



2nd April, 2015

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**VIA Canada Post, email and RSS Filing**

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

**Re: EB-2014-0116 Toronto Hydro-Electric System Limited ("Toronto Hydro")  
2015 - 2019 Distribution Custom Incentive Rate Setting Application  
The Society of Energy Professionals' Final Submissions**

Dear Ms. Walli,

Attached please find the Final Submissions of The Society of Energy Professionals in the above noted proceeding.

Two (2) hard copies of this submission have been sent to your attention. We have also directed via email copies of the same to the Applicant and all parties of record.

Thank you.

Dan Kellar  
Staff Officer, Policy  
The Society of Energy Professionals

Copy by email: All parties of record

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**EB-2014-0116**

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

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

**FINAL SUBMISSIONS  
OF  
THE SOCIETY OF ENERGY PROFESSIONALS**

**2<sup>ND</sup> APRIL 2015**

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## **EB-2014-0116: FINAL SUBMISSIONS OF THE SOCIETY OF ENERGY PROFESSIONALS**

### **Introduction:**

This is the Final Argument of The Society of Energy Professionals (“The Society”) in the Toronto Hydro-Electric System Limited (“Toronto Hydro”) 2015 - 2019 Distribution Custom Incentive Rate Setting (CIR) Application, EB-2014-0116. This Argument is organized in the same manner as the Issues List, with numbering and sub-numbering that matches the issues list numbering scheme.

Rather than put forward positions on all issues, The Society has chosen to limit itself to those largely which it considers to be of primary concern to its interests and where it can provide a different perspective for the OEB’s consideration in reaching its decision in this proceeding.

### **Issue 3.1 Are the planned OM&A programs and expenditures appropriate?**

#### **Workforce Staffing and Compensation**

The following submissions outline The Society’s concerns regarding Toronto Hydro staffing.

#### **3.1 A) Contracted Out Engineering Services**

As outlined by Toronto Hydro witness Mr. Mike Walker (General Manager, Engineering & Investment Planning), “[he has] always viewed engineering as kind of a core competency of a utility”<sup>1</sup>. And with regards to engineering expertise for new technologies, such as lithium ion battery energy storage systems, Toronto Hydro’s intent in the long term would be to have these capabilities “in-house”<sup>2</sup>. So clearly, one of Toronto Hydro’s staffing goals through the CIR period is to ensure that it is has the required engineering expertise internally as employees.

Further, as outlined by Mr. Walker, Toronto Hydro’s staffing levels are based on having adequate internal resources to deal with the “valleys” of work volumes, whereas for peak work volumes, external contract engineers are put on payroll as well as engineering work is contracted out.

*[Tr. Vol.6 pg12 lns4-7]*

MR. DUMKA: Your internal staff are the valley, and peaks you go outside and you bring in contract engineers on payroll as well, I assume, as part of that.

MR. WALKER: Yes, that's right.

As the following paragraphs outline, it would appear that Toronto Hydro is not adequately staffed with internal engineers to deal with its valley of work volumes. Being properly staffed internally with qualified engineers would be to the benefit of ratepayers as this is the most cost effect and efficient way to meet these needs due to the premiums and inefficiencies attached to external engineering contracts.

Whether Toronto Hydro does directly or indirectly engage external engineering contractors and contract engineers to provide engineering services is not at question; it clearly does. However, as outlined to Ms. Long,

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<sup>1</sup> Tr. Vol.6 pg.22 lns25,26

<sup>2</sup> Tr. Vol.6 pg.22 lns14-27

the presiding member of this proceeding's panel, Toronto Hydro does not keep track of the annual cost of the engineering services which it contracts out directly or indirectly<sup>3</sup>, for example in the many capitalized turn-key projects which it awards to external contractors, such as the \$193M Copeland TS – Phase 1. When asked under cross-examination to confirm roughly how much Toronto Hydro pays for engineering services out of its total bill for turn key projects, it was initially estimated to be in the range of 5 to 10%<sup>4</sup> but on closer consideration, the THESL witness Mr. Owen Nash (Director, Operations Support Services) could not provide a ballpark estimate, as confirmed by the THESL external legal counsel Mr. Charles Keizer<sup>5</sup>.

As shown in table 1, if one assumes that between 2.5% to 5% of the annual capex which is done by turn key design and construction contractors is for engineering services, then the annual fte's for engineering work which are contracted out between 2011 and 2015 range between 10 and 60 fte's.

**Table 1 – Society FTE's Contracted Out**

CAPEX M\$	2011 Actual	2012 Actual	2013 Actual	2014 Bridge	2015 Test
<b>Total Capex*</b>	<b>446</b>	<b>288</b>	<b>446</b>	<b>589</b>	<b>531</b>
<b>Design &amp; Construction Contractors Capex +</b>	140.6	70.8	129.8	191.5	176.1
<b>5% of D&amp;C Capex</b>	7.0	3.5	6.5	9.6	8.8
<b>2.5% of D&amp;C Capex</b>	3.5	1.8	3.2	4.8	4.4
<b>Avg Society Pay/fte (\$)**</b>	144547	143667	154130	162526	162548
<b>Society ftes contracted out (5% of D&amp;C Capex)</b>	48.6	24.6	42.1	58.9	54.2
<b>Society ftes contracted out (2.5% of D&amp;C Capex)</b>	24.3	12.3	21.1	29.5	27.1

\* Interrogatory IB-SEC-5 except 2015 from Exhibit 1B Tab 2 Schedule 4 Figure 1

+ Undertaking J2.29-CUPE-15

\*\* Undertaking J2.04-Society

In what Toronto Hydro's Mr. Walker would characterize as a "valley" year for work, in 2012 the company contracted out between 12 and 25 fte's of work which would otherwise be done by Society represented engineers. Alternatively, if only 1% of the annual total external contract services included in OM&A and capex in 2012 were for engineering services, this would represent 13 fte's of work which would otherwise be done by Society represented engineers<sup>6</sup>.

It is clear that Toronto Hydro is not following the staffing strategy and goal elucidated by their witness Mr. Walker, with regards to engineering as a core competency of a utility, which is to staff internally for work volume "valleys". Further it is to the disadvantage of the ratepayer if Toronto Hydro has to rely on contract engineering services for its day to day work rather than in-house staff. This is due to the internal staff building up a body knowledge of the systems, methods, practices and general approach within the company which

<sup>3</sup> Tr. Vol.6 pg.152 lns14-22

<sup>4</sup> Tr. Vol.6 pg150 lns3-8

<sup>5</sup> Tr. Vol.6 pg 155 lns23-27

<sup>6</sup> As per J2.29-CUPE-14 & 15, in 2012 the external contract services OM&A and capex costs were respectively \$57.5M and \$133.7M, for a total of \$191.2M. One per cent of this is \$1.91M, divided by \$143,667 per Society fte which represents 13.3fte's of engineering work.

result in greater efficiency and economy of effort in terms of getting the job done and getting it done right. This is the same situation as outlined in CUPE's argument outlining how Toronto Hydro has changed its hiring strategy to contract out more work rather maintaining the required critical mass of internal skills, knowledge, capability and capacity.

Consequently, The Society urges the OEB to direct Toronto Hydro to increase its Society engineer headcount by between 10 to 15 staff through the CIR period and reduce its contracted out engineering services by an equivalent amount. Further, it is recommended that the majority of these new Society engineers be new grad hires in junior-engineer-in-training (jeit) positions. The jeit positions offer two advantages to Toronto Hydro and ratepayers:

- (i) These positions are broadly similar conceptually to trades apprentices where employees do productive work as they learn on the job over a three to five year period. Further, the initial pay levels and those for the first number of years of employment are lower than that for experienced engineers. The jeits get gradual pay increases to match their knowledge and skills progression.
- (ii) The staff demographics for Society engineers and for Toronto Hydro will be materially lowered. This is very important in the face of the impending retirement of significant numbers of Toronto Hydro Society staff [this is discussed further in the following section].

### 3.1 B) Just In Time Hiring (JITH)

At the start of 2015, Toronto Hydro implemented a just in time hiring (JITH) strategy. Basically, rather than hire new replacement employees in advance of staff retiring and training them, the company will bring in the needed new hires after the employees retire<sup>7</sup>. As outlined by CUPE in their argument, this unproven staffing strategy<sup>8</sup> is inefficient and will cost ratepayers more in the long run.

For new engineering graduates hired as Society engineers in junior-engineer-in-training (jeit) positions, it takes roughly three to five years on the job to gain the necessary experience and skills to become fully competent. Under normal circumstances, the jeits get direction and guidance from experienced engineers as they learn on the job. Further, they are doing productive real work as they gain work experience as jeits. With the JITH strategy, Toronto Hydro will have to hire more expensive external engineering resources, as discussed in the preceding section, to get this same work done, all to the disadvantage of the ratepayer. From an economic perspective this makes no sense.

Further, as outlined by Toronto Hydro's own expert witness, Mr. Greg Lyle (Owner, Innovative Research Group Inc.), the company is at risk if it does not improve the condition of its infrastructure and have on staff the employees required to do so.

Tr. Vol. 9 pg 149 lns 4-16

MR. LYLE: Well, I will put it back to you. In the briefing that I received, my understanding is that this is not the only system in North America that's in the same boat, that has aging infrastructure that needs to be replaced.

If these decisions are delayed, ***there's going to be increased competition for the supplies and the people that deliver it, with a whole bunch of people retiring in the near future.***

So my brief, which seemed to make sense to me, was that that's true, that if these decisions are delayed, that there will be costs down the road because this stuff will have to be replaced at some point.

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<sup>7</sup> IR response 4A-CUPE-4 a)

<sup>8</sup> The JITH model has NOT been proven in the context of comparator utilities, Tr. Vol. 7 pgs31,32 lns22-28, 1

So Toronto Hydro with its JITH model will be imprudently disregarding the briefing they provided Mr. Lyle by delaying needed new hires into the future when there will be increased competition for the necessary expert engineering skills it requires to maintain its system.

The Society supports CUPE Local One's recommendation that the OEB in its decision direct Toronto Hydro to eliminate its JITH model.

### **3.1 C) Required New Policy re: Hiring Former Employees As Contractors**

As it will be to the benefit to the ratepayer, The Society supports and adopts the position put forward by CUPE Local One in its argument regarding the need for Toronto Hydro to put in place a policy requiring a three year cooling off period for re-engaging former company employees directly or indirectly as contractors.

As outlined in CUPE's argument, as per Toronto Hydro's witness Ms. Shirley Powell (Director, HR Systems, Planning & Rewards):

*[Tr. Vol.7 pg28 lns4-6]*

"Once an employee retires from us, should they choose to work for a third-party contractor, we hire those contractors based on fair market pricing."

Firstly, this statement by Ms. Powell infers that as it is "fair market pricing" for contractors, it is not relevant that this price may be greater than the wage the individual was earning as a Toronto Hydro employee before their employment was severed. Typically, the fair market priced contractor engineer is indeed paid more than when they were Toronto Hydro employees, which is to the disadvantage of the ratepayer.

Secondly, by instituting a three year cooling off period, this may result in some Toronto Hydro employees seeing no advantage to taking early retirement. This may result in some individuals prolonging their employment with Toronto Hydro, resulting in a net gain to the company and its ratepayers.

**Issue 3.2 Is the DSP and the planned capital programs and expenditures for the 2015-2019 period appropriate?**

**Issue 2.3 Will Toronto Hydro's Custom Application produce acceptable outcomes for existing and future customers (including, for example, cost control, system reliability, service quality, and bill impacts)?**

**Issue 2.4 Are Toronto Hydro's monitoring and reporting proposals adequate to track and assess the utility's performance during the 2015-2019 rate period?**

**System reliability** is a factor which is of great concern to The Society through the CIR period and cuts across the three above issues, that is planned capex, acceptable outcomes for customers and monitoring & reporting to track and assess performance. As such, all aspects regarding system reliability and these issues are dealt with in the following paragraphs. Specifically, The Society submits that Toronto Hydro should be directed in the forthcoming decision in this proceeding to focus primarily upon improving overall system reliability with the capital investments which it makes over the CIR period as well as monitor and report on its performance by setting specific annual performance targets.

### **A) Reliability Results**

As shown in the following table, Toronto Hydro's SAIFI performance is essentially unchanged between 2011 and 2014 and forecast to improve marginally in 2015. This is despite having spent on average \$440M per year on capex between 2011 and 2014. This would suggest that reliability was not a primary driver in the actual

and forecast capex spend between 2011 and 2014. Further, this casts doubt as to whether the forecast SAIFI levels will be reached in 2016 to 2019 despite the high capex spend proposed in those years.

**Table 2 Econometric vs. Actual & Projected SAIFI<sup>9</sup>**

	2011	2012	2013	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast	2019 Forecast
<b>Econometric Benchmark</b>	0.82	0.84	0.87	0.87	0.88	0.89	0.9	0.91	0.92
<b>THESL</b>	1.62	1.6	2.91*	1.58	1.55	1.44	1.36	1.27	1.19
<b>% Difference</b>	68%	64%	121%	60%	57%	48%	42%	34%	26%
<b>Capex M\$**</b>	<b>446</b>	<b>288</b>	<b>446</b>	<b>589</b>	<b>531</b>	<b>519</b>	<b>467</b>	<b>470</b>	<b>502</b>

\*The 2013 SAIFI increase was due to the December ice storm.

\*\* Interrogatory IB-SEC-5 for 2011-2014; Exhibit 1B Tab 2 Schedule 4 Figure 1 for 2015-2019

In all years in the table, Toronto Hydro’s SAIFI is substantially above the econometric benchmark level calculated by the THESL consultant PSE. Also, the projected 2015 to 2019 SAIFI levels have not been revised to reflect the further delay of the Copeland TS project going into service, which was announced in February 2015.

Further, when discussing the new contract terms (beginning in 2015) for external design and construction contractors through the CIR period, Toronto Hydro witness Mr. Owen Nash (Director, Operations Support Services) revealed that contractors had lost money doing contract work in the downtown city core during the first contract period of 2012 to 2014:

*[Tr. Vol.6 pg.106,107 lns21-28, 1-5]*

MR. NASH: The other part, just to answer the other part of your question, was, in terms of downtown, we have added in this RFP a downtown rate, and that was really because a significant amount of the capital program that we have on the horizon is mostly done in the non-downtown core area. ***And we were seeing price escalations coming through from contractors trying to -- trying to ensure that they don't lose money by coming downtown to work.***

So we actually separated the downtown from what we call the horseshoe, and there is then a price escalation for them to work in the downtown core. Again, that type of methodology actually helped us reduce some pricing in the non-downtown core area.

This would suggest that if contractors were losing money doing downtown core projects during the 2012 to 2014 contract period, they may not have bid for these projects in the last two years of their contracts. This may have resulted in necessary projects not being done, which may have contributed to SAIFI flatlining through this period.

### **B) Reliability An Investment Planning Output Not A Driver**

The fact that reliability is not a primary driver in Toronto Hydro’s investment planning in past years and through the CIR period was underlined by their witness, Ms. Amanda Klein (Vice President, Regulatory Affairs & General Counsel):

*[Tr. Vol.9 pg 189 lns 4-7]*

MS. KLEIN: I think the starting point is that reliability is an output, not the primary driver in terms of investment planning. We're not solving for a particular reliability outcome.

<sup>9</sup> Exhibit 1B Tab 2 Schedule 5 Appendix B “Econometric Benchmarking of Toronto Hydro’s Historical and Projected Total Cost and Reliability Levels” by PSE, page 50 Table 15



The Society submits that Toronto Hydro should be redirected to revise its investment planning for the CIR period to make reliability a primary driver and not simply a passive output. It is quite clear from the many thousands of pages of evidence submitted in this proceeding that renewal of infrastructure is vital. However Toronto Hydro has to ensure that it delivers the highest value possible for each dollar it spends, materially improving reliability for its customers. This is what the ratepayer requires and deserves.

### **C) Monitoring & Reporting To Drive Reliability**

The Society submits that Toronto Hydro's monitoring and reporting proposals are inadequate to track and assess the utility's performance during the 2015-2019 rate period. The following outlines The Society's proposals for annual monitoring and reporting.

Under cross-examination, Toronto Hydro's witness Ms. Klein summarized the applicant's position regarding reliability measure targets:

*[Vol.9 pg189 lns9-21]*

MS. KLEIN: I have spoken a little bit about, you know, this capital plan is to a level that maintains reliability.

We are forecasting some incremental small improvements in reliability, and that is in part because of the integrated nature of these investments, including some of these targeted investments such as feeder automation.

In terms of the question about setting targets, our system is very old. A lot of the assets are past their end-of-life, and things could start breaking faster.

And if this happens, and SAIDI and SAIFI could be worsening despite the investment plan, we don't think that the multi-year targets are appropriate in this instance.

The Society submits that annual targets for SAIFI and SAIDI should be set for Toronto Hydro. The rationale is that in order to incent improved system reliability through the CIR period and ensure to the degree possible the best investments are being made, the company has to be held accountable for its annual performance. The proposed annual targets for 2015 to 2019 are the projections provided by the applicant in undertaking J1.2-EP-52 Appendix A<sup>10</sup>. There are two other reliability measures where Toronto Hydro has provided projections, however in order not to divert attention from the key measures of SAIDI and SAIFI it is not recommended that any of these be assigned with targets. Specifically, the CAIDI measure is derived from SAIDI and SAIFI so it really does not provide any additional information that the latter two measures don't already provide. The MAIFI (Momentary Average Interruption Frequency Index) measure is only used by about 5% of North American utilities so it cannot be meaningfully benchmarked, which reduces its usefulness.

Each year the company should be required to report on:

- (i) What its actual SAIFI and SAIDI levels were in the previous year,
- (ii) How the actuals compare to the annual target,
- (iii) Explain any variances equal to or greater than 50% of the change between the target and the prior year target, and
- (iv) if the annual target was not met, outline the actions which will be taken in the current year as well as subsequent years to improve reliability results.

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<sup>10</sup> The proposed SAIFI targets are also found in table 2 of this document.

A key element in the proposed annual reporting requirements is that if the company does not meet a target, it will be required to outline the actions it will take in order to get back on track in meeting the annual reliability targets that it has set for itself through the CIR period.

The applicant has stated that it “plans to measure the overall progress of its Distribution System Plan implementation as a rolling ratio of total capital expenditures made over the plan years completed to date, divided by the five-year total amount of OEB-approved capital expenditures approved as a part of the utility’s 2015-2019 Distribution System Plan”<sup>11</sup>. The proposed measure would be calculated as follows:

$$\text{Implementation Progress} = \frac{\sum (\$ \text{Spend Year } n + \$ \text{Spend Year } n + 1 \dots )}{\$ \text{Five Year OEB Approved Plan}} [\% \text{ of Plan Total}]$$

This proposed measure by no means “track[s] the effectiveness of the Distribution System Plan implementation”<sup>12</sup>, rather all it keeps track of is the spending of money which Toronto Hydro’s customers will have to pay for.

The Society submits that this proposed implementation progress measure must be supplemented with or replaced by the following annual reporting requirements regarding capex:

- (i) Provide the proposed annual investment levels for the current year for System Access, System Renewal, System Service, General Plant, Other capex.
- (ii) If the current year annual spend in any of these five categories varies by more than 5% from the OEB approved level, provide a variance explanation<sup>13</sup>.
- (iii) For the previous year, if the actual annual spend in any of these five categories varied by more than 5% from the OEB approved level provide a variance explanation.
- (iv) Variance explanations have to tie in to the impact on work program results, including system reliability.
- (v) Provide units of work to be done along with the unit costs for the current year. This would be the number of transformers installed, kms of line installed etc. This effectively would be the planned work for the current year.
- (vi) For the previous year, if the actual units of work or the unit costs varied by more than 5% from the planned units of work or planned unit costs provide a variance explanation.
- (vii) The actual annual cost of work completed by external contractors and internal staff should also be provided, along with the units of work done and the unit costs for each of external contractors and internal staff.

**ALL OF WHICH IS RESPECTFULLY SUBMITTED ON THIS 2nd DAY OF APRIL 2015**

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<sup>11</sup> Exhibit 2B, Section C, C3.1.1 pages 15, 16

<sup>12</sup> Toronto Hydro response to interrogatory 2B-CUPE-1 part a).

<sup>13</sup> Proposed levels are provide in Exhibit 2B Section E1 page 4 Table 1