

Amanda Klein

Director, Regulatory Affairs

Toronto Hydro-Electric System Limited
14 Carlton Street

Toronto, Ontario M5B 1K5

Telephone: 416.542.2729

Facsimile: 416.542.3024

regulatoryaffairs@torontohydro.com

www.torontohydro.com



December 21, 2012

via RESS e-filing – 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 (“THESL”)
OEB File No. EB-2012-0064 (the “Application”)
THESL’s Interrogatories to Environmental Defence**

THESL writes to the Ontario Energy Board in respect of the above-noted matter.

Pursuant to Procedural Order No. 3, please find attached THESL’s interrogatories to Environmental Defence regarding its evidence relating to the Bremner Station project, filed on December 7, 2012.

Please do not hesitate to contact me if you have any questions.

Yours truly,

[original signed by]

Amanda Klein

Director, Regulatory Affairs

Toronto Hydro-Electric System Limited

regulatoryaffairs@torontohydro.com

:AK/RB

cc: Fred Cass of Aird & Berlis LLP, Counsel for THESL, by electronic mail only
Intervenors of Record for EB-2012-0064 by electronic mail only

INTERROGATORIES TO ENVIRONMENTAL DEFENCE

Issue 2.2 – Has THESL provided sufficient evidence including consultant reports, business cases and consideration of alternatives, for the proposed capital projects to adequately justify them?

2.2 THESL-1

Ref: Exhibit JT1.15

Environmental Defence indicated that the information requested in undertaking JT1.15 was required for the preparation of this report. Please indicate where in this report the hourly interval data for the downtown stations has been utilized.

2.2 THESL-2

Ref: Environmental Defence Report, Page 1

In reference to Navigant's Business Case Analysis (page 16, Table 6) please clarify how the author arrived at the conclusion that "Navigant's analysis assumed that the maximum amount of incremental CDM that Toronto Hydro could reasonably achieve in downtown Toronto by 2014 would be 18 MW."

2.2 THESL-3

Ref: Figures 3.1-1, 3.1-2 and Table 3.1-1

Please provide the source data from BOMA that is referenced in Table 3.1-1.

2.2 THESL-4

Ref: Figures 3.1-1, 3.1-2 and Table 3.1-1

Please re-tabulate the BOMA data to show the realized savings specific to the geographic area served by the five downtown transformer stations. Please provide these savings broken down by type (lighting retrofit, HVAC, VSDs, etc).

INTERROGATORIES TO ENVIRONMENTAL DEFENCE

2.2 THESL-5

Ref: Figures 3.1-1, 3.1-2 and Table 3.1-1

Please indicate whether the results are verified results, or a “gross” value (i.e., prior to being discounted for additional factors).

2.2 THESL-6

Ref: Environmental Defence Report, Section 3.2

Is Environmental Defence aware of any proposed changes by the Ministry of Environment to the existing emission limits or Certificate of Approval process governing the operation of emergency generators that would allow the emergency generators to make a significant contribution to reducing peak demand?

2.2 THESL-7

Ref: Environmental Defence Report, Section 3.2

Please provide a projection of peak demand capacity using emergency generators for backup generation that could be delivered from 2012 through 2021 for the area served by the 5 downtown Transformer Stations.

2.2 THESL-8

Ref: Environmental Defence Report, Section 3.2

What incentive would you anticipate (on a per kW basis) would be required to encourage owners to convert emergency generators for use in demand response applications?

2.2 THESL-9

Ref: Environmental Defence Report, Section 3.2, Table 3.2-1.

Please provide the approximate costs required to install, operate and maintain the 130MW of “On-site Generator Dispatch” as listed in Table 3.2-1.

INTERROGATORIES TO ENVIRONMENTAL DEFENCE

2.2 THESL-10

Ref: Environmental Defence Report, Section 3.2, Page 6

The report states on page 6 that, “There is a new technology that is expected to permit existing diesel engines to run on 100% natural gas with a much lower investment in engine modifications and no emissions control devices such as catalytic convertors required. This should be available in 2013.”

- a) Who is developing this technology?
- b) Please clarify the statement that, “This should be available in 2013”. Does this mean that it will be approved for commercial use by 2013?
- c) When is the anticipated date for the first approved installation in the downtown Toronto core?
- d) What is the expected cost?
- e) Please estimate the peak electricity reduction in the downtown core that Environmental Defence expects to materialize as a result of the introduction of this technology to the marketplace.

2.2 THESL-11

Ref: Environmental Defence Report, Section 3.2

In reference to the third tranche of DR3 noted in the report, this capacity was developed for the most part with higher incentive rates when Toronto was a “premium zone”. Given that current incentive rates are ~25% lower than what was previously offered (through the elimination of the “premium rates”):

- a) What is the controlled load in the program that ED anticipates in the future in the downtown Toronto core from 2013 to 2018 (i.e., the program’s five-year duration)?
- b) What impact will the lower rates have on re-signing existing or acquiring new DR-3 Participants?

INTERROGATORIES TO ENVIRONMENTAL DEFENCE

2.2 THESL-12

Ref: Environmental Defence Report, Section 3.3

For the four potential district energy nodes in the downtown core, please advise:

- a) The availability of the proposed land for development
- b) The anticipated developer of these sites
- c) The capacity of each node
- d) The expected timelines for implementation

2.2 THESL-13

Ref: Environmental Defence Report, Section 3.4

The City of Toronto Energy Plan information presented discusses energy use intensity. Is there a corresponding projection for peak demand reduction? If so, please provide the estimated peak electricity demand reductions in the downtown core expected as a result of the plan for 2012 through 2021.

2.2 THESL-14

Ref: Environmental Defence Report, Section 3.5

With the addition of 18,125 tons of renewable cooling slated to be operational by 2015, what is the anticipated timeline by which sufficient customers are connected to realize the 18 MW in peak demand savings?

2.2 THESL-15

Ref: Environmental Defence Report, Section 3.5

Please provide an estimate of the additional load required to the Enwave DLWC system to enable delivery of the additional 18,125 tons. Is the 18 MW peak demand reduction

INTERROGATORIES TO ENVIRONMENTAL DEFENCE

the net savings?

2.2 THESL-16

Ref: Environmental Defence Report, Section 3.5

In reference to the possibility of installing back-pressure steam turbine-generators at the Wallton St Steam Plant, is there a potential date when this capacity could be available?

2.2 THESL-17

Ref: Environmental Defence Report, Sections 4.0 and 5.0

- a) Please provide the impact of these initiatives on peak demand savings, along with any supporting documentation and calculations.
- b) When is the anticipated realization of these savings?
- c) What is the anticipated impact on downtown Toronto?

2.2 THESL-18

Ref: Environmental Defence Report, Section 8.0

Please clarify the statement that, “the organization is still in the early part of this market readiness and penetration curve even up to the present time.”

2.2 THESL-19

Ref: Environmental Defence Report, Section 8.0, Figure 8.2-1

In reference to THESL’s total system load information in Figure 8.2-1, ED states that, “This strongly suggests that Toronto Hydro should focus their CDM efforts in the downtown area on loads such as air conditioning and lighting as well as demand response to counter this trend.”

- a) Please clarify how this system-wide data indicates a need for targeted CDM in the downtown area.

INTERROGATORIES TO ENVIRONMENTAL DEFENCE

- b) Please clarify why air conditioning and lighting loads should be the targeted CDM measures.

2.2 THESL-20

Ref: Environmental Defence Report, Section 9.0

Please provide a comparison table for the Consolidated Edison Project and the proposed Bremner TS project, showing:

- i) Number of new stations being proposed for construction
- ii) Circuit length of new radial feeders proposed for construction
- iii) Circuit length of existing radial feeders proposed to be replaced with feeders of higher capacity
- iv) Circuit length of new network feeders proposed for construction
- v) Circuit length of existing network feeders proposed to be replaced with network feeders of higher capacity
- vi) Surface area of project boundary
- vii) Peak reduction in MW by total contracted cost including the cost of liquidated damages for non-performance

2.2 THESL-21

Ref: Environmental Defence Report, Section 10.0

In reference to the statement that, “The nineteen activities described in this document each on their own have only a limited impact, but the total effect on electricity consumption and summer peak demand is large and growing significantly.” Please tabulate the impact over 2012 to 2014 for each of the 19 activities on summer peak demand in the downtown Toronto area served by the five Transformer Stations.

INTERROGATORIES TO ENVIRONMENTAL DEFENCE

2.2 THESL-22

Ref: Environmental Defence Report, Section 10.0

For the years 2012-2021, please provide a table for each of the five stations (John/Windsor, Terauley, Strachan, Esplanade, Cecil) listing the 19 conservation and demand initiatives and:

- i) the peak reduction in MW for each initiative for each year (noting any underlying factors and assumptions used to calculate it)
- ii) the amount of each initiative that would be need to be contracted in order to achieve the peak reduction in MW, stated with 99% statistical confidence.
- iii) the unit costs by dividing the total contracted costs (ii) by the corresponding peak reduction in (i).

2.2 THESL-23

Ref: Environmental Defence Report, Section 10.0

The report provides a number of potential means of achieving demand reductions.

- a) How would Environmental Defence propose to assess the probability of any of the activities occurring?
- b) For each activity, what does Environmental Defence believe is the probability of realizing the stated peak load reductions? Please state any assumptions used in your analysis.

2.2 THESL-24

Ref: Retainer of Energy Profiles Limited

- a) When was Energy Profiles Limited first retained by Environmental Defence?
- b) What are the terms of that retainer/engagement, including the pricing arrangements and costs incurred by Environmental Defence?

INTERROGATORIES TO ENVIRONMENTAL DEFENCE

c) What instructions were given to Energy Profiles Limited in respect of their retainer, including preparation of the Environmental Defence Report dated December 7, 2012?

2.2 THESL-25

Ref: Retainer of Energy Profiles Limited

- a) Did Energy Profiles Limited have a retainer either with, or in connection with, Pollution Probe in respect of this proceeding?
- b) What are the terms of that retainer/engagement, including the pricing arrangements?
- c) What instructions were given to Energy Profiles Limited in respect of their retainer?
- d) Was any research conducted, notes and/or report prepared, either in draft or final form, in respect of this retainer?
- e) If any research was conducted, notes and/or report prepared (either in whole or part), did that work product form a basis of the Environmental Defence Report and if so, in what respects? (please note sections of the Environmental Defence Report and describe use of prior work product)