

EB-2004-0436

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O.
1998, c. 15, Sched. B, section 92;

AND IN THE MATTER OF an Application by Hydro One
Networks Inc., for an order or orders granting leave to construct a
230 kV underground cable transmission line reinforcing supply to
the City of Toronto.

Before: Paul Vlahos
Presiding Member

Art Birchenough
Member

DECISION AND ORDER

March 11, 2005

1. THE APPLICATION AND PROCEEDING

Hydro One Networks Inc. (“the Applicant” or “Hydro One”) owns and operates transmission facilities within Ontario, including the City of Toronto. The Applicant seeks Ontario Energy Board approval to reinforce its electricity facilities in the downtown area of the City of Toronto. Specifically, the Applicant proposes to reinforce the existing 115 kV network between the Manby and Leaside sectors in the City of Toronto by constructing and operating two new 2.2 kilometres 230 kV underground cable circuits between the John and Esplanade transformer stations. The Applicant proposes to locate the underground cable below the City of Toronto road allowance through construction of a tunnel under John Street, Front Street and Sherbourne Street. The cost of the project is estimated at \$44.7 million including \$4.0 million in contingencies. Construction is planned to commence in Summer 2005. The planned in-service date is Spring 2007.

The application has been filed with the Ontario Energy Board pursuant to section 92(1) of the *Ontario Energy Board Act*. The Board has assigned the application File EB-2004-0436.

The Board issued a Notice of Application on October 15, 2004. Hydro One served and published the Notice as directed by the Board. The following parties intervened: The Independent Electricity System Operator (“IESO”), H&R Real Estate Investment Trust, Toronto Hydro Electric System Limited (“Toronto Hydro”), the City of Toronto, and Enbridge Gas Distribution Inc. (“Enbridge”).

By Procedural Order No.1 issued on November 18, 2004, the Board indicated that it would proceed with Hydro One’s Application by way of a written hearing. No party objected. Interrogatories and supplemental interrogatories and responses were received in accordance with the schedule listed in Procedural Order No. 1.

Pursuant to Procedural Order No. 2 issued on January 18, 2005, the written submissions stage was completed by February 9, 2005.

The full record of this proceeding is available at the Board's offices. The Board has considered the full record but refers in this Decision and Order to only those portions that it considers necessary to explain its findings.

The next chapter, chapter 2, summarizes the evidence and submissions of the parties. The third and final chapter sets out the Board's findings.

2. EVIDENCE AND SUBMISSIONS

2.1 EVIDENCE OF THE APPLICANT

For transmission planning purposes, the Greater Toronto Area (“GTA”) includes the City of Toronto, plus a ring of suburban communities that surround Toronto, including Oakville, Mississauga, Brampton, Richmond Hill, Vaughan, Markham, Aurora, Newmarket, Pickering, Ajax, Whitby, and Oshawa. The GTA represents more than 10,000 MW of load or 40% of the Province’s total.

Central Toronto is the part of the City of Toronto approximately south of Eglinton Avenue and bounded by the Humber River on the west and Victoria Park Avenue on the east. The Downtown Toronto Area is the part of Central Toronto that is south of approximately Bloor Street, west of approximately Sherbourne Street and east of approximately Spadina Avenue. Central Toronto currently has a total load of over 2000 MW.

The existing transmission facilities supplying Central Toronto consist of two major transmission line corridors feeding separately into two sectors, the Leaside sector and the Manby sector. The Leaside sector is supplied by a 230 kV line corridor running from Cherrywood TS, located in the western part of the Town of Pickering, to Leaside TS located near the intersection of Millwood Road and Laird Drive in the City of Toronto. The Leaside sector contains the Leaside transformer station which supplies loads to several other transformer stations, including Esplanade. The Manby sector is a 230 kV line corridor running from Richview TS, located on Kelfield Road near the intersection of Dixon Road and Highway 27 in the City of Toronto, to Manby TS, located on the west side of Kipling Avenue south of Dundas Street West in the City of Toronto. The Manby sector contains the Manby East transformer station which supplies loads to several other transformer stations, including John. These sectors are divided, in general, along Avenue Road/University Avenue within the Central Toronto area. Both the Leaside TS and the

Manby TS are major transformation points where the supply voltage is reduced from 230 kV to 115 kV.

According to Hydro One's evidence, the proposed project would provide relief for the existing 230 kV transmission facilities in the Leaside sector and increase load transfer flexibility between the Leaside and Manby sectors by reinforcing the existing 115 kV elements between the two sectors. The additional operating flexibility and the increased transformation capacity requirements were identified in a Hydro One-Toronto Hydro joint study. Hydro One's evidence noted that the joint study showed that reinforcement is needed by 2008, while a longer-term solution is needed by 2010. The longer-term solution would involve a third supply path to Central Toronto through a number of options. According to the IESO, the proposed underground cable would not favour one option over any other.

The need for transmission facilities in Downtown Toronto was identified by the IESO in its latest annual 10 Year Outlook report dated April 29, 2004, as well as in the 2002 and 2003 editions, and the IESO concluded that transmission reinforcements in Downtown Toronto are required regardless whether new generation is constructed in the area. The IESO's report, dated July 12, 2004, examined Hydro One's proposed project and assessed the reliability enhancement in the immediate term and the longer term. The report reviewed the fit of the proposed project with future options and plans to provide a third supply to Downtown Toronto. The report recommended various configurations to the transmission system to be implemented should certain generation developments occur in the near future. The report determined that the proposed John-to-Esplanade Link would have no adverse impact on the IESO-controlled grid and recommended that a Notification of Approval to Connect be issued.

Hydro One noted that the link provided by the installation of the underground transmission lines between the Leaside and Manby sectors will increase the availability of any new generation in the City, regardless of which sector the generation is located in.

Hydro One emphasized that the Class Environmental Assessment (EA) process requirements have been completed, noting that the tunnel technique minimizes environmental impacts.

Hydro One stressed that the present leave to construct application by Hydro One arose directly from the IESO's identification of emerging and critical constraints in Downtown Toronto and its request that market participants propose solutions. These constraints concern the capability and flexibility to reliably supply loads in Downtown Toronto, the ability to provide reactive support in the western GTA during peak demand conditions, and the existing limited capability to transfer loads between the Manby and Leaside sectors, particularly in response to contingencies and maintenance outages.

Hydro One also stated the IESO's Notice of Intervention, assessed the solutions proposed by various market participants and determined that while certain new generation resources that are proposed in the area would, if built, address some of the reliability of supply concerns, the transmission reinforcements that are the subject of this application are still required.

The cost of the project was estimated at \$44.7 million including \$4.0 million contingencies. The profitability index was estimated at 1.0.

Hydro One acknowledged that while the proposed underground transmission lines are initially radial in configuration these lines will become a network asset when the third supply to the City of Toronto is introduced. Therefore, for administrative efficiency,

Hydro One suggested that the proposed facilities should be considered network assets for the purposes of calculating capital contribution requirements at this time.

Hydro One further emphasized that the proposed facilities will not adversely impact the transmission rates of other customers over the long term.

2.2 SUBMISSIONS BY CITY OF TORONTO

The City of Toronto provided a letter of support for the proposed project indicating that the proposed route and construction method minimizes impacts to the public, both during construction and throughout the ongoing operation of the transmission lines.

2.3 SUBMISSIONS BY TORONTO HYDRO

Toronto Hydro submitted that the proposed project addresses the following concerns identified in the IESO's 10-Year Outlook report: the constraints pertaining to the capability and flexibility to reliably supply loads in Downtown Toronto; the ability to provide reactive support in the western GTA during peak demand conditions; and the limited capability to transfer loads between the Manby and Leaside sectors. Toronto Hydro also noted that the proposed project serves many functions related to maintaining and enhancing the integrity and reliability of transmission network service as well as contributing to overall electricity market efficiency. These functions include enhancing system transfer capability, reinforcing and improving the reliability of interconnected network service, and providing a tap connection between the network stations and load supply points for Toronto Hydro.

Toronto Hydro explained that over time the 115 kV network grid evolved into 230 kV lines that acted as network transmission and 115 kV radial distribution lines. The grid in its current state is not meeting current needs and will certainly be unable to meet the

growing demand of the City of Toronto. Deliberate and coordinated expansion of the network is required to meet these needs and the proposed project is required to allow the network to function as a complete network in an efficient and cost-effective manner.

Toronto Hydro submitted that, through its own experience as the distributor in the area and its participation in the Toronto Public Utilities Coordinating Committee (“TPUCC”), it fully recognizes the difficulty in routing underground facilities in the Downtown Area and supports implementation of the route and tunnel methodology proposed by Hydro One.

Toronto Hydro supported Hydro One’s proposal to classify the proposed transmission lines as network assets. This would be consistent with the Board’s decision on the first phase of the Transmission System Code review. To initially classify this line as a Line Connection asset and later change that classification to a Network asset creates unnecessary, foreseeable and avoidable financial complication. Toronto Hydro further noted that the installation of the line supports the network function by providing increased load transfer capability and meets the criteria for the economic treatment as a networks asset. The line is not designed nor proposed for the exclusive benefit of a specific single customer or group of local customers. The proposed transmission line materially reinforces the transmission interface capability of the “back-bone” transmission network that is commonly shared by the GTA.

2.4 SUBMISSIONS BY ENBRIDGE

Enbridge agreed that the need for reinforcement between the John and Esplanade transformer stations does not appear to be in question, even though it observed that the Joint Utility Planning Study assumed no new generation. Enbridge submitted that the evidence is not sufficient to justify the proposed timing or to validate the long-term transmission requirements to supply Toronto. The 230 kV underground circuits may be considered as the first phase of the third supply, and little or no consideration is given to

the Government's Request for Proposals for 2500 MW in new clean generation, Distributed Generation or Conservation and Demand Management alternatives. Enbridge submitted that these factors will impact the need for and timing of new supply to Toronto. Accordingly, Enbridge submitted that it is premature to conclude that a third major transmission line must be built to serve Toronto. These issues require a more detailed review and a broader evidentiary base before the need for a third supply can be decided. Given the integrated resource planning implications, these longer-term planning issues may be more appropriately considered in conjunction with the newly formed Ontario Power Authority.

Based on the above submissions, Enbridge recommended that the Board defer its decision on the Proposed Facilities until after the results from the Government's Request for Proposals for 2,500 MW are known to determine if further submissions are required and refer the longer-term planning issues related to the need for a third supply to the Ontario Power Authority for recommendation back to the Ontario Energy Board.

2.5 REPLY SUBMISSION BY HYDRO ONE

Hydro One argued that Enbridge's own submission indicates it is concerned less with the proposed project currently before the Board, but with a future third supply option. It noted that the proposed transmission link does not replace any of the longer-term transmission options or any new generation options, but rather it is prudently compatible with any of the options and defers the need for a third supply. The project increases the flexibility in long term planning to allow for timely responses to changes in assumptions such as load growth, including opportunities to re-evaluate alternatives and prospective solutions such as new generation. In that regard, utility Conservation and Demand Management plans and Distributed Generation identified under the Government's RFP process could impact the future third supply options.

Hydro One further emphasized that the evidence it submitted in regard to the construction schedule, the IESO's needs assessment, or Toronto Hydro's load forecast clearly detail why a decision by April 1, 2005 is required in order to permit the construction and installation of the facilities to be operational to meet the forecasted load requirements in Summer 2008. The Applicant noted that the IESO has stated that it considers it prudent to ensure that additional supply capability is available beginning in the summer of 2006 recognizing the uncertainty inherent in such a forecast, and the vital need to maintain supply reliability in this area. Hence, a delay in the decision would require the compression of the proposed construction schedule in order to meet the defined need date. This compression of the construction schedule would also adversely impact on the costs of the project.

3. BOARD FINDINGS

The issues for the Board that arise from the instant application are as follows:

1. Should the Board proceed to decide the application now that the Ontario Power Authority exists?
2. If yes, should the Board await the outcome of the Government's RFP which may result in new generation in Central Toronto?
3. If no, has there been a demonstration of need for the proposed project and of the proposed timing?
4. If yes, are the estimated costs for the proposed project reasonable?
5. Should the proposed project be classified as network or as connection?
6. Are the rate impacts reasonable?
7. What are the conditions of approval, if any?

3.1 SHOULD THE BOARD PROCEED TO DECIDE THE APPLICATION NOW THAT THE ONTARIO POWER AUTHORITY EXISTS?

Since the time of the application, the Ontario Power Authority has come into existence. The OPA's mandate is, among other things, to develop a transmission and generation plan through the establishment of a formal Integrated Power System Plan ("IPSP"), which will be subjected to the review and approval of the Ontario Energy Board.

While the OPA has been formed, it is not yet in a position to carry out many of its statutory obligations, including the development of the IPSP. The development and approval of the first IPSP may be beyond the time horizon contemplated for this project. For the Board to decide to defer the subject matter of Hydro One's application, as Enbridge recommends, would not be reasonable. Furthermore, the creation of the OPA does not take away from the Board's authority to proceed under s. 92(1) of the *Ontario Energy Board Act*. It is the Board's view that proceeding to decide in the instant application is lawful and in the public interest.

3.2 SHOULD THE BOARD AWAIT THE OUTCOME OF THE GOVERNMENT'S RFP WHICH MAY RESULT IN NEW GENERATION IN CENTRAL TORONTO?

The Government is currently in the process of assessing the proposals it received for new generation or conservation and demand response for 2,500 MW. That process is not complete and the timing of any announcements is not clear at this point. The commencements of the awarded projects is also not known. It is possible that a generation project in Central Toronto may result from the current RFP process. The decision to await the completion of this process before the Board is able to make a decision hinges on the impact of any such new generation on the need and timing of Hydro One's proposal.

The Board notes the IESO's statement in its System Impact Assessment that transmission reinforcements in Downtown Toronto are required regardless of whether new generation is constructed. Without the transmission link provided by the proposed project for the Leaside and Manby sectors, any relief from additional generation would only be of direct benefit to the sector in which the new generation will be situated. The Board also notes that the IESO, Toronto Hydro and Hydro One agree that transmission facilities are required to meet the growing load demands in the area. Further, the Board notes that the need for these facilities was identified in the three most recent annual 10-year reports by the IESO.

Finally the Board notes that, according to the IESO, the proposed project would not favour nor inhibit any of the longer term options.

In light of this evidence, it is unnecessary in the Board's view to await the results of the Government's RFP process. The Board finds it in the public interest to render its decision prior to April 1, 2005 so that, if the project is approved, Hydro One could proceed towards construction in Summer 2005 as scheduled.

3.3 HAS THERE BEEN A DEMONSTRATION OF NEED FOR THE PROPOSED PROJECT AND OF THE PROPOSED TIMING?

The evidence by Hydro One and the submissions by the IESO and Toronto Hydro are convincing that there is a need for the proposed project. The project will provide additional capacity to ensure the availability of electricity service and maintain the reliability and quality of service to consumers in the Downtown Toronto area. The project will provide relief for an existing limitation on load transfer capability between the Leaside and Manby sectors and overload relief for the Leaside auto-transformers and the Cherrywood to Leaside 230 kV circuits.

Enbridge does not question the need for the project but, rather, its timing. The Board already dealt with Enbridge's concerns regarding the involvement of the Ontario Power Authority and the results from the Government's RFP process. Enbridge's other concern is that the proposed project may be premature as it represents the first stage of a longer-term third transmission supply option, which option has not yet been identified and which may not even be required. The Board agrees with Hydro One that the proposed project does not replace any of the longer-term transmission solutions, or any new generation options. The Board views the proposed project as increasing the flexibility in long-term planning while at the same time addressing a more immediate need.

3.4 ARE THE ESTIMATED COSTS FOR THE PROPOSED PROJECT REASONABLE?

Hydro One estimated the cost of the project at \$44.7 million, which includes a contingency of \$4.0 million. While the Board notes from the evidence that the direct costs for the tunnel method is more costly than the direct costs associated with the trenching alternative, the indirect costs of the tunnel method appear lower given the negligible disruption resulting from this technology which employs a boring machine requiring minimum excavation at the road surface. The Board expects Hydro One to appropriately justify the final costs when these are sought to be included in the network pool for ratemaking purposes.

3.5 SHOULD THE PROPOSED PROJECT BE CLASSIFIED AS NETWORK OR AS CONNECTION?

The Board accepts as reasonable Hydro One's proposal and Toronto Hydro's argument to include this project as part of network assets for ratemaking purposes. The proposal is consistent with the first phase of the Transmission System Code review proceeding, administratively easier, and grounded on the fact that the project would provide overload relief for the network facilities at the Richview and Cherrywood stations. It contributes to the ability to transfer load which to some extent mirrors a capability of a network element.

3.6 ARE THE RATE IMPACTS REASONABLE?

The Board notes Hydro One's attempts to justify the project as economically feasible, which resulted in a profitability index of 1.0. The Board agrees with Hydro One that the economic evaluation methodology contained in the Transmission System Code for assessing new load for projects is of limited applicability in this application which is driven primarily by reliability considerations. In any event, based on the analysis submitted, the Board notes that, everything else being equal, the network pool rate will rise from the current level of \$2.83 to \$2.85 per kW/month on account of this project for the first five

years, returning to its current level in the sixth year and declining after that. The Board considers the negative impact in the first five years from the in-service date to be negligible.

3.7 WHAT ARE THE CONDITIONS OF APPROVAL?

The Board approves the proposed project as outlined in Hydro One's application subject to the Board's practice for instituting certain general conditions for projects of this type. The conditions of approval are appended to this Decision and Order.

THE BOARD THEREFORE ORDERS THAT:

Hydro One Networks' application for leave to construct a 230 kV underground cable transmission line reinforcing supply to the City of Toronto is approved subject to the conditions attached as Appendix "A" to this Decision and Order.

Dated at Toronto, March 11, 2005

Signed on behalf of the Panel

ORIGINAL SIGNED BY

Paul Vlahos

Presiding Member

**Conditions of Approval
Hydro One Networks Inc.
EB-2004-0436**

1 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, 2006, unless construction has commenced prior to that date.
- 1.3 Hydro One shall advise the Board's designated representative of any proposed material change in the project, including 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.
- 1.4 Hydro One shall obtain all necessary easement rights prior to commencement of construction.

2 Project and Communications Requirements

- 2.1 The Board's designated representative for the purpose of these Conditions of Approval shall be the Manager, Licensing and 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 fulfilment 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 seven days of the Board's Order being issued.
- 2.3 Hydro One shall give the Board's designated representative ten 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 for ascertaining 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 5 copies to the Board's designated representative.
- 2.6 Hydro One shall furnish the Board's designated representative with five copies of written confirmation of the completion of construction. This written confirmation shall be provided within one month of the completion of construction.
- 2.7 Within fifteen 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 explain all significant variances from the estimates filed with the Board.

3 Monitoring and Reporting Requirements

- 3.1 Both during and after construction, Hydro One shall monitor the impacts of construction, and shall file five 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.

4 Other Approvals

- 4.1 Hydro One shall obtain, prior to commencement of construction, all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project.

5 System Impact Assessment Report

- 5.1 Hydro One shall implement all the recommendations of the Independent Electricity System Operator ("IESO"), as set out in the System Impact Report dated July 12, 2004.

6 Licences

- 6.1 Hydro One shall obtain and comply with all applicable licence requirements.