

**Hydro One Networks Inc.****Application for approval to upgrade an existing transmission line and expand the  
Runnymede Transformer Station in the City of Toronto - West Toronto  
Transmission Enhancement Project****OEB Staff  
Submission  
March 30, 2017****INTRODUCTION AND SUMMARY**

Hydro One Networks Inc. (Hydro One or HONI) applied to the Ontario Energy Board (OEB) under section 92 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B (Act) on November 17, 2016 for approval to:

- Upgrade the 115 kV circuits (K1W/K3W/K11W/K12W) between Manby Transformer Station (TS) and Wiltshire TS; and
- Expand the existing 115/27.6 kV Runnymede TS with two 50/83 MVA transformers that will provide an additional 102 MW of transformation capacity.

The proposed facilities will be referred to as West Toronto Transmission Enhancement (WTTE) Project.

In its prefiled evidence, Hydro One estimated the cost of the work to be \$59.3 million. On March 16, 2017, Hydro One updated its prefiled evidence on estimated costs of the WTTE Project and the classification of the transmission lines. More particularly, the revised evidence reduced the estimated costs to \$54.7 million from \$59.3 million, and advised that Hydro One would be classifying the circuits as dual function lines for cost classification purposes. Hydro One stated that \$50.6 million of the capital costs will be recovered through a capital contribution from its only transmission customer for the WTTE Project - Toronto Hydro – with the balance of the cost being recovered through incremental transmission revenues arising from incremental load.

A letter of support from Toronto Hydro, filed at Exhibit B, Tab 1, Schedule 1, Attachment 1 states that “Toronto Hydro has made provisions to fund a capital

contribution to HONI for its share of the work detailed above based on the cost allocation principles set out by the OEB in the Transmission System Code. Toronto Hydro's capital contribution was presented as part of the Stations Expansions program (Section E7.9) in the 2015-2019 Distribution System Plan, which was filed with the OEB in Toronto Hydro's 2015-2019 Custom IR Application (EB-2014-0116, Exhibit 2B, Section E7.9)."

Section 96 of the Act provides, in part, that in a leave to construct application under section 92 of the Act, the OEB shall make an order granting leave to carry out the work if the OEB is of the opinion that the construction, expansion or reinforcement of the work is in the public interest. When considering whether the work is in the public interest, the OEB is limited to the consideration of the interests of consumers with respect to prices and the reliability and quality of electricity service; and where applicable and in a manner consistent with the policies of the Government of Ontario, the promotion of the use of renewable energy resources. In this case, OEB Staff submits that prices, the reliability and quality of electric service are the main considerations.<sup>1</sup>

The Electricity System Operator's (IESO's) Draft System Impact Assessment (SIA) identified no material adverse impacts of the project on the reliability of the integrated power system. Hydro One completed and filed a draft Customer Impact Assessment (CIA) which determined no adverse impacts on existing customers. Hydro One indicated that the WTTE Project will have no net impact on typical residential customer bill.

Hydro One has advised that the upgrade of the existing 115kV line will not require any new permanent land rights. The planned in-service date is November 30, 2018 assuming construction starts May 1, 2017.

As discussed below, OEB Staff has no concerns with the OEB's approval of Hydro One's application with respect to need, alternatives, price, reliability and quality of service. OEB staff submits that leave to construct the WTTE Project should be granted.

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<sup>1</sup>. According to the Regional Planning Evidence and the IRRP the conservation potential cannot defer or avoid the needed capacity relief.

## PROCESS

The OEB issued a Notice of Application on January 10, 2017 which Hydro One served and published as the OEB directed. The City of Toronto, the IESO and Toronto Hydro-Electric System Limited (Toronto Hydro) were granted intervenor status. The OEB proceeded by way of a written hearing. Procedural Order No. 1 was issued on February 8, 2017 setting the schedule for written discovery and submissions. Hydro One asked, on March 9, 2017, that the OEB allow a two week extension to Hydro One for answering interrogatories. On March 10, 2017, the OEB granted a one week extension and adjusted the procedural schedule accordingly. On March 16, 2017 Hydro One filed answers to interrogatories by OEB Staff and the City of Toronto, at the same time as providing updates to its prefiled evidence.

## NEED

Hydro One has advised that the WTTE Project is needed to increase capacity to accommodate load growth forecasted by Toronto Hydro. The need for the upgrade is identified in the IESO's Central Toronto Area Integrated Regional Resource Plan (IRRP) dated April 28, 2015, and the Metro Toronto Regional Infrastructure Plan (RIP) dated January 12, 2016. The demand forecasts in the IRRP and the RIP were updated by Hydro One in response to OEB Staff interrogatory 1. Out of the total of forecasted demand for additional capacity, 9 MVA is to supply the Metrolinx Eglinton Crosstown Light Railway Transit System (Metrolinx LRT) while the remaining capacity is to supply anticipated demand growth in the West Toronto area over the medium to long term planning horizons. The Metrolinx LRT is planned to be connected to the Toronto Hydro system in 2018.

OEB Staff's view is that the proposed WTTE Project is needed.

## ALTERNATIVES

Hydro One advised that it considered two alternatives for the provision of needed capacity in West Toronto:

- Construction of additional distribution feeders to permanently transfer load to other stations in the area (Distribution Feeders Alternative)
- Expansion of the Runnymede TS and upgrading the 115 kV circuits between Manby TS and Wiltshire TS (Proposed WTTE Project)

The Proposed WTTE Project was the recommended alternative in both the IRRP and the RIP.

Hydro One's comparative assessment of the Proposed WTTE Project and the Distribution Feeders Alternative is as follows<sup>2</sup>:

<b>Comparison Criterion</b>	<b>Proposed WTTE Project</b>	<b>Distribution Feeders Alternative</b>
Cost	\$54.7 million	\$70 million
Uncertainty of estimated cost	Low	High
Meets long term supply needs	Yes	No
Implementation risks	Low	High
Makes use of existing rights of way	Yes	No

Hydro One rejected the Distribution Feeders Alternative because the cost is significantly higher and less certain. Also, under this alternative scenario, additional investment in transmission facilities is needed in 2025 which would add \$54.7 million to the cost of the alternative, resulting in a total of \$124.7 million costs for the Distribution Feeders Alternative. The alternative would also require additional permanent land rights.<sup>3</sup>

Hydro One submitted that the WTTE Project is also more advantageous because there would be fewer line losses and voltage drops because the distribution feeders will be closer to the point of supply than under the Distribution Feeders Alternative. Hydro One also noted that the WTTE Project would be comparatively more reliable because of the option for underground construction at certain points and fewer river crossings.

OEB Staff's view is that, based on a comparative assessment in the Hydro One evidence, the Proposed WTTE Project is the best feasible alternative to address the need for the forecast demand.

<sup>2</sup> EB-2016-0325 Application and Evidence, Exhibit B, Tab 5, Schedule 1, Updated March 16, 2017, page 4, lines 2-3

<sup>3</sup> EB-2016-0325 Application and Evidence, Exhibit B, Tab 5, Schedule 1, Updated March 16, 2017, page 2 lines 1-9 and Hydro One's response to OEB Staff Interrogatory 3 c)

## PRICE OF ELECTRICITY SERVICE

The total cost of work is estimated at \$54.7 million. The total estimated cost of line work is \$27.006 million while the total estimated station work is \$27.647 million. Hydro One provided cost information for a comparable project – Barwick TS in Northwestern Ontario – which was completed in 2013.<sup>4</sup> In OEB Staff's view, this comparison suggests that Hydro One's cost estimate for the WTTE Project is reasonable.

Hydro One explained that revenues from incremental loads are insufficient to cover the capital costs for the WTTE Project. As a result, a capital contribution will be required from Toronto Hydro, the only transmission connected customer for the WTTE Project. Toronto Hydro has entered into a Connection and Cost Recovery Agreement (CCRA) with Hydro One. Based on the economic evaluation methodology referred to in section 6.5 of the Transmission System Code (TSC), the capital contribution to be paid by Toronto Hydro is \$50.6 million. The difference between \$ 54.7 and \$ 50.6 will be recovered from incremental revenue from the WTTE Project that will result from incremental load on those transmission facilities. Hydro One calculated the capital contribution using a discounted cash flow model in accordance with section 6.5 and Appendix 5 of the TSC, and as described in section 2.5 of Hydro One's Transmission Connection Procedures (EB- 2006-0189).

As described in Toronto Hydro's letter of support at Exhibit B, Tab 1, Schedule 1, Attachment 1, Toronto Hydro has made provisions to fund the capital contribution to HONI for its share of the work. According to Hydro One's response to OEB Staff interrogatory 4 c), Toronto Hydro confirmed that it expects Metrolinx to provide a capital contribution towards a portion of the cost of the WTTE Project.

Hydro One's evidence is that based on the project's initial cost and incremental cash flows in the Line pool, Network Connection pool and Transformation Connection pool, there will be no changes in revenue requirement with the addition of the WTTE Project cost to the transmission rate base in 2018. The pool rates will also be unchanged over the 25-year time horizon.

As illustrated in the table below<sup>5</sup>, the WTTE Project costs will have no impact on a

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<sup>4</sup> EB-2016-0325 Application and Evidence, Exhibit B, Tab 7, Schedule 1, Updated March 16, 2017, page 5, Table 2 Costs of Comparable Projects

<sup>5</sup> EB-2016-0325 Application and Evidence, Exhibit B, Tab 9, Schedule 1, Updated March 16, 2017, page 5 lines 14-15

typical residential customer's bill.

OEB Staff submits that Hydro One's evidence demonstrates that the WTTE Project will have no adverse impact on transmission rates or customer bills.

A. Typical monthly bill (Residential R1 in a high density zone at 1,000 kWh per month with winter commodity prices.)	\$188.28 per month
B. Transmission component of monthly bill	\$11.86 per month
C. Line Connection Pool share of Transmission component	\$1.48 per month
D. Network Connection Pool share of Transmission component	\$6.95 per month
E. Transformation Connection Pool share of Transmission component	\$3.43 per month
F. Impact on Line Connection Pool Provincial Uniform Rates	0.00%
G. Impact on Transformation Connection Pool Provincial Uniform	0.00%
H. Impact on Network Connection Pool Provincial Uniform	0.00%
I. Decrease in Transmission costs for typical monthly bill (C x E)	\$0.00 per month or \$0.00 per year
J. Net impact on typical residential customer bill (G / A)	0.00%

## RELIABILITY AND QUALITY OF ELECTRICITY SERVICE

### System Impact Assessment Report

Hydro One filed with its application a draft SIA Report for the WTTE Project dated November 9, 2016. The IESO concluded that the WTTE Project is expected to have no material adverse impact on the reliability of the IESO controlled integrated power system. The IESO recommended in the SIA that a Notification of Conditional Approval for Connection be issued for Runnymede TS subject to implementation of certain project specific and general requirements<sup>6</sup> of the SIA.

<sup>6</sup> EB-2016-0325 Hydro One's Evidence Exhibit F, Tab 1, Schedule 1, Attachment 1, SIA Report: "Connection Assessment and Approval Process", Executive Summary pages 1-2

### Customer Impact Assessment

Hydro One submitted with the application a CIA for the WTTE Project dated November 14, 2016. The CIA examined potential short circuit impacts, voltage impacts and reliability impacts of the WTTE Project on existing customers and found no significant impacts on short-circuit levels, no adverse voltage impact in the vicinity of the project, no adverse impact on supply reliability and no issues related to thermal loading.<sup>7</sup>

Based on the above evidence in respect to the SIA and CIA, OEB staff submits there are no concerns with respect to reliability and quality of electricity service.

### **CONCLUSION**

In conclusion, OEB staff has no concerns with OEB's approval of the WTTE Project and submits that leave to construct the WTTE Project should be granted. OEB Staff proposes that the following conditions be included in the order for leave to construct, should the OEB approve Hydro One's application:

- Hydro One Networks Inc. is granted leave pursuant to section 92 of the Act to construct the proposed WTTE Project in accordance with the OEB's Decision in this proceeding and subject to fulfillment of the requirements of the SIA and CIA and all other necessary approvals, permits, licences and certificates required to construct, operate and maintain the proposed facilities.
- Unless otherwise ordered by the OEB, authorization for Leave to Construct shall terminate 12 months from the date of this Order, unless construction has commenced prior to that date.
- Hydro One Networks Inc. shall advise the OEB of any proposed material change in the WTTE Project, including but not limited to changes in: the proposed route, construction schedule or the necessary environmental assessment approvals, including the REA, and all other approvals, permits, licences, certificates and rights required to construct the proposed facilities.

**All of which is respectfully submitted.**

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<sup>7</sup> EB-2016-0325 Hydro One's Evidence Exhibit G, Tab 1, Schedule 1, Attachment 1, "Customer Impact Assessment Report: "Runnymede TS – Station Expansion and 115 kV Circuit Upgrades" prepared by Hydro One networks Inc., November 14, 2016, , Executive Summary page 3