

Board Staff Supplementary Interrogatories

**Supplementary Evidence (September 4, 2009)
Capital Projects D7 & D8**

**2009/2010 Electricity Transmission Rates
Hydro One Networks Inc.
EB-2008-0272**

September 28, 2009

4. CAPITAL EXPENDITURES AND RATE BASE

Issue 4.1

Are the proposed 2009 and 2010 Sustaining and Development and Operations capital expenditures appropriate, including consideration of factors such as system reliability and asset condition?

Development Capital

Board staff Supplementary Interrogatory No.1:

Reference:

- a) Supplementary Evidence/Exh B/Tab 1/Sch. 1/from p.1, line 4 to p.3, line 5
- b) Ministry of Energy directive dated December 20, 2007 in regard to “The Hydro Electric Energy Supply Agreements” to develop about 500 MW of hydroelectric generation (from 4 specific projects)
- c) Ministry of Energy Directives dated August 27, 2007 requiring the OPA to procure up to 2,000 MW of Renewable Energy Supply by 2011.

Preamble:

Justification of the two projects D7 and D8 as outlined in Hydro One Supplementary Evidence [see Reference a)] is based on:

- 1) a Ministry of Energy directive dated December 20, 2007, see Ref b) in regard to developing about 500 MW of hydroelectric generation in addition to another (updated projections¹) generation from variety of technologies amounting to 762 MW (387 MW of in-service and committed plus 375 MW)
- 2) maintaining the supply reliability for customers north of New Liskeard in the event of a single contingency on the 500 kV single-circuit, which also contributes to meeting the IESO’s criteria in assessing connection proposals² ;

Clarification:

In regard to the two directives in References b) and c), please provide responses to the following two statements indicating for each statement whether Hydro One agrees, or if not, provide an explanation why it disagrees:

¹ Supplementary Evidence, Exh C/Tab 1/Sch 2/p. 7/ Table 4

² Ontario Resource and Transmission Assessment Criteria

- (i) Statement: Hydro One's non-discretionary obligation to the noted Ministry directives is to provide connections either to specific sites, or to take steps (after contracting is completed between the OPA and the project proponent) to connect such generation sites to Hydro One's transmission system.
- (ii) Statement: The options and plans on how to modify the transmission system to accommodate generation projects on its system is carried out by judiciously evaluating alternatives to select the most suitable one based on economic evaluation of alternatives. This is regarded according to the Board's "Filing Requirements"³ as a discretionary project and as such should be accompanied by quantitative economic evaluation and be documented and filed for approval as was carried out for the Bruce to Milton project.

Board staff Supplementary Interrogatory No.2:

Reference:

- a) Supplementary Evidence/Exh A/Tab 2/Sch 2/section 2. "Supporting Evidence for Projects D7 and D8"/from p.2, line 20 to p. 3 line 2.
- b) Hydro One's Response to Board Staff IR # 61 in regard to Projects D7 and D8, dated December 23, 2008 (Exh I/Tab 1/Sch. 61/p. 1.
- c) Filing Requirements for Transmission and Distribution Applications, November 14, 2006 (EB-2006-0170)/Sec. 5.3.2/paragraph 3

Preamble:

- (1) In Reference a), It is partly stated that:

"Hydro One notes the Board's satisfaction with the level of supporting detail provided by the OPA in the Bruce to Milton Leave to Construct proceeding and has tried to balance the level of detail required for a section 92 application with the detail that can be provided for approval of a transmission project as part of a revenue requirement application."

- (2) In Board staff Interrogatory # 61 under "Preamble" it is stated in part that:

"Reference c)"⁴ indicate that even though the net present value for a non-discretionary project need not be shown to be greater than zero, an

³ Filing Requirements for Transmission and Distribution Applications, November 14, 2006 (EB-2006-0170)/Sec. 5.2.2

⁴ Reference c) in Board Staff Interrogatory # 61, is the same as Reference c) in this Board Staff Interrogatory #1

evaluation of the economic benefits e.g., the evaluation of the reduced congestion on the system is appropriate.”

In that Board staff Interrogatory # 61, under the related “Request” section, it is stated that:

“Please provide an estimate of the reduced congestion attributable to the two projects over an appropriate study horizon, and listing all assumptions.”

Hydro One’s response to that Board staff Interrogatory # 61 stated that:

The Independent Electricity Operator (IESO) provided an estimate of the reduced congestion in their System Impact Assessment Report, IESO_REP_0379 for these two projects. This report is included in the OPA’s IPSP filing, EB-2007-0707, Exhibit E, Tab 3, Schedule 1, Attachment 1 which is available from the OEB’s website (<http://www.oeb.gov.on.ca/OEB/>). A copy of the attachment is also included with this interrogatory as Attachment 1. The IESO estimate of reduced congestion on the North- South interface amounts to 700 MW. The referenced report includes all assumptions used to derive that figure.”

Questions:

Given that the evidence provided by Hydro One in the original submission for Projects D7 and D8 was not satisfactory to the Board, evidenced by the requirements for submission of additional evidence, please respond to the following:

- (i) What are the reasons for not providing evidence in accordance with the Board’s “Filing Requirements” as noted in Reference c) and Preamble 2), which requires conducting a quantitative economic evaluation for the proposed D7 and D8 projects?

It is expected that an economic evaluation for the two projects (D7 and D8) would compare the cost of the two projects versus the benefits assessed on the basis of avoided costs. For these two projects, the benefits are typically assessed based a present value over a study period of 15-20 years of congestion reduction or the bottled energy in absence of the two projects. The latter approach to assessment of bottled energy was presented in the evidence for the Bruce-Milton project by the OPA.

- (ii) In the event that the Board requires a quantitative economic evaluation for the D7 and D8 projects:
 - (a) Could Hydro One provide the quantitative economic evaluation with help from the OPA and/or the IESO?

- (b) If the answer to (a) is “Yes”, when can such an analysis be completed and filed with the Board?
- (c) If the answer to (a) is “No”, please provide the reasons for it.

Board staff Supplementary Interrogatory No.3:

Reference:

- a) Supplementary Evidence/Exh B/Tab 1/Sch 1/from p.2, line 24 to p. 3 line 5.

Preamble:

In Reference a), It is indicated that

- The need with respect to maintaining supply reliability for customers north of New Liskeard is attributed to events of a single-circuit contingency on the 500 kV line from Porcupine TS to Hanmer TS, where the whole power system north of Timmins is connected to the rest of network via two weak 115 kV circuits connected to Kirkland Lake TS.
- Without the dynamic reactive power support from the proposed SVCs, instability could cause the transmission system to separate at Kirkland Lake TS.

Questions:

- (i) Did Hydro One perform an economic evaluation based on the assessment of the loss of load probability for load customers identified in Reference a), assuming the incorporation of the new generation resources without installation of the SVCs at Porcupine TS and Kirkland Lake TS? If “yes”, please provide the results of that study;
- (ii) If the answer to (i) is “No”, could Hydro One complete such a study and filed with the Board with help from the OPA and/or the IESO? If the answer is “No”, please provide the reasons for that.

Board staff Supplementary Interrogatory No. 4:

Reference:

- a) Supplementary Evidence/Exh B/Tab 1/Sch 1/p. 2 /lines 18-19
- b) Supplementary Evidence/Exh B/Tab 2/Sch 1/p. 1 /lines 25-26

Clarification

In Reference a), and in Reference b), the sentence states that:

“The transfer capability is further increased to 2,050 MW through use of the existing post contingency generation rejection scheme.”

There appears to be a minor error in both Reference a) and Reference b), because the amount of transfer capability should be 2,150 MW⁵, and not 2,050 MW. Please confirm.

Board staff Supplementary Interrogatory No. 5:

Reference:

- a) Supplementary Evidence/Exh C/Tab 1/Sch 2/p. 7/Table 4/”Other Resources”
- b) Existing Atikokan Generating Station Capacity Information
Source - Ontario Power Generation Website:
<http://www.opg.com/power/fossil/atikokan.asp>
- c) Existing Thunder Bay Generating Station Capacity Information
Source - Ontario Power Generation Website:
<http://www.opg.com/power/fossil/thunderbay.asp>

Preamble:

- 1) In Reference a) there are two projects Biomass Atikokan with Capacity of 200 MW, and Thunder Bay Biomass with Capacity of 150 MW
- 2) In Reference b), it is indicated that Atikokan GS has one coal-fueled generating unit that produces over 200 MW of electricity.
- 3) In Reference c), it is indicated that Thunder Bay GS has two coal-fueled generating units that together produce up to 306 MW of electricity.

Questions:

- (I) At Atikokan G.S
 - (i) Is the 200 MW listed as Biomass Atikokan project in Reference a) replacing the 200 MW of existing coal-fueled capacity at Atikokan GS identified in Reference b)? If so please provide the expected date of phasing out the existing coal-fuel unit, and the in-service date of the Biomass facility. In

⁵ Supplementary Evidence, Exh C/Tab 1/Sch 5/System Impact Assessment Report:1st Addendum, (August 15, 2007)/p. 3/ Summary of the maximum transfers that could be supported across the Flow-South Interface

responding to this question please reference the source of the information (OPG, OPA, Ministry of Energy and Infrastructure).

- (ii) If the new 200 MW Biomass at Atikokan is replacement for the existing 200 MW coal-fueled Capacity at that Station, and the two events occur within a short period, please confirm that once the replacement occurs, there will be no new/ incremental power flow contribution through the North –South Interface. If this assumption is not accurate please provide a full explanation.
- (II) At Thunder Bay G.S
- (i) Is the 150 MW listed as a Thunder Bay Biomass in Reference a) a partial replacement for 306 MW of existing coal-fueled capacity at Thunder Bay GS as identified in Reference c)? If so please provide the expected date of phasing out the existing coal-fuel units, and the in-service date of the Biomass facility. In responding to this question please reference the source of the information (OPG, OPA, Ministry of Energy and Infrastructure).
 - (ii) If the new 150 MW Biomass at Thunder Bay is part replacement for the existing 306 MW coal-fueled Capacity at Thunder Bay Station, and the two events occur within a short period, please confirm that once the partial replacement occurs, there will be incremental reduction in the power flow contribution through the North–South Interface by about 156 MW. If this assumption is not accurate please provide a full explanation.

Board staff Supplementary Interrogatory No.6:

Reference:

- a) Supplemental Evidence, exhibit A/Tab 2/Schedule 1/page 2/Paragraph 5
- b) Letter dated June 11, 2009 from Hydro Networks Inc. to the Board Secretary titled “EB-2008-0272 Hydro One Networks 2009-2010 Electricity Transmission Requirements - Final Revenue Requirements and Charge Determinants in Accordance with Decision”

Preamble:

Paragraph 5 indicates that the resulting impact on the 2010 Revenue Requirement is estimated to be \$7.1 million, using the same cost of capital assumptions as in the Order issued by the Board on July 3, 2009.

Request:

Please provide the calculations which indicate how the \$7.1 million figure has been determined. This could be in the form of the relevant parts of Exhibits 1 and 2 provided in reference b) above i.e. in a format similar to what was provided to the Board in preparation for issue of the UTR.

Board staff Supplementary Interrogatory No.7:

Reference:

- a) Exhibit B/Tab 1/Schedule 2
- b) Exhibit B/Tab 2/Schedule 2

Preamble:

The question below relates to potential landowner concerns.

Reference a) refers to “landscaping” (line 16) and a “High Voltage Line tap from the 115kV D4 Bus to the SVC” (line 22).

Reference b) refers to “new 550kV tapping structures” (line 13), “access roads, landscaping” (line 16) and a “new station site” (line 26).

Question:

Please indicate if each of the projects D7 and D8 introduce or have outstanding any landowner issues, and if so please provide full details.

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