

**Hydro One Networks Inc.**

8<sup>th</sup> Floor, South Tower  
483 Bay Street  
Toronto, Ontario M5G 2P5  
www.HydroOne.com

Tel: (416) 345-5700  
Fax: (416) 345-5870  
Cell: (416) 258-9383  
Susan.E.Frank@HydroOne.com

**Susan Frank**

Vice President and Chief Regulatory Officer  
Regulatory Affairs



BY COURIER

August 18, 2009

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

Dear Ms. Walli:

**EB-2009-0079 – Hydro One Networks' Section 92 – Woodstock East Transmission Line Upgrade Project – Interrogatory Responses**

I am attaching three (3) copies of the Hydro One Networks' interrogatory responses to questions from OEB Staff.

An electronic copy of the responses has been filed using the Board's Regulatory Electronic Submission System (RESS) and the proof of successful submission slip is attached.

Sincerely,

ORIGINAL SIGNED BY SUSAN FRANK

Susan Frank

Attach.

**Ontario Energy Board (Board Staff) INTERROGATORY #1 List 1**

**Interrogatory**

**Load Forecast for Transformer Stations in the Woodstock Area**

**Reference:** Exhibit B, Tab 1, Schedule 4, page 1, lines 10-14

**Preamble:** Hydro One states in its pre-filed evidence that the existing Woodstock TS load has exceeded its summer peak demand rating of 82.9 MW for the past few years. Woodstock Hydro and Hydro One Distribution (on a combined basis) are forecasting load growth of 40 MW by 2012 and 60 MW by 2016 in excess of the peak demand rating of Woodstock TS.

**Questions/Requests**

- a) Please provide the latest available forecast that is being relied upon for this project, broken down by Transformer Station and by 115 kV directly connected customers (LaFarge and Toyota) and also indicate any assumed load transfers.
- b) Does the forecast that is used for the planning of the project in question reflect current economic conditions and can it still be relied upon to establish need for this project?
- c) If load transfers from the Woodstock area have been contemplated (or have been carried out) to Ingersoll TS, what is the current loading at that station and when is it projected to be overloaded?
- d) So as to properly “calibrate” this forecast, please provide the projected and actual summer peak demand for all Woodstock area stations and 115 kV directly connected customers for 2007, 2008 and 2009.

**Response**

- a) The table below provides the latest load forecast for this project and was prepared in April 2009, compared with the February 2009 forecast that was used in the pre-filed material. Loads are identical to the ones presented in Table 1 of Exhibit B, Tab 1, Schedule 4 page 2 of 7 except for the inclusion of La Farge CTS. For the purpose of Table 1, it is assumed that the temporary 7 MW transfer to Ingersoll TS is no longer in effect. Please see the response to part c) for more information.

1        **Table 1: Woodstock Area 115 kV Coincident Summer Peak Load Forecast (MW)**

Station	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Woodstock TS	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9
Toyota Woodstock TS	25	25	25	25	25	25	25	25	25	25	25
La Farge CTS	11	11	11	11	11	11	11	11	11	11	11
Commerce Way TS	26.3	34.4	40.2	44.7	49.2	53.0	55.9	58.8	61.7	64.6	67.5
Load Transfer	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	145.3	153.3	159.1	163.6	168.1	171.9	174.8	177.7	180.6	183.5	186.4

- 2
- 3        b) Yes. The forecast is considered current. If anything, economic conditions have
- 4                improved since April, 2009 when the latest forecast was prepared.
- 5
- 6        c) In Exhibit B, Tab 1, Schedule 4, Page 1 of 7, it states that “Temporary measures are
- 7                being implemented to transfer about 7 MW of load to nearby Ingersoll TS to relieve
- 8                Woodstock TS.” For the purpose of Table 1 provided in the response to question 1a)
- 9                above, this load transfer is assumed to be no longer in effect. This is planned as an
- 10              emergency measure only and not a permanent transfer. Due to the lengths of the
- 11              feeders required, it would be unreliable to supply Woodstock area loads from
- 12              Ingersoll TS.

13

14        d)

15                                **Summer Peak Loads for June -August (MW)**

Station	2007	2008	2009*
Woodstock TS	88.7	85.9	78.3
Toyota Woodstock TS		16.2	21.5
La Farge CTS	12.2	10.6	5.0

16                                \* Only June and July data available for 2009.

17                                2009 actuals reflect the impact of a cooler-than-normal summer and the

18                                recession.

**Ontario Energy Board (Board Staff) INTERROGATORY #2 List 1**

**Interrogatory**

**Load Forecast for the B8W 115kV Transmission Line (and Proposed Replacement Circuits)**

**Reference:** Exhibit B, Tab 1, Schedule 4, page 2, lines 1-5

**Preamble:** Hydro One states in its pre-filed evidence that B8W is a single-circuit 115 kV line running between Woodstock TS in the west and Brant TS in the east and running east-west along Parkinson Road in the City of Woodstock and Towerline Road in Norwich Township. It is operated with an open point at the Brant TS end. Hydro One contends that the thermal capability of B8W (105 MW) is not adequate to supply the forecast load.

**Questions/Requests:**

- a) Since the section of B8W proposed for rebuild (section between Woodstock TS and the planned Commerce West TS) will only supply Commerce Way TS and Woodstock Toyota TS and this circuit has a thermal capacity of 105 MW and the load on these two facilities is only 59.4 MW in 2011, rising to 92.5 MW in 2020, please provide an explanation of why the line “is not adequate to supply the forecast load”?
- b) Provide a year to year forecast of the load projected for the B8W transmission line so as to indicate when the line loading is estimated to reach 105 MW, 145 MW and 150 MW.

**Response**

- a) A double circuit line is being proposed to comply with “IESO’S Ontario Resource and Transmission Assessment Criteria” Issue 5.0 dated August 22, 2007, section 7.2 a. This requires that all loads greater than 150 MW must be restored within 4 hours for a single contingency outage. This response time is not possible for the Commerce Way TS / Toyota Woodstock TS load pocket unless a 2-circuit line were to be provided. An alternate source for the load proposed to be supplied by these two stations is simply not available under the current single-circuit configuration if that circuit were to experience a catastrophic contingency. The potentially impacted load, shown in the table below, is forecasted to be within 51 MW and 145 MW during the period 2010 to 2040. As noted in the evidence at Exhibit B, Tab 1, Schedule 4 at pages 3 and 4, “For the Woodstock East line upgrade, as the 145 MW load that is forecast to

be served off the line B8W is close to the 150 MW threshold of the Load Restoration Criteria, in Hydro One's view it is appropriate to install a second circuit at this time given that the Woodstock area is becoming an area of increasing manufacturing importance (e.g., the new Toyota plant and associated spin-offs) with time-sensitive loads requiring high reliability."

The existing 115 kV line B8W from Woodstock TS to the proposed Commerce Way TS was built in 1910. Originally it was a double circuit 115 kV line and one of the circuits was removed in 1994 because it was unsafe for the line structures to support the weight of two circuits. The existing condition of the B8W line and the need to meet IESO's criteria mentioned above, require that B8W is rebuilt to a double circuit line.

b)

**Projected Future Loading on B8W (MW)**

Station	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Commerce Way TS	26.3	34.4	40.2	44.7	49.2	53.0	55.9	58.8	61.7	64.6	67.5
Toyota Woodstock TS	25	25	25	25	25	25	25	25	25	25	25
<b>TOTAL</b>	51.3	59.4	65.2	69.7	74.2	78.0	75.9	83.8	86.7	89.6	92.5

Station	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Commerce Way TS	70.7	73.4	76.0	78.7	81.4	84.1	86.8	89.5	92.2	94.9	97.7
Toyota Woodstock TS	25	25	25	25	25	25	25	25	25	25	25
<b>TOTAL</b>	95.7	98.4	101.0	103.7	106.4	109.1	111.8	114.5	117.2	119.9	122.7

1

<b>Station</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>
Commerce Way TS	113.7	114.5	115.3	116.1	116.9	117.6	118.3	119.0	120
Toyota Woodstock TS	25	25	25	25	25	25	25	25	25
<b>TOTAL</b>	138.7	139.5	140.3	141.1	141.9	142.6	143.3	144	145

2

**Ontario Energy Board (Board Staff) INTERROGATORY #3 List 1**

**Interrogatory**

**Asset Condition of the Existing B8W Transmission Line**

**Reference:** Exhibit B, Tab 1, Schedule 4, page 3, lines 11-18

**Preamble:** Hydro One states in its pre-filed evidence that the existing single-circuit B8W line is close to its end of life and the existing line towers lack the structural strength to be suitable for the replacement of the existing conductors with higher-rated conductors or the accommodation of a second circuit.

**Questions/Requests:**

- a) What evidence does Hydro One have to support its assertion that the B8W transmission line is close to its end of life? Please provide that evidence.
- b) What specific tests have been carried out on the B8W transmission line and what analysis has been performed on these test results?

**Response**

- a) The Transmission Line supporting B8W has been in-service since 1910. Until 1994, the line supported two circuits (i.e. B8W and a circuit formerly known as B2W) at which time it was deemed to be at end-of-life. In its condition, the line was characterized by deteriorated line components and was incapable of supporting two circuits as a result of reduced structural integrity. To extend the life of the line, a refurbishment project was undertaken in 1994 to replace critical end-of-life components and to remove the B2W circuit to reduce physical loading on the structures. This refurbishment has allowed the almost 100-year old transmission line to safely remain in-service, but it has not enabled the line to support two circuits as originally designed. In addition, although a single-circuit 115kV line with upgraded conductor could supply the customers' expected future load, as noted in the pre-filed evidence in Exhibit B, Tab 1, Schedule 4, page 5, lines 6 – 8, the line in its current condition cannot support the additional weight of an upgraded conductor.
- b) The tests and analysis leading to the end-of-life determination for the double circuit transmission line were conducted prior to the 1994 refurbishment project. The records of these tests, dating from the early 1990's, could not be located.

**Ontario Energy Board (Board Staff) INTERROGATORY #4 List 1**

**Interrogatory**

**Upgrading B8W to a Double Circuit 230 kV Transmission Line**

**Reference:** Exhibit B, Tab 1, Schedule 4, page 5, lines 4-10

**Preamble:** Hydro One states in its pre-filed evidence that the development and sustainment aspects of the project consist of replacing the existing single circuit 115 kV line, which is at end of life, and upgrading it to a double circuit 230 kV line to meet system reliability and future load growth needs. While a single circuit 115 kV line with upsized conductors could supply the customers' expected future load, the line is proposed to be upgraded at this time to a double circuit 230 kV configuration in order to meet reliability guidelines and address anticipated future system enhancements in the area.

**Questions/Requests:** What are the cost differences between:

- a) a single circuit 115 kV line with upsized conductors that could supply the customers' expected future load and a double circuit 115 kV line with similar sized conductors; and
- b) a single circuit 115 kV line with upsized conductors that could supply the customers' expected future load and a double circuit 230kV line with conductors as proposed for the preferred alternative?

For each of the cost comparisons provided above, please provide the following detailed information:

***Estimated Cost*** (\$000's)

- I. Project Management
- II. Engineering
- III. Procurement
- IV. Construction
- V. Contingencies
- VI. Costs before Overhead and AFUDC
- VII. Overhead
- VIII. AFUDC
- IX. Total Line Work



**Response**

a) The typical cost for a single-circuit 115 kV in the Woodstock area, steel-pole line with no expansion capability is approximately \$2.5M/km. Also, the typical cost for a double circuit 115 kV steel-pole line in the Woodstock area is approximately \$3.0M/km. These values include the additional construction and materials costs applicable to the Woodstock area itemized in the response to Interrogatory # 8 b). Please note that these costs are not available in the format requested. It is also assumed, based on the statement quoted in the preamble above --*"While a single circuit 115 kV line with upsized conductors could supply the customers' expected future load, ...."*, that the line is rebuilt with new structures and one circuit strung.

b) The typical cost for a single-circuit 115 kV, steel-pole line with no expansion capability is \$2.5M/km as noted in a) above. The estimate for the double-circuit 230 kV line for the Woodstock project is approximately \$3.5 M/km and includes anticipated additional construction and materials costs applicable to the Woodstock area itemized in 8 b). The cost breakdown for the recommended Woodstock line is included in the OEB submission (EB-2009-0079), Exhibit B, Tab 4, Schedule 2, Page 2, in the format requested.

Based on these figures, the cost to upgrade the line to a double-circuit 230 kV configuration compared with rebuilding the line with a single-circuit 115 kV line (with no expansion capability) is \$1.0M per km, or \$4M for the 4 km. length of the line. The savings in building the line now to 230 kV standards as compared to upgrading from 115 kV to 230 kV in 15 years are estimated to be \$3.7M. The savings are arrived at by the comparison of the NPV of the recommended option (230 kV double-circuit line) and the NPV of the cost to construct a single circuit 115 kV line now, and replacing it with a 230 kV double-circuit line in 15 years. In Hydro One's view, it is prudent to make the expenditure now to upgrade to a 230 kV double-circuit line given the plan for future system upgrades in the area to the 230 kV standards, as noted in the pre-filed evidence at Exhibit B, Tab 1, Schedule 4, page 4, and given the cost efficiencies in doing the work now. These efficiencies include avoiding future removal, disposal and mobilization costs relating to the 115 kV towers and conductors which if installed, would have to be removed and disposed at the time of the upgrade.

In addition, the existing right of way is significantly narrower (65 foot right-of-way compared to normal 120 foot right-of-way). Parts of the line are located on the shoulder of an existing road, and parts run through a built-up residential area. As a result, it would be impractical, difficult, and costly to convert the 115 kV to 230 kV in the future. Doing so would subject the local community to further disruption and

1 by that time the area along the right-of-way is anticipated to have experienced further  
2 development, making construction-related disturbances more impactful.

**Ontario Energy Board (Board Staff) INTERROGATORY #5 List 1**

**Interrogatory**

**Woodstock Area Requirement for Additional Reliability**

**Reference:** Exhibit B, Tab 1, Schedule 4, page 3, lines 22-26

**Preamble:** Hydro One states in its pre-filed evidence that the need to add a second circuit is based on the IESO's Load Restoration Criteria (contained in the IESO's Ontario Resource Transmission Assessment Criteria) which specify that loads greater than 150 MW should be restorable within an approximate 4-hour time limit following a contingency. Typically, this means the line should be restorable by switching to a [readily available] second circuit.

**Questions/Request:**

- a) What has been the history of faults and restoration times on the B8W line over the last 15 years?
- b) Is the fault history for B8W significantly different than that for other similar 115 kV single circuit transmission lines?
- c) Has Hydro One ever previously rebuilt a single circuit transmission line into a double circuit arrangement significantly in advance of the circuit reaching the 150 MW threshold?
- d) If Hydro One has rebuilt a single circuit transmission line into a double circuit arrangement in advance of the circuit reaching the 150 MW threshold, when was this done, what were the circumstances and to what degree was the work advanced in respect of the 150 MW threshold?

**Response**

- a) Operationally, the B8W line is in series with the W12W line and the two are hence treated as a single element. The outage statistics for B8W are therefore included with those for W12W. Interruptions caused on W12W will affect the supply to B8W. The following is a summary of the interruption history of W12W for the past 15 years (7/31/1994 – 7/31/2009):

Circuit	# of Momentary Interruptions	Frequency of Momentary Interruptions (occ./yr)	# of Sustained Interruptions	Frequency of Sustained Interruptions (occ./yr)	Total Duration (minutes)	Average Duration (hr/occ.)	Unavailability (hr/yr)
W12W	24	1.60	6	0.40	2739	7.61	3.04

1

2

3

4

5

6

7

8

9

As the table above indicates, there has been a total of 30 interruptions (Momentary + Sustained) in the past 15 years. On average, the supply was restored in 7.61 hours from the start of the interruption which exceeds the ORTAC standard of 4-hour restoration (albeit applicable for loads > 150 MW).

- b) The following is a summary of interruption history of similar circuits (115kV – Single Supply), including W12W that supplies B8W, for the past 15 years:

Circuit	# of Momentary Interruptions	Frequency of Momentary Interruptions (occ./yr)	# of Sustained Interruptions	Frequency of Sustained Interruptions (occ./yr)	Total Duration (minutes)	Average Duration (hr/occ.)	Unavailability (hr/yr)
W12W	24	1.60	6	0.40	2739	7.61	3.04
C7BM	22	1.46	69	4.59	14772	3.57	16.39
H9A	9	0.60	35	2.33	8124	3.87	9.02

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

Supply W12W has historically had fewer sustained interruptions than other similar circuits, but the time to restore this line is significantly different. Compared to C7BM, W12W has required an additional 4.04 hours on average to restore an interruption and similarly, on average W12W has required an additional 3.74 hours to restore an interruption compared to H9A.

- c) No. Hydro One and the former Ontario Hydro has generally followed the Supply Delivery Guidelines that are currently in the IESO's ORTAC document referenced in the response to question 2a). Depending on the characteristics and capability of the distribution network, two sources of transmission supply are provided for most loads in excess of about 25 to 50 MW in order to have the capability to restore the load within a few hours upon the loss of a supply circuit. An exception would be in an area where the distribution system has sufficient redundancy built-in in order to provide this capability. The distribution system in the Woodstock area has insufficient redundancy to provide this capability. Hence, historically dual supply is provided for most loads in excess of about 25 to 50 MW. The load on B8W exceeds this range.

- d) Not Applicable. This situation has not arisen.

**Ontario Energy Board (Board Staff) INTERROGATORY #6 List 1**

**Interrogatory**

**Project Need Characterization**

**Reference:** Exhibit B, Tab 1, Schedule 4, page 6, lines 10-20

**Preamble:** Hydro One states in its pre-filed evidence that the project is classified as primarily non-discretionary. The connection aspect (non-discretionary) of the project is to meet the needs of Woodstock Hydro and Hydro One Distribution and the Sustainment and Development (discretionary) aspects are required to ensure the reliability and quality of electrical supply to consumers in the area.

**Question/Request:**

- a) Why does Hydro One state that there is a non-discretionary requirement to rebuild the B8W line to deliver additional Woodstock area load when the load on the line will only be 59.4 MW in 2011 (rising to 92.5 MW in 2020) and the line is currently rated at a capacity 105 MW?

**Response**

- a) See the response to IR#2 part a), IR#5 part c) and IR#10 part a).

With respect to the criticality and need to upgrade the line, it should also be noted that from 1994 to 2007, B8W has been used as backup supply to Woodstock TS or Brant TS in the event the primary double circuit supply to Woodstock TS (W7W/W12W) or Brant TS (B12/B13) is lost. Since 2007 it has also been utilized as the primary supply source to Toyota Woodstock TS.

**Ontario Energy Board (Board Staff) INTERROGATORY #7 List 1**

**Interrogatory**

**Use of Demand Side Resources and Distributed Generation to meet Additional Load Requirements**

**Reference:** Exhibit A, Tab 3, Schedule 1, page 4, lines 20-23

**Preamble:** Hydro One states in its pre-filed evidence that the LDCs have confirmed that the need cannot be met through new distributed generation resources or conservation and demand management initiatives in the Woodstock Area, given the overloading situation at the existing facilities.

**Questions/Request:**

- a) What amount of conservation and demand management has been achieved for Woodstock TS and at Toyota and LaFarge to date and how much is projected in the planning timeframe for these facilities and for Commerce Way TS? Please provide answers in MW/year and MWh/year for each facility.
- b) What amount of distributed generation has been achieved for Woodstock TS and at Toyota and LaFarge to date and how much is projected in the planning timeframe for these facilities and for Commerce Way TS? Please provide answers in MW/year and MWh/year for each facility
- c) How do the levels of achievement for conservation and demand management) and distributed generation described in 7(a) and (b) compare with those at other similar facilities?

**Response**

- a) The load forecast is net of the load impact of conservation and demand management (CDM). The reduction in load due to CDM in the past and over the forecast period was calculated by prorating the OPA provincial target in accordance with the ratio of peak load in the study area to that of the province. The figures are presented for peak and energy in Tables 7.a.1 and 7.a.2, respectively.

**Table 7.a.1.**  
**Woodstock Area 115 kV Conservation and Demand Management (MW)**

Station	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Woodstock TS	3.1	3.8	4.9	8.2	9.4	10.5	11.6	12.7	13.9	14.6	15.5	16.4	17.0	17.7
Toyota Woodstock TS	0.9	1.1	1.5	2.5	2.8	3.2	3.5	3.8	4.2	4.4	4.7	4.9	5.1	5.3
Commerce Way TS	1.0	1.2	1.6	2.6	3.9	5.1	6.3	7.6	8.9	9.8	11.0	12.2	13.3	14.4

**Table 7.a.2.**  
**Woodstock Area 115 kV Conservation and Demand Management (GWh)**

Station	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Woodstock TS	8.1	11.2	15.7	35.6	43.3	51.0	57.9	64.8	72.1	76.3	80.7	85.0	88.7	92.8
Toyota Woodstock TS	2.4	3.4	4.7	10.7	13.0	15.4	17.5	19.5	21.8	23.0	24.3	25.6	26.8	28.0
Commerce Way TS	2.6	3.5	5.0	11.3	18.0	24.7	31.2	38.5	46.1	51.5	57.2	63.3	69.1	75.6

According to OPA, the CDM targets have been achieved over the historical period (up to and including 2007). However, CDM impact at the transformer station level is not available.

- b) The reduction in load due to distributed generation beyond the IESO-controlled grid (115 kV and above) is considered to be captured in the CDM targets set by the OPA. However, the OPA has not provided a specific program list for this.

Distributed generation (DG) connected to the IESO-controlled grid can be conceived of as an alternative source of generation (rather than reduction in demand) and as such does not reduce required transmission/distribution facilities for supplying load to the area in question. At the present time, there is one DG in place that started its operation in February 2009 with generating capacity of about 110 kW. There are also about 24 DG applications in the Woodstock area but it is difficult at the present time to predict how many will be built and when they will be built.

- c) As detailed above, the reduction in load due to CDM and distributed generation is calculated as a proportion of the provincial target using the ratio of study area peak to that of the province. Consequently, the amount of CDM and distributed generation used for the study area as a percentage of load is similar to that of other areas in the province.

**Ontario Energy Board (Board Staff) INTERROGATORY #8 List 1**

**Interrogatory**

**Cost of New Facilities**

**Reference:** Exhibit B, Tab 4, Schedule 2, page 2, lines 2-14  
Exhibit B, Tab 4, Schedule 3, page 3, lines 11-14

**Preamble:** It is noted in the pre-filed evidence that the estimated cost for the proposed line work is \$14.89 million. In addition to the line construction costs, \$5.8 million of telecommunications work is needed to incorporate the proposed transmission facilities on to the grid.

**Questions/Requests:**

- a) Is the \$5.8 million telecommunications upgrade typical for the installation or rebuild of 4 km of double circuit 230 kV line and if this is the case, please provide examples along with the associated telecommunications costs for similar upgrades that Hydro One has carried out.
- b) The cost estimate provided by Hydro One in the EB-2006-0013 proceeding (Line Connection to Hurontario Switching Station) for a similar double circuit transmission line was \$8.425 million for 4.2 km and the Hurontario line was slightly longer, had the added complexity of a 401 highway crossing as well as the requirement for specialized line structures near the airport. Why are the projected costs for the proposed Woodstock line approximately 75% more expensive than for the Hurontario line?

**Response**

- a) The work covered by the tele-protection upgrade is to bring the tele-protection facilities up to NPCC standards for the path between Buchanan TS, Karn TS and Burlington TS and hence is not directly related to the need for Commerce Way TS. As such, the costs for the telecommunication upgrade are not typical compared with those on other projects. A review of the existing facilities after the predecessor Woodstock Area Transmission Reinforcement project was committed showed that additional work was required along this path to comply with NPCC requirements. Because some of the work does involve Commerce Way TS, Hydro One decided from a work efficiency point-of-view to bundle the work with the Commerce Way project but fund it from the pool rather than through customer contributions.



1        However, the portion that is required specifically to incorporate Commerce Way TS  
2        is funded by the customers.

- 3
- 4        b) The Woodstock line is going through the city and has shorter spans resulting in a  
5        greater number of towers than the line built for Hurontario. The right of way is also  
6        significantly narrower (65 foot right-of-way compared to 120 foot for Hurontario).  
7        As a result some towers are almost on the shoulder of the road and work crews will  
8        require traffic control and barriers at many of the tower sites. The Hurontario line in  
9        contrast was mostly in the “clear” for crews to work around. There were also only 3  
10       road crossings including the Hwy 410 crossing presenting no traffic problems on the  
11       Hurontario project.

12

13       The Woodstock line utilizes steel poles and foundations which are costlier when  
14       compared to the lattice towers for the Hurontario line.

15

16       The Woodstock line has an allowance for property acquisition whereas the Hurontario  
17       line did not require property acquisition.

18

19       The Woodstock line right-of-way has existing underground utilities to deal with whereas  
20       the Hurontario line did not require any additional work to deal with underground utilities.  
21

**Ontario Energy Board (Board Staff) INTERROGATORY #9 List 1**

**Interrogatory**

**Cost Sharing for Transmission Station Facilities**

**Reference:** Exhibit B, Tab 4, Schedule 3, page 2, lines 28-30  
Exhibit B, Tab 4, Schedule 3, page 3, lines 1-5  
Exhibit B, Tab 4, Schedule 3, page 4, lines 12-17

**Preamble:** It is stated in the pre-filed evidence that the costs assigned to customers for cost responsibility purposes in relation to the Transformation Connection pool are \$23.8 million for a new 115-27.6 kV 50/83 MVA DESN Transformer Station at Commerce Way TS. This amount includes \$0.6 million of telecommunications costs assigned to customers for the installation of protection and control (P&C) systems at Commerce Way TS and for P&C modifications at nearby stations. The remaining \$0.3M of telecommunications costs is assigned to the pool as this is to accommodate future design for 230 kV facilities.

The pre-filed evidence further states that a 25-year discounted cash flow analysis for the Transformation Connection facilities is provided and the results indicate that the forecast incremental revenues are expected to be insufficient to pay for the incremental capital and operating costs and therefore a customer capital contribution will be required from Hydro One Distribution (\$8.5M) and Woodstock Hydro (\$4.1M).

**Questions/Requests:**

- a) Please provide details of the cost sharing arrangement for the construction of the last five Hydro One transformer stations (LDC or high voltage customer connection) and show that these were consistent with the method suggested for this project.
- b) If there were differences in the cost sharing arrangement for the construction of the last five Hydro One transformer stations, please state the reason(s) for those differences.
- c) Is Woodstock Hydro in agreement with this cost sharing proposal?

1 **Response**

- 2
- 3 a) Hydro One is applying for leave to construct the transmission line. Information on
- 4 the transformation elements of the project is provided only to add context to the
- 5 application. Hydro One has consistently applied the methodology set out by Section
- 6 6.3.15 of the Transmission System Code when determining shared capital
- 7 contribution requirements for transformer stations where there are multiple load
- 8 customers.
- 9
- 10 b) N/A. There were no differences in cost-sharing arrangements on previous projects,
- 11 based on consistent application of the Code as noted in the response to part a).
- 12
- 13 c) Yes.

**Ontario Energy Board (Board Staff) INTERROGATORY #10 List 1**

**Interrogatory**

**Cost Sharing for Transmission Facilities**

**Reference:** Exhibit B, Tab 4, Schedule 3, page 2, lines 1-24  
Exhibit B, Tab 4, Schedule 3, page 4, lines 3-8

**Preamble:** It is stated in the pre-filed evidence that in determining the capital contribution regarding the line connection assets, the costs assigned to customers for cost responsibility purposes are \$0.7 million. This amount covers the cost of constructing a line tap from the B8W ROW to the new station. The remaining \$14.2 million of line connection costs covers the cost of rebuilding the existing end-of-life line to 230 kV standards and installing a second 230 kV circuit from Woodstock TS to the tap to Commerce Way TS. Hydro One states that this additional work (rebuilding and upgrading the line) has been identified and planned for and is being done to replace an existing line and to provide a second circuit for the reliability of the transmission system and to meet future load growth needs. Additionally, of the \$6.4 million in telecommunications work required for the project, which is primarily network pool-related, \$5.8 million has been identified by Hydro One to upgrade telecommunication for the transmission system reliability needs (e.g. the 230 kV upgrade).

It is further stated that the costs related to the replacement of the existing line and upgrade to 230 kV standards have been assigned to the pool for cost responsibility purposes and excluded from the project's economic analysis, in accordance with the exceptions provided in Sections 6.3.6 and 6.7.2 of the *Transmission System Code*.

**Questions/Requests:**

- a) Since the line section of B8W between Woodstock TS and Commerce Way TS and the tap section from the main B8W corridor into Commerce Way TS (0.1 km) are both connection assets why are they treated differently in the application with respect to customer capital contributions?
- b) Why has the applicant stated that the line section of B8W between Woodstock TS and Commerce Way TS will require no customer capital contribution when the Board stated in its decision in the Brampton West Transmission Facilities upgrade (EB-2007-0013) that:

It is clear that, taken as a whole, section 6.3 of the Code (including the sections referenced above) provides that in

almost all cases where the transmitter is enhancing its equipment to accommodate the needs of a line connection, a capital contribution will be required from the customer or customers who benefit from the enhancement..... To be clear, where planning involves joint studies between Hydro One and one or more distributor(s) to meet different timing and supply needs such as load growth, the Board views such plans as customer-driven, where a capital contribution would be required.<sup>1</sup>

**Response**

**a)** The B8W line from Woodstock TS to the proposed Commerce Way TS is an existing line that was built in 1910. Originally this was a double circuit 115 kV line and one of the circuits was removed in 1994 because it was unsafe for the line structures to support the weight of two circuits. This line also can not support the weight of a larger conductor. As per TSC Section 6.7.2, a transmitter is required to replace and or rebuild existing facilities when they require replacement at no cost to customers. In addition to the replacement work, Hydro One has also proposed to build this line to 230 kV standards because the long term plan for the area is to extend the 230 kV system from Ingersoll, to the west of Woodstock, to Burlington in the east. Consistent with this plan, the 115 kV line upgrade from Karn TS to Woodstock TS on the west side of the town of Woodstock is being upgraded to 230 kV standards under the Woodstock Area Transmission Reinforcement (WATR) approved by the Board in EB-2007-0027. The 230 kV design up to Commerce Way TS will facilitate the future conversion of the remainder of the system in the most cost-effective and efficient manner. For all of the reasons above, Hydro One believes that it is fair and reasonable to provide a credit to customers for the costs of replacing the existing line B8W and upgrading it to 230kV standards, when assigning costs for cost responsibility purposes.

In contrast, the tap section from the line to the proposed Commerce Way TS is a new line section required to connect the new TS. All of the costs of the tap (\$0.7M) are assigned to customers for cost responsibility purposes, consistent with the Code.

**b)** See response in (a).

**c)** Hydro One agrees that a capital contribution should be paid by the two distributors creating the increased demand, and that their capital contribution should be

---

<sup>1</sup> OEB Proceeding EB 2007 0013; Decision and Order; pages 4 and 5

1 commensurate with their contribution to the increase in demand. However, the  
2 allocation of costs is limited to the cost of the line tap of \$0.7 million for the reasons  
3 mentioned in part (a) above.  
4

**Ontario Energy Board (Board Staff) INTERROGATORY #11 List 1**

**Interrogatory**

**Aboriginal Peoples Consultations**

**Reference:** Exhibit B, Tab 6, Schedule 5, page 3, lines 3-9

**Preamble:** Hydro One states in the pre-filed evidence that it consulted with the Ontario Ministry of Aboriginal Affairs, and Indian and Northern Affairs Canada, and has provided information on this project to the following Aboriginal Peoples: Chippewas of the Thames First Nation; Oneida Nation of the Thames; Munsee-Delaware Nation; Mississaugas of the New Credit First Nation; Chippewas of Kettle and Stoney Point; Walpole Island First Nation; and Six Nations of the Grand River. Hydro One stated that it will continue consultation and discussions with Aboriginal Peoples relating to this project and will work to resolve any issues or concerns that may arise.

**Questions/Requests:** Please provide a status update with regard to the following;

- a) Identify all of the Aboriginal groups that have been contacted in respect of this application.
- b) Indicate:
  - I. how the Aboriginal groups were identified;
  - II. when and how contact was first initiated;
  - III. the individuals within the Aboriginal group who were contacted, and their position in or representative role for the group; and
  - IV. a listing, including the dates, of any phone calls, meetings and other means that may have been used to provide information about the project and to hear any interests or concerns of Aboriginal groups with respect to the project.
- c) Provide relevant information gathered from or about the Aboriginal groups as to their treaty rights, any filed and outstanding claims or litigation concerning their treaty rights, treaty land entitlement or aboriginal title or rights, which may potentially be impacted by the project.
- d) Provide any relevant written documentation regarding consultations, such as notes or minutes that may have been taken at meetings or from phone calls, or letters received from, or sent to, Aboriginal groups.

- 1 e) Identify any specific issues or concerns that have been raised by Aboriginal  
2 groups in respect of the project and, where applicable, how those issues or  
3 concerns will be mitigated or accommodated.  
4
- 5 f) Explain whether any of the concerns raised by Aboriginal groups with respect to  
6 the applied-for project have been discussed with any government department or  
7 agencies, and if so, identify when contacts were made and who was contacted.  
8
- 9 g) If any of the Aboriginal groups who were contacted either support the application  
10 or have no objection to the project proceeding, identify those groups and provide  
11 any available written documentation of their position. Also, indicate whether their  
12 positions are final or preliminary or conditional in nature and if so, under what  
13 circumstances those positions may change.  
14
- 15 h) Provide details of any know Crown involvement in consultations with Aboriginal  
16 groups in respect of the applied-for project.  
17  
18

19 [Response](#)  
20

- 21 a) Hydro One originally identified in the Application the following Aboriginal Groups  
22 who may have an interest in, or may be potentially affected by, the Project. All of  
23 these groups have been contacted.  
24
- 25 Chippewas of the Thames First Nation, Oneida Nation of the Thames, Munsee-  
26 Delaware Nation, Mississaugas of the New Credit First Nation, Chippewas of  
27 Kettle Stoney Point, Walpole Island First Nation, Bkejwanong Territory, and Six  
28 Nations of the Grand River.  
29
- 30 b) Prior to submitting the Application, Hydro One undertook a due diligence exercise to  
31 determine which Aboriginal Groups should be included in its engagement program  
32 relating to the Project; the fundamental question posed was who may have an interest  
33 in, or may be potentially affected by, the Project? In addition to its own internal  
34 work, Hydro One also received information from Indian and Northern Affairs Canada  
35 (INAC) and Ministry of Aboriginal Affairs (MAA). Hydro One received a response  
36 from the INAC – Specific Claims Branch with respect to any specific claims in the  
37 area of interest, along with a list of First Nations communities in the general vicinity  
38 of the Project. Please see Attachment A for all INAC and MAA consultation  
39 comment documentation.  
40



Hydro One sent correspondence to all of the identified Aboriginal Groups providing them with information regarding the Project and inviting them to express any concerns or issues they might have directly to Hydro One.

Attachment B lists all of Hydro One's correspondence with First Nations groups, including the Notice of Commencement, Notice of PIC #2 and Notice of Completion, Contacts with Aboriginal Communities and any responses received from these communities. The contact was first initiated by Notice of Commencement letters to Chippewas of the Thames First Nation, Six Nations of the Grand River, Oneida Nation of the Thames, Munsee-Delaware Nation, Mississaugas of the New Credit First Nation on May 5, 2008, and to Chippewas of Kettle Stoney Point and Walpole Island First Nation on May 21, 2008.

The Chiefs and associated First Nations communities who were contacted during the consultation process are shown in the table below:

Contact Name	Organization
Chief Vaughan Albert Sr.	Chippewas of the Thames First Nation
Chief William Montour	Six Nation of the Grand River Territory
Chief Randall Phillips	Oneida Nation of the Thames
Chief Patrick Waddilove	Munsee-Delaware Nation
Chief Bryan Laforme	Mississaugas of the New Credit First Nation
Chief Thomas Bressette <sup>1</sup>	Chippewas of Kettle and Stoney Point
Chief Joseph Gilbert	Walpole Island First Nation, Bkejwanong Territory

Note: 1. Chippewas of Kettle and Stoney Point indicated via fax on March 12, 2009, that all correspondence should be sent to Chief Elizabeth Cloud. The subject FaxBack Form is attached in Attachment B.

- c) As noted in response (b) to this interrogatory, Hydro One has been in communication with applicable government ministries and agencies with respect to the identification of Aboriginal Groups whose interests may be potentially affected by the Project and in respect of the consultation process.

Consultations with the identified First Nation Groups were subsequently initiated by Hydro One. Notice of Project Commencement, Invitation to Public Information Centre, and Notice of Project Completion were sent out. Telephone contact with the

1 First Nations was made in May and June 2008. No Specific concerns regarding their  
2 treaty rights were raised at that time.

3  
4 For example, Six Nations of the Grand River responded to Hydro One by letter on  
5 May 29, 2008 to indicate that:

6  
7 “Six Nations’ cultural, sustenance and other rights are  
8 recognized by the Province of Ontario by way of the 1701  
9 Treaty of Ft. Albany. Six Nations’ rights and interests in  
10 relation to lands six miles either side of the Grand River (the  
11 Grand River Tract) was also confirmed by way of treaty,  
12 through the Haldimand Proclamation of October 25, 1784. This  
13 study area is within the 1710 Treaty Territory”.

14  
15 Six Nations Council also stated in this letter that “at this time we have no further  
16 comments with regards to this project”.

- 17  
18 d) Attachment B is a list of all the Hydro One’s notifications, including Notice of  
19 Commencement, Notice of PIC and Notice of Completion, to all the identified First  
20 Nation groups, along with a record of Project Aboriginal Correspondence, responses  
21 from some First Nations.

22  
23 Hydro One is committed to continuing to engage with the Aboriginal Groups to  
24 continue to share Project-related information, understand and, where possible,  
25 address their issues and concerns regarding the Project and to continue to engage  
26 with them both before the OEB hearing process and after any approvals are issued  
27 and throughout the construction and operation phases of the Project.

- 28  
29 e) No Specific concerns regarding their treaty rights were raised by First Nation Groups  
30 at this time. As noted in the response to part c), Six Nations of the Grand River wrote  
31 back in a letter that “*as this time we have no further comments with regards to this*  
32 *project*”. Telephone contacts with the First Nations were made in May and June 2008.  
33 No Specific concerns regarding their treaty rights were raised at that time.

34  
35 Hydro One welcomes the involvement of any of the other Aboriginal communities  
36 and groups having an interest in the Project.

- 37  
38 f) No concerns were raised and as such no government department or agency was  
39 contacted regarding concerns raised by Aboriginal Groups. Hydro One has kept  
40 INAC and MAA informed on the progress of the project.  
41

- 1 g) At this time, Hydro One is not aware of Aboriginal Groups who expressly support or  
2 have no objection to the Project. All the identified First Nations have not expressed  
3 any specific concerns regarding this project.  
4
- 5 h) Please refer to Question (f) regarding the Crown's involvement. Hydro One is not  
6 aware of activities that the Crown may have undertaken in respect of its duty to  
7 consult.  
8

**Attachment A DETAILS OF INAC and MAA CONSULTATION**

<b>SENES Project Reference #</b>	34624-Woodstock East Transformer Station and Associated Transmission Line Upgrades Class EA		
<b>SENES Contact Person</b>	Rosanna Barbuzzi – Environmental Planner		
<b>Contact's Name</b>	Kevin Clement Director	<b>Date of Contact</b>	December 26, 2007
<b>Organization</b>	Indian and Northern Affairs Canada Comprehensive Claims Branch		
<b>Contact's Address</b>	10 Wellington Street Gatineau, QC K1A 0H4		
<b>Contact's Phone</b>	819-994-7134		
<b>Contact Mode</b>	<input type="checkbox"/> Phone <input type="checkbox"/> E-mail <input type="checkbox"/> In person <input checked="" type="checkbox"/> Mail		
<b>Summary of Discussion</b>	<p>Contact was made to determine whether any active Aboriginal comprehensive claims occur in the general vicinity of the proposed project area that SENES should be aware of.</p> <p><u>INAC response letter dated January 25, 2008</u></p> <p>I am responding to your request for information sent to the Comprehensive Claims Branch, by mail, on December 26, 2007.</p> <p>We can confirm that there are no comprehensive claims in Woodstock, Ontario. We cannot make any comments regarding potential or future claims, or claims filed under other departmental policies. This includes claims under Canada's Specific Claims Policy or legal action by the First Nation against the Crown. For more information, I suggest you contact the Director General of Specific Claims Branch at (819) 994-2323 and the Director General of Litigation Management and Resolution Branch at (819) 997-3582.</p> <p>INAC- Comprehensive Claims Branch does not have any specific interest in the project and would request to be taken out of the mailing list.</p>		

<b>SENES Project Reference #</b>	34624-Woodstock East Transformer Station and Associated Transmission Line Upgrades Class EA		
<b>SENES Contact Person</b>	Rosanna Barbuzzi – Environmental Planner		
<b>Contact's Name</b>	Surinder Singh Gill Policy Advisor	<b>Date of Contact</b>	February 29, 2008
<b>Organization</b>	Ministry of Aboriginal Affairs Policy and Relationships Branch		
<b>Contact's Address</b>	720, Bay Street, 4th Floor Toronto, ON M5G 2K1		
<b>Contact's Phone</b>	416-314-6781		
<b>Contact Mode</b>	<input type="checkbox"/> Phone <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> In person <input checked="" type="checkbox"/> Mail		
<b>Summary of Discussion</b>	<p>Contact was made to determine if there are any issues involving First Nations in the general vicinity of the proposed project area that SENES should be aware of.</p> <p><u>MAA response letter dated April 7, 2008</u></p> <p>Thank you for your inquiry dated February 29, 2008, regarding the above noted project.</p> <p>The responsibilities of the Ministry of Aboriginal Affairs (MAA) include conducting land claim and related negotiations on behalf of the Province. MAA can provide you with information about land claims that have been submitted to the Ministry, are currently in active negotiations, or are in the process of implementing a settlement agreement. We can also advise as to whether there is any litigation with an Aboriginal community that may be impacted by your project.</p> <p>You should also be aware that many First Nations either have or assert rights to hunt and fish in their traditional territories. These territories often include lands and waters outside of a First Nation's reserve. As well, in some instances project work may impact archaeological and burial sites. First Nations with an interest in such archaeological sites may extend beyond those First Nations in the nearest vicinity of the proposed project.</p> <p>With respect to your project, we have reviewed the brief materials you have provided, and can advise that this project appears not to be located in an area where First Nations may have existing or asserted rights that could be impacted by your project.</p> <p>MAA is not the approval or regulatory authority for your project. You should consider the information provided in this letter in light of the statutes and guidance materials provided by the appropriate approval or regulatory authority for consultation requirements with Aboriginal communities on a</p>		

<i>SENES Project Reference #</i>	<i>34624-Woodstock East Transformer Station and Associated Transmission Line Upgrades Class EA</i>
<i>SENES Contact Person</i>	<i>Rosanna Barbuzzi – Environmental Planner</i>
	<p>project such as you are proposing. Should you have questions on the process please contact the appropriate ministry.</p> <p>The Government of Canada sometimes receives claims that Ontario does not receive, or with which Ontario does not become involved. For information about possible claims in the area, MAA recommends the proponent contact the following federal contacts:</p> <p>Mr. Fred Hosking Senior Claims Analyst Ontario Research Team Indian and Northern Affairs Canada 10 Wellington St. Gatineau, QC K1A 0H4 Tel: (819) 953-1940 Fax: (819) 997-9873</p> <p>Mr. Kevin Clement A/Director, Financial Issues and Cost-Sharing Indian and Northern Affairs Canada 10 Wellington St. 8th Floor Gatineau, QC K1A 0H4 Tel: (819) 997-8369 Fax: (819) 997-9147</p> <p>For federal information on litigation contact:</p> <p>Jonathan Allen Litigation Team Leader for Ontario 1430-25 Eddy Street Gatineau, QC K1A 0H4 Tel: (819) 956-3181 Fax: (819) 953-6143</p> <p><u>MAA response email dated April 14, 2008</u></p> <p>Please note MAA E.A inquiries has been assigned to my colleague Francois Lachance, forward your correspondence to him. Francois.Lachance@ontario.ca, phone # 416-326-4754.</p> <p>Thanks for your cooperation</p>

<b>SENES Project Reference #</b>	34624-Woodstock East Transformer Station and Associated Transmission Line Upgrades Class EA		
<b>SENES Contact Person</b>	Rosanna Barbuzzi – Environmental Planner		
<b>Contact's Name</b>	Franklin Roy Director	<b>Date of Contact</b>	February 29, 2008
<b>Organization</b>	Indian and Northern Affairs Canada Litigation Management and Resolution Branch		
<b>Contact's Address</b>	25 Eddy, Room 1430 10 Wellington Street Gatineau, QC K1A 0H4		
<b>Contact's Phone</b>	819-997-3582		
<b>Contact Mode</b>	<input type="checkbox"/> Phone <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> In person <input checked="" type="checkbox"/> Mail		
<b>Summary of Discussion</b>	<p>Contact was made to determine if there is litigation involving First Nations in the general vicinity of the proposed project area that SENES should be aware of.</p> <p><u>INAC response letter dated May 7, 2008</u></p> <p>We can advise that our inventory includes active litigation cases in the vicinity of this property. They are entitled <i>Chippewas of Kettle and Stoney Point v. Her Majesty the Queen in Right of Canada as represented by Attorney General of Canada and Minister for Department of Indian Affairs and Northern Development, Corporation of Township of Bosonquet, Paul Hendrick Wi1mink, Joanne Cecilia Wilmink, Joyce Van Geel, Martha Jean Morrison, Paul L. Winger, Agnes J. Winger, Leon Edward, Sf. John, Margaret J. St. John, Daniel Albert Vincent Rusciolelli, Rachel Emma Rusciolelli, Domenico Abrogio, Maurina Ambrogio, William Walter Ellison, Gail Ann Ellison, National Trust Company, Joseph John Huybers, Joanne Maria Huybers, Karl Huetter, Inge Huetter, Annie Jeanette Dunston, Grace Marie Lasenby, Jack Harold Lasenby, Amin Mussani (in Trust), Donald Bruce Gray, Juliaan Alfons D'Hanyns, Simonne Clara D'Hanyns, Brian Bernard McGowan, Margaret Ann McGowan, Mary Lou LaPratte, Christopher Thomas Allan King, William John Harkness, Frances Curry Harkness, Barbara L. St. Louis, Eugene M. Sorin, Bank of Montreal, Frank Thoren, Cynthia Marie Thoren, The Toronto-Dominion Bank, Daniel Leo Bosnak, Ellen J. Bosnak, Edward G. Paschalidis, Veronika E. Paschalidis, Jack Malcolm Galbraith, Margaret Irene Galbraith, John Archibald Pedden, Dorothy Harriet Pedden Gloria Ann Redmond, Carolyn Jane Sheprak, Diana Mary Susan Sheprak, Lotte Nachtnebel, Josef Szela, Erika Szela, Roy Francis Giroux, Madonna Giroux, Derek Leslie Barker, Nan Francis Barker, George C. Wallis, Janet Wallis, Bernardus Josephus Veel, Hendrika Petronella Veel, St. Willibrord Community Credit Union Limited, David A. Voll, Diane M. Voll, CIBC Mortgage Corporation, Pierre Conrad Morisset, 876709 Ontario Ltd., Ontario Superior Court of Justice, filed in London,</i></p>		

	<p><i>Ontario, court file #C22725; and</i></p> <p><i>Walpole Island First Nation, Bkejwanong Territory v. Attorney General of Canada, Her Majesty the Queen in Right of Ontario, Ontario Superior Court of Justice, filed in Toronto, court file #00-CV-189329.</i></p> <p>I am unable to comment with respect to the possible effect of these claims as the cases have not yet been adjudicated and any statement regarding the outcome of the litigation would be speculative at this point. It is recommended that you consult legal counsel as to the effect these actions could have on the lands you are concerned with.</p> <p>If you are interested in further details about the claims, copies of the pleadings can be obtained from the Courts for a fee; please contact the appropriate Court Registry Office and make reference to the court file numbers listed above.</p> <p>We cannot make any comments regarding claims filed under other departmental policies. For information on any claims you should also contact Fred Hosking of the Specific Claims Branch at (819) 953-1940 to inquire about any Specific Claims, and Guy Morin of the Comprehensive Claims Branch at (819) 956-0325 to inquire about any current Comprehensive Claims.</p> <p>If you have any further questions please do not hesitate to contact me at (819) 994-1947.</p>
--	--



<b>SENES Project Reference #</b>	34624-Woodstock East Transformer Station and Associated Transmission Line Upgrades Class EA		
<b>SENES Contact Person</b>	Rosanna Barbuzzi – Environmental Planner		
<b>Contact's Name</b>	Fred Hosking Senior Claims Analyst	<b>Date of Contact</b>	February 29, 2008 & March 3, 2008
<b>Organization</b>	Indian and Northern Affairs Canada Claims Branch - Specific Claims		
<b>Contact's Address</b>	Room 1310 10 Wellington Street Gatineau, QC K1A 0H4		
<b>Contact's Phone</b>	819-953-1940		
<b>Contact Mode</b>	<input checked="" type="checkbox"/> Phone <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> In person <input type="checkbox"/> Mail		
<b>Summary of Discussion</b>	<p>Contact was made to determine whether any active Aboriginal specific claims occur in the general vicinity of the proposed project area that SENES should be aware of.</p> <p><u>INAC response email dated March 12, 2008</u></p> <p>I am writing in response to your e-mail of February 29, 2008, and our subsequent telephone conversation of March 3, 2008, inquiring as to whether there are any First Nation specific claims in the area of the above noted project.</p> <p>We have conducted a brief search of our records and determined that the following First Nations have submitted specific claims in the area of interest.</p> <p>Chippewas of the Thames First Nation RR 1, MUNCEY ON N0L 1Y0 (519) 289-5555</p> <p>Oneida Nation of the Thames RR 2, SOUTHWOLD ON N0L 2G0 (519) 652-3244</p> <p>Munsee-Delaware Nation RR 1, MUNCEY ON N0L 1Y0 (519) 289-5396</p> <p>Mississaugas of the New Credit First Nation 2789 MISSISSAUGA ROAD R.R. #6 HAGERSVILLE ON N0A 1H0 (905) 768-1133</p> <p>It may be of interest to you that the following First Nation is in the general vicinity of your project. You may wish to contact this First Nation to advise them of your intentions. They can be reached at:</p> <p>Six Nations of the Grand River PO BOX 5000 OHSWEKEN ON N0A 1M0 (519) 445-2201</p>		

<i>SENES Project Reference #</i>	<i>34624-Woodstock East Transformer Station and Associated Transmission Line Upgrades Class EA</i>
<i>SENES Contact Person</i>	<i>Rosanna Barbuzzi – Environmental Planner</i>
	<p>For more information, you may wish to consult a "Public Information Status Report" on all claims which have been submitted to date. This information is available to the public on the Indian and Northern Affairs Canada (INAC) website and can be found at <a href="http://www.aincinac.gc.ca/ps/clm/pis_e.html">http://www.aincinac.gc.ca/ps/clm/pis_e.html</a>.</p> <p>It should be noted that the reports available on the INAC website are updated quarterly and therefore, you may want to check this site at regular intervals for updates. In accordance with legislative requirements, confidential information has not been disclosed.</p> <p>Please rest assured that it is the policy of the Government of Canada as expressed in Outstanding Business: A Native Claims Policy that "in any settlement of specific native claims the government will take third party interests into account. As a general rule, the government will not accept any settlement which will lead to third parties being dispossessed."</p> <p>We can only speak directly to claims filed under the Specific Claims Policy in the Province of Ontario. We cannot make any comments regarding potential or future claims, or claims filed under other departmental policies. This includes claims under Canada's Comprehensive Claims Policy or legal action by a First Nation against the Crown. You may wish to contact INAC's Comprehensive Claims Branch at (819) 994-7521 or its Litigation Management and Resolution Branch at (819) 934-2185 directly for more information. In addition, you may wish to consult the unit responsible for Special Claims at (819) 994-6453.</p> <p>To the best of our knowledge, the information we have provided you is current and up-to-date. However, this information may not be exhaustive with regard to your needs and you may wish to consider seeking information from other government and private sources (including Aboriginal groups). In addition, please note that Canada does not act as a representative for any Aboriginal group for the purpose of any claim or the purpose of consultation.</p> <p>I hope this information will be of assistance to you. I trust that this satisfactorily addresses your concerns. If you wish to discuss this matter further please contact me at (819) 953-1940.</p>

**Hydro One Networks Inc.**  
483 Bay Street  
TCT14, North Tower  
Toronto, Ontario, M5G 2P5  
Brian.mccormick@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051

Filed: August 18, 2009  
EB-2009-0079  
Exhibit C-1-11  
Attachment B



**Brian McCormick**  
Manager, Environmental Services and Approvals

May 5, 2008

Chief William Montour  
Six Nations of the Grand River  
PO Box 5000  
Ohsweken N0A 1M0  
Ontario

**RE: Woodstock East Transformer Station Class Environmental Assessment**

Dear Chief Montour,

This letter is to inform you that Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (Class EA) for a proposed 50/83 MVA, 115-27.6 kV transformer station (TS) and a transmission line rebuild in the Woodstock area. This project will address increased electricity demand resulting from strong economic growth and development in the community, and ensure a reliable supply of power for future demand. The Indian and Northern Affairs Canada has indicated that you may have an interest in this project.

The proposed undertaking involves the construction of a new 115-27.6 kV TS (re-connectable to 230/27.6 kV). This station will be connected to the existing 115 kV line running east-west along Parkinson Road in the City of Woodstock, and Towerline Road in Norwich Township. The study area for the proposed facilities is shown on the attached map.

To accommodate the new TS, the existing 115 kV single-circuit line needs to be rebuilt to a double-circuit line. The rebuild would include the line section on the existing right of way from Woodstock TS to the vicinity of the Toyota tap line. The line would continue to operate at 115 kV but be built to 230 kV design standards for possible future conversion to 230 kV. The construction of the new line will occur on the existing right of way. Hydro One will need to acquire property for the new TS as well as property rights for the line tap to the new double-circuit line.

The need for the proposed facilities was identified by Hydro One Distribution and Woodstock Hydro. Woodstock TS has reached its capacity to reliably supply customers in the growing area of Woodstock. Also, the expected load growth and "spin-off" industries in the area resulting from the Toyota Woodstock plant are expected to compound the loading issues at Woodstock TS. Technical studies have concluded that the proposed new TS is required in order to maintain a reliable supply for existing and future electricity demand. The new station will supply both Woodstock Hydro and Hydro One Distribution customers.

The proposed undertaking is subject to provincial Environmental Assessment (EA) Act approval in accordance with the Class EA for Minor Transmission Facilities. Also, the transmission line rebuild is

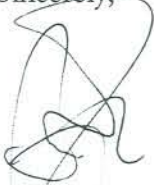
subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). The Class EA will involve the identification and comparative evaluation of alternate sites to select a preferred site for the TS. Contingent on the outcome of the Class EA and the OEB approval processes, the new facilities could be placed in service as early as June 2010.

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives and government agencies.

A Public Information Centre (PIC) will be held in the upcoming months. The PIC will provide interested parties the opportunity to learn more about the project and the preferred site for the TS, provide their input on project options, and discuss any issues or concerns with our project team. We welcome your participation at the PIC, and we will advise you of the details of the PIC via an invitation letter closer to the date.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would also be pleased to arrange a meeting to discuss this project further. Yu San Ong will be following up with your Band Office to discuss this further. In the meantime, if you have any questions regarding this project please feel free to contact me at 416-345-6597 or Yu San Ong at 416-345-5031.

Sincerely,



Brian McCormick  
Manager, Environmental Services & Approvals

cc:

Lee Anne Cameron, Director, Aboriginal Affairs

Rosella Fazio, Regulatory Approvals Project Manager, Asset Management

attachments:

Study Area Map

Fax Back Form



**Hydro One Networks Inc.**  
483 Bay Street  
TCT14, North Tower  
Toronto, Ontario, M5G 2P5  
Brian.mccormick@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**  
Manager, Environmental Services and Approvals

May 5, 2008

Chief Vaughan Albert Sr.  
Chippewas of the Thames  
RR 1  
Muncey N0L 1Y0  
Ontario

**RE: Woodstock East Transformer Station Class Environmental Assessment**

Dear Chief Albert Sr.,

This letter is to inform you that Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (Class EA) for a proposed 50/83 MVA, 115-27.6 kV transformer station (TS) and a transmission line rebuild in the Woodstock area. This project will address increased electricity demand resulting from strong economic growth and development in the community, and ensure a reliable supply of power for future demand. The Indian and Northern Affairs Canada has indicated that you may have an interest in this project.

The proposed undertaking involves the construction of a new 115-27.6 kV TS (re-connectable to 230/27.6 kV). This station will be connected to the existing 115 kV line running east-west along Parkinson Road in the City of Woodstock, and Towerline Road in Norwich Township. The study area for the proposed facilities is shown on the attached map.

To accommodate the new TS, the existing 115 kV single-circuit line needs to be rebuilt to a double-circuit line. The rebuild would include the line section on the existing right of way from Woodstock TS to the vicinity of the Toyota tap line. The line would continue to operate at 115 kV but be built to 230 kV design standards for possible future conversion to 230 kV. The construction of the new line will occur on the existing right of way. Hydro One will need to acquire property for the new TS as well as property rights for the line tap to the new double-circuit line.

The need for the proposed facilities was identified by Hydro One Distribution and Woodstock Hydro. Woodstock TS has reached its capacity to reliably supply customers in the growing area of Woodstock. Also, the expected load growth and "spin-off" industries in the area resulting from the Toyota Woodstock plant are expected to compound the loading issues at Woodstock TS. Technical studies have concluded that the proposed new TS is required in order to maintain a reliable supply for existing and future electricity demand. The new station will supply both Woodstock Hydro and Hydro One Distribution customers.

The proposed undertaking is subject to provincial Environmental Assessment (EA) Act approval in accordance with the Class EA for Minor Transmission Facilities. Also, the transmission line rebuild is

subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). The Class EA will involve the identification and comparative evaluation of alternate sites to select a preferred site for the TS. Contingent on the outcome of the Class EA and the OEB approval processes, the new facilities could be placed in service as early as June 2010.

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives and government agencies.

A Public Information Centre (PIC) will be held in the upcoming months. The PIC will provide interested parties the opportunity to learn more about the project and the preferred site for the TS, provide their input on project options, and discuss any issues or concerns with our project team. We welcome your participation at the PIC, and we will advise you of the details of the PIC via an invitation letter closer to the date.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would also be pleased to arrange a meeting to discuss this project further. Yu San Ong will be following up with your Band Office to discuss this further. In the meantime, if you have any questions regarding this project please feel free to contact me at 416-345-6597 or Yu San Ong at 416-345-5031.

Sincerely,



Brian McCormick  
Manager, Environmental Services & Approvals

cc:

Lee Anne Cameron, Director, Aboriginal Affairs

Rosella Fazio, Regulatory Approvals Project Manager, Asset Management

attachments:

Study Area Map

Fax Back Form



**Hydro One Networks Inc.**  
483 Bay Street  
TCT14, North Tower  
Toronto, Ontario, M5G 2P5  
Brian.mccormick@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**  
Manager, Environmental Services and Approvals

May 5, 2008

Chief Patrick Waddilove  
Munsee-Delaware Nation  
RR 1  
Muncey NOL 1Y0  
Ontario

**RE: Woodstock East Transformer Station Class Environmental Assessment**

Dear Chief Waddilove,

This letter is to inform you that Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (Class EA) for a proposed 50/83 MVA, 115-27.6 kV transformer station (TS) and a transmission line rebuild in the Woodstock area. This project will address increased electricity demand resulting from strong economic growth and development in the community, and ensure a reliable supply of power for future demand. The Indian and Northern Affairs Canada has indicated that you may have an interest in this project.

The proposed undertaking involves the construction of a new 115-27.6 kV TS (re-connectable to 230/27.6 kV). This station will be connected to the existing 115 kV line running east-west along Parkinson Road in the City of Woodstock, and Towerline Road in Norwich Township. The study area for the proposed facilities is shown on the attached map.

To accommodate the new TS, the existing 115 kV single-circuit line needs to be rebuilt to a double-circuit line. The rebuild would include the line section on the existing right of way from Woodstock TS to the vicinity of the Toyota tap line. The line would continue to operate at 115 kV but be built to 230 kV design standards for possible future conversion to 230 kV. The construction of the new line will occur on the existing right of way. Hydro One will need to acquire property for the new TS as well as property rights for the line tap to the new double-circuit line.

The need for the proposed facilities was identified by Hydro One Distribution and Woodstock Hydro. Woodstock TS has reached its capacity to reliably supply customers in the growing area of Woodstock. Also, the expected load growth and "spin-off" industries in the area resulting from the Toyota Woodstock plant are expected to compound the loading issues at Woodstock TS. Technical studies have concluded that the proposed new TS is required in order to maintain a reliable supply for existing and future electricity demand. The new station will supply both Woodstock Hydro and Hydro One Distribution customers.

The proposed undertaking is subject to provincial Environmental Assessment (EA) Act approval in accordance with the Class EA for Minor Transmission Facilities. Also, the transmission line rebuild is

subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). The Class EA will involve the identification and comparative evaluation of alternate sites to select a preferred site for the TS. Contingent on the outcome of the Class EA and the OEB approval processes, the new facilities could be placed in service as early as June 2010.

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives and government agencies.

A Public Information Centre (PIC) will be held in the upcoming months. The PIC will provide interested parties the opportunity to learn more about the project and the preferred site for the TS, provide their input on project options, and discuss any issues or concerns with our project team. We welcome your participation at the PIC, and we will advise you of the details of the PIC via an invitation letter closer to the date.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would also be pleased to arrange a meeting to discuss this project further. Yu San Ong will be following up with your Band Office to discuss this further. In the meantime, if you have any questions regarding this project please feel free to contact me at 416-345-6597 or Yu San Ong at 416-345-5031.

Sincerely,



Brian McCormick  
Manager, Environmental Services & Approvals

cc:

Lee Anne Cameron, Director, Aboriginal Affairs

Rosella Fazio, Regulatory Approvals Project Manager, Asset Management

attachments:

Study Area Map

Fax Back Form



**Hydro One Networks Inc.**  
483 Bay Street  
TCT14, North Tower  
Toronto, Ontario, M5G 2P5  
Brian.mccormick@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**  
Manager, Environmental Services and Approvals

May 5, 2008

Chief Randall Philips  
Oneida Nation of the Thames  
2212 Elm Avenue  
Southwold N0L 2G0  
Ontario

**RE: Woodstock East Transformer Station Class Environmental Assessment**

Dear Chief Philips,

This letter is to inform you that Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (Class EA) for a proposed 50/83 MVA, 115-27.6 kV transformer station (TS) and a transmission line rebuild in the Woodstock area. This project will address increased electricity demand resulting from strong economic growth and development in the community, and ensure a reliable supply of power for future demand. The Indian and Northern Affairs Canada has indicated that you may have an interest in this project.

The proposed undertaking involves the construction of a new 115-27.6 kV TS (re-connectable to 230/27.6 kV). This station will be connected to the existing 115 kV line running east-west along Parkinson Road in the City of Woodstock, and Towerline Road in Norwich Township. The study area for the proposed facilities is shown on the attached map.

To accommodate the new TS, the existing 115 kV single-circuit line needs to be rebuilt to a double-circuit line. The rebuild would include the line section on the existing right of way from Woodstock TS to the vicinity of the Toyota tap line. The line would continue to operate at 115 kV but be built to 230 kV design standards for possible future conversion to 230 kV. The construction of the new line will occur on the existing right of way. Hydro One will need to acquire property for the new TS as well as property rights for the line tap to the new double-circuit line.

The need for the proposed facilities was identified by Hydro One Distribution and Woodstock Hydro. Woodstock TS has reached its capacity to reliably supply customers in the growing area of Woodstock. Also, the expected load growth and "spin-off" industries in the area resulting from the Toyota Woodstock plant are expected to compound the loading issues at Woodstock TS. Technical studies have concluded that the proposed new TS is required in order to maintain a reliable supply for existing and future electricity demand. The new station will supply both Woodstock Hydro and Hydro One Distribution customers.

The proposed undertaking is subject to provincial Environmental Assessment (EA) Act approval in accordance with the Class EA for Minor Transmission Facilities. Also, the transmission line rebuild is

subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). The Class EA will involve the identification and comparative evaluation of alternate sites to select a preferred site for the TS. Contingent on the outcome of the Class EA and the OEB approval processes, the new facilities could be placed in service as early as June 2010.

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives and government agencies.

A Public Information Centre (PIC) will be held in the upcoming months. The PIC will provide interested parties the opportunity to learn more about the project and the preferred site for the TS, provide their input on project options, and discuss any issues or concerns with our project team. We welcome your participation at the PIC, and we will advise you of the details of the PIC via an invitation letter closer to the date.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would also be pleased to arrange a meeting to discuss this project further. Yu San Ong will be following up with your Band Office to discuss this further. In the meantime, if you have any questions regarding this project please feel free to contact me at 416-345-6597 or Yu San Ong at 416-345-5031.

Sincerely,



Brian McCormick  
Manager, Environmental Services & Approvals

cc:

Lee Anne Cameron, Director, Aboriginal Affairs

Rosella Fazio, Regulatory Approvals Project Manager, Asset Management

attachments:

Study Area Map

Fax Back Form



**Hydro One Networks Inc.**  
483 Bay Street  
TCT14, North Tower  
Toronto, Ontario, M5G 2P5  
Brian.mccormick@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**  
Manager, Environmental Services and Approvals

May 5, 2008

Chief Brian LaForme  
Mississaugas of the New Credit  
2789 Mississauga Road R.R # 6  
Hagersville N0A 1H0  
Ontario

**RE: Woodstock East Transformer Station Class Environmental Assessment**

Dear Chief LaForme,

This letter is to inform you that Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (Class EA) for a proposed 50/83 MVA, 115-27.6 kV transformer station (TS) and a transmission line rebuild in the Woodstock area. This project will address increased electricity demand resulting from strong economic growth and development in the community, and ensure a reliable supply of power for future demand. The Indian and Northern Affairs Canada has indicated that you may have an interest in this project.

The proposed undertaking involves the construction of a new 115-27.6 kV TS (re-connectable to 230/27.6 kV). This station will be connected to the existing 115 kV line running east-west along Parkinson Road in the City of Woodstock, and Towerline Road in Norwich Township. The study area for the proposed facilities is shown on the attached map.

To accommodate the new TS, the existing 115 kV single-circuit line needs to be rebuilt to a double-circuit line. The rebuild would include the line section on the existing right of way from Woodstock TS to the vicinity of the Toyota tap line. The line would continue to operate at 115 kV but be built to 230 kV design standards for possible future conversion to 230 kV. The construction of the new line will occur on the existing right of way. Hydro One will need to acquire property for the new TS as well as property rights for the line tap to the new double-circuit line.

The need for the proposed facilities was identified by Hydro One Distribution and Woodstock Hydro. Woodstock TS has reached its capacity to reliably supply customers in the growing area of Woodstock. Also, the expected load growth and "spin-off" industries in the area resulting from the Toyota Woodstock plant are expected to compound the loading issues at Woodstock TS. Technical studies have concluded that the proposed new TS is required in order to maintain a reliable supply for existing and future electricity demand. The new station will supply both Woodstock Hydro and Hydro One Distribution customers.

The proposed undertaking is subject to provincial Environmental Assessment (EA) Act approval in accordance with the Class EA for Minor Transmission Facilities. Also, the transmission line rebuild is

subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). The Class EA will involve the identification and comparative evaluation of alternate sites to select a preferred site for the TS. Contingent on the outcome of the Class EA and the OEB approval processes, the new facilities could be placed in service as early as June 2010.

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives and government agencies.

A Public Information Centre (PIC) will be held in the upcoming months. The PIC will provide interested parties the opportunity to learn more about the project and the preferred site for the TS, provide their input on project options, and discuss any issues or concerns with our project team. We welcome your participation at the PIC, and we will advise you of the details of the PIC via an invitation letter closer to the date.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would also be pleased to arrange a meeting to discuss this project further. Yu San Ong will be following up with your Band Office to discuss this further. In the meantime, if you have any questions regarding this project please feel free to contact me at 416-345-6597 or Yu San Ong at 416-345-5031.

Sincerely,



Brian McCormick  
Manager, Environmental Services & Approvals

cc:

Lee Anne Cameron, Director, Aboriginal Affairs

Rosella Fazio, Regulatory Approvals Project Manager, Asset Management

attachments:

Study Area Map

Fax Back Form

**Hydro One Networks Inc.**

483 Bay Street  
TCT14, North Tower  
Toronto, Ontario, M5G 2P5  
Brian.mccormick@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**

Manager, Environmental Services and Approvals

May 21, 2008

Chief Thomas Bressette  
Chippewas of Kettle and Stoney Point  
53 Indian Lane  
R. R #2  
Forest, Ontario  
N0N 1J0

**RE: Woodstock East Transformer Station Class Environmental Assessment**

Dear Chief Bressette ,

This letter is to inform you that Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (Class EA) for a proposed 50/83 MVA, 115-27.6 kV transformer station (TS) and a transmission line rebuild in the Woodstock area. This project will address increased electricity demand resulting from strong economic growth and development in the community, and ensure a reliable supply of power for future demand. The Indian and Northern Affairs Canada has indicated that you may have an interest in this project.

The proposed undertaking involves the construction of a new 115-27.6 kV TS (re-connectable to 230/27.6 kV). This station will be connected to the existing 115 kV line running east-west along Parkinson Road in the City of Woodstock, and Towerline Road in Norwich Township. The study area for the proposed facilities is shown on the attached map.

To accommodate the new TS, the existing 115 kV single-circuit line needs to be rebuilt to a double-circuit line. The rebuild would include the line section on the existing right of way from Woodstock TS to the vicinity of the Toyota tap line. The line would continue to operate at 115 kV but be built to 230 kV design standards for possible future conversion to 230 kV. The construction of the new line will occur on the existing right of way. Hydro One will need to acquire property for the new TS as well as property rights for the line tap to the new double-circuit line.

The need for the proposed facilities was identified by Hydro One Distribution and Woodstock Hydro. Woodstock TS has reached its capacity to reliably supply customers in the growing area of Woodstock. Also, the expected load growth and "spin-off" industries in the area resulting from the Toyota Woodstock plant are expected to compound the loading issues at Woodstock TS. Technical studies have concluded that the proposed new TS is required in order to maintain a reliable supply for existing and future electricity demand. The new station will supply both Woodstock Hydro and Hydro One Distribution customers.



The proposed undertaking is subject to provincial Environmental Assessment (EA) Act approval in accordance with the Class EA for Minor Transmission Facilities. Also, the transmission line rebuild is subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). The Class EA will involve the identification and comparative evaluation of alternate sites to select a preferred site for the TS. Contingent on the outcome of the Class EA and the OEB approval processes, the new facilities could be placed in service as early as June 2010.

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives and government agencies.

A Public Information Centre (PIC) will be held in the upcoming months. The PIC will provide interested parties the opportunity to learn more about the project and the preferred site for the TS, provide their input on project options, and discuss any issues or concerns with our project team. We welcome your participation at the PIC, and we will advise you of the details of the PIC via an invitation letter closer to the date.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would also be pleased to arrange a meeting to discuss this project further. Yu San Ong will be following up with your Band Office to discuss this further. In the meantime, if you have any questions regarding this project please feel free to contact me at 416-345-6597 or Yu San Ong at 416-345-5031.

Sincerely,



*for* Brian McCormick  
Manager, Environmental Services & Approvals

cc:  
Lee Anne Cameron, Director, Aboriginal Affairs

Rosella Fazio, Regulatory Approvals Project Manager, Asset Management

attachments:  
Study Area Map  
Fax Back Form

**Hydro One Networks Inc.**

483 Bay Street  
TCT14, North Tower  
Toronto, Ontario, M5G 2P5  
Brian.mccormick@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**

Manager, Environmental Services and Approvals

May 21, 2008

Chief Joseph Gilbert  
Walpole Island First Nation  
R. R #3  
Wallaceburg, Ontario  
N8A 4K9

**RE: Woodstock East Transformer Station Class Environmental Assessment**

Dear Chief Gilbert ,

This letter is to inform you that Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (Class EA) for a proposed 50/83 MVA, 115-27.6 kV transformer station (TS) and a transmission line rebuild in the Woodstock area. This project will address increased electricity demand resulting from strong economic growth and development in the community, and ensure a reliable supply of power for future demand. The Indian and Northern Affairs Canada has indicated that you may have an interest in this project.

The proposed undertaking involves the construction of a new 115-27.6 kV TS (re-connectable to 230/27.6 kV). This station will be connected to the existing 115 kV line running east-west along Parkinson Road in the City of Woodstock, and Towerline Road in Norwich Township. The study area for the proposed facilities is shown on the attached map.

To accommodate the new TS, the existing 115 kV single-circuit line needs to be rebuilt to a double-circuit line. The rebuild would include the line section on the existing right of way from Woodstock TS to the vicinity of the Toyota tap line. The line would continue to operate at 115 kV but be built to 230 kV design standards for possible future conversion to 230 kV. The construction of the new line will occur on the existing right of way. Hydro One will need to acquire property for the new TS as well as property rights for the line tap to the new double-circuit line.

The need for the proposed facilities was identified by Hydro One Distribution and Woodstock Hydro. Woodstock TS has reached its capacity to reliably supply customers in the growing area of Woodstock. Also, the expected load growth and "spin-off" industries in the area resulting from the Toyota Woodstock plant are expected to compound the loading issues at Woodstock TS. Technical studies have concluded that the proposed new TS is required in order to maintain a reliable supply for existing and future electricity demand. The new station will supply both Woodstock Hydro and Hydro One Distribution customers.

The proposed undertaking is subject to provincial Environmental Assessment (EA) Act approval in accordance with the Class EA for Minor Transmission Facilities. Also, the transmission line rebuild is subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). The Class EA will involve the identification and comparative evaluation of alternate sites to select a preferred site for the TS. Contingent on the outcome of the Class EA and the OEB approval processes, the new facilities could be placed in service as early as June 2010.

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives and government agencies.

A Public Information Centre (PIC) will be held in the upcoming months. The PIC will provide interested parties the opportunity to learn more about the project and the preferred site for the TS, provide their input on project options, and discuss any issues or concerns with our project team. We welcome your participation at the PIC, and we will advise you of the details of the PIC via an invitation letter closer to the date.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would also be pleased to arrange a meeting to discuss this project further. Yu San Ong will be following up with your Band Office to discuss this further. In the meantime, if you have any questions regarding this project please feel free to contact me at 416-345-6597 or Yu San Ong at 416-345-5031.

Sincerely,



*for* Brian McCormick  
Manager, Environmental Services & Approvals

cc:  
Lee Anne Cameron, Director, Aboriginal Affairs

Rosella Fazio, Regulatory Approvals Project Manager, Asset Management

attachments:  
Study Area Map  
Fax Back Form



Hydro One Networks Inc.  
483 Bay Street  
TCT12, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



Brian McCormick  
Manager, Environmental Services and Approvals

Chief Vaughan Albert Sr.  
Chippewas of the Thames First Nation  
RR 1,  
Muncey, ON N0L 1Y0

March 9, 2009

**RE: Class EA - 30 Day Review Period for the Draft ESR  
Commerce Way TS & the Associated Transmission Line Upgrades**

Dear Chief Vaughan Albert Sr.:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed construction of a new 115/27.6 kV transformer station (TS) at Commerce Way in Woodstock ON and the associated transmission line upgrades. This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One's preferred location for the new Commerce Way TS is within the Commerce Way Business Park in the City of Woodstock, on the south side of Parkinson Road, just west of the Township of Norwich. This location was selected based on results from public meetings and input from regulatory and municipal officials. The associated transmission line upgrades would be completed in two phases. The first phase involves the replacement of the existing towers with new 115 kV structures which is designed to be operated at 230 kV in the future when higher voltage supply is required, between Woodstock TS and Commerce Way TS. The upgraded transmission line will continue to operate at 115 kV. The second phase involves the transmission line upgrade between Commerce Way TS and Toyota Junction in the future. Construction of the TS and Phase 1 of the transmission line upgrade is planned to begin in February 2010 and the new facilities are planned to be in-service at the end of 2011.

A copy of the Draft ESR for the project and a CD are enclosed for your review. This is also available on the Hydro One project website: [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects).

Hard copies of this report are available at the following locations (see enclosed newspaper ad):

- Woodstock Public Library
- Township of Norwich Clerk's Department
- Woodstock Hydro
- City of Woodstock

The 30-day public and agency review period required under the Class EA begins March 12, 2009 and ends April 13, 2009. If there are substantive issues or effects identified for this project, the Class EA process includes provision for a potential "bump up" to an Individual EA. Should issues arise that require an Individual EA, Hydro One would make the necessary revisions and submit the project as an Individual EA or cancel the project.

If you have any questions or concerns regarding this project, please feel free to contact me at 416-345-6597 or Yu San Ong, Environmental Planner, at 416-345-5031.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Brian J. McCormick', with a stylized, looping flourish at the end.

Brian J. McCormick, Manager  
Environmental Services & Approvals

Hydro One Networks Inc.  
483 Bay Street  
TCT12, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



Brian McCormick  
Manager, Environmental Services and Approvals

Chief William Montur  
Six Nation of the Grand River Territory  
PO Box 5000,  
Ohsweken, ON N0A 1M0

March 9, 2009

**RE: Class EA - 30 Day Review Period for the Draft ESR  
Commerce Way TS & the Associated Transmission Line Upgrades**

Dear Chief William Montur:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed construction of a new 115/27.6 kV transformer station (TS) at Commerce Way in Woodstock ON and the associated transmission line upgrades. This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One's preferred location for the new Commerce Way TS is within the Commerce Way Business Park in the City of Woodstock, on the south side of Parkinson Road, just west of the Township of Norwich. This location was selected based on results from public meetings and input from regulatory and municipal officials. The associated transmission line upgrades would be completed in two phases. The first phase involves the replacement of the existing towers with new 115 kV structures which is designed to be operated at 230 kV in the future when higher voltage supply is required, between Woodstock TS and Commerce Way TS. The upgraded transmission line will continue to operate at 115 kV. The second phase involves the transmission line upgrade between Commerce Way TS and Toyota Junction in the future. Construction of the TS and Phase 1 of the transmission line upgrade is planned to begin in February 2010 and the new facilities are planned to be in-service at the end of 2011.

A copy of the Draft ESR for the project and a CD are enclosed for your review. This is also available on the Hydro One project website: [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects).

Hard copies of this report are available at the following locations (see enclosed newspaper ad):

- Woodstock Public Library
- Township of Norwich Clerk's Department
- Woodstock Hydro
- City of Woodstock

The 30-day public and agency review period required under the Class EA begins March 12, 2009 and ends April 13, 2009. If there are substantive issues or effects identified for this project, the Class EA process includes provision for a potential "bump up" to an Individual EA. Should issues arise that require an Individual EA, Hydro One would make the necessary revisions and submit the project as an Individual EA or cancel the project.

If you have any questions or concerns regarding this project, please feel free to contact me at 416-345-6597 or Yu San Ong, Environmental Planner, at 416-345-5031.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Brian J. McCormick', with a stylized, looping flourish at the end.

Brian J. McCormick, Manager  
Environmental Services & Approvals

Hydro One Networks Inc.  
483 Bay Street  
TCT12, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



Brian McCormick  
Manager, Environmental Services and Approvals

Chief Randall Phillips  
Oneida Nation of the Thames  
2212 Elm Avenue,  
Southwold, ON N0L 2G0

March 9, 2009

**RE: Class EA - 30 Day Review Period for the Draft ESR  
Commerce Way TS & the Associated Transmission Line Upgrades**

Dear Chief Randall Phillips:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed construction of a new 115/27.6 kV transformer station (TS) at Commerce Way in Woodstock ON and the associated transmission line upgrades. This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One's preferred location for the new Commerce Way TS is within the Commerce Way Business Park in the City of Woodstock, on the south side of Parkinson Road, just west of the Township of Norwich. This location was selected based on results from public meetings and input from regulatory and municipal officials. The associated transmission line upgrades would be completed in two phases. The first phase involves the replacement of the existing towers with new 115 kV structures which is designed to be operated at 230 kV in the future when higher voltage supply is required, between Woodstock TS and Commerce Way TS. The upgraded transmission line will continue to operate at 115 kV. The second phase involves the transmission line upgrade between Commerce Way TS and Toyota Junction in the future. Construction of the TS and Phase 1 of the transmission line upgrade is planned to begin in February 2010 and the new facilities are planned to be in-service at the end of 2011.

A copy of the Draft ESR for the project and a CD are enclosed for your review. This is also available on the Hydro One project website: [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects).

Hard copies of this report are available at the following locations (see enclosed newspaper ad):

- Woodstock Public Library
- Township of Norwich Clerk's Department
- Woodstock Hydro
- City of Woodstock

The 30-day public and agency review period required under the Class EA begins March 12, 2009 and ends April 13, 2009. If there are substantive issues or effects identified for this project, the Class EA process includes provision for a potential "bump up" to an Individual EA. Should issues arise that require an Individual EA, Hydro One would make the necessary revisions and submit the project as an Individual EA or cancel the project.

If you have any questions or concerns regarding this project, please feel free to contact me at 416-345-6597 or Yu San Ong, Environmental Planner, at 416-345-5031.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brian J. McCormick". The signature is stylized with loops and a large "B".

Brian J. McCormick, Manager  
Environmental Services & Approvals

Hydro One Networks Inc.  
483 Bay Street  
TCT12, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



Brian McCormick  
Manager, Environmental Services and Approvals

Chief Patrick Waddilove  
Munsee-Delaware Nation  
R. R. #1,  
Muncey, ON N0L 1Y0

March 9, 2009

**RE: Class EA - 30 Day Review Period for the Draft ESR  
Commerce Way TS & the Associated Transmission Line Upgrades**

Dear Chief Patrick Waddilove:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed construction of a new 115/27.6 kV transformer station (TS) at Commerce Way in Woodstock ON and the associated transmission line upgrades. This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One's preferred location for the new Commerce Way TS is within the Commerce Way Business Park in the City of Woodstock, on the south side of Parkinson Road, just west of the Township of Norwich. This location was selected based on results from public meetings and input from regulatory and municipal officials. The associated transmission line upgrades would be completed in two phases. The first phase involves the replacement of the existing towers with new 115 kV structures which is designed to be operated at 230 kV in the future when higher voltage supply is required, between Woodstock TS and Commerce Way TS. The upgraded transmission line will continue to operate at 115 kV. The second phase involves the transmission line upgrade between Commerce Way TS and Toyota Junction in the future. Construction of the TS and Phase 1 of the transmission line upgrade is planned to begin in February 2010 and the new facilities are planned to be in-service at the end of 2011.

A copy of the Draft ESR for the project and a CD are enclosed for your review. This is also available on the Hydro One project website: [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects).

Hard copies of this report are available at the following locations (see enclosed newspaper ad):

- Woodstock Public Library
- Township of Norwich Clerk's Department
- Woodstock Hydro
- City of Woodstock

The 30-day public and agency review period required under the Class EA begins March 12, 2009 and ends April 13, 2009. If there are substantive issues or effects identified for this project, the Class EA process includes provision for a potential "bump up" to an Individual EA. Should issues arise that require an Individual EA, Hydro One would make the necessary revisions and submit the project as an Individual EA or cancel the project.

Hydro One Networks Inc.  
483 Bay Street  
TCT12, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



Brian McCormick  
Manager, Environmental Services and Approvals

Chief Thomas Bressette  
Chippewas of Kettle and Stoney Point  
53 Indian Lane, R. R.#2  
Forest, ON NON 1JO

March 9, 2009

**RE: Class EA - 30 Day Review Period for the Draft ESR  
Commerce Way TS & the Associated Transmission Line Upgrades**

Dear Chief Thomas Bressette:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed construction of a new 115/27.6 kV transformer station (TS) at Commerce Way in Woodstock ON and the associated transmission line upgrades. This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One's preferred location for the new Commerce Way TS is within the Commerce Way Business Park in the City of Woodstock, on the south side of Parkinson Road, just west of the Township of Norwich. This location was selected based on results from public meetings and input from regulatory and municipal officials. The associated transmission line upgrades would be completed in two phases. The first phase involves the replacement of the existing towers with new 115 kV structures which is designed to be operated at 230 kV in the future when higher voltage supply is required, between Woodstock TS and Commerce Way TS. The upgraded transmission line will continue to operate at 115 kV. The second phase involves the transmission line upgrade between Commerce Way TS and Toyota Junction in the future. Construction of the TS and Phase 1 of the transmission line upgrade is planned to begin in February 2010 and the new facilities are planned to be in-service at the end of 2011.

A copy of the Draft ESR for the project and a CD are enclosed for your review. This is also available on the Hydro One project website: [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects).

Hard copies of this report are available at the following locations (see enclosed newspaper ad):

- Woodstock Public Library
- Township of Norwich Clerk's Department
- Woodstock Hydro
- City of Woodstock

The 30-day public and agency review period required under the Class EA begins March 12, 2009 and ends April 13, 2009. If there are substantive issues or effects identified for this project, the Class EA process includes provision for a potential "bump up" to an Individual EA. Should issues arise that require an Individual EA, Hydro One would make the necessary revisions and submit the project as an Individual EA or cancel the project.



If you have any questions or concerns regarding this project, please feel free to contact me at 416-345-6597 or Yu San Ong, Environmental Planner, at 416-345-5031.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brian J. McCormick". The signature is stylized with loops and a long horizontal stroke at the end.

Brian J. McCormick, Manager  
Environmental Services & Approvals

If you have any questions or concerns regarding this project, please feel free to contact me at 416-345-6597 or Yu San Ong, Environmental Planner, at 416-345-5031.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brian J. McCormick". The signature is stylized with loops and a large "B".

Brian J. McCormick, Manager  
Environmental Services & Approvals

Hydro One Networks Inc.  
483 Bay Street  
TCT12, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**  
Manager, Environmental Services and Approvals

Chief Bryan LaForme  
Mississaugas of the New Credit First Nation  
2789 Mississauga Road, R.R. #6  
Hagersville, ON N0A 1H0

March 9, 2009

**RE: Class EA - 30 Day Review Period for the Draft ESR  
Commerce Way TS & the Associated Transmission Line Upgrades**

Dear Chief Bryan LaForme:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed construction of a new 115/27.6 kV transformer station (TS) at Commerce Way in Woodstock ON and the associated transmission line upgrades. This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One's preferred location for the new Commerce Way TS is within the Commerce Way Business Park in the City of Woodstock, on the south side of Parkinson Road, just west of the Township of Norwich. This location was selected based on results from public meetings and input from regulatory and municipal officials. The associated transmission line upgrades would be completed in two phases. The first phase involves the replacement of the existing towers with new 115 kV structures which is designed to be operated at 230 kV in the future when higher voltage supply is required, between Woodstock TS and Commerce Way TS. The upgraded transmission line will continue to operate at 115 kV. The second phase involves the transmission line upgrade between Commerce Way TS and Toyota Junction in the future. Construction of the TS and Phase 1 of the transmission line upgrade is planned to begin in February 2010 and the new facilities are planned to be in-service at the end of 2011.

A copy of the Draft ESR for the project and a CD are enclosed for your review. This is also available on the Hydro One project website: [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects).

Hard copies of this report are available at the following locations (see enclosed newspaper ad):

- Woodstock Public Library
- Township of Norwich Clerk's Department
- Woodstock Hydro
- City of Woodstock

The 30-day public and agency review period required under the Class EA begins March 12, 2009 and ends April 13, 2009. If there are substantive issues or effects identified for this project, the Class EA process includes provision for a potential "bump up" to an Individual EA. Should issues arise that require an Individual EA, Hydro One would make the necessary revisions and submit the project as an Individual EA or cancel the project.

If you have any questions or concerns regarding this project, please feel free to contact me at 416-345-6597 or Yu San Ong, Environmental Planner, at 416-345-5031.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Brian J. McCormick', with a stylized, cursive script.

Brian J. McCormick, Manager  
Environmental Services & Approvals

Hydro One Networks Inc.  
483 Bay Street  
TCT12, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



Brian McCormick  
Manager, Environmental Services and Approvals

Chief Joseph Gilbert  
Walpole Island First Nation  
R.R. #3,  
Wallaceburg, ON N8A 4K9

March 9, 2009

**RE: Class EA - 30 Day Review Period for the Draft ESR  
Commerce Way TS & the Associated Transmission Line Upgrades**

Dear Chief Joseph Gilbert:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed construction of a new 115/27.6 kV transformer station (TS) at Commerce Way in Woodstock ON and the associated transmission line upgrades. This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One's preferred location for the new Commerce Way TS is within the Commerce Way Business Park in the City of Woodstock, on the south side of Parkinson Road, just west of the Township of Norwich. This location was selected based on results from public meetings and input from regulatory and municipal officials. The associated transmission line upgrades would be completed in two phases. The first phase involves the replacement of the existing towers with new 115 kV structures which is designed to be operated at 230 kV in the future when higher voltage supply is required, between Woodstock TS and Commerce Way TS. The upgraded transmission line will continue to operate at 115 kV. The second phase involves the transmission line upgrade between Commerce Way TS and Toyota Junction in the future. Construction of the TS and Phase 1 of the transmission line upgrade is planned to begin in February 2010 and the new facilities are planned to be in-service at the end of 2011.

A copy of the Draft ESR for the project and a CD are enclosed for your review. This is also available on the Hydro One project website: [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects).

Hard copies of this report are available at the following locations (see enclosed newspaper ad):

- Woodstock Public Library
- Township of Norwich Clerk's Department
- Woodstock Hydro
- City of Woodstock

The 30-day public and agency review period required under the Class EA begins March 12, 2009 and ends April 13, 2009. If there are substantive issues or effects identified for this project, the Class EA process includes provision for a potential "bump up" to an Individual EA. Should issues arise that require an Individual EA, Hydro One would make the necessary revisions and submit the project as an Individual EA or cancel the project.

If you have any questions or concerns regarding this project, please feel free to contact me at 416-345-6597 or Yu San Ong, Environmental Planner, at 416-345-5031.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Brian J. McCormick', with a stylized, cursive script.

Brian J. McCormick, Manager  
Environmental Services & Approvals

**Hydro One Networks Inc.**

483 Bay Street  
TCT13, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**

Manager, Environmental Services and Approvals

January 26, 2009

Chief Vaughan Albert Sr.,  
Chippewas of the Thames First Nation  
RR 1  
Muncey, ON N0L 1Y0

**RE: Commerce Way Transformer Station and associated Transmission Line Upgrades  
Public Information Centre #2**

Dear Chief Vaughan Albert Sr.:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform you of the preferred site for the proposed Transformer Station in the east end of the City of Woodstock. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects)

Sincerely,

A handwritten signature in black ink, appearing to be "BJM", written over a horizontal line.

for Brian J. McCormick, Manager  
Environmental Services & Approval

**Hydro One Networks Inc.**

483 Bay Street  
TCT13, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**

Manager, Environmental Services and Approvals

January 26, 2009

Chief William Montur,  
Six Nation of the Grand River Territory  
PO Box 5000  
Ohsweken, ON N0A 1M0

**RE: Commerce Way Transformer Station and associated Transmission Line Upgrades  
Public Information Centre #2**

Dear Chief William Montur:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform you of the preferred site for the proposed Transformer Station in the east end of the City of Woodstock. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects)

Sincerely,

A handwritten signature in black ink, appearing to read "B. McCormick".

for Brian J. McCormick, Manager  
Environmental Services & Approval



**Hydro One Networks Inc.**

483 Bay Street  
TCT13, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**

Manager, Environmental Services and Approvals

January 26, 2009

Chief Randall Phillips,  
Oneida Nation of the Thames  
2212 Elm Avenue  
Southwold, ON N0L 2G0

**RE: Commerce Way Transformer Station and associated Transmission Line Upgrades  
Public Information Centre #2**

Dear Chief Randall Phillips:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform you of the preferred site for the proposed Transformer Station in the east end of the City of Woodstock. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects)

Sincerely,

A handwritten signature in black ink, appearing to be "Brian J. McCormick".

for

Brian J. McCormick, Manager  
Environmental Services & Approval

**Hydro One Networks Inc.**

483 Bay Street  
TCT13, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**

Manager, Environmental Services and Approvals

January 26, 2009

Chief Patrick Waddilove,  
Munsee-Delaware Nation  
R. R. #1  
Muncey, ON N0L 1Y0

**RE: Commerce Way Transformer Station and associated Transmission Line Upgrades  
Public Information Centre #2**

Dear Chief Patrick Waddilove:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform you of the preferred site for the proposed Transformer Station in the east end of the City of Woodstock. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects)

Sincerely,

A handwritten signature in black ink, appearing to be "BJM", written over a horizontal line.

for Brian J. McCormick, Manager  
Environmental Services & Approval

**Hydro One Networks Inc.**

483 Bay Street  
TCT13, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**

Manager, Environmental Services and Approvals

January 26, 2009

Chief Bryan LaForme,  
Mississaugas of the New Credit First Nation  
2789 Mississauga Road  
R.R. #6  
Hagersville, ON N0A 1H0

**RE: Commerce Way Transformer Station and associated Transmission Line Upgrades  
Public Information Centre #2**

Dear Chief Bryan LaForme:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform you of the preferred site for the proposed Transformer Station in the east end of the City of Woodstock. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects)

Sincerely,

A handwritten signature in black ink, appearing to be "BJM", written over a horizontal line.

*for* Brian J. McCormick, Manager  
Environmental Services & Approval

**Hydro One Networks Inc.**

483 Bay Street  
TCT13, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597

Fax: 416-345-6919

Cell: 416-525-1051



**Brian McCormick**

Manager, Environmental Services and Approvals

January 26, 2009

Chief Thomas Bressette,  
Chippewas of Kettle and Stoney Point  
53 Indian Lane  
R. R.#2  
Forest, ON NON 1J0

**RE: Commerce Way Transformer Station and associated Transmission Line Upgrades  
Public Information Centre #2**

Dear Chief Thomas Bressette:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform you of the preferred site for the proposed Transformer Station in the east end of the City of Woodstock. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects)

Sincerely,

A handwritten signature in black ink, appearing to be "BJM", written over a horizontal line.

*for* Brian J. McCormick, Manager  
Environmental Services & Approval

**Hydro One Networks Inc.**

483 Bay Street  
TCT13, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



**Brian McCormick**

Manager, Environmental Services and Approvals

January 26, 2009

Chief Joseph Gilbert,  
Walpole Island First Nation  
R.R. #3  
Wallaceburg, ON N8A 4K9

**RE: Commerce Way Transformer Station and associated Transmission Line Upgrades  
Public Information Centre #2**

Dear Chief Joseph Gilbert:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform you of the preferred site for the proposed Transformer Station in the east end of the City of Woodstock. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects)

Sincerely,

A handwritten signature in black ink, appearing to be "BJM", written over a horizontal line.

for Brian J. McCormick, Manager  
Environmental Services & Approval



May 29, 2008

Brian McCormick  
Manager, Environmental Services & Approvals  
Hydro One Networks Inc.  
483 Bay Street  
TCT14, North Tower  
Toronto, Ontario M5G 2P5

Dear: Mr. McCormick

**Re: Woodstock East Transformer Station Class Environmental Assessment**

---

Six Nations of the Grand River (Six Nations) has received a notice regarding the Woodstock East Transformer Station Class Environmental Assessment.

Six Nations' cultural, sustenance and other rights are recognized by the Province of Ontario by way of the 1701 Treaty of Ft. Albany. Six Nations' rights and interests in relation to lands six miles either side of the Grand River (the Grand River Tract) was also confirmed by way of treaty, through the Haldimand Proclamation of October 25, 1784. This study area is within the 1701 Treaty Territory.

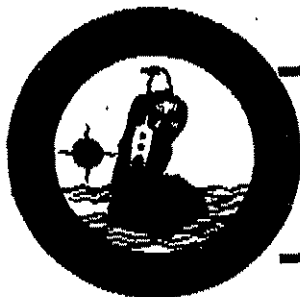
At this time we have no further comments with regards to this project. For further information, please do not hesitate to contact Lonny Bomberry at (519) 753-0665 ext. 12. We thank Hydro One Networks Inc. for providing us notification of this project.

Respectfully,

Chief William K. Montour  
Six Nations Lands and Resources Committee  
SIX NATIONS OF THE GRAND RIVER

CC: Mr. Lonny Bomberry, Director: Six Nations Lands and Resources  
Mr. Leroy Hill, Secretary: Confederacy Council of the Grand River  
Minister Michael Bryant, Ontario Ministry of Aboriginal Affairs  
Minister Chuck Strahl, Indian and Northern Affairs Canada

*This letter is without prejudice to the positions that Six Nations has and may take in respect to its claims and litigation in relation to the Six Nations Tract/ Haldimand Proclamation Lands.*



*Chippewas of Kettle & Stony Point First Nation*

6247 Indian Lane, R.R. #2  
Forest, Ontario, Canada N0N 1J0

**FACSIMILE**

TO: <i>Hydro One</i>	FAX #: <i>416-345-6919</i>
ATTENTION:	DATE:
FROM: <i>Kettle Stony Point</i>	# OF PAGES: <i>2, incl. cover</i>
REGARDING:	

*Note*  
*All (any) correspondence*  
*please send :*  
  
*Chief Elizabeth Cloud*  
  
*Thank You*

**This fax contains confidential information for use by the addressee(s) named above.**

**If you receive this fax in error, please notify us immediately. Thank you.**

Hydro One Networks Inc.  
483 Bay Street  
TCT12, North Tower  
Toronto, Ontario, M5G 2P5  
mccormick.bj@hydroone.com

Tel: 416-345-6597  
Fax: 416-345-6919  
Cell: 416-525-1051



Brian McCormick  
Manager, Environmental Services and Approvals

~~Chief Thomas Bressette~~  
Chippewas of Kettle and Stony Point  
53 Indian Lane, R. R.#2  
Forest, ON NON 1J0

March 9, 2009

Chief Liz Cloud  
- please change this.

**RE: Class EA - 30 Day Review Period for the Draft ESR  
Commerce Way TS & the Associated Transmission Line Upgrades**

Dear Chief Thomas Bressette:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed construction of a new 115/27.6 kV transformer station (TS) at Commerce Way in Woodstock ON and the associated transmission line upgrades. This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One's preferred location for the new Commerce Way TS is within the Commerce Way Business Park in the City of Woodstock, on the south side of Parkinson Road, just west of the Township of Norwich. This location was selected based on results from public meetings and input from regulatory and municipal officials. The associated transmission line upgrades would be completed in two phases. The first phase involves the replacement of the existing towers with new 115 kV structures which is designed to be operated at 230 kV in the future when higher voltage supply is required, between Woodstock TS and Commerce Way TS. The upgraded transmission line will continue to operate at 115 kV. The second phase involves the transmission line upgrade between Commerce Way TS and Toyota Junction in the future. Construction of the TS and Phase 1 of the transmission line upgrade is planned to begin in February 2010 and the new facilities are planned to be in-service at the end of 2011.

A copy of the Draft ESR for the project and a CD are enclosed for your review. This is also available on the Hydro One project website: [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects).

Hard copies of this report are available at the following locations (see enclosed newspaper ad):

- Woodstock Public Library
- Township of Norwich Clerk's Department
- Woodstock Hydro
- City of Woodstock

The 30-day public and agency review period required under the Class EA begins March 12, 2009 and ends April 13, 2009. If there are substantive issues or effects identified for this project, the Class EA process includes provision for a potential "bump up" to an Individual EA. Should issues arise that require an Individual EA, Hydro One would make the necessary revisions and submit the project as an Individual EA or cancel the project.



Contacts with Aboriginal Communities						
Project:	Need & Status of Project	Community	Notice of Commencement & other correspondence (signed by & date)	Fax-back/ contact (whom and date)	Follow-up (with whom and date)	Comments/ Concerns
Commerce Way TS & associated Line Upgrades	Load growth in the Woodstock area (TS for Woodstock Hydro)	Chippewas of the Thames	<ul style="list-style-type: none"> <li>• Notice of commencement: May 5 and May 21, 2008 (signed by Brian McCormick, Manager of Environmental Services &amp; Approval)</li> <li>• Notice of PIC #2: January 26, 2009 (signed by Brian McCormick, Manager of Environmental Services &amp; Approval)</li> <li>• Notice of Completion - Class EA 30 Day Review Period for the Draft ESR: on March 9, 2009 (signed by Brian McCormick, Manager of Environmental Services &amp; Approval)</li> </ul>	none	called June 3, 2008 at 4:40, and was asked to follow-up with Candice O'Deary the Chief's secretary. The Chief is out of town for a few days. She would probably be able to tell us the status of the notice. Candice' phone number is 519-289-5555 ext. 230 called June 6 at 11:10 and left a message on Candice's answering machine stating that I was following up on Woodstock East, Rodney TS, Essex and Norfolk.	
		Oneida Nation of the Thames		none	Called June 6, 2008 at 11:25 and left a message with Gloria Brown about planning projects in areas of their land claim. She said that neither Chief Randall Phillips or his secretary were in, but she would relay the message. The secretary is supposed to be in this afternoon.	
		Munsee-Delaware Nation		none	called June 6, 2008 at 11:20. Told Chief Waddilove I was following up on projects where they may have an interest or landclaim. Told him I would re-forward via e-mail and he said he would get back to us Monday. Sent the information on Essex and Vanessa June 6 and June 9 for woodstock and Rodney	
		Mississaugas of the New Credit First Nation		none		May 27 left v-mail with Chief re call and asked to phone back
		Six Nations of the Grand River Territory		none		Spoke to Chief's office May 27 and Land Use Office May 27 & 28. Takes 6 weeks minimum to respond. Should check after mid June. Letter dated May 29, 2008, was received.
		Walpole Island First Nation		none		
		Chippewas of Kettle Stoney Point		none		Fax dated March 12, 2009, regarding contact person change, was received.

**Ontario Energy Board (Board Staff) INTERROGATORY #12 List 1**

**Interrogatory**

**Other Agreements and Approvals**

**Reference:** Exhibit B, Tab 6, Schedule 1, page 1, lines 5-15

**Preamble:** The IESO has completed a System Impact Assessment for the proposed facilities under the IESO Connections Assessment and Approval process and has filed a final draft (April 12/09) of the document with the pre-filed evidence. In this document the IESO makes certain recommendations that are summarized on pages 2 and 3.

Hydro One has completed a Customer Impact Assessment in accordance with its Cost Connections procedure and Hydro One plans to file this document as soon as it is available. In the past when Hydro One provided these reports, it made recommendations so as to allow the successful implementation of the project in question and it is Board staff's expectation Hydro One will do the same with this project.

**Questions/Requests:**

- a) Does Hydro One agree with the recommendations made by the IESO with respect to the System Impact Assessment and does Hydro One commit to fully implementing these recommendations?
- b) Does Hydro One agree with the recommendations with respect to the Customer Impact Assessment and does Hydro One commit to fully implementing these recommendations as well as encouraging Woodstock Hydro and the local high voltage direct customers to fully implement any recommendations that are directed at them?

**Response**

**a)** Yes

**b)** Yes. The final CIA is included as an attachment to this response.



**Hydro One Networks Inc.**  
483 Bay Street  
Toronto, Ontario  
M5G 2P5

**CUSTOMER IMPACT ASSESSMENT**

**COMMERCE WAY TS**

**New 2 x 50/83 MVA, 115/27.6 kV Transformer Station**

Date: March 28, 2008

Revised: March 09, 2009

Issued by: **System Investment Division**  
**Hydro One Networks Inc.**

Prepared by:

A handwritten signature in black ink, appearing to read "cliff d v Rostami".

*for*  
Firoxi Rostami  
Assistant Network Management Engineer  
Transmission & Connections Planning  
Department  
Hydro One Networks Inc.

Reviewed by:

A handwritten signature in black ink, appearing to read "John Sabiston".

John Sabiston  
Transmission Planning Manager - West  
Transmission & Connections Planning  
Department  
Hydro One Networks Inc.

**Disclaimer**

This Customer Impact Assessment was prepared based on information available about the Commerce Way TS Plan. It is intended to highlight significant impacts, if any, to affected transmission customers early in the project development process and thus allow an opportunity for these parties to bring forward any concerns that they may have. Subsequent changes to the required modifications or the implementation plan may affect the impacts of the proposed connection identified in Customer Impact Assessment. The results of this Customer Impact Assessment are also subject to change to accommodate the requirements of the IESO and other regulatory or municipal authority requirements.

Hydro One shall not be liable to any third party which uses the results of the Customer Impact Assessment under any circumstances whatsoever for any indirect or consequential damages, loss of profit or revenues, business interruption losses, loss of contract or loss of goodwill, special damages, punitive or exemplary damages, whether any of the said liability, loss or damages arises in contract, tort or otherwise.

<b>1.0</b>	<b>INTRODUCTION</b>	<b>PG. 3</b>
1.1	Background	
1.2	Commerce Way TS Plan	
1.2.1	115 kV Line Work	
1.2.2	Station Work	
1.3	Customer Connections	
<b>2.0</b>	<b>METHODOLOGY &amp; CRITERIA</b>	<b>PG. 5</b>
2.1	Planning Criteria	
2.2	Study Assumptions	
2.3	Power System Analysis	
<b>3.0</b>	<b>ASSESSMENT OF HYDRO ONE NETWORKS SHORT CIRCUIT LEVELS AT CUSTOMER CONNECTION</b>	<b>PG. 5</b>
3.1	Present System with the Woodstock Area Transmission Reinforcement plan in service	
3.2	The Incorporation of Commerce Way TS	
3.3	Change in the Short Circuit levels	
<b>4.0</b>	<b>ASSESSMENT OF HYDRO ONE NETWORKS VOLTAGE PERFORMANCE AT CUSTOMER CONNECTIONS</b>	<b>PG. 8</b>
4.1	Pre-Contingency Voltages	
4.2	Post- Contingency Voltages	
<b>5.0</b>	<b>CONCLUSIONS AND RECOMMENDATIONS</b>	<b>PG.12</b>

## 1.0 INTRODUCTION

This Customer Impact Assessment (CIA) report is based on analysis conducted in March 2008. Since that time, a minor configuration change has been made to the Woodstock Area Transmission Reinforcement (WATR) plan. The connection circuits for Karn TS and Ingersoll TS have been changed to M31W and M32W from M32W and M33W. It is judged that this change will have no material impact to the results and conclusion reported herein. The report has not been revised to reflect this change.

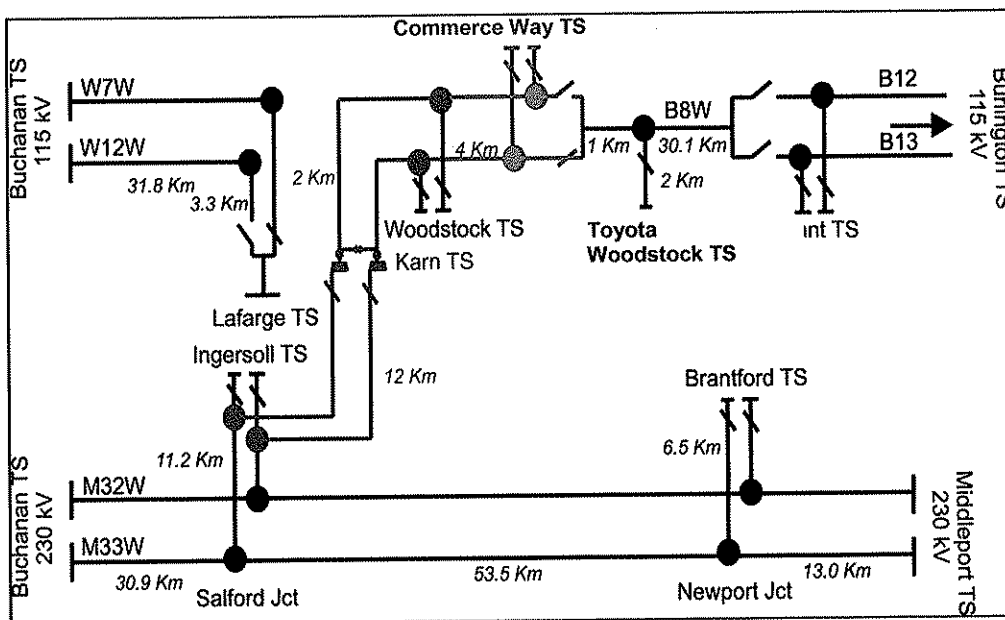
### 1.1 Background

Loads on the existing Woodstock TS has exceeded its station capability as defined by the 10-day summer LTR. The expected load growth and “spin-off” industries in the area resulting from the Toyota Woodstock plant is expected to compound the loading issues at Woodstock TS. In the short term, arrangements are being made for temporary load transfer of 8 MVA to Ingersoll TS to help relieve the problem.

Hydro One Distribution and Woodstock Hydro have given Hydro One Networks the go-ahead for a new transformer station called Commerce Way TS. It will consist of two transformers (115/ 27.6 kV, 50/83 MVA). The ultimate footprint for the station will accommodate 8 feeder positions and 2 capacitor banks. Four feeder breakers will be installed initially.

The new Commerce Way TS cannot be connected to the network before the WATR facilities which are expected to be in-service by 2011.

The preferred location of the new Commerce Way TS is west of the Toyota Woodstock tap, within close proximity of the Toyota Woodstock plant, as illustrated in Figure 1.



**Figure 1: Proposed Connection of Commerce Way TS**  
 — Facilities for WATR Project  
 — Facilities for Commerce Way TS

Hydro One is to carry out the Customer Impact Assessment (CIA) study in accordance to Section 6.4 in the Transmission System Code, the Market Rules (Chapter 4, Section 6) and the IESO's CAA process in order to assess the impacts of the proposed connection on existing customers on W7W/W12W, B8W and M32W/ M33W circuits.

## 1.2 Commerce Way TS Plan

### 1.2.1 Line Work

The 115kV line work includes rebuilding 4 km of the existing 115kV single circuit line B8W from Woodstock TS to Commerce Way TS to a double circuit 230kV design. The line will be operated at 115kV with an option to operate at 230kV in the future.

### 1.2.2 Station Work

A new Commerce Way Transformer Station will be built to accommodate 2x 50/83 MVA, 115/27.6 kV power transformers. The transformers will be equipped with underload tap-changers on the low-voltage side. The station is located on Commerce Way between Woodstock TS and Toyota Woodstock TS

## 1.3 Customer Connections

The purpose of this CIA is to assess the potential impacts on the existing transmission connected customer(s) in the vicinity of the proposed new facility at their connection point to the Hydro One system. The primary focus of this study was on customers supplied by stations directly connected to circuit M32W/ M33W. Table 1 summarizes the stations and customers associated with this assessment:

**Table 1: Customers Connected to M32W/M33W/W7W/W12W/B8W**

<b>Station</b>	<b>Customers</b>
Woodstock TS	Woodstock Hydro Hydro One Networks (Distribution)
Karn TS	none
Toyota Woodstock TS	Toyota Woodstock
Ingersoll TS	Hydro One Networks (Distribution) Erie Thames Hydro
Brantford TS	Brantford Hydro Hydro One Networks (Distribution)



## **2.0 METHODOLOGY & CRITERIA**

---

### **2.1 Planning Criteria**

To establish the adequacy of Hydro One transmission system incorporating the proposed facility, the following post-fault voltage decline criteria were applied:

- The loss of a single transmission circuit should not result in a voltage decline greater than 10% for pre-transformer tap-changer action (including station loads) and 10% post-transformer tap-changer action (5% for station loads) ;
- The loss of a double transmission circuit should not result in a voltage decline greater than 10% for pre-transformer tap-changer action (including station loads) and 10% post-transformer tap-changer action (5% for station loads) ;
- Voltages below 50 kV shall be maintained in accordance with CSA 235.

### **2.2 Study Assumptions**

- The 2009 summer load flow Base Case was used to model the impact of the Commerce Way TS plan.
- The Woodstock Area Transmission Reinforcement (WATR) facility was assumed to be in-service in this study.
- The most likely option was studied that with the preferred location of the Commerce Way TS west of Toyota Woodstock TS.
- New generators expected to be in service prior to May 2010, the original planned in service date of Commerce Way TS were modeled in this study. These include GTAA connected to the LV busses at Bramalea TS and Woodbridge TS, and Kruger Wind Farm connected to C23Z and C24Z, Lambton GS, Nanticoke GS, 6 Pickering GS units and 8 Bruce GS units.
- All loads are modeled as constant MVA loads except for immediately after contingencies. If the voltage change exceeds the limits, with respect to the area loads, immediately after a contingency, 50% of the real power load value was modeled as constant MVA; the other 50% of the real power was modeled as voltage dependent load; 100% of the reactive power was assumed as voltage dependent. After tap-changer action, a constant MVA power load model is assumed.

### **2.3 Power System Analysis**

Power system analysis is an integral part of the transmission and distribution planning process. It includes:

- a. Load Flow Studies: The PTI PSS/E AC load flow program was used to set up detailed base cases.
- b. Short-Circuit Studies: Short circuit studies are used to determine the impact of the new facilities to customers at their points of connection to Hydro One.

## **3.0 ASSESSMENT OF HYDRO ONE NETWORKS SHORT CIRCUIT LEVELS AT CUSTOMER CONNECTION**

Short-circuit studies were carried out to assess the fault contribution of the new transformer station facility to the neighboring area. This new station will support the Woodstock Area load growth and the load of Woodstock TS. The study area encompasses the 115kV W7W/W12W/B8W and the 230 kV M32W/M33W line taps and end stations. The following study assumptions were used for short circuit studies:

- Base case assumes existing & committed generating facilities in-service.
- Pre-fault voltage of 250.00 kV at 220 kV stations is assumed.

- Pre-fault voltage of 127.00 kV at 115 kV stations is assumed.
- Pre-fault voltage of 29.00 kV at 27.6 kV stations is assumed.
- Pre-fault voltage of 14.2 kV at 13.8 kV stations is assumed.

The study results are summarized in Table 2 to Table 4 below show both symmetric and asymmetric (3-cycle) fault currents and percentage increase. The study also assumes maximum contribution from all the planned generation additions.

### 3.1 Present System with the Woodstock Area Transmission Reinforcement plan in service

The new Commerce Way TS cannot be connected to the network before the Woodstock Area Transmission Reinforcement (WATR) facilities are in-service. Thus the fault calculation of the present system as represented in Table 2 was calculated with the WATR facilities already in-service.

**Table 2: Fault Levels of Existing System with the Woodstock Area Transmission Reinforcement plan in service**

Area Customers	Fault Levels (kA)			
	Symmetrical		Asymmetrical	
	3-Phase	L-G	3-Phase	L-G
Brantford 230kV M32W	14.0	9.75	15.33	9.89
Brantford 230kV M33W	14.0	9.73	15.33	9.88
Ingersoll 230kV M32W	8.80	6.82	9.65	7.01
Ingersoll 230kV M33W	8.80	6.82	9.65	7.00
Woodstock 115kV W7W	9.58	9.25	10.33	9.64
Woodstock 115kV W12W	9.58	9.24	10.33	9.64
Toyota Woodstock 115kV B8W	8.51	7.63	9.02	7.75
Woodstock 27.6kV	11.7	9.81	15.24	12.92
Brantford 27.6kV Y/Z	12.5/12.4	9.95/9.92	15.97/16.60	13.55/13.87
Ingersoll 27.6kV E/Z	11.9/11.9	9.70/9.71	15.97/15.97	13.03/13.03
Toyota Woodstock 13.8kV	7.75	8.34	10.39	11.11
Karn 230	9.02	7.96	10.25	8.89
Karn 115kV	12.6	14.5	15.17	16.89

### 3.2 The Incorporation of Commerce Way TS

The fault calculation with the new Commerce Way TS facility is as represented in Table 3 below:

**Table 3: Fault Levels with the Commerce Way TS plan in service**

Area Customers	Fault Levels (kA)			
	Symmetrical		Asymmetrical	
	3-Phase	L-G	3-Phase	L-G
Brantford 230kV M32W	14.02	9.77	15.33	9.89
Brantford 230kV M33W	14.02	9.75	15.33	9.88
Ingersoll 230kV M32W	8.87	6.85	9.65	7.01
Ingersoll 230kV M33W	8.87	6.85	9.65	7.00
Woodstock 115kV W7W	9.68	9.31	10.72	9.64
Woodstock 115kV W12W	9.68	9.31	10.71	9.64
Toyota Woodstock 115kV B8W	8.51	7.63	9.02	7.75
Woodstock 27.6kV	11.70	9.82	15.25	13.75
Brantford 27.6kV Y/Z	12.50/12.42	9.95/9.93	16.00/16.65	13.93/13.89
Ingersoll 27.6kV E/Z	11.91/11.93	9.70/9.72	15.97/15.97	13.58/13.60
Toyota Woodstock 13.8kV	7.75	8.34	10.39	11.50
Karn 230	9.10	8.00	10.37	8.89
Karn 115kV	12.68	14.55	15.31	16.89
Commerce Way TS (115kV) W7W	7.81	6.93	8.66	6.98
Commerce Way TS (115kV) W12W	7.81	6.93	8.66	6.98
Commerce Way TS (27.6kV)	11.99	8.90	15.64	12.46

### 3.3 Change in the Short Circuit levels

Table 4 summarizes the expected change in the short circuit levels due to the proposed new Commerce Way TS.

**Table 4: Change in the Short Circuit levels due to the Commerce Way TS**

Area Customers	Percentage Increase (%)			
	Symmetrical		Asymmetrical	
	3-Phase	L-G	3-Phase	L-G
Brantford 230kV M32W	0.14	0.21	0.03	0.01
Brantford 230kV M33W	0.14	0.21	0.03	0.00
Ingersoll 230kV M32W	0.80	0.44	0.00	0.00
Ingersoll 230kV M33W	0.80	0.44	0.00	0.00
Woodstock 115kV W7W	1.04	0.65	3.80	0.01
Woodstock 115kV W12W	1.04	0.76	3.70	0.01
Toyota Woodstock 115kV B8W (future)	0.00	0.00	0.05	0.05
Woodstock 27.6kV	0.00	0.10	0.10	6.39
Brantford 27.6kV Y/Z	0.00/0.16	0.00/0.01	0.18/0.29	2.77/0.16
Ingersoll 27.6kV E/Z	0.08/0.25	0.00/0.01	0.00/0.00	4.23/4.38
Toyota Woodstock 13.8kV	0.00	0.00	0.01	3.48
Karn 230	0.89	0.50	1.12	0.00
Karn 115kV	0.63	0.34	0.93	0.00

Observations made from the short-circuit study results in Tables 2, 3 and 4 may be summarized as follows:

Table 4 shows that the maximum percentage increase in fault levels is 6.39%. Table 2 gives study results for the present system with WATR in service. Table 3 shows study results for the incorporation of Commerce Way TS. Results indicate that both the existing and future fault levels at the customer delivery points are below the *Transmission System Code* (TSC) limits.

The maximum symmetrical three-phase and single line-to-ground faults (kA) as set out in Appendix 2 of the *Transmission System Code* (TSC) may be summarized as follows:

Nominal Voltage (kV)	Max. 3-Phase Fault (kA)	Max. SLG Fault (kA)
500	80	80
230	63	80
115	50	50
44	20	19
27.6	17	12 (4 wire)/ 0.45 (3 wire)

#### 4.0 ASSESSMENT OF HYDRO ONE NETWORKS VOLTAGE PERFORMANCE AT CUSTOMER CONNECTIONS

---

The maximum and minimum phase-to-phase voltages given in the IESO's Transmission Assessment Criteria and Canadian Standard Association document CAN-3-C235-83 are as follows:

<i>Nominal Voltage (kV)</i>	<i>Maximum Voltage (kV)</i>	<i>Minimum Voltage (kV)</i>
230	250*	220
115	127 *	113
44	+6% nominal = 46.64	-6% nominal = 41.51
27.6	+6% nominal = 29.26	-6% nominal = 26.04

\*Certain buses can be assigned specific maximum and minimum voltages as required for operations. In northern Ontario, the maximum continuous voltage for the 230 and 115kV systems can be as high as 260kV and 132kV respectively. [from IESO document IMO\_REQ\_0041 Issue 2.0]

Load flow studies were carried out for the Commerce Way TS Plan. The studies reviewed potential voltage impacts on the local 230 kV system, 115kV system and customers in the vicinity due to the addition of the new facility. The area under study encompasses stations connected to W7W/W12W/ B8W/M32W/M33W. This includes the stations Ingersoll, Brantford, Woodstock, Karn and Toyota Woodstock. Brant supply conditions were not assessed because the existing system cannot reliably support Brant load for normal operating configurations.

The following conditions were used to assess the local voltage impact:

- Incorporation of Woodstock Area Transmission Reinforcement Plan with Autotransformers at Karn TS (2010) with 90% lagging power factor load with all existing LV shunt capacitors in-service, an extra 21.6MVar capacitor available at Woodstock and Toyota Woodstock In-service.
- In addition to the above, the incorporation of the Commerce Way TS with the transformer station west of Toyota Woodstock TS, using the load forecast of 2010 with 90% lagging power factor

##### 4.1 Pre-Contingency Voltages:

Pre-contingency voltage studies were done to record the results (shown in Tables 5 summarized below) for the system with the proposed facility in service.

- Table 5 shows the pre-contingency voltages of the study area before and after the incorporation of the Commerce Way TS.

**Table 5: Commerce Way TS Pre-Contingency Voltages**

	Existing System (with WATR) - w/out Commerce Way TS Pre-Contingency (kV)	Commerce Way TS Plan w/ Taps on
		Pre-Contingency (kV)
Brantford TS 230kV M32W	245.96	245.3
Brantford TS 230kV M33W	244.86	241.56
Ingersoll TS 230kV M32W	241.78	238.04
Ingersoll TS 230kV M33W	242	241.34
Karn TS 230kV M32W	241.34	240.46
Karn TS 230kV M33W	241.56	237.6
Woodstock TS 115kV W7W	124.254	122.248
Woodstock TS 115kV W12W	124.254	122.248
Commerce Way TS 115kV B8W	n/a	122.012
Commerce Way TS 115kV B8W	n/a	121.658
Toyota Woodstock TS 115kV B8W	123.428	121.658
Karn TS 115kV W7W	124.136	122.248
Woodstock 27.6kV	29.6976	29.4216
Commerce Way TS 27.6kV	n/a	29.1732
Brantford 27.6kV	29.0904	29.0352
Brantford 27.6kV	29.2836	29.2008
Ingersoll 27.6 kV	29.4492	29.2836
Toyota Woodstock TS 13.8kV	13.9794	13.6206

#### 4.2 Post-Contingency Voltages:

Local voltage impacts were assessed using post-contingency load flows. The work proposed corrects both a transformer overload constraint and unacceptable voltage performance at Woodstock TS

Tests for the voltage impact were conducted using the following contingencies:

- A single contingency loss of W7W (Woodstock Side) – Table 6
- A single contingency loss of W12W (Woodstock Side) – Table 7
- A single contingency loss of M32W – Table 8
- A single contingency loss of M33W – Table 9

**Table 6: Commerce Way TS Post Contingency with W7W out of service**

	With Commerce Way TS				
	Pre-Con (kV)	Post C (kV) pre tap	% Δ	Post C (kV) post tap	% Δ
Brantford TS 230kV M32W	245.3	245.3	0.00	245.3	0.00
Brantford TS 230kV M33W	241.56	241.34	-0.09	241.56	0.00
Ingersoll TS 230kV M32W	238.04	237.38	-0.28	237.6	-0.18
Ingersoll TS 230kV M33W	241.34	240.9	-0.18	240.9	-0.18
Karn TS 230kV M32W	240.46	239.8	-0.27	240.02	-0.18
Karn TS 230kV M33W	237.6	236.94	-0.28	237.16	-0.19
Woodstock TS 115kV W12W	122.248	121.54	-0.58	121.658	-0.48
Woodstock TS 115kV W7W	122.248	n/a	n/a	n/a	n/a
Commerce Way TS 115kV W7W	122.012	n/a	n/a	n/a	n/a
Commerce Way TS 115kV W12W	121.658	120.714	-0.78	120.832	-0.68
Toyota Woodstock TS 115kV B8W	121.658	120.714	-0.78	120.714	-0.78
Karn TS 115kV W7W	122.248	121.776	-0.39	121.776	-0.39
Woodstock 27.6kV	29.4216	30.3048	3.00	29.5872	0.56
Commerce Way TS 27.6kV	29.1732	28.0416	-3.88	28.0692	-3.78
Brantford 27.6kV	29.04	29.8632	2.85	29.2008	0.57
Brantford 27.6kV	29.20	30.0564	2.93	29.3664	0.57
Ingersoll 27.6 kV	29.28	30.0288	2.54	29.6976	1.41
Toyota Woodstock TS 13.8kV	13.6206	13.524	-0.71	13.524	-0.71

**Table 7: Commerce Way TS Post Contingency with W12W out of service**

	With Commerce Way TS				
	Pre-Con (p.u.)	Post Con (p.u.) pre tap	% Δ	Post Con (p.u.) post tap	% Δ
Brantford TS 230kV M32W	245.3	245.3	0.00	245.3	0.00
Brantford TS 230kV M33W	241.56	241.34	-0.09	241.56	0.00
Ingersoll TS 230kV M32W	238.04	237.38	-0.28	237.6	-0.18
Ingersoll TS 230kV M33W	241.34	240.9	-0.18	240.9	-0.18
Karn TS 230kV M32W	240.46	239.8	-0.27	240.02	-0.18
Karn TS 230kV M33W	237.6	236.94	-0.28	237.16	-0.19
Woodstock TS 115kV W12W	122.248	n/a	n/a	n/a	n/a
Woodstock TS 115kV W7W	122.248	121.54	-0.58	121.776	-0.39
Commerce Way TS 115kV W7W	122.012	120.714	-1.06	120.832	-0.97
Commerce Way TS 115kV W12W	121.658	n/a	n/a	n/a	n/a
Toyota Woodstock TS 115kV B8W	121.658	120.478	-0.97	120.596	-0.87
Karn TS 115kV W7W	122.248	121.776	-0.39	121.776	-0.39
Woodstock 27.6kV	29.4216	30.2772	2.91	29.5872	0.56
Commerce Way TS 27.6kV	29.1732	28.0416	-3.88	28.0692	-3.78
Brantford 27.6kV	29.04	29.8632	2.85	29.2008	0.6
Brantford 27.6kV	29.20	30.0564	2.93	29.3664	0.6
Ingersoll 27.6 kV	29.28	30.0288	2.54	29.6976	1.5
Toyota Woodstock TS 13.8kV	13.6206	13.524	-0.71	13.524	-0.7

**Table 8: Commerce Way TS Post Contingency with M32W out of service**

	With Commerce Way TS				
	Pre-Con (kV)	Post Con (kV) pre tap	%Δ	Post Con (kV) post tap	%Δ
Brantford TS 230kV M32W	245.3	o/s	o/s	o/s	o/s
Brantford TS 230kV M33W	241.56	238.7	-1.18	238.7	-1.18
Ingersoll TS 230kV M33W	238.04	231.66	-2.68	231.66	-2.68
Ingersoll TS 230kV M32W	241.34	o/s	o/s	o/s	o/s
Karn TS 230kV M32W	240.46	o/s	o/s	o/s	o/s
Karn TS 230kV M33W	237.6	230.34	-3.06	230.34	-3.06
Woodstock TS 115kV W7W	122.248	116.466	-4.73	116.466	-4.73
Woodstock TS 115kV W12W	122.248	116.466	-4.73	116.466	-4.73
Commerce Way TS 115kV W7W	122.012	115.994	-4.93	115.994	-4.93
Commerce Way TS 115kV W12W	121.658	116.23	-4.46	116.23	-4.46
Toyota Woodstock TS 115kV B8W	121.658	116.23	-4.46	115.876	-4.75
Karn TS 115kV W7W	122.248	116.584	-4.63	116.584	-4.63
Woodstock 27.6kV	29.4216	29.3664	-0.19	29.0352	-1.31
Commerce Way TS 27.6kV	29.1732	27.7932	-4.73	27.7932	-4.73
Brantford 27.6kV	29.0352	26.4	-0.57	28.8696	-0.57
Brantford 27.6kV	29.2008	26.7	0.28	29.2836	0.28
Ingersoll 27.6 kV	29.2836	29.3112	0.09	29.3112	0.09
Toyota Woodstock TS 13.8kV	13.6206	13.041	-4.26	12.972	-4.76

**Table 9: Commerce Way TS Post Contingency with M33W out of service**

	With Commerce Way TS				
	Pre-Con (kV)	Post Con (kV) pre tap	%Δ	Post Con (kV) post tap	% Δ
Brantford TS 230kV M32W	245.3	242.88	-0.99	242.44	-1.17
Brantford TS 230kV M33W	241.56	o/s		o/s	o/s
Ingersoll TS 230kV M32W	238.04	o/s		o/s	o/s
Ingersoll TS 230kV M33W	241.34	236.94	-1.82	236.5	-2.01
Karn TS 230kV M32W	240.46	235.62	-2.01	234.96	-2.29
Karn TS 230kV M33W	237.6	o/s		o/s	o/s
Woodstock TS 115kV W7W	122.248	119.062	-2.61	118.826	-2.80
Woodstock TS 115kV W12W	122.248	119.062	-2.61	118.826	-2.80
Commerce Way TS 115kV W7W	122.012	118.826	-2.61	118.59	-2.80
Commerce Way TS 115kV W12W	121.658	118.59	-2.52	118.354	-2.72
Toyota Woodstock TS 115kV B8W	121.658	118.472	-2.62	118.236	-2.81
Karn TS 115kV W7W	122.248	119.18	-2.51	118.944	-2.70
Woodstock 27.6kV	29.4216	30.0564	2.16	29.6148	0.66
Commerce Way TS 27.6kV	29.1732	28.428	-2.55	28.3452	-2.84
Brantford 27.6kV	29.0352	26.358	-9.22	28.566	-1.62
Brantford 27.6kV	29.2008	26.7444	-8.41	28.98	-0.76
Ingersoll 27.6 kV	29.2836	27.2964	-6.79	29.2008	-0.28
Toyota Woodstock TS 13.8kV	13.6206	13.2756	-2.53	13.248	-2.74

Tables 6, 7, 8 and 9 are indicative of the post contingencies voltage changes due to the connection of the Commerce Way TS facility. The voltage changes at all the customer points for all post contingencies are maintained within 10% and 5% voltage decline limit before and after transformer tap-changer operation.



## **5.0 CONCLUSIONS AND RECOMMENDATIONS**

---

This Customer Impact Assessment (CIA) presents results of short-circuit and voltage performance study analysis.

The report has confirmed that the Commerce Way TS can be incorporated without any adverse impact on W7W/W12W/B8W/M32W/M33W customers provided that facilities conforming to TSC requirements are installed.