



EB-2007-0027

IN THE MATTER OF the *Ontario Energy Board Act*
1998, S.O.1998, c.15, (Schedule B);

AND IN THE MATTER OF an Application by Hydro One
Networks Inc., for an Order or Orders granting Leave to
construct Transmission Facilities in the Woodstock Area.

BEFORE: Bill Rupert
Presiding Member

Paul Vlahos
Member

Ken Quesnelle
Member

DECISION AND ORDER

1.0 THE APPLICATION

Hydro One Networks Inc. (“Hydro One” or the “Applicant”) filed an application with the Ontario Energy Board (the “Board”) on March 9, 2007 under section 92 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B. The Applicant has applied for an order of the Board for leave to construct approximately 14 kilometres of double circuit, 230 kilovolt (“kV”) transmission line and a new 230-115 kV transformer station (“TS”) referred to as Karn TS, collectively, the “Project”. The proposed new transmission line will replace an existing 115 kV transmission line and extend from Ingersoll TS to Woodstock TS. A two kilometre section of the

new 230 kV line from the proposed Karn TS to Woodstock TS will be operated at 115 kV. The proposed in-service date for the Project is April 2010.

The Board assigned file number EB-2007-0027 to this application.

The Board issued a Notice of Application and Hearing on March 22, 2007. The Notice of Application and Hearing was published and served by Hydro One as directed by the Board. The Independent Electricity System Operator (the "IESO"), Woodstock Hydro Services Inc. ("Woodstock Hydro") and the Township of South-West Oxford intervened in the application.

On July 3, 2007, the Board issued a letter to Hydro One advising that it would not issue a decision in this matter until a decision was rendered in the joint Hydro One (EB-2006-0189) and Great Lakes Power Limited (EB-2006-0200) proceeding for review and approval of their respective connection procedures. That proceeding considered, among other things, the issue of capital contributions associated with transmitter connection facilities. A decision was issued on September 6, 2007.

The Board has proceeded with this application by way of a written hearing.

2.0 EVIDENCE AND SUBMISSIONS

2.1 Project Need

Hydro One stated that this is a non-discretionary transmission project, as that term is used in the Board's Filing Requirements for Transmission and Distribution Applications, because it allows Hydro One:

- to satisfy reliability standards and guidelines within a specified operating timeframe; and
- to address near-term equipment or facility loading or ratings when their capacities are, or are about to be, exceeded.

Based on Hydro One's evidence, the summer peak load in the Woodstock area supplied by Hydro One's 115 kV system is expected to reach 113 MW in 2007 and increase to 143.8 MW by 2010. The 2010 load level includes 25 MW of load to serve a Toyota auto assembly plant currently under construction in Woodstock.

Hydro One submitted that based on its voltage decline performance guideline, the minimum allowable post-contingency voltage at the 115 kV buses is 108 kV. According to Hydro One, the post-contingency voltages at Woodstock TS would

fall below 108 kV when the Woodstock area load exceeds 102 MW. Based on the load forecast provided, this is expected to occur in 2007. In order to mitigate the above noted voltage issue, Hydro One implemented a temporary 8 MW load transfer from Woodstock TS to Ingersoll TS.

Hydro One also submitted that the loading on the 115 kV circuits supplying the Woodstock area is expected to exceed the thermal limit of the circuits (139 MW) by 2010.

Hydro One provided a letter from the Ontario Power Authority (OPA) that indicated the OPA agreed there is an urgent need to provide service improvements in the Woodstock area and that Hydro One's proposal is the preferred option for addressing the need.

2.2 Alternatives Considered

Hydro One considered the following four alternatives to address the future transmission needs in the Woodstock Area.

Alternative 1 (the Project): Build a new 230 kV line from Ingersoll TS to Woodstock TS and install two 230-115 kV autotransformers at a new transformer station (Karn TS).

Alternative 2: Build a new 230 kV line on a new right-of-way and establish a new transformer station (Woodstock #2 TS) with two 230-28 kV step-down transformers east of Woodstock.

Alternative 3: Build new 250 MVA Autotransformer station near Brantford, upgrade 115 kV lines towards Woodstock, and build a new 115 kV-connected station for Woodstock.

Alternative 4: Build distribution facilities from Ingersoll TS.

According to Hydro One, the present values of the estimated costs of each alternative over a 40-year period are:

Alternative 1: \$107 million

Alternative 2: \$107 million

Alternative 3: \$149 million

Alternative 4: \$ 89 million

Hydro One submitted that the above cost estimates have an accuracy of +/- 10% and that its choice of Alternative 1 is based on its higher reliability of supply and its greater flexibility to meet unforeseen future load development.

Hydro One rejected Alternative 4, which has the lowest long-term cost, because it would have poor reliability relative to the other alternatives. In addition, Hydro One stated that Alternative 4 would require upgrades to the distribution facilities to accommodate any unforeseen increase in the capacity requirements of the Woodstock area.

2.3 Reliability and Quality of Service

The IESO's System Impact Assessment ("SIA") stated that the Project will significantly improve the voltage profile and increase the supply capability in the Woodstock area and will not have a materially adverse effect on the reliability of the IESO-controlled grid. The SIA contains three detailed requirements for the Project.

Hydro One confirmed that the proposed Project will meet the requirements of the IESO's System Impact Assessment ("SIA"), the transmitter's Customer Impact Assessment ("CIA") and the Board's Transmission System Code ("TSC").

2.4 Future System Development

Hydro One submitted that, depending on the overall load growth at Woodstock TS, Brant TS, Powerline Municipal Transformer Station ("MTS") and other potential new stations in the area, consideration will be given to converting all the stations to 230 kV and supplying them at 230 kV via the proposed line between Ingersoll TS and Woodstock TS. It is further stated that if conversion to 230 kV were to occur, it would likely be in the 10 to 20 year time horizon.

Board staff questioned Hydro One regarding the option of advancing the above-noted 230 kV line and station conversions to 2010 avoiding the need to build Karn TS. Hydro One's response indicates that it does not favour that alternative because:

- it would be more costly than the proposed plan in the long term;
- it would require lengthy outages at Woodstock TS because of space limitations;
- there is an urgent need for supply to the new Toyota plant in Woodstock in 2007, which necessitates the installation of service transformation which utilizes the existing 115 KV line. The equipment would be incompatible with a 230 kV line; and
- additional facilities would be needed to provide backup to Brant TS and Powerline MTS.

2.5 Project Costs and Impact on Transmission Rates

2.5.1 Capital costs

Hydro One's evidence indicates that the total capital cost of the Project is estimated to be \$71.6 million, comprised of \$42.9 million for the transmission line facilities and \$28.7 million for station and telecommunications facilities.

By way of comparison, Hydro One provided evidence reflecting costs for other similar transmission projects it has recently undertaken and provided explanations for any significant differences.

2.5.2 Cost Responsibility

Hydro One submitted that a capital contribution is not required from any load customer because, in Hydro One's view, section 6.3.6 of the Board's Transmission System Code (TSC) does not require contributions for connections that are part of a "Local Area Supply Plan." Based on Hydro One's evidence, were the Board to require a capital contribution in this case, the aggregate capital contribution would be in excess of \$70 million and would be charged to three directly-connected load customers.

Hydro One stated that the need to reinforce the supply to the Woodstock area was identified by Hydro One staff during 2006 based on observations about the load growth in the Woodstock area being driven by increased industrial, commercial and residential activity. This was followed by a Joint Utility Planning Study (Hydro One, Woodstock Hydro and Erie Thames Powerlines), which also included consideration of the proposed Toyota plant in Woodstock.

The Project will serve multiple customers at multiple transmission delivery points, and, in Hydro One's view, is part of a Local Area Supply (LAS) plan to meet load growth and maintain the reliability and integrity of the transmission system in the Woodstock Area.

Hydro One's interpretation of section 6.3.6 of the TSC was addressed in the Board's September 6, 2007 decision on Hydro One's and Great Lakes Power's connection procedures (EB-2007-0189/EB-2007-0220) and is discussed in section 3.3 below.

2.6 Impact on Rates

Hydro One submitted that the proposed facilities are considered Line Connection assets and hence the costs will have no impact on the Network pool and Transformation Connection pool.

The evidence indicated that the maximum revenue deficiency related to the Project will be about \$8 million in 2012 with a corresponding Line Connection Pool rate impact of 4.88%. The impact will remain at that level until 2014, decrease to 3.66% in 2015 and decrease again to 2.44% in 2024.

According to Hydro One's evidence, the maximum rate impact of 4.88% translates to an increase of about 0.06% in a typical residential customer's bill; i.e. a typical monthly bill of \$120.00 (based on 1000 kWh per month) would increase from \$120.00 to \$120.07 per month.

2.7 Environmental Assessment

Hydro One advised that the Project falls within the definition of the projects covered by the Class Environmental Assessment for Minor Transmission Facilities ("Class EA"), under the Ontario *Environmental Assessment Act*.

In accordance with the Class EA process, Hydro One prepared a draft Environmental Study Report which was placed on the Hydro One project website as well as various public libraries and municipal offices in the area for the required 30-day review period.

Hydro One advised that the 30-day review period ended on July 20, 2007 and there were no requests for an individual environmental assessment.

On September 15, 2007, Hydro One advised the Board that the final Environmental Study Report was filed with the Ministry of the Environment on September 12, 2007 and that this filing completes the Class EA requirements.

2.8 Land Matters

Hydro One's evidence indicates that the majority of land rights required to construct the proposed line facilities have already been acquired in connection with the existing transmission line facilities. New land rights are required at select locations along the transmission ROW and for the new Karn TS site. Some temporary access rights are also required to construct the proposed facilities.

The Township of South-West Oxford (the Township) expressed concerns regarding the proposed placement of the transmission line within the road allowance of Karn Road (see Section 2.9 below for details).

2.9 Transmission Line Routing Along Karn Road

In its letter of comment dated April 24, 2007, the Township expressed concerns regarding the proposed routing of the transmission line along the road allowance of an approximately eight kilometre section of Karn Road. The Township expressed two concerns – safety issues related to the proposed transmission line being close to the travelled portion of the road, and the impact of the transmission line on the Township's ability to widen the road in the future.

In its submission dated August 9, 2007, the Township reiterated its concerns regarding the routing of the proposed transmission line along Karn Road and proposed that in the event that the Board grants leave to construct for the Project, it should include a condition to "achieve an alignment of the towers that is acceptable to the Township." Alternatively, the Township proposed that the Board include a condition that "would impose a minimum setback from the edge of the pavement to the proposed towers."

In its response submission, filed on August 17, 2007, Hydro One stated that the proposed transmission line will be located on the existing right-of-way, where the existing transmission line has been for many decades. Hydro One further submitted that it takes public safety very seriously and that by using narrow-based towers for the proposed Project, the existing setback at most tower locations will be increased by an additional eight feet.

Hydro One submitted that a relocation of the transmission line would necessitate a lengthy process triggered by the need to acquire new additional property rights, resulting in delays to the Project and delays in establishing a reliable electricity supply to the Woodstock area.

Hydro One submitted that it would be inappropriate for the Board to include the above-noted conditions proposed by the Township in any leave to construct that is granted.

2.10 Aboriginal Consultations

Hydro One submitted that it identified the following six Aboriginal groups that may be affected by the Project: Chippewas of the Thames First Nation, Walpole Island First Nation, Munsee-Delaware Nation, Oneida Nation of the Thames, Mississaugas of the New Credit, and Six Nations of the Grand River. These were identified through research and consultation with representatives from the Ontario Secretariat Aboriginal Affairs, and Indian and Northern Affairs Canada.

Hydro One further submitted that it contacted all of the above-noted Aboriginal groups on or about April 3, 2007; that an information package about the Project was sent to them; and that they were invited to contact Hydro One for any additional information required or to discuss any concerns.

Only Six Nations of the Grand River contacted Hydro One. They indicated they had no issues or concerns with the Project.

Hydro One also advised the Board that three of the six Aboriginal groups have land claims or litigation matters related to lands affected by the Project.

Hydro One submitted that it considers the consultations with the Aboriginal Peoples to be complete and consistent with the guidelines in the Board's proposed Aboriginal Consultation Policy.

3.0 BOARD FINDINGS

Section 96(1) of the Act provides that if, after considering an application under section 92 of the Act, the Board is of the opinion that a proposed work is in the public interest, then the Board shall make an order granting leave to construct the work.

Section 96(2) of the Act provides that, for an application under section 92 of the Act, the Board shall only consider the interests of consumers with respect to prices and reliability and quality of electricity service when determining if a proposed work is in the public interest.

In the context of this Application, the main issues for the Board are as follows:

1. Is the Project needed and is it the best alternative?
2. Are the estimated costs for the Project reasonable?
3. Are any capital contributions required from load customers?
4. Are the Project's transmission rate impacts reasonable?
5. What impact will the Project have on reliability of supply?
6. Have the Environmental Assessment Act requirements and landowner issues been dealt with appropriately?
7. Have consultations with Aboriginal Peoples been conducted appropriately?
8. Is the project in the public interest?

3.1 Is The Project Needed And Is It The Best Alternative?

The Board accepts Hydro One's evidence that the Project is needed to maintain an adequate electricity supply in the Woodstock area.

The Board notes that Hydro One has considered a number of alternatives to meet the identified need and has chosen the Project based on cost and reliability considerations as well as its flexibility to meet unforeseen future load development. The Board accepts Hydro One's evidence that the Project is the best alternative to meet the identified need.

3.2 Are The Estimated Costs For The Project Reasonable?

The Board notes Hydro One's evidence that there are differences in costs between the Project and other similar projects that have been undertaken in the past by Hydro One and accepts Hydro One's explanation that any differences are due to specific factors associated with the individual projects. The Board is satisfied that Hydro One's estimated costs for the Project are reasonable.

3.3 Are Any Capital Contributions Required From Load Customers?

In the joint connection procedures proceeding (EB-2007-0189/EB-2007-0220), Hydro One submitted that a capital contribution is not required under section 6.3.6 of the TSC for transmission projects intended to serve multiple customers under what Hydro One characterized as a “Local Area Supply Plan.” In its September 6, 2007 decision, the Board rejected that interpretation of the TSC.

The connection procedures decision noted that Hydro One had applied its interpretation of section 6.3.6 in relation to two projects, including the proposed Woodstock project, that were before the Board in leave to construct proceedings. The decision stated: “Based on this Decision and Order [EB-2007-0189/EB-2007-0220], it appears that a capital contribution from the customers would have been required in both of these cases.”¹ However, that decision went on to state:

The ultimate disposition of the two Leave to Construct applications rests with the Panels that have been assigned to them. In this Panel’s view, however, given that the issue of the interpretation of section 6.3.6 of the Code is only now being resolved through this Decision and Order, it would be inequitable to require a capital contribution for a project which has been completed or which is advanced to a point where parties have very clear expectations as to their respective responsibilities. To reach back now to require the customer to pay when the project has been presented as not requiring any such contribution would, in this Panel’s view, be unfair. The customer had a right to know at the time of its engagement the full extent of its financial responsibility. To unwind these arrangements now could create significant difficulty and embarrassment for affected parties. Plans and projections involving diverse interests will have been made that may be difficult or impossible to recast.²

This Board Panel agrees with that position and will not require a capital contribution from load customers.

The connection procedures decision also included findings on the calculation of the amount of any required capital contributions under section 6.3.6 of the TSC. It stated that “where a transmitter’s plans require installation of unique system elements as part of the proposed reinforcement of the connection facilities, some

¹ Decision and Order EB-2006-0189/EB-2006-0200, September 6, 2007, page 27.

² *Ibid*, page 27.

adjustment to the cost responsibility can be, and should be made."³ It also noted that:

*....section 6.7.2 of the Code provides that, where a connection facility is retired, a transmitter shall not recover from a customer a capital contribution to replace the connection facility. This provision can be applied in various situations to reduce the transmission connection reinforcement costs that are attributable to a customer.*⁴

Given its decision not to require a capital contribution in this case, the Board did not need to make any findings about the appropriate amount of a contribution. However, had a capital contribution been required in this case and had it been calculated based on the findings in the connection procedures decision, it appears the amount would have been substantially less than the amount calculated by Hydro One (over \$70 million). The approach described in the connection procedures decision would exclude from the capital contribution calculation at least the cost to construct the Karn TS as well as the replacement cost of the existing 115 kV line, which together comprise a large part of the estimated project cost.

3.4 Are The Project's Transmission Rate Impacts Reasonable?

The Board notes Hydro One's evidence that there will be no network pool or transformation connection pool rate impacts and that the connection line pool rates will increase by an estimated 2.4% to 4.9% over the life of the Project. The Board finds Hydro One's estimated rate impacts to be reasonable for the benefits achieved.

3.5 What Impact Will The Project Have On Reliability Of Supply?

The Board accepts Hydro One's evidence and the SIA results that the Project will significantly improve the voltage profile and increase supply capability in the area and that it will not have a materially adverse effect on the reliability of the IESO-Controlled grid.

³ *Ibid*, page 24

⁴ *Ibid*, page 25.

3.6 Have The Environmental Assessment Act Requirements And Landowner Issues Been Appropriately Dealt With?

The Board accepts Hydro One's evidence that the EA requirements for the Project have been completed and that there are no requests for an individual environmental assessment.

The Board has considered the submissions by the Township regarding its concern about the transmission line being on the road allowance of Karn Road. The Board accepts Hydro One's position that the proposed routing is preferred since the existing line has been there for many decades and relocating it would require additional land rights with resultant delays in the Project. The Board notes that Hydro One has taken steps to mitigate the impact of the line along Karn Road by using narrow base towers which will result in a greater setback from the road than currently exists.

With respect to the Township's concern that the new line could affect future expansion of Karn Road, the Board is of the opinion that this concern should not impact the routing of the transmission line. The new line will satisfy a certain and pressing need for increased power supply. In contrast, the nature and timing of future improvements, if any, to Karn Road are speculative. It is the Board's view that the merits of widening Karn Road and any associated land acquisitions that may be required to accommodate that widening would be more appropriately considered as a separate matter at a time when the need is apparent.

3.7 Have Consultations With Aboriginal Peoples Been Conducted Appropriately?

The Board accepts Hydro One's evidence that it has taken appropriate steps with respect to Aboriginal consultations which are in keeping with Board's proposed Aboriginal Consultation Policy. The Board notes Hydro One's commitment to continue to work with Aboriginal Peoples should any concerns about the Project arise in the future.

3.8 Is the Project in the Public Interest?

Based on the evidence provided and the above findings, the Board has determined that the project is in the public interest and that, in accordance with

Section 96(1) of the Act, an order granting leave to construct the Project should be made.

THE BOARD ORDERS THAT:

Hydro One Networks Inc. is granted leave to construct approximately 14 kilometres of double circuit, 230 kV transmission line and a new 230-115 kV transformer station in the Woodstock Area subject to the Conditions of Approval set forth in Appendix A to this Order.

DATED at Toronto, October 11, 2007

ONTARIO ENERGY BOARD

Original signed by

Kirsten Walli
Board Secretary

APPENDIX A
TO BOARD DECISION AND ORDER
IN THE MATTER OF EB-2007-0027
DATED OCTOBER 11, 2007

CONDITIONS OF APPROVAL

APPENDIX A

CONDITIONS OF APPROVAL

EB-2007-0027

HYDRO ONE NETWORKS INC.

WOODSTOCK AREA TRANSMISSION REINFORCEMENT PROJECT

1.0 GENERAL REQUIREMENTS

- 1.1 Hydro One Networks Inc. ("Hydro One") shall construct the facilities and restore the land in accordance with its application, evidence and undertakings, except as modified by this Order and these Conditions of Approval.
- 1.2 Unless otherwise ordered by the Board, authorization for Leave to Construct shall terminate December 31, 2009, unless construction has commenced prior to that date.
- 1.3 Except as modified by this Order, Hydro one shall implement all the recommendations of the Environmental Study Report that has been prepared for this project.
- 1.4 Hydro One shall satisfy the Independent Electricity System Operator ("IESO") requirements and recommendations as reflected in the System Impact Assessment document dated April 24, 2007, and such further and other conditions which may be imposed by the IESO.
- 1.5 Hydro One shall advise the Board's designated representative of any proposed material change in the project, including but not limited to changes in: the proposed route; construction techniques; construction schedule; restoration procedures; or any other impacts of construction. Hydro One shall not make a material change without prior approval of the Board or its designated representative. In the event of an emergency the Board shall be informed immediately after the fact.
- 1.6 Hydro One shall obtain all necessary approvals, permits, licences, certificates and easement rights required to construct, operate and

maintain the proposed project, shall provide copies of all such written approvals, permits, licences and certificates upon the Board's request.

2.0 PROJECT AND COMMUNICATIONS REQUIREMENTS

- 2.1 The Board's designated representative for the purpose of these Conditions of Approval shall be the Manager, Facilities.
- 2.2 Hydro One shall designate a person as project engineer and shall provide the name of the individual to the Board's designated representative. The project engineer will be responsible for the fulfillment of the Conditions of Approval on the construction site. Hydro One shall provide a copy of the Order and Conditions of Approval to the project engineer within ten (10) days of the Board's Order being issued
- 2.3 Hydro One shall give the Board's designated representative ten (10) days written notice in advance of the commencement of construction.
- 2.4 Hydro One shall furnish the Board's designated representative with all reasonable assistance needed to ascertain whether the work is being or has been performed in accordance with the Board's Order.
- 2.5 Hydro One shall develop, as soon as possible and prior to start of construction, a detailed construction plan. The detailed construction plan shall cover all activities and associated outages and also include proposed outage management plans. These plans should be discussed with affected transmission customers before being finalized. Upon completion of the detailed plans, Hydro One shall provide five (5) copies to the Board's designated representative.
- 2.6 Hydro One shall furnish the Board's designated representative with five (5) copies of written confirmation of the completion of construction. This written confirmation shall be provided within one month of the completion of construction.

3.0 MONITORING AND REPORTING REQUIREMENTS

- 3.1 Both during and after construction, Hydro One shall monitor the impacts of construction, and shall file five (5) copies of a monitoring report with the

Board within fifteen months of the completion of construction. Hydro One shall attach to the monitoring report a log of all complaints related to construction that have been received. The log shall record the person making the complaint, the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying such actions.

- 3.2 The monitoring report shall confirm Hydro One's adherence to Condition 1.1 and shall include a description of the impacts noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction and the condition of the rehabilitated land and the effectiveness of the mitigation measures undertaken. The results of the monitoring programs and analysis shall be included and recommendations made as appropriate. Any deficiency in compliance with any of the Conditions of Approval shall be explained. Within fifteen (15) months of the completion of construction, Hydro One shall file with the Board a written Post Construction Financial Report. The report shall indicate the actual capital costs of the project with a detailed explanation of all cost components and shall explain all significant variances from the estimates filed with the Board.

4.0 ENVIRONMENTAL ASSESSMENT ACT REQUIREMENTS

- 4.1 Hydro One shall comply with any and all requirements of the Environmental Assessment Act relevant to this application.