Board would endorse an IRM application from Toronto Hydro including an ICM component. The letter strongly implied that, when added to Toronto Hydro's previous (2011) spending level, could provide THESL with a capital program in excess of \$450 million in 2012.

However, Hydro One did not take up the opportunity until the early summer to rebuild its submission, nor did it revise its decision to have its contractors stop all design and construction work. It began to unfreeze construction projects in the summer of 2012 and ramped up construction substantially in the fourth quarter, but it was too late; it was able to make more than \$125 million of \$303.6 million ICM related planned CAPEX in 2012.

The segments also vary considerably as to their nature, from slices of much larger programs, which have been put in place, to gradually replace least reliable cable, transformers, and switchgear equipment to one-off efforts to replace assets that pose a worker safety, or a recently identified systemic risk or reliability, issue. As noted, many, though not all, of the segments represent the 2012-2013 "slice" of longer term programs, which were outlined in the most recent version of THESL's Electrical Distribution Capital Plan (the "Ten Year Plan") 2012-2021, August 11, 2011 [EB-2011-0144, Exh. D1, T7, Sch 6] (See also Manager's Summary, Original, T2, p16, line 21). For example, the underground infrastructure segment is part of a longer term program that began in 2007 [T4, B1] with a ten year goal of replacing virtually all of the remaining direct buried XLPE cable, with concrete ducted TKXLPE cable (see below).

While THESL's evidence suggests that the primary purpose of the expenditures is to preserve and enhance the reliability of its system, and, for some segments, enhance worker and/or public safety, the evidence does not contain a comprehensive safety analysis leading to a list of investments prioritized on the basis of their contribution to the improvement in worker and public safety.

Perhaps most important, while in some segments, individual jobs are prioritized based on asset age and condition, THESL does not prioritize the proposed work as among projects, or segments, despite several invitations to do so. Their position is that all segments are of equal priority and all \$579.1 million of proposed 2013 capital expenditures are non-discretionary, and all must be done in 2013. The assertion is not supported by the evidence, and runs counter to the views expressed of utility's best practice, and THESL's practice expressed by their asset management advisor, BIS Consulting LLC (T4, Sch D2).

The BIS Report, entitled Toronto Hydro's Current Asset Management Practices Related to Aging Infrastructure; Comparison with Industry, states, at page 1:

"Toronto Hydro (THESL) has a well developed asset management program for optimizing spending on replacement of aging assets and prioritizing, among competing programs in case of resource limitation".

Toronto Hydro has not prioritized segments or projects in this case in the manner described by BIS.

BIS goes on to state:

"The outputs of this process (analysis and prioritization referred to above) that is projects whose benefits in term of avoided risk are expected to exceed their costs, are inputs to Toronto Hydro's budget process which includes project prioritization and the rate filing itself".

Again, Toronto Hydro has not prioritized among projects or segments. In fact, their view apparently is they want all expenditures approved in all the segments; if they can't have that, they want at least some of the money allocated to each segment.

And while the Feeder Investment Model ("FIM") appears to calculate cost benefit ratios for investments to replace certain assets, setting aside for the moment, parties' concerns about some aspects of the FIM methodology dealt with earlier, the results are not used to prioritize expenditures across the spectrum of possible investments.

The BIS analysis states, at page 11 (last paragraph):

"Toronto Hydro's FIM and business case models result in explicit metrics of NPV and benefit forecast ratio, which support prioritization across asset programs".

As noted above, THESL has not used this capability to prioritize in this case.

BIS went on to state:

"In addition, FIM is tied to the value model used for prioritizing spending across the entire utility (ie. not only aging infrastructure spending) which means that the results of the FIM are consistent with the overall strategic objectives of the utility and can readily be compared with other spending models (page 12)" (our emphasis).

But there is no value model disclosed in the filing nor does BIS explain clearly what it means by the term in its evidence. BIS notes that:

"THESL is in the process of improving its value model" (page 12, line 3)

and later, under the heading "Develop an Approach to Integrate Drivers", BIS recommends:

"The FIM and other AM tools include means of incorporating drivers from executive level management or OEB. For example, an increased emphasis on reliability may be reflected in an increase in customer outage cost. Toronto Hydro is in the process of re-creating its value model, which identifies and weights the drivers of spending decisions. It will be important to ensure that there is consistency between these weights and the FIM: either the weighting should be done based on the assumptions in FIM, or the FIM assumptions should be updated to reflect the weightings".

Toronto Hydro is clearly not at that stage yet. As an aside, it would have been useful to have had the BIS report authors testify in the proceeding. They are senior people, and their analysis was interesting, particularly when juxtaposed against what THESL actually filed.

Nor did THESL comply with the provision of the Filing Guidelines, which requires applicants for ICM to advise what they would do if their requires for ICM treatment for certain capital expenditures were not approved. The Company's witnesses stated that they would make those expenditures required by statute or codes, necessary repairs, and they would look at it from an operational perspective, for example, in the work already permitted, and other "operational" considerations but provided no further clarification [V1, p57].

While the Feeder Investment Model ("FIM") can be a useful tool, to estimate the optimal time to replace any given asset, it does not indicate whether the proposed investment is non-discretionary or discretionary.

Mr. Rubinstein asks:

"MR. RUBENSTEIN: But if we just isolate this, would you agree with me that most favourable, optimal, is not the same thing as non-discretionary?"

MR. PARADIS: Yes, I think that is correct." (V1, p47)

The evidence contains no overall analysis of the impacts of the proposed capital expenditures on O&M costs, including maintenance costs. While increasing maintenance costs are included in the FIM to support the case for immediate replacement of aging equipment, there was no broad and deep discussion of the extent to which maintenance,

and repair costs, would be reduced by making the proposed investments. THESL's argument that there is no maintenance cost differential between aged and new or reinforced equipment does not seem correct. At the very least, there would be O&M costs associated with replacing the assets (Tab 6F, Sch 11-64). But surely, some aging assets require more maintenance than new assets. THESL states that in only two segments, rear lot, and box construction conversion, were reductions in maintenance costs identified because of the reconfiguration of assets. In many of its segment presentations, THESL mentions lower maintenance or other O&M costs as a benefit but there is no attempt to methodically document and quantify the likely savings. This is too narrow a perspective (Tab 6F, Sch 11-27). BOMA would expect that THESL will be able to demonstrate continuing savings, arising from what, if any, ICM capital is approved, in its rebasing case.

While THESL did take a \$26 million charge against earnings in 2011 for "restructuring costs", apparently settlements with employees who were terminated [T6C-10-1, Appendix D, p20; Footnote 12 to THESL's 2011 Financial Statement], these measures seemed like more reflexive, dramatic reactions, in the wake of the Board's decision in EB-2011-0144, than a considered effort to review O&M costs.

Finally, THESL did not attempt to make a substantial case for the executability of its proposed capital expenditures for 2013. Other than remarking on how quickly it was able to ramp up expenditures in the last quarter of 2012 (and we have not yet seen the actuals), THESL agreed that its largest one year capital spend to date was in 2011, when it spent \$445.5 million. Today, it likely has more difficult relationships with contractors and suppliers, and a somewhat smaller payroll. Consequently, BOMA believes it would not

be able to execute a \$579 million capital spending program in 2013. BOMA believes that the upside limit to THESL's ability to execute would be in the range of \$400-\$450 million. Reaching \$450 million would probably be a stretch. Some of that expenditure would not likely come into service until 2014 or, in some cases, 2015.

11. 2012 Expenditures

Given that 2012 is nearly over, THESL will soon have the actual numbers for its 2012 capital expenditures, including the expenditures it proposes for its ICM. THESL 2012 actuals, as of August 31, 2012 (T2, Addendum, Table 1) were about \$59 million of ICM related expenditures. Its 2012 yearend most recent forecast of \$125.2 million of ICM related expenditures (Addendum, page 14, Table 2) and another \$139.5 million of non-ICM capital. In an undertaking response to J1.1, it reiterated its updated 2012 total forecast ICM Amounts to \$283 million (T2, Addendum, page 14) noting that it ramped up expenditures significantly in the fourth quarter. That said, BOMA suggests that, given the passage of time, and THESL's decision to hold back planned spending in 2012 in the wake of the Board's EB-2011-0144 decision, actual capital expenditure may well be less than forecast, and the actual expenditures should be used for determining the ICM amount, if any, from 2012. Otherwise, ratepayers will be asked to fund expenditures, beginning on June 1, 2013 for forecast expenditures for 2012, which were not incurred.

With those general comments, BOMA will comment on each Project/Segment in turn, and recommend reductions where appropriate.

12. Segment by Segment Description and Analysis

BOMA agrees with the Board's Chair's comment that given the size and diversity of THESL's capital expenditure proposals, it would be appropriate for the Board in this case to make findings on each project or each segment, rather than a single number for the entire program. This seems particularly apt given the large size of the proposed Incremental Capital Module THESL has requested and the significant difference in the degree to which the segments in a project meets the Board's current eligibility criteria. BOMA would suggest findings on each segment.

Finally, BOMA notes that while THESL has requested, and the Board has agreed to treat 2014 in a separate phase of the proceeding (the Board is not being asked to approve 2014 capital expense), the Company has proposed, in many cases, that ICM related capital expenditures commenced in 2013, or even in 2012, will be completed, where necessary, in 2014. In this sense, approval of segments and jobs that begin in 2013, and in some cases, 2012, effectively pre-commit further capital expenditures of the same type in 2014.

13. Project Underground Infrastructure and Cable (Tab 4, Sch B1)

Segment B1. Underground Infrastructure

In this segment, THESL proposes:

- (a) \$87.7 million over two years to replace XLPE underground cable with newer jacketed TR-XLPE cable in concrete ducts, together with the new switches and transformers;

- (b) as part of the same project (and in the same jobs), replace any adjacent air-insulated pad mounted switches with SF6-insulated pad mounted switches;
- (c) to replace underground (submersible) transformers, on the section of the feeders being replaced.

Over 80% of the total cost is for the feeder replacement. The cost to replace the transformers is \$6.6 million.

The total cost of the work is projected to be \$28.8 million in 2012, and \$58.9 million in 2013, for a two year total of \$87.7 million.

The twenty-nine jobs which make up the segment are prioritized based on the outages experienced on each of the feeders, which also determine the switches and transformers will be replaced (on those feeder cables that are being rebuilt).

The plan is to replace some sections of direct buried XLPE cable, some of which is near the end of its useful life and is leaking oil with the more advanced, better insulated TRXLPE cable encased in concrete ducts.

The two year work plan is part of a longer term program which began in 2007 (T4, B1, page 114) and is intended to carry on for about ten years with the apparent objective of eventually replacing about 80% of the remaining 876 kms of direct buried XLPE cable in THESL's system [EB-2011-0144, EX D1, Tab 7, Sch 6, Electrical Distribution Capital Plan (EDCP) 2012-2021 at p23; hereinafter referred to as the "Ten Year Plan"]. THESL claims that 580 km of the cable requires immediate attention. BOMA would agree that putting TRXPPE cable in conduit is the most durable replacement mode. According to

THESL, the XLPE cables, developed some fifty years ago, were widely installed prior to the availability of the TRXLPE product in 1990, a coated, more leak resistant cable. The original XLPE cable has some design defects that has led to relatively high failure rates.

BOMA does not question the need to continue with the program of replacing direct buried cable, and that the priority should be on the feeders experiencing the largest number of outages. However, the amount of work in any one period is discretionary in BOMA's view. BOMA would suggest stretching the program out over a somewhat longer period. It is not clear from the evidence how much of the direct buried cable will be replaced by the expenditure of these funds in 2012-2013. BOMA also notes the submersible transformer in the segment, of direct buried cable are being replaced, as well, even though most of those transformers are not characterized as being in poor or very poor condition. The transformers are not where the faults are occurring (V3, page 11). Moreover, the evidence suggests the replacements of multi-taps (the other reason for replacing the transformer, can be done for a much lower cost than replacing the transformer itself (J3.2)).

The second component of the underground cable segment is the proposed replacement of air-insulated, underground (but open enclosure) pad mounted switches with sealed-type SFG gas-insulated pad mounted switches not susceptible to contamination from the atmosphere and safer to work with. These switches are THESL's current standard pad mounted switches. THESL determined in 2011 that to institute a program to replace all 800 legacy switches, as part of the underground system sustaining program at a total cost of \$76 million over a ten year period [Ten Year Plan, page 25]. These switches will all be replaced in conjunction with feeder replacements for efficiency reasons.

In addition, THESL proposes to replace "non-standard" submersible transformers in this section of feeders to be replaced, "where cost effective". Many transformers are in feeders where they have been very few outages.

It is not clear from the evidence how many switches and transformers will be replaced, and what condition they are in.

There is no discussion of increased maintenance as an alternative to replacement, at least for a period. THESL states that increased maintenance would not help but do not appear to have tried, for example half-yearly rather than yearly maintenance (T4, Sch B1, page 137).

In BOMA's view, THESL is replacing the direct buried XLPE cable over too aggressive a timetable, given the other demands on resources and the activities of other utilities. The evidence notes that Consolidated Edison, with a similar experience with direct buried cable, has a program to replace the cable over twenty years. BOMA recommends a reduction of fifty percent in the 2013 expenditures on underground infrastructure, a savings of \$29.5 million. Priority, where practical, should be given to replacing the air-insulated pad mounted switches, because of safety considerations, and recent failure rate [T4, B1, page 124], especially the defective ones [T4, B1, p123]. BOMA recommends action should be taken to recover funds from the manufacture of the deficient equipment.

14. Segment B2. Paper Insulated Lead Covered "PILC" Cables – Piece Outs and Leakers

This segment covers two tasks; the replacement of lead shielded cable, which is at the end of its useful life and is leaking oil, and second, to reduce the safety risk to employees

working in the cable vaults by placing the cables in proper brackets along the cable chambers' walls and clearing the chambers.

In its initial evidence, THESL planned to spend \$17.1 million and \$5.2 million in 2012 and 2013, respectively (a total of \$22.3 million) on this work. In the updated evidence, they proposed virtually nothing in 2012 and \$5.4 million in 2013. Essentially, THESL is proceeding with only one job in 2013, the replacement of the Bringham-High Line cables, as the deterioration in the existing cable has caused several faults at certain Hydro One transformers. THESL does not explain why it has deferred most work until 2014 and later, in other words, explain its relative low priority. Only one supplier of such cable remains in business.

This program is part of a longer term, ten year program to replace about 400 km of overloaded and/or end of life PILC cable with TRXLPE cable in conduit ducts. Given the safety dimensions of the work, and the impact on the transmission system, BOMA would support the work.

15. Segment B3. Handwell Replacement

THESL states that the purpose of the handwell replacement segment is to protect the public, including dogs, from the potential safety risk posed by electric shocks from contact voltage. This work entails the replacement of metal handwells with composite non-conducting structures, both the lids and the underground structure which holds the cables, and the cables themselves. There have been recent instances of people and animals receiving severe shocks from contact with the metal lids mostly found on the

sidewalk or in roadways [occasionally located on private property, for example, in customers' front yards].

The shock arises from faults caused by erosion to the cable insulation from salt and dirt which penetrate the lid.

THESL began an emergency replacement program in 2009 to replace its metal handwells with non-conducting composite handwells. As of December 31, 2011, 6,100 metal handwells remained in place. The proposed 2012, 2013, and 2014 replacement schedule would leave 1,000 metal handwells remaining at the end of 2014. Replacements are prioritized to the downtown core.

This is a relatively large expenditure of funds, with \$15.8 million forecast for 2012 [as of August 31, \$6.37 million spent] and \$14.4 million forecast for 2013, for a total of \$30.2 million. This proposal is largely safety driven and, to some degree, by public relations. However, there is no indication of its importance on safety grounds relative to other safety driven measures nor on how THESL views the trade-offs between public safety and reliability growth and other objectives.

THESL has not fully answered the question of why it would not be possible, as a precautionary initial measure, to replace the metal lids with composite ones, and remaking the connection to the current standard, without having to establish new underground composite units and replace all the cables in the vaults. BOMA would support a lid and connection replacement program at this time, which would, presumably, cost no more than thirty-three percent of the total.

16. Segment B4. ICM Project Overhead Infrastructure and Equipment

Overhead Infrastructure Segment

This segment encompasses work THESL proposes to perform on poles, transformers, conductors, switches, and porcelain hardware in 2012 and 2013. The updated budgets for the work total \$65.0 million in 2012 and 2013, consisting of \$9.1 million, down from \$29.4 million in 2012, and \$55.9 million, up from \$53.0 million in 2013.

17. Poles

THESL proposes to replace about 4,124 poles in 2012-2013 out of a population of 2,650 poles in very poor condition and 9,530 poles in poor condition at a cost of approximately \$30 million. This is part of an ongoing pole replacement program under which about 4,000 to 5,000 poles are replaced annually. Apparently about 40,000 of THESL's 106,000 are rated in fair condition, which THESL says means they should be replaced within ten years. The other work described below is done at the same time as a group of poles are being replaced.

18. Overhead, Pole-Mounted Transformers

THESL proposes to replace 1,000 CSP transformers (transformers with the fuse located inside the transformer tank) with standard non-CSP transformers, at a cost of about \$10 million in conjunction with pole replacement and rehabilitation of other assets (eg. certain conductors) in 2012-2014. The CSP overhead transformers are legacy products used in Scarborough and North York prior to amalgamation. Since that time, THESL has been gradually replacing them with transformers with an exterior primary fuse. THESL's

standard CSP transformer defects can be addressed by changing the fuse first, cutting the necessity for transformers replacement by 50% (T4, B4, page 38, updated, Figures 24, 25, and 26). Replacement improves reliability and makes repair work safer. The cost is relatively small.

19. Overhead Conductors

THESL proposes to deal with two problems with conductors:

- (a) Undersized Conductors – THESL wants to replace overutilized and undersized conductors as part of the overall jobs to minimize repair time after faults. There are 96 feeders on which a portion of the conductor is undersized, comprising in total 82 km on the trunk system, of which 9 km are also overloaded. The cost is modest, \$2 million.
- (b) Replacement of Bare Conductors (61 km in West Toronto and Leaside) at a cost of \$2.5 million with tree proof conductors.

No estimates are provided of concomitant reduced maintenance costs, for example, tree trimming. THESL states that Sustained Interruptions caused by tree contacts on the trunk portion of the feeder have risen by sixty percent from 2010 to 2011 (T4, Sch B4, page 5).

20. Porcelain Overhead Switches

THESL proposes to replace porcelain SMD-20 switches with redesigned polymer SMD-20 switches, as part of other overhead conversion and rehabilitation work. THESL has about 17,000 overhead switches on its system. All SMD-20 porcelain switches, which

pose safety risks to workers and the public are eventually to be replaced with redesigned polymer SMD-20 switches. Other types of vintage switches will be replaced by SCADA-MATE R2 switches. THESL will replace 683 switches in 2012-2013.

21. Porcelain Hardware (insulators and pothead terminals)

THESL intends to replace 400 porcelain insulators in each of 2012 and 2013 at a two year cost of \$1.0 million as part of broader overhead infrastructure jobs, for performance and safety reasons, and product incompatibility with new TRXLPE overhead cable and new standard polymer insulators.

22. Porcelain Pothead Terminals

THESL plans to replace fifty of these in each of 2013 and 2014, at a two year cost of \$2.2 million, as they pose a safety hazard, and a risk of catastrophic failure. THESL will replace these with polymer equipment.

23. Comments

Much of the overhead infrastructure work is driven by pole replacement on a street or neighbourhood basis. For efficiency reasons, THESL proposes to replace other problematic assets, including switches, insulators, and lighting arrestors, as part of the job.

THESL says that it is a priority to replace poles in very poor or poor condition. In total, 9,530 poles are in poor or very poor condition, of which 1,683 poles are on trunk feeders, yet in 2013, THESL plans to replace only 556 poles in poor and very poor condition, out

of the 4,124 poles it plans to replace in that period (T4, B4, page 31, updated), presumably all of them on trunk feeders. THESL's pole replacement practice is not following its stated priority. This view is supported by THESL's statement that:

"The poles that are identified for replacement are typically located on the worst performing feeders (our emphasis), except for poles that are identified as Danger and Replace Poles, through an external contractor, which can be located anywhere" [T4, Sch B4, page 30, Figure 18].

The Board should only permit THESL to replace poles that are in poor or very poor condition on trunk feeders, as per THESL's stated policy, except in very exceptional circumstances at least until such time as THESL clarifies the application of its pole replacement policy.

Similarly, THESL intends to replace 275 poles rated 4 and 5 by the Ontario Pole Inspection Services. These are equivalent to poor and very poor ratings. The cost benefit of using the enhanced testing service are not set out in the evidence.

THESL's inspection and assessment cycle for poles in ten years. THESL should exercise the benefits on a more frequent maintenance cycle [T4, B4, page 17].

In BOMA's view, the pole replacement and ancillary asset programs are linked but they are discretionary to some degree, in particular, the pole replacement component. BOMA suggests a reduction of \$15 million.

24. Segment B5. Box Construction

The task in this segment is to replace the existing box construction overhead configuration along some of the city's busiest streets, because of their age, the safety risk

posed to workers when attempting to repair circuits and transformers attached to them, the time taken to maintain and repair them, and the fact that THESL is gradually replacing the 4 kw feeders that link the boxes to many municipal stations with a new 13.4 kw overhead system which will eliminate many municipal stations, and therefore, make some of the boxes redundant. The box construction removal project is driven in part by this voltage conversion project.

Box construction removal is another relatively expensive item, with \$0.6 million forecast for 2012 and \$23.0 million for 2013, for a two year total of \$23.6 million.

The Company suggests that the removal of the box construction will result in some savings associated with the closure of municipal stations, and maintenance costs for 4.16 kv feeders will be eliminated for those that are converted (which are higher for 4.16 kv feeders than the 13.8 kv and 27.6 kv feeders) [Ten Year Plan, page 39], Revenue should be produced by the sale of real estate which is no longer required for the stations or such other purpose, although no figures were provided in evidence for either reduced maintenance costs, or proceeds from the sale of the redundant real estate. In BOMA's view, this is part of a longer term plan that can be extended, so it would suggest a reduction of one-third.

25. Segment B6. Rear Lot Construction

In this segment, THESL intends to remove an undetermined length of rear lot bare cable and related assets and replace the cable with front lot underground cable in concrete ducts. The initiative is driven by the age and condition of some of the back lot assets, the

frequency of outages from tree contact, the cost of maintenance of the assets, and the safety risk for both employees and customers when assets fail and need to be replaced.

The two year work plan is substantial, with a forecast spending of \$16.4 million and \$29.4 million in 2012 and 2013, respectively; a two year total of \$43.8 million. This work plan is part of a longer term program to replace virtually all of the rear lot assets over a ten year period [Ten Year Plan, page 37].

The company's evidence is that this work is difficult to schedule.

The Company states that it wishes to remove rear lot plant completely for reasons of safety, reliability, and cost. Their view is that removing the existing rear lot bare cable is non-discretionary. However, they admit that replacing it with front lot underground ducted conductor, is discretionary [V2, p8].

As noted above, THESL has decided that it does not want to have any rear lot plant, and states that it has not considered the alternative of replacing bare conductor with insulated TRXLPE cable to lessen the outages caused by the contact with tree branches, animals, etc., which would be more cost effective than moving the entire back lot infrastructure to underground service. From a reliability standpoint, BOMA does not view the THESL evidence as conclusive, at least relative to the option of replacing bare conductor with TRXLPE conductors which maintaining the back lot location.

A large part of THESL's case for the elimination of back lot service appears to be safety driven, particularly employee safety.

However, THESL finds no evidence on the relative causes of injuries to its employees, by work type, the health related costs and lost time costs to THESL and society of returning the employee to full health, let along a coherent plan on an overall safety plan to accompany the investment plan. Parties and the Board are unable to understand and assess the safety implications of the different segments, and how those consequences link up with an overall preventative safety plan as it relates to feeder investment initiatives. The chair remarked on the absence of such a plan on more than one occasion during the proceeding. BOMA shares his view.

BOMA is of the view that the back lot replacement program is more discretionary than many of the other programs, such as underground and overhead infrastructure programs. It should not be proceeded with at this time.

26. Segment B7. Polymer SMD-20 Switches

This task involves the removal of polymer SMD-20 switches from the overhead system and replacing them with new switches to remove the deficiency experienced in the existing switches. The switches are used to mount SMU fuse units on distribution poles. Many of the switches have been determined to have a manufacturing deficit which causes them to break upon operation. They pose a substantial safety risk.

This replacement is a very small contribution to the total ICM module cost, \$0 forecast in 2012 and \$1.5 million in 2013.

This amount represents a reduction of \$4.48 million from the original estimate. There is just one job to be undertaken in 2013 and 2014, to replace 3,226 defective switches in 2,553 overhead locations. There are 5,226 defective switches deployed.

Priority is to be given to the locations that have experienced the highest number of outages due to faults of the type that would activate the fuses on the switches.

THESL is seeking compensation from the manufacturer and proposes to credit any revenue obtained to ratepayers on rebasing. The Board should request THESL do this. BOMA is supportive of this segment.

27. Segment B8. SCADA-MATE R1 Switches Segment ("SCADA Switches")

The SCADA Switches costs are forecast at \$0 in 2012 (adjusted from \$2.9 million) and \$1.5 million in 2013 (down from \$2.8 million), a total reduction of \$4.23 million to \$1.43 million, down from \$5.6 million. It is one of the smaller items in the total. The balance of the three year \$8.4 million program has been shifted to 2014 (original evidence).

The existing switches are a safety risk to workers, and are not being maintained by field crews because of the safety risks. There are 318 such switches in the system and THESL's goal is to replace all of them with a second generation switch in which the design defect has been fixed, so the inevitable corrosion will not lead to arc flashes. The new R2 switch has been used since 2000. It is not clear how long it will take to replace all 318 R2 switches.

This is a non-discretionary item because of the safety risks and the increased maintenance costs.

Reduced maintenance costs should be demonstrated at rebasing.

THESL should report on any potential recovery from the manufacture for the design flaws in the R1 switch.

THESL has suggested a reasonable priority list for the replacements (T4, B8, page 17).

BOMA supports the investment project.

28. Segment B9. Network Infrastructure and Equipment

Network Vaults and Roof Segment

This segment has forecast 2012 costs of \$2.8 million, down \$10.7 million from \$13.6 million and forecast 2013 costs of \$18.8 million, up \$6.5 million from \$12.3 million for a 2012-2013 total of \$21.6 million. THESL currently has 1,064 network vaults.

The two year expense will repair 26 high risk vaults, or 2.4% of the vaults in the system. The vaults to be replaced are classified as poor or very poor condition and need to be replaced within three and one year, respectively. 81% of the vaults have roofs beyond the 25 year expected life. Jobs take as long as 24 months.

The vaults are mostly in the downtown core or the Yonge Street corridor where outages are particularly costly from customers' points of view.

Clearly, the proposal is a small part of what will be a long term program.

BOMA is supportive of this program.

29. Segment B10. Fibretop Networks Unit Segment

The 240 fibre top units represent 16% of the 1,900 network protective units.

The 2012-2013 budget has been reduced from \$17.3 million to \$9.1 million. Forecast 2012 cost is \$1.5 million, down \$7.1 million from \$8.6 million; 2013 forecast is \$7.7 million, down \$1.1 million from \$8.8 million. THESL proposes to replace 61 Fibre top Network Units with Submersible Network Units. More than 45% of these assets are past their useful life (Ten Year Plan, page 45).

This segment is an increase in the number of units replacement jobs annually from the current 40-60 units, to approximately 65 units per year over the 2012, 2013, 2014 period (T4, B10, pp2 and 4).

The 2012-2013 work has been prioritized based on condition assessments. The units constitute much higher risk of catastrophic failure, for example vault fires, than other network transformer protectors. These can lend to lengthy outages.

The new units introduced in 2003 put all low voltage connections on to only three buses, which are further apart and elevated from the surface of the fibre top protector, reducing risks of corrosion and short circuits.

BOMA supports this program.

30. Segment B11. Automatic Transfer Switches ("ATS") and Reverse Power Breakers Segment ("RPB")

The 2012-2013 budget for the segment was reduced from \$6.57 million to \$3.3 million, a reduction of \$3.3 million. 2012 costs are \$0, down from \$3.3 million; forecast 2013 costs are \$3.3 million.

The proposal is to replace 30 ATSS and 6 RBPs in 2012-2013 out of 90 ATS and 137 RBPs, with Stand-Alone Network Protectors or Standard Network Equipment (new transformers and new network protectors). This is continuation of work that began in 2011, when fourteen units were replaced.

The jobs are prioritized to do the very poor condition units first, followed by those currently in poor condition but about to become in very poor condition (T4, Sch B11). The very poor and poor assets are all almost and beyond the end of life. They are vintage assets, are unrepairable and failure of assets would result in the customer being supplied losing supply.

BOMA supports this program.

31. ICM Project - Station Infrastructure and Equipment

Segment B12. Stations Power Transformers Segment

This segment consists of replacing 10 step-down power transformers at 10 municipal stations. This is a relatively small segment. Combined 2012 and 2013 expenditures are forecast to be 3.9; 0.4 in 2012 and 3.5 in 2013; down in 2012 from 1.3, up in 2013 from 2.9. The stations are widely dispersed throughout the city, and each station services

between a few hundred and a few thousand customers. Only 2 of the 10 transformers to be replaced are less than 43 years old, the typical end of life. There are 276 of these transformers for like replacement.

BOMA supports this segment.

32. Segment B13.1. Municipal Substation Switchgear Replacement Segment

This proposal is relatively expensive with 2012-2013 costs estimated at 23.5; 1.7 in 2012, down from 19.3, and 21.8 in 2013, up from 18.8. Initially, 2012-2013 capital CAPEX was estimated at 38.1.

There are two components to this segment – Switchgear replacement at Municipal Station (B13.1) and Switchgear replacement at transformer stations (B13.2).

Total costs for 2012-2013 are estimated at \$11.4. Eleven municipal stations' switchgear out of 181 switchgear in 170 municipal substations will be replaced in 2012 and 2013 based on equipment age and equipment obsolescence (oil circuit breakers), lack of arc-resistant design, and resulting safety issues. These eleven switchgear replacements are part of a program to replace the equipment at forty-four municipal stations over the next ten years (Ten Year Plan, p51). All but one of these stations are over fifty years old. THESL does not indicate the condition of the eleven municipal stations which they wish to rebuild.

THESL has stated that there will be savings in maintenance costs [B13.1, p5], however, THESL has not quantified the savings. It should do so at rebasing.

Assuming that all the switchgear are rated poor or very poor, because of safety considerations, BOMA supports changing out the switchgear at the four stations, Thoraton Municipal Station, York Municipal Station, Porterfield Municipal Station and Neilson Municipal Station, that have auto-reclosures issues, at an (estimated) cost of \$4 million.

33. Segment B13.2. Station Switchgear; Transformer Stations Segment

The proposed 2012-2013 budget for both B13.1 and B13.2 has been reduced from \$38.1 million to \$23.5 million, a reduction of \$15.0 million. Jobs have been reduced from 15 to 5 over the two year period. The cost of this segment is \$23.5 million, less \$11.4 million, or \$12.1 million.

The proposal is to replace the existing switchgear at five central Toronto transformer stations with new, state of the art arc-resistant switchgear. Each of the stations serves a load of at least twenty MVAs. This is part of a program to replace switchgear at 20 transformer stations over the next ten years (Ten Year Plan, p51).

There will be savings due to less replacements having to be done on an emergency basis, which is estimated to cost 50% more (page 5). Maintenance costs should also be reduced. The amount of maintenance reduction should be produced at rebasing for both the switches and circuit breakers (see below). BOMA supports this expenditure because of the increase in reliability (the poor condition of the assets), the strategic nature of the assets, and the stranded costs that would otherwise occur (Carlaw).

34. Segment B14. Station Circuit Breaker Segment

This segment will cost \$1.4 million in 2012-2013; \$0.8 million in 2012, down from \$1.4 million, and \$0.6 million in 2013, down from \$1.1 million, a relatively inexpensive segment. The proposal is to replace nine oil circuit breakers (from 27.6 kv circuits) mounted outdoors with vacuum circuit breakers at five terminal stations (a further eleven replacements were planned for 2014).

They were chosen for replacement based on age and condition, and the fact that they were outdoors. Eighty-one percent of the sixty-four breakers are beyond their typical useful lives, and each breaker failure would cause customer outages of at least two hours.

Vacuum circuit breakers were chosen as replacements because of component size and ease of maintenance and inspection. However, THESL should document at rebasing the likely maintenance savings from removing oil circuit breakers [T4, B14, p2, line 14], and savings from not having to order customized breakers in cases where spare parts are no longer being manufactured (they are not). BOMA supports the work, due to possible significant consequences of failure [T4, B14, p4, line 12], age and obsolescence of the equipment, and the "reliability" leverage obtained from a relatively small expenditure of funds.

35. Segment B15. Station Control and Communication Segment

The forecast cost for 2012-2013 of this segment is \$1.1 million, a reduction of \$2.2 million from the original budget of \$3.3 million. The 2012 forecast is \$0.1 million, down from \$1.1 million, the 2013 forecast is \$1.0 million, down from \$2.2 million.

The proposal is to improve the SCADA and SONET systems in several stations and between stations, by increasing SONET redundancy, upgrading SONET system capacity and installing SCADA remote terminal units.

The cost benefit calculations show that duration of outages can be greatly reduced with proper connection [T4, B15, p19].

Unlike many of the segments, the proposal appears to be a one-time expenditure to upgrade the THESL communications between control room, response crews and equipment. BOMA supports the expenditures, assuming that THESL will make full use of existing equipment, when it makes sense to do so.

36. Segment B16. Downtown Station Load Transfers

This is a relatively inexpensive project in 2012 and 2013 with updated forecast expenditures of \$0.7 million in 2012 and \$2.1 million in 2013. Much of this is for the completion of the 2011 Dufferin-Bridgman station transfer capability work [T4, B16, p6].

THESL has stated that the proposal is the first tranche of a multi-year effort to improve the connectivity of the downtown stations. BOMA believes that the project, and others like it, are necessary to meet the need to have further support in the event of the failure of an entire downtown station, so as to avoid huge outage losses [V4, p38, lines 9-14].

THESL has not outlined the full scope of the program. It seems likely that increasing the interconnection of existing (or expanded stations) would also reduce the need for new stations or expansions of existing stations over time.

BOMA supports this program because of its importance to THESL's ability to backstop a partial or complete station failure, and the fact that the consequences of the failure of a downtown station would be substantial.

37. Segment B17. Bremner Station – Separate Proceeding.

38. Segment B18. Hydro One Capital Contributions

This is a very large item. The updated forecast is \$72.4 million in 2012 and 2013 combined, \$23 million in 2012 and \$48.1 million in 2013. These are capital contributions to HONI for investments HONI must make on the transmission system to support THESL projects on the distribution system. Of the \$72.4 million, \$33 million is for the Bremner station and almost \$34 million is for the Leaside-Birch Transmission Reinforcement. Of the \$48.1 million in 2013, \$42.2 is for Bremner and Leaside-Birch. The Leaside-Birch project has already been approved by the Board; Bremner has not. THESL states that it is obliged to make the Leaside-Birch payment to HONI because it has signed a CCRA agreement with HONI for the project. However, BOMA is of the view that HONI should not be able to collect contributions in aid of construction from THESL, which must be incorporated into THESL's rate base, if it is in a rebasing year, or otherwise, absorbed or funded through an ICM if incurred during an IRM year, for assets, the revenue requirement resulting from which HONI cannot recover from its own customers because the assets are not yet in-service. THESL should make the contribution when the assets are placed in-service, and are of benefit to both HONI and THESL ratepayers. The payment should be deferred until that time; in 2014.

The third largest capital contribution for 2013 is to replace incoming circuit breakers at the Wiltshire, Strachan, and Dupont stations, at a cost of \$9.3 million in 2013. They are driven by proposed replacement of legacy switchgear at those stations, which requires HONI to replace incoming circuit breakers and any necessary upgrades to HONI transformers (Wiltshire).

BOMA is, in principle, supportive of the capital contributions work on the circuit breakers. It is necessary to complete approved switchgear replacements. The Board should not approve the Bremner contribution at this time since the need for the Bremner plant is an issue in this proceeding.

39. Segment B19. ICM Project Feeder Automation

The proposal is to automate several trunk feeders in different parts of the City. Priority is determined by age, outage experience, and location. THESL states location must be considered carefully because of the desirability to leverage feeder transfer capability by integrating the newly automated feeders with already automated feeders and because feeders taken out of service to be "automated" need to be temporarily "replaced" by nearby feeders to avoid outages.

Outages on the trunk portions of feeders selected for automation account for sixty-eight percent of the total customer interruptions and fifty-eight percent of Customer Hour Interrupted (CHI) on these feeders (our emphasis).

The feeder automation project is a significant expense in 2012-2013. The updated budget for the two years is \$22.6 million (down from \$24.1 million); \$2.3 million in 2012, down from \$7.8 million, and \$20.7 million in 2013, up from \$16.3 million.

THESL stated that this segment is a follow up to a successful pilot project on ten feeders completed in 2010.

This segment is part of a larger feeder automation project, to expand the technology to the remainder of the 27.6 kv looped electrical distribution system and to also implement feeder automation for underground assets. THESL should provide the total cost for the automatic project across the system.

The FA program does not reduce outages, rather it enhances the restoration process, resulting in large reductions in both CI and CHI, and enabling reductions to both SAIFI and SAIDI. It replaces manual switches with SCADA switches. It therefore, makes sense when applied to trunk feeders that are experiencing high outages, but are not likely to be replaced in the near future.

The Feeder Automatic ("FA") Program claims some very high cost benefit ratios. However, the prefiled evidence is not clear as to:

- the extent to which FA switches upgrade SCADA switches or just replace manual switches
- what percentage of total switches on selected trunk feeders are now SCADA vs. manual.

THESL does not analyze the likely reduced maintenance and repair costs, due to the fact that manual switches are being replaced, and the activities of field crews will be diminished. THESL should provide this analysis at rebasing if this project goes ahead.

The relationship between the cost of automating a feeder which already has SCADA and one that is manual needs to be clearly explained. Does the existing SCADA equipment have to be replaced or can it be utilized? Further, it is not clear whether the worst performing feeders, or next to worst performing feeders, will be replaced. THESL did not provide evidence on the cost savings which result from using feeder automation as an alternative to Feeder Replacement (either overhead or underground), in effect as both a mitigation strategy and a deferral strategy. Feeder automation must be at least an order of magnitude less than the costs of replacing the feeder. THESL needs to discuss this. BOMA does not support further expenditures on FA at this time. Doing the pilot project made sense but the roll-out of a system-wide project requires more analysis, and a better case, that THESL has made so far.

40. Segment B20. ICM Project Wholesale Metering Market – Settlement Compliance (T4, Sch B20)

This project is a medium cost, \$13.1 million in 2012-2013, \$4.7 million, down from \$5.0 million in 2012; and \$8.4 million, up from \$7.2 million in 2013.

There are two components to this project. The first is to bring the instrument transformers associated with its wholesale meters up to IESO standards. Proposed spending in 2012-2013 is \$7.3 million, \$1.0 million in 2012, and \$6.3 million in 2013. This work is part of an eleven year plan agreed with IESO to upgrade 223 meter

installations between 2010 and 2021 (87 have been completed prior to 2012, 67 are to be addressed in 2012-2014, and 69 between 2015 and 2021).

In BOMA's view, the Board should reduce the amount requested for 2012 to 2013 by 3.5 or 50%. The existing agreement with the IESO should give THESL flexibility to do that, especially in light of an OEB order. THESL should negotiate the reduction. The existing instrument transformers have apparently caused no insurmountable problems, or they would all have already been replaced. This is not a safety or a reliability issue, in the sense the meters are expected to fail imminently.

The second component is to replace 115 seals expiring meters to make them compliant with the Federal Electricity and Gas Inspection Act (the "Federal Act") and the Smart Meter Program.

The total expenditure for replacing meters with expired seals is \$5.9 million in 2012-2013, \$5.0 million in 2012 and \$0.9 million in 2013. Presumably, the 2012 work has been done in order to comply with the federal regulation. However, THESL's evidence does not distinguish between the requirements of the Federal Act and the Smart Meter Program. It should.

41. ICM Project

Segment B21. Externally-Initiated Plant Relocations and Expansions
(T4, Sch B21, pages 1-40)

This segment is relatively expensive, a total of \$35.0 million in 2012-2013, \$10.2 million forecast for 2012, down from \$24.3 million, and \$24.8 million in 2013, up from \$17.7

million. THESL states that they have no choice but to make these payments under various statutes, contracts, practices, and customs.

THESL's evidence is that a cost sharing regime between THESL and the City of Toronto to pay for changes to utility asset configuration or placement brought about by changes to road widths and locations is imposed by the Public Service Works on Highways Act (the "Act").

\$21.0 million of the \$35.0 million is waterfront improvement projects (T4, B21, page 19) which are for the Waterfront Toronto Queens Quay expansion.

While THESL has no or little latitude with respect to both the need to adjust its facilities if requested to do so by the City of Toronto, given the statutory cost sharing formula, it has more flexibility with regard to Waterfront Toronto. Waterfront Toronto is the THESL counterpart agency, which is co-owned by the Municipal, Provincial, and Federal Governments. THESL has stated that it believes that Waterfront Toronto should pay 100% of the cost of its replacements. BOMA is of the view that THESL should pay no more than fifty percent of the cost of its Queens Quay Improvements.

With respect to THESL's claim that the railways, including Go Transit, has the right to insist that it pay 100% of the costs of track crossings, it has filed no evidence setting out in detail why this is the case. It should at least provide a current legal opinion that it is required to bear the full costs of the expenditures, over all railway lines, including those used by Go Transit. They are substantial expenditures.

42. Summary of Savings

The table below summarizes the reduction to the THESL CAPEX for 2013 that flow from BOMA's recommendation for each segment. The segments are numbered as they are in T4, Schedule B of THESL's evidence for convenience. Reductions are also proposed for the non-ICM capital expenditures and are described earlier in these submissions.

| | |
|-------|----------|
| B1 | \$29.5 M |
| B2 | \$9.5 M |
| B3 | \$9.5 M |
| B4 | \$1.5 M |
| B5 | \$8 M |
| B6 | \$43.8 M |
| B7 | --- |
| B8 | --- |
| B9 | --- |
| B10 | --- |
| B11 | --- |
| B12 | --- |
| B13.1 | \$18.8 |
| B13.2 | --- |
| B14 | --- |
| B15 | --- |
| B16 | --- |

| | |
|-----|--|
| B17 | --- |
| B18 | \$15.25 M (contributions will be due in 2014, when transmission facilities are in-service [T4, B18, p4]) |
| B19 | \$20.7 M |
| B20 | \$3.5 M |
| B21 | \$7.8 M |

The reduction to 2013 ICM related CAPEX shown in the above table is \$171.4 million, subtracting that sum from the \$434.1 million in THESL's forecast 2013 ICM related CAPEX results in a balance of \$262.7 million, an acceptable 2013 capital module.

The amount of \$262.7 million, the non-discretionary 2013 capital, should be the starting point for the calculation of the 2013 rate rider. The next task is to ascertain how much of that amount will go into service in 2013. The 2013 revenue requirement generated by those 2013 capital expenditures that result in assets in-service in 2013 should be the amount collected in a rate rider in 2013, providing that THESL can demonstrate that it has no other way to pay for that amount from its existing resources, and subject to any further offsetting reductions that can be obtained to the non-ICM related part of THESL's 2013 capital budget, as recommended earlier in the submissions. THESL agreed that any rider for 2013 ICM related revenue requirements should commence May 1, 2013.

43. Affordability, Rates, Implementation

THESL states that it has no other way of paying for the capital expenditures it must make other than the revenue it would receive from ICM-related rate riders. However, THESL

has submitted no evidence in this case to demonstrate that conclusion. It has provided no pro forma cash flow or earning statements, no quantitative analysis of any kind to back up its claim. It has merely asserted it. Nor were there any witnesses available to speak to its financial capabilities. There was neither a financial panel with capital markets expertise nor a policy panel.

Clearly, THESL has no problem in paying for its 2012 capital expenditures since they are below several earlier years' capital expenditures, \$283 million (forecast) versus \$445 million CAPEX incurred in 2011, and 2012 revenues are about the same as 2011 revenues. As noted above, THESL does not meet the ICM materiality threshold for 2012, nor does it need ICM in 2012.

With respect to in-service assets arising from the 2013 proposed expenditures, at least those which BOMA believes qualify for ICM treatment, in BOMA's view, THESL would certainly not have a problem financing those investments, whether it would have a problem paying for them without a rate rider for two years is not clear to BOMA, although we suspect it would not.

First, THESL enjoys high ratings from the rating agencies. DBRS has rated THESL's debenture A (high) and Commercial Paper R-1 (low). Both are strong ratings. In September 2012, Standard and Poor rated THESL A/Stable [Tab 6C, Sch 10-1, Appendix I].

DBRS stated, in its September 7, 2012 Report [Tab 6C, Sch 10-1, Appendix G] that the ratings (of Toronto Hydro Corporation):

"reflect the continued stable earnings contribution from THC's regulated distribution business and its reasonable credit profile".

DBRS further notes that THESL's existing capital structure, 60:40 debt to equity should allow it to spend approximately \$300 to \$350 million CAPEX annually, with reasonable rate increases. Standard and Poor has suggested \$350 million to \$400 million.

Furthermore, THESL's interest coverage ratio has been improving over the last few years, and reached 2.46 (EBIT/Interest) in the first half of 2012.

In that same report, DBRS commented, under the heading "Strong Franchise Area", that:

"THC is one of the largest municipally owned local distribution companies (LDC's) in Canada, serving a customer base of 700,000 users. Approximately 91% of THC's electricity throughput is to residential and general service customers. Demand from these customers is relatively stable year over year, as they are less sensitive to economic cycles when compared to large users (9% of demand)".

Second, interest rates have come down substantially in the last few years, and THESL was able to take advantage of that fact to raise \$254 million in unsecured ten-year debentures in November 2011 at 3.54%. According to DBRS, THESL needs to refinance \$470 million of debt with a coupon rate of 6.11% due June 1, 2013. On the assumption it can refinance at 3.54%, it will increase its cash flow by about \$3.5 million per year by this refinancing [6C, Sch 10-1, App G].

Third, THESL has a line of credit of \$400.0 million, upon which no funds have been drawn to date [T6C, Sch 10-1, App D, p19].

Given this fact, the state of the capital markets, and the fact that THESL is well within the financial covenants of the credit facility, it is reasonable to assume that a line of credit will be extended.

Fourth, THESL has access to a shelf prospectus for debentures and notes, issued December 9, 2010, in an amount of \$1 billion. The shelf prospectus is also likely to be refreshed, in BOMA's view.

In addition, THESL is paying a dividend to the City of \$25 million in four quarterly installments, plus half of any net income over \$50 million. Assuming an average net income of approximately \$100 million per year over the next few years, THESL could accumulate additional equity of \$50 million per year, if required, by suspending its dividend. This annual equity infusion would support annual additional long term debt of \$75 million. The Board ruled some years ago that a committee of independent directors has to approve any dividends paid to the City of Toronto, and that decision was upheld by the Ontario Court of Appeal. Once the proposed eligible capital expenditures are in-service and generating a depreciation and a return, on capital invested, they will in effect, become self financing, providing they are not so large as to render the Company undercapitalized. And it is clear from THESL's 2011 Annual Report and the discussions of the rating agencies, that THESL has the capacity to finance investments of that order of magnitude. They have already financed in the 2011 year, CAPEX of \$445 million.

Finally, THESL has other options. They could issue new equity to an outside shareholder of up to ten percent of total equity, at a premium to book value. They could also issue long term preferred shares, as Enbridge and Union have done.

44. Liquidity

Standard and Poor's September 7, 2012 Report [T6C, Sch 10-1, App I, p3] states that, so long as THESL retains an Average Free Cash Flow to Debt ("AFFD") of above twelve percent (as of June 30, 2012, its AFFD was 14.1%) and a total debt to equity of no greater than sixty percent, it's a rating should be safe. It noted that THESL was well within the financial covenants applicable to its credit facility. Finally, it noted that the Company liquidity sources, including cash, estimated Free Cash Flow, and the revolving credit facility will likely exceed cash uses 1.2x or more in the next twelve months. It does not have a commercial paper program, and would have the potential to have one. Standard and Poor's assessed use of funds to include \$300 to \$400 million of CAPEX plus a dividend of about fifty percent of net income (our emphasis).

An examination of THESL's six month statements on June 30, 2012 reflects net income before a restructuring charge, of \$93.45 million versus \$81.6 million in the first six months of 2011. A restructuring charge of \$27.8 million was taken to cover retirement incentive bonus to departing employees.

45. Costs

BOMA requests that the Board award 100% our reasonably incurred costs of participation in this proceeding.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

**Tom Brett
Counsel to BOMA**