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Susan Frank

Vice President and Chief Regulatory Officer
Regulatory Affairs

BY COURIER

August 3, 2007

Ms. Kirsten Walli
Secretary
Ontario Energy Board
Suite 2700, 2300 Yonge Street
P.O. Box 2319
Toronto, ON.
M4P 1E4

Dear Ms. Walli:

EB-2007-0027 – Hydro One Networks' Section 92 Woodstock Area Transmission Reinforcement Project Application – Responses to Supplementary Interrogatory Questions

I am attaching ten (10) paper copies of Hydro One Networks' responses to supplementary interrogatory questions. An electronic copy in accessible, searchable PDF format will be emailed to the Board Secretary at Boardsec@oeb.gov.on.ca, to Robert Caputo at robert.caputo@oeb.gov.on.ca and Board Counsel, Kristi Sebalj at kristi.sebalj@oeb.gov.on.ca at the OEB, and to IESO.

Sincerely,

ORIGINAL SIGNED BY SUSAN FRANK

Susan Frank

Attach.

- c. Mr. Carl Burrell, Independent Electricity System Operator
- Mr. John Rattray, Independent Electricity System Operator
- Mr. Jay Heaman, Woodstock Hydro Services
- Mr. Scott Stoll, Aird and Berlis
- Mr. Allen Forrester, Township of South-West Oxford

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4 **SUPPLEMENTARY INTERROGATORY # 1**

5
6
7 **Interrogatory**

8
9 **1.0 Aboriginal Consultation**

10 *Reference: (1) Hydro One response to Board Staff Interrogatories EB-2007-*
11 *0027 filed May 28, 2007, Exh. C, Tab 1, Question 8*
12 *(2) The Board's proposed Aboriginal Consultation Policy issued on June 18, 2007*
13 *(see the Board's website at*
14 *[http://www.oeb.gov.on.ca/html/en/industryrelations/ongoingprojects_aboriginal-](http://www.oeb.gov.on.ca/html/en/industryrelations/ongoingprojects_aboriginal-consultation-policy.htm)*
15 *consultation-policy.htm)*

16 **Preamble**

17
18 The above-noted reference indicates that Hydro One has consulted all of the 6 First
19 Nations communities that may be affected by the proposed project and that only one
20 of the six communities responded.

21 It is also stated in the reference that three of the six First Nations have outstanding
22 land claims or litigation that may be affected by the proposed project.

23
24 **Questions / Requests**

- 25
26 i. Please provide an update on the status of Hydro One's consultations with the
27 Aboriginal Communities. Does Hydro One consider this as appropriate and
28 complete consultation and accommodation in accordance with the Board's
29 proposed Aboriginal Consultation Policy (Ref 2)?
30
31 ii. If the consultations are considered complete, please explain the rationale for
32 this determination.
33
34 iii. If the consultations are not considered complete, please advise what further
35 steps are planned and the proposed timing.

36
37 **Response**

- 38
39 i) The First Nations groups deemed to have a potential interest in the project were
40 identified through research and consultation with representatives from the Ontario
41 Secretariat Aboriginal Affairs (OSAA), and Indian and Northern Affairs Canada
42 (INAC).

1 Hydro One has identified six First Nations communities who may be affected by
2 the proposed project. They are Chippewas of the Thames First Nation, Walpole
3 Island First Nation, Munsee-Delaware Nation, Oneida Nation of the Thames,
4 Mississaugas of the New Credit, and Six Nations of the Grand River.

5
6 The six First Nations identified above were contacted by telephone on or about
7 April 3 and an information package about the Woodstock project similar to the
8 one provided to the municipalities for review was sent to the following parties:

9
10 Chief Joseph Gilbert
11 Walpole Island First Nation

12
13 Chief Kelly Riley
14 Chippewas of the Thames First Nation

15
16 Chief D.M. General
17 Chief A. MacNaughton
18 Six Nations of the Grand River

19
20 Chief Randall Phillips
21 Oneida Nation of the Thames

22
23 Chief Patrick Waddilove
24 Munsee-Delaware Nation

25
26 Chief Bryan LaForme
27 Mississaugas of the New Credit

28
29 The First Nations listed above were invited to contact Hydro One for any
30 additional information required or to discuss any concerns. To date, Hydro One
31 has only been contacted by the Six Nations of the Grand River who did not
32 identify any specific issues or concerns with the proposed project. Hydro one will
33 continue to work with all interested affected community throughout the project.

34
35 The consultations Hydro One has done, as described above, with the Aboriginal
36 Communities (EB-2007-0027, Exhibit C, Tab 1, Question 8, filed on May 28,
37 2007) is appropriate and complete, and appears to be consistent with the Board's
38 Draft Aboriginal Consultation Policy. No other Aboriginal Community has come
39 forward since the last consultation.

40
41 As noted in Hydro One's comments to the Board on its Draft Aboriginal
42 Consultation Policy dated July 20, 2007:

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"Hydro One...has substantially followed the proposed filing guidelines for applications for approvals, whether these entail section 92 proceedings or transmission revenue requirement and transmission rate proceedings."

ii) Hydro One considers the consultations with the Aboriginal Communities are consistent with the guidelines set out in Appendix A of the Board's Draft Aboriginal Policy. Hydro One has

- identified all of the Aboriginal Peoples affected by this project;
- contacted all the affected Aboriginal Peoples;
- indicated how the Aboriginal Peoples were identified;
- when the contact was first initiated;
- provided a listing including names and dates of contacts;
- provided relevant information to the Aboriginal Peoples;
- identified any specific issues (in this case none) raised by Aboriginal Peoples in respect of the project, and
- identified that the Six Nations of the Grand River wrote back and had no objection to the project proceeding.

Refer to Interrogatory Answer 8 (EB-2007-0027, Exhibit C, Tab 1) filed on May 28, 2007.

While Hydro One considers the consultation complete, if any future concerns get identified by the First Nations communities, Hydro One will continue to work with these communities.

iii) N/A

SUPPLEMENTARY INTERROGATORY # 2

Interrogatory

2.0 Environmental Assessment

Reference: Hydro One response to Board Staff Interrogatories EB-2007-0027 filed May 28, 2007, Exh. C, Tab 1, Question 6, items (iii) and (iv)

Preamble

The above-noted reference indicates that the Draft Environmental Study Report (ESR) will be ready approximately two weeks following the second Public Information Centre planned for May 29, 2007.

Board Staff would like an update on the EA process including outstanding issues, expected timing for their resolution and completion of the EA process.

Questions / Requests

- i. Please provide an update on the status of the EA process including results of the second Public Information Centre on May 29, 2007;
- ii. Has there been any challenges to the Class EA process or any additional issues identified;
- iii. Has the ESR been completed? If not, please explain the delay and provide the expected completion date;
- iv. What is the expected completion date of the EA process including the 30-day waiting period?

Response

- i) The second Public Information Centre (PIC) was held on May 29, 2007 and local municipal officials were invited to a preview of the PIC at the same location, earlier in the day. The PIC involved the announcement of the preferred route and transformer station site. In total, 52 individual attended the PIC. This included a number of key property owners as well as several residents from the west end of the City of Woodstock.

The only issue brought up at the PIC, was the Mayor of Woodstock's request that Hydro One considers installing steel poles within the built-up area between Woodstock TS and the western city limit of Woodstock. Subsequently, Hydro

1 One held a Community Consultation on July 18, 2007 at the Southside Aquatic
2 Centre in the City of Woodstock. The consultation session offered residents who
3 live along this transmission corridor the opportunity to view two alternative tower
4 types and to state their preference. Residents can submit their preference in
5 writing to Hydro One by August 31, 2007. Hydro One will accept the preference
6 of the community, as long as the steel poles can be placed in the same location as
7 the existing poles and the easement holders agree with the proposal.

8
9 ii) Hydro One is not aware of any challenges to the Class EA process. The
10 outstanding issue includes Township of South-West Oxford's request to relocate
11 the centreline of the proposed transmission line. The transmission line concern
12 relates to the proximity of the right of way to Karn Road as explained in
13 Supplemental Interrogatory #3 below.

14
15 The decision of using the narrow-base lattice towers versus steel poles between
16 Woodstock TS and the western city limit of Woodstock as discussed above, will
17 be determined after August 31, 2007.

18
19 iii) The Draft Environmental Study Report (ESR) has been completed following the
20 second Public Information Centre (PIC). It was posted on the Hydro One project
21 website, as well as in various public libraries and clerk offices within the Study
22 Area on June 20, 2007 for the 30-day review period. This period ended on July
23 20, 2007 with no bump-up requests being received. Any public or agency
24 comments will be incorporated and the ESR will then be finalized by the end of
25 August 2007, when the review of the Mayor's request is complete.

26
27 iv) The 30-day review period of the Draft ESR ended on July 20, 2007, and the Final
28 ESR is expected to be completed by the end of August 2007. The EA process
29 will conclude once the Final ESR is filed.
30

1 **SUPPLEMENTARY INTERROGATORY # 3**

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3 **Interrogatory**

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6 **3.0 Land Matters**

7
8 *Reference: Hydro One response to Board Staff Interrogatories EB-2007-0027 filed*
9 *May 28, 2007, Exh. C, Tab 1, Question 7, item (iv)*

10
11 **Preamble**

12
13 The above-noted reference indicates the concern expressed by Township of South-
14 West Oxford regarding the placement of the proposed transmission line within the
15 road allowance of Karn Road has not been resolved and that Hydro One is taking
16 certain actions to address the concern.

17
18 **Questions / Requests**

- 19
20 i. Please provide an update on the status of the negotiations with the Township of
21 South-West Oxford.
22
23 ii. Is the resolution of the Township's concern likely to require a re-routing of the
24 transmission line?
25
26 iii. If a re-routing is required, what impact would it have on the scope and timing
27 of the EA process?
28

29 **Response**

- 30
31 i) Hydro One has recently offered to meet with Members of Council and the
32 municipal staff to make a presentation on the Woodstock project and its status, as
33 well as to discuss working with the municipality should it decide to make
34 improvements along Karn Road. This presentation would re-iterate that both the
35 EA process and public input have shown that the least impactful proposal is to
36 use the existing transmission right of way in this area. There are other mitigative
37 measures, such as protecting the towers to limit any road accidents involving the
38 structures. A date for this presentation has not yet been determined.
39
40 (ii) It is not anticipated that the resolution of the Township's concern will require a
41 re-routing of the transmission line. Relocating the existing transmission line
42 would contravene Provincial policy as articulated in the Ministry of Municipal
43 Affairs and Housing, 2005 Provincial Policy Statement referred to on page 3 of

Filed: August 3, 2007

EB-2007-0027

Exhibit C

Tab 1

Supplementary Question 3

Page 2 of 2

1 Exhibit B, Tab 3, Schedule 1. Also there are other mitigative measures that that
2 can remedy any future concerns.

3

4 (iii) It is not anticipated that any re-routing will be required.

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1 **SUPPLEMENTARY INTERROGATORY #4**

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3 **Interrogatory**

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6 **4.0 Project Costs and Alternatives**

7
8 *Reference: Hydro One response to Board Staff Interrogatories EB-2007-0027 filed*
9 *May 28, 2007, Exh. C, Tab 1, Question 3, items (iii) to (iv)*

10
11 **Preamble**

12
13 The above-noted reference indicates that the 2 km portion of the new line from Karn
14 TS to Woodstock TS (initially operated at 115 kV) will be built to 230 kV standards
15 because:

- 16
17 - of the potential future need for this line to operate at 230 kV;
18
19 - the incremental additional cost of building the line at 230 kV is \$ 0.5 to 1.0
20 million and that this is substantially less than replacing the 115 kV line
21 with a new 230 kV line later;
22
23 - depending on the overall load growth at Woodstock TS, Brant TS,
24 Powerline MTS and other potential new stations in the area,
25 consideration will be given to converting all the stations to 230 kV and
26 supplying them at 230 kV via the proposed line between Ingersoll TS and
27 Woodstock TS. It is further stated that if conversion to 230 kV were to
28 occur, it would likely be in the 10 to 20 year time horizon;

29
30 Board Staff would like to explore the option of converting the affected stations to 230
31 kV supply initially.

32
33 **Questions / Requests**

- 34
35 i. If Hydro One decides to convert the transformer stations affected by the proposed
36 transmission line to 230 kV supply in 10-20 years, what plan does Hydro One
37 have for what would be a “relatively new” Karn TS?
38
39 ii. Has Hydro One considered the option of converting appropriate stations to 230 kV
40 supply initially and avoiding the need to build Karn TS (estimated to cost \$28.7
41 million)? If not, why not?
42
43 iii. Please provide comparative cost estimates including net present value (NPV) over an
44 appropriate time horizon for the following two options:
45

- 1 a. Proceed with current proposal and convert appropriate stations to 230 kV supply when
2 required; and
3
4 b. Build the proposed 230 kV line and carry out other work necessary to supply the
5 appropriate stations at 230 kV initially, or adopting a staged approach if economic
6 and feasible, and avoid building Karn TS.
7
8 iv. Please comment on the results in (iii) and provide the rationale for the preferred plan.
9

10 **Response**

- 11
12 (i) If the existing transformer stations in the area were converted to 230 kV supply
13 the autotransformers and circuit breakers at Karn TS would be removed and
14 would either be relocated to other stations or would become part of the spares
15 inventory for future use. The Karn TS site could then either be used for a 230 kV
16 switching station which would increase the reliability of supply to the increasing
17 loads in the area or as a transformer station stepping down voltage from 230 kV to
18 distribution voltage to supply load in the area.
19
20 (ii) Hydro One did not include the option of converting the Woodstock area
21 transformer stations to 230 kV as part of this project for the following reasons.
22
23 • The Woodstock TS is physically confined between a busy road, residences, and
24 a popular Southside Park. There is, therefore, no room for any additional
25 facilities in the station, so the existing equipment would have to be taken out of
26 service to install new equipment which would require lengthy outages. Also, the
27 existing station site may not be able to accommodate larger transformers and
28 additional feeder egress from the station.
29
30 • Due to the urgent need for supply to the new Toyota plant in 2007, the Toyota
31 TS supply was built at 115/13.8 kV since 230 kV supply was not available in
32 the area. This means that the Woodstock TS needs to continue to accommodate
33 the 115 kV voltage into the station.
34
35 • The existing 115 kV transmission line between the Woodstock area and Brant
36 TS provides back-up supply for Brant TS and Powerline MTS (see Exhibit B,
37 Tab 1, Schedule 3). If a 230/115 kV Karn TS were not built, there would be an
38 immediate need to build additional 230 kV circuits in the area since the existing
39 115 kV line would not be able to be tied into the system.
40
41 (iii) The comparative cost estimates are provided in the attached Table 1. The cost
42 estimates shown in Table 1 are based on high level planning estimates without
43 detailed analysis of approval requirements, route & site constraints, property
44 requirements and design and engineering for the lines and stations. The facility

1 requirements and cost estimates in Table 1 do not include measures that may be
2 required as discussed in item (ii) above. The layout and methodology for Table 1
3 is similar to the tables in Appendix J of Exhibit B, Tab 6, Schedule 5.
4

5 As shown in Table 1, the Net Present Value (NPV) cost of Option A ranges
6 between \$ 149 million and \$ 176 million. (depending on the escalation rate). The
7 NPV of Option B ranges between \$ 173 million and \$ 187 million.
8

9 (iv) The NPV of the Option A is lower than the NPV for Option B (depending on the
10 escalation rate). Furthermore, Option A is adaptable to various load growth
11 scenarios. Under a lower than forecast load growth scenario, Karn TS would
12 remain at 115 kV. Under a higher than forecast load growth scenario, the plan is
13 the first step towards converting the Woodstock area and possibly the Brant area
14 to 230 kV supply with timing catered to the future need. Option B does not have
15 that flexibility. Option A is therefore the preferred Plan.
16

Table 1: Cost Comparison of Options as per OEB Staff Supplementary Interrogatory # 4 (iii)

Option A: Proceed with current proposal and convert appropriate transformer stations to 230 kV supply when required

Year	Base Cost	0% Escalation NPV 2006	2% Escalation NPV 2006
* 2006 Losses	3	3.0	3.0
* 2007 Cap at Woodstock TS	1.3	1.2	1.3
* 2007 Cap at Brant TS	1.3	1.2	1.3
** 2010 Brantford Auto (1 x 250MVA)	14	11.1	12.0
** 2010 Alford x Auto 115kV Line	8	6.4	6.9
** 2010 Two Switchers at East of Alford	2	1.6	1.7
* 2010 Karn TS (2 x 250MVA Auto's)	28	22.2	24.0
* 2010 Woodstock East TS (2 x 115kV 50/83MVA reconnectable at 230kV)	16.9	13.4	14.5
* 2010 Cap at Woodstock East TS	1.3	1.0	1.1
* 2010 15km 230kV line (Ingersoll x Karn x Woodstock)	40	31.8	34.3
2010 4km 230kV line operated at 115kV (Woodstock x Woodstock East)	10.7	8.5	9.2
2010 1km 230kV line operated at 115kV (Woodstock East x Toyota)	2.7	2.1	2.3
* 2010 5km x4 Dist feeders (connects load in SE)	4	3.2	3.4
* 2016 Second Cap at Woodstock East TS	1.3	0.7	0.9
2025 Brant Auto TS (2 x 250MVA Auto's from Karn TS)	15	5.0	7.2
2025 Woodstock TS (2 x 230/27.6kV 50/83MVA)	16.9	5.7	8.1
2025 Toyota TS (2 x 230/13.8kV 50/83MVA)	7	2.3	3.4
2025 30km 230kV line (Toyota x Brant)	80	26.8	38.5
* 2027 Salford x Ingersoll Re-conductor	6	1.8	2.7
Total		149.1	175.6

* - Items included under Alternative 1 of Exhibit B, Tab 6, Schedule 5 page 67, which has a total NPV 2006 (2% Escalation) of 107M.

** - In-service date revised from previous study to reflect earliest possible date facilities can be placed into operation.

Option B: Build the proposed 230 kV line and carry out other work necessary to supply the appropriate stations at 230 kV initially to avoid building Karn TS

Year	Base Cost	0% Escalation NPV 2006	2% Escalation NPV 2006
2006 Losses	3	3.0	3.0
2007 Cap at Woodstock TS	1.3	1.2	1.3
2007 Cap at Brant TS	1.3	1.2	1.3
2010 Brant Auto TS (2 x 250MVA Auto's)	28	22.2	24.0
2010 15km 230kV line (Ingersoll x Karn x Woodstock)	40	31.8	34.3
2010 Woodstock TS (2 x 230/27.6kV 50/83MVA)	16.9	13.4	14.5
2010 4km 230kV line (Woodstock x Woodstock East)	10.7	8.5	9.2
2010 Woodstock East TS (2 x 230kV 50/83MVA)	16.9	13.4	14.5
2010 Cap at Woodstock East TS	1.3	1.0	1.1
2010 1km 230kV line (Woodstock East x Toyota)	2.7	2.1	2.3
2010 Toyota TS (2 x 230/13.8kV 50/83MVA)	7	5.6	6.0
2010 30km 230kV line (Toyota x Brant)	80	63.5	68.6
2010 5km x4 Dist feeders (connects load in SE)	4	3.2	3.4
2016 Second Cap at Woodstock East TS	1.3	0.7	0.9
2027 Salford x Ingersoll Re-conductor	6	1.8	2.7
Total		172.8	186.9