

**Daliana Coban**  
Lead Regulatory Counsel  
Toronto Hydro-Electric System Limited  
14 Carlton Street  
Toronto, ON M5B 1K5

Telephone: 416.542.2627  
Facsimile: 416.542.3024  
[regulatoryaffairs@torontohydro.com](mailto:regulatoryaffairs@torontohydro.com)  
[www.torontohydro.com](http://www.torontohydro.com)



February 20, 2015

*via RESS – signed original to follow by courier*

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

Dear Ms. Walli:

**Re: Toronto Hydro-Electric System Limited (“Toronto Hydro”)  
Custom Incentive Rate-setting Application for 2015-2019 Electricity Distribution Rates  
and Charges – Undertaking Responses  
OEB File No. EB-2014-0116**

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Toronto Hydro writes to the Ontario Energy Board (“OEB”) in respect of the above-noted matter.

Further to my letter dated February 18, 2015 enclosed are the following responses:

- Day 1, February 18 Undertaking: J1.5 – AMPCO; and
- Day 2, February 20 Undertaking: J2.1 – Energy Probe.

Responses to Undertakings J2.2 and J2.3, from Energy Probe, will be answered by members of Panel 1 at their next scheduled appearance. The response to Undertaking J2.4 from CCC will be filed on Monday, February 23, 2015.

Please contact me if you have any questions.

Yours truly,

*[original signed by]*

**Daliana Coban**  
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[regulatoryaffairs@torontohydro.com](mailto:regulatoryaffairs@torontohydro.com)

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cc: Charles Keizer, Torys LLP  
Crawford Smith, Torys LLP  
Amanda Klein, Toronto Hydro  
Intervenors of Record for EB-2014-0116

## **ORAL HEARING UNDERTAKING RESPONSE TO ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

1 **UNDERTAKING NO. J1.5:**

2 **Reference(s):**

3

4 To indicate where in the Evidence asset condition information may be found.

5

6 **RESPONSE:**

7 Information about the condition of Toronto Hydro's assets is presented in Exhibit 2B,  
8 Section D, Appendix A, which is the Toronto-Hydro-Electric System Limited 2014 Asset  
9 Condition Assessment Audit prepared by Kinetrics Inc.

10

11 As shown in Exhibit 2B, Section D1, Figure 2, page 6, asset condition assessment is one  
12 of the tools Toronto Hydro uses as an input into its planning process. As discussed in  
13 Exhibit 2B, Section D3.2.1, pages 16-18, the asset condition assessment is used to create  
14 health indices for the various asset classes shown in Figure 6 of that section.

15 Specifically, the information on asset condition is used to produce an outlook of the asset  
16 population's condition and highlight trends in that condition to support project planning.

17

18 However, asset condition is not the primary driver of Toronto Hydro's asset renewal  
19 program. As explained in response to interrogatory 1B-BOMA-31(b) with regard to the  
20 Feeder Investment Model, age-based failure probabilities are the primary driver of  
21 projected asset failures, with condition based assessment used "only if the condition-  
22 based result exceeds the baseline failure probability produced from the age-based  
23 calculation". As 1B-BOMA-31(b) goes on to explain, "where an asset is experiencing an  
24 accelerated failure rate due to its condition, the Health Index and condition-based failure  
25 probability calculations are applied to increase the probability of failure". Moreover,

## **ORAL HEARING UNDERTAKING RESPONSE TO ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

1 asset condition assessment information may not be comprehensive because information  
2 may only be available for certain conditions that impact asset performance.

3

4 Toronto Hydro's approach reflects the reality that as assets reach and then exceed their  
5 useful lives, their probability of failure increases regardless of their known condition. In  
6 other words, assets at or beyond their useful lives are more likely to fail, even if they  
7 appear to be in good condition, but assets that are both at or beyond their useful and in  
8 poor condition are that much more likely to fail. For this reason, asset condition  
9 assessment information, where available, is used to help prioritize capital work.

10

11 As an example, the power transformers scheduled for replacement in 2015 are all at or  
12 beyond their useful lives and in fair or poor condition as shown in Table 1 below. Note  
13 that this excludes one 2015 project for which the scope of work involves installation of  
14 an oil containment system rather than installation of a new transformer. As noted in  
15 Exhibit 2B, Section E6.14, Table 5, page 23-24 (the source of Table 1 below), the power  
16 transformers shown as being in fair condition have specific issues that support their  
17 immediate replacement.

## ORAL HEARING UNDERTAKING RESPONSE TO ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

1 **Table 1: Assets for renewal identified in the Power Transformer Program for 2015**

Asset (Power Transformer)	Age (As of 2014)	Past Useful Life (Y/N)	Health Index	HI Grade	Optimal Intervention Time (Feeder Investment Model)
Blaketon MS Transformer TR1	45	Y (At Useful Life)	67	Fair Condition	0
High Level MS Transformer TR2	68	Y	48	Poor Condition	0
Coronation Bennett MS Transformer TR1	58	Y	36	Poor Condition	0
Norseman MS Transformer TR1	58	Y	59	Fair Condition	0

**ORAL HEARING UNDERTAKING RESPONSE TO ENERGY  
PROBE RESEARCH FOUNDATION**

1 **UNDERTAKING NO. J2.1:**

2 **Reference(s):** **CEA Report, 2A-EP-8 part (d)**

3

4 To provide a comparison of the five-year average on page 39 of the CEA report for  
5 SAIDI and SAIFI to the five-year averages for Canadian urban utilities.

6

7 **RESPONSE:**

8 The benchmarking presented on page 39 of the CEA report for 2013 has SAIDI and  
9 SAIFI for Canadian Urban Utilities. Page 37 details the exact utilities considered as part  
10 of this urban group.

11

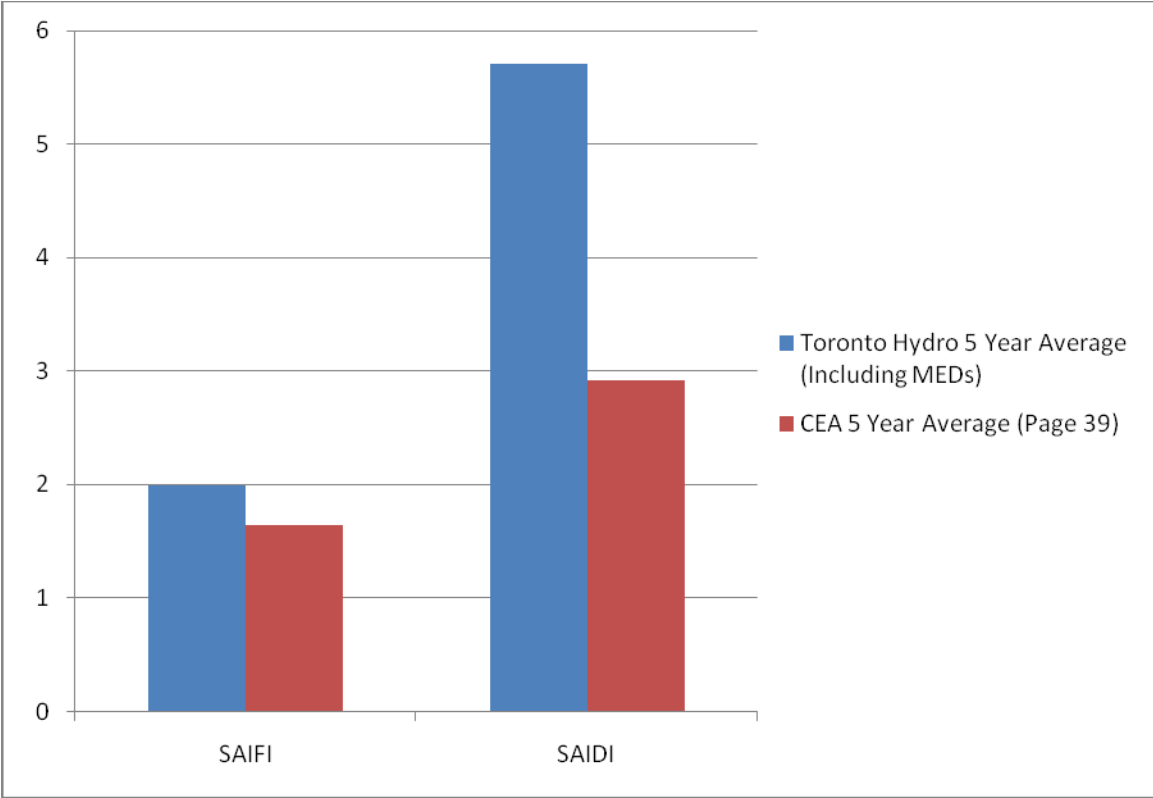
12 Before doing a comparison, it is important to understand what the data in the CEA report  
13 represents and how it relates to Toronto Hydro's reliability data. Page 39 of the CEA  
14 report outlines SAIDI and SAIFI of "Urban Utilities" for 2013, 2012 and a five-year  
15 historical average. This data includes Major Event Days (or Most Prominent Events by  
16 CEA definition), Significant Events (large events that affect the national reliability  
17 metrics) and Loss of Supply. The data presented in 2A-EP-8, page 4 excludes Major  
18 Event Days by Toronto Hydro definition as well as Loss of Supply and Significant  
19 Events. Therefore, the CEA metrics on page 39 are not comparable to the averages  
20 shown on page 4 of 2A-EP-8.

21

22 The following figure compares Toronto Hydro's five-year (2009-2013) SAIDI and SAIFI  
23 averages calculated on the same basis as the average on page 39 of the referenced CEA  
24 report.

25

**ORAL HEARING UNDERTAKING RESPONSE TO ENERGY  
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1 **Figure 1: Comparison of CEA Five-Year SAIDI and SAIFI Average (2009-2013) to**  
2 **Five-Year THESL Average (Including MEDs)**