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February 25, 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 24, 2015, enclosed are the following responses from Day 5, February 24, 2015 of the Oral Hearing:

- J5.1 – Energy Probe;
- J5.2 – Energy Probe; and
- J5.3 – Energy Probe.

Please contact me if you have any questions.

Yours truly,

*[original signed by]*

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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 ENERGY PROBE RESEARCH FOUNDATION**

1 **UNDERTAKING NO. J5.1:**

2 **Reference(s):**

3

4 To provide a list of which segments, other than rear lot conversions, have updated unit  
5 quantities

6

7 **RESPONSE:**

8 As part of the February 6, 2015, update to the CIR application, Toronto Hydro corrected  
9 the unit count forecasts in the following seven Distribution System Plan capital programs:

10

- 11 • E6.1 UG Circuit Renewal
- 12 • E6.4 OH Circuit Renewal
- 13 • E6.6 Rear Lot Conversion
- 14 • E6.7 Box Construction
- 15 • E6.8 SCADAMate R1 Renewal
- 16 • E7.3 Feeder Automation
- 17 • E7.4 Polymer SMD20 Renewal

18

19 Please note that this was strictly a presentation error with respect to the unit forecast  
20 tables; therefore, the updated information had no bearing on the costs of the program or  
21 the business case evaluation.

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

1 **UNDERTAKING NO. J5.2:**

2 **Reference(s):**

3

4 To describe in plain language current and prospective situations involving EV charging  
5 and energy storage systems.

6

7 **RESPONSE:**

8 Currently, it is anticipated that the increased penetration of EVs and charging stations on  
9 lateral portions of a feeder, regardless of the type and level of charging stations, may  
10 require upgrades to local distribution system infrastructure.

11

12 In this situation, Toronto Hydro proposes that LES is a cost effective alternative to  
13 replacing assets outside of their useful life. An LES unit is deployed for a specific  
14 section of a feeder, and in this situation would be deployed on the lateral portion of a  
15 feeder with a significant presence of EVs. Because the concentration of EV charging  
16 stations is not uniformly spread along the entire feeder, GSES and MSES units are not  
17 suitable.

18

19 As the uptake of EVs increase, the distribution of EV charging stations physically located  
20 along a feeder will become uniform. In this situation, GSES and MSES units are more  
21 suited to help enable EV connections.

22

23 Across Toronto, the EV residential charging stations typically range between 3.4 kW and  
24 7.6 kW in peak demand. This compares with a typical demand of 10 kW for a gas-heated  
25 residence across Toronto. Service/metering costs for EV connections across Toronto are  
26 the responsibility of the customer. There are currently approximately 1,000 EVs in the

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- 1 Toronto area (approximately half of the 2,000 EVs across Ontario as per the Ministry of
- 2 Transportation<sup>1</sup>).

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<sup>1</sup> <http://www.mto.gov.on.ca/english/dandv/vehicle/electric/>

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1 **UNDERTAKING NO. J5.3:**

2 **Reference(s):**

3

4 To consult with PSE and advise whether major event data can be removed from their  
5 results, or to explain why it cannot be done.

6

7 **RESPONSE:**

8 The Major Event Days (MED) data cannot be separated from the combined dataset, as all  
9 Ontario reliability data is reported inclusive of MEDs, but without MED values  
10 separately quantified.

11

12 As to the U.S.-only dataset, Appendix J to the undertaking 1B-SEC-8 provides an earlier  
13 (2013) PSE reliability benchmarking study based on a U.S.-only sample that excluded  
14 MEDs. The conclusions of that study are directionally aligned with those of the 2014  
15 report that included the MEDs in the outage definition. Toronto Hydro notes that the  
16 2014 PSE benchmarking study explicitly states that the utility's future reliability  
17 projections assume normal weather, and would result in higher indices if a major event  
18 were to occur.<sup>1</sup>

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<sup>1</sup> PSE Report, Exhibit 1B, Tab 2, Schedule 5, Appendix B, p.41, footnote 34.