

Hydro One Networks Inc.

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

Tel: (416) 345-5707
Fax: (416) 345-5866
Andrew.skalski@HydroOne.com

Andrew Skalski

Director – Major Projects and Partnerships
Regulatory Affairs



BY COURIER

October 11, 2011

Mr. David Richmond
Manager, Electricity Facilities and Infrastructure
Ontario Energy Board
Suite 2601, 2300 Yonge Street
P.O. Box 2319
Toronto, Ontario
M4P 1E4

Dear Mr. Richmond:

**EB-2011-0055 – Amendment to the Transmission Licence of Hydro One Networks – OPA
Recommendations for Licence Amendment Projects**

For your records, I am providing a copy of OPA recommendations that Hydro One has received with respect to the West of London Upgrade project and the Southwestern Ontario Reactive Compensation project. Based on these recommendations, Hydro One is proceeding with planning work on both projects. Staff will be updated on the progress of the projects through the regular quarterly updates.

I trust the above is satisfactory.

Sincerely,

A handwritten signature in cursive script, appearing to read "A. Skalski".

Andrew Skalski

Attach.

Ontario Power Authority



120 Adelaide Street West
Suite 1600
Toronto, Ontario M5H 1T1
T 416-967-7474
F 416-967-1947
www.powerauthority.on.ca

October 3, 2011

Mr. Mike Penstone
Vice President, Transmission Project Development
Hydro One Networks Inc.
483 Bay Street
Toronto, Ontario M5G 2P5

Dear Mike,

Southwestern Ontario Reactive Compensation Priority Project

In its Decision and Order dated February 28, 2011, the Ontario Energy Board (OEB) amended the transmission license of Hydro One Networks Inc. (Hydro One) in accordance with the Minister's Directive, dated February 9, 2011, to the Ontario Energy Board. The transmission license amendment includes, among others, a requirement for Hydro One to develop and implement an upgrade project consisting of adding one or more devices to enhance transfer capability, such as series or static var compensation or other similar devices, in Southwestern Ontario. The Directive stated that Hydro One was to "immediately work in co-operation with the Ontario Power Authority (OPA) to establish the scope and timing of the projects identified...", and that "the scope and timing of the projects shall accord with the recommendation(s) of the OPA".

The purpose of this letter is to provide Hydro One with a recommendation on the scope and timing of the Southwestern Ontario reactive compensation project. This project is an important element of the efforts to add renewable generation to the grid in support of the Long Term Energy Plan target of 10,700 MW of installed non-hydroelectric renewable capacity by 2018. The Supply Mix Directive received by the OPA on February 17, 2011 states that the OPA shall include this project in the Integrated Power System Plan.

The existing bulk transmission system in the Bruce transmission area consists of a 500kV network connecting the Bruce Nuclear Complex and the Greater Toronto Area (GTA), and an underlying 230kV network, as shown in Figure 1. The 500kV network consists of two main transmission paths: one between the Bruce Nuclear Complex and the Milton station in the western part of the GTA, which will include the new double-circuit 500 kV Bruce-to-Milton transmission line, expected to be in service by the end of 2012, and another connecting the Bruce Nuclear Complex to the GTA via the Longwood station near London, the Nanticoke station on the shore of Lake Erie and the Milton station. The 230 kV network consists of three double-circuit transmission lines between the Bruce Nuclear Complex and the Detweiler (near Waterloo), Orangeville and Owen Sound stations, and provides connection points for many of the individual generation projects in the Bruce area.

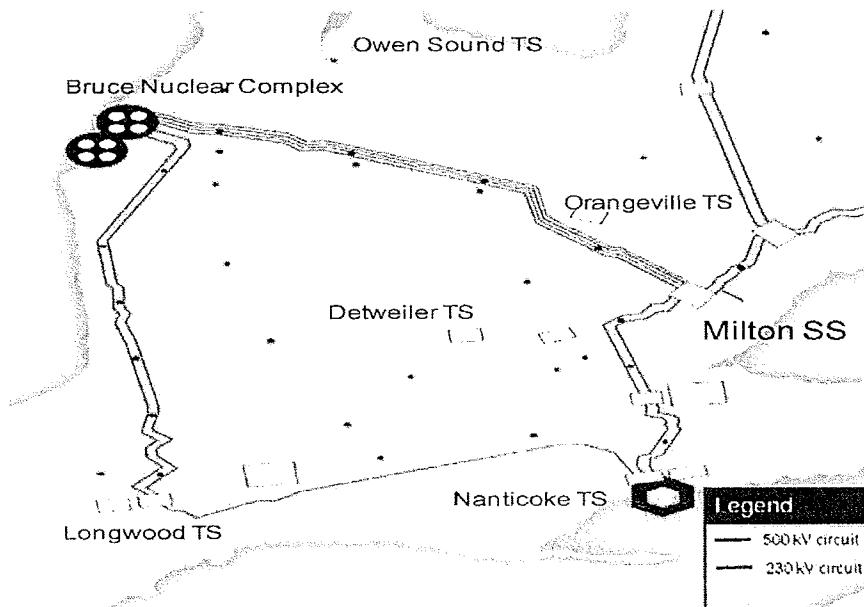


Figure 1 – Bruce Area Transmission System

After the new Bruce-to-Milton line comes into service, the amount of additional generation that can be accommodated in the Bruce area will be limited by the potential voltage instability that could occur on the Bruce transmission system following the outage of one of the double-circuit Bruce to Milton 500 kV lines. The addition of reactive compensation to better support transmission voltages in southwestern Ontario will increase the transfer capability between the Bruce and the GTA and enable the connection of additional renewable generation in the Bruce area.

The Bruce area has significant wind power potential. As of early July 2011, over 2,000 MW, mostly wind generation, has applied to the FIT program and is awaiting transmission capability in the area. This is in addition to the 750 MW of renewable energy projects in the Bruce that were offered FIT contracts in July 2011 in anticipation of the new Bruce to Milton 500 kV line. As well, about 450 MW of wind power projects have currently been committed in the Bruce area by the Korean Consortium under the Green Energy Investment Agreement.

The OPA has considered the use of two standard technologies for providing reactive compensation: static var compensation and series compensation, both of which are currently in use in Ontario. The OPA considered alternatives including the installation of static var compensators (SVC) at several locations in Southwestern Ontario as well as series compensation options on the Bruce to Longwood and/or Longwood to Nanticoke circuits. After working closely with the IESO and Hydro One, it was determined that adding an SVC at the Milton station was the best alternative to meet the upgrade requirements, based on cost effectiveness, land use, and technical considerations. In addition to enabling the connection of renewable generation in the Bruce area, the Milton SVC will also provide local voltage support and regulation to the west GTA area, especially when local generation there is not available. The addition of an SVC at Milton also provides flexibility for future development should greater transmission capability be required in the Bruce area.

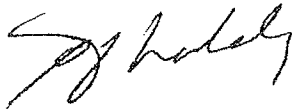
The OPA recommends that Hydro One proceed with adding an SVC with a rating of 350 MVar (of capacitive capability) and connecting to the 500kV voltage level at the Milton station. This SVC should have similar performance characteristics of the SVC currently being installed at the Nanticoke station.

Ontario Power Authority

Should the final project specifications determined by Hydro One result in substantially different performance characteristics from those of the SVC at Nanticoke, Hydro One will seek the OPA's confirmation of the suitability of the performance characteristics for meeting project objectives. This project will increase the capability of the Bruce transmission system by approximately 250 MW, depending on where future projects may be connected.

Based on discussions with Hydro One, an in-service date of Spring 2015 has been established for this project. The OPA will continue consulting regularly with Hydro One to review progress and provide any further assistance in order to enable the successful project completion by the required in-service date.

Regards,

A handwritten signature in black ink, appearing to read 'Amir Shalaby', written in a cursive style.

Amir Shalaby
Vice President, Power System Planning
Ontario Power Authority



120 Adelaide Street West
Suite 1600
Toronto, Ontario M5H 1T1
T 416-967-7474
F 416-967-1947
www.powerauthority.on.ca

June 30, 2011

Mr. Mike Penstone
Vice President, Transmission Project Development
Hydro One Inc.
483 Bay Street
Toronto, Ontario M5G 2P5

Dear Mike,

Re: West of London Transmission Upgrade Priority Project

In its Decision and Order dated February 28, 2011, the Ontario Energy Board (OEB) amended the transmission license of Hydro One Networks Inc. (Hydro One) in accordance with the Minister's Directive, dated February 17, 2011, to the Ontario Energy Board. The transmission license amendment includes, among other things, a requirement that Hydro One develop and seek approvals for an upgrade of one or more existing transmission lines west of the City of London. The Directive further stated that Hydro One was to "immediately work in co-operation with the Ontario Power Authority (OPA) to establish the scope and timing on the projects identified...", and that "the scope and timing of the projects shall be in accordance with the recommendations of the OPA".

The purpose of this letter is to provide Hydro One with a recommendation on the scope and timing of the west of London transmission line upgrade project. As stated in the government's Long Term Energy Plan (LTEP), this project is needed to add renewable generation to the grid, in order to meet the LTEP target of 10,700 MW of installed non-hydroelectric renewable capacity by 2018. The Supply Mix Directive received by the OPA on February 17, 2011 states that the OPA shall include this project in the Integrated Power System Plan.

The existing bulk transmission system in the west of London area consists of three double circuit 230 kV transmission lines connecting Sarnia, Lambton and Chatham respectively with the Longwood and Buchanan transformer stations near London. There are also 230 kV circuits connecting Sarnia and Lambton, Lambton and Chatham, and Longwood and Buchanan. This system is shown in Figure 1.

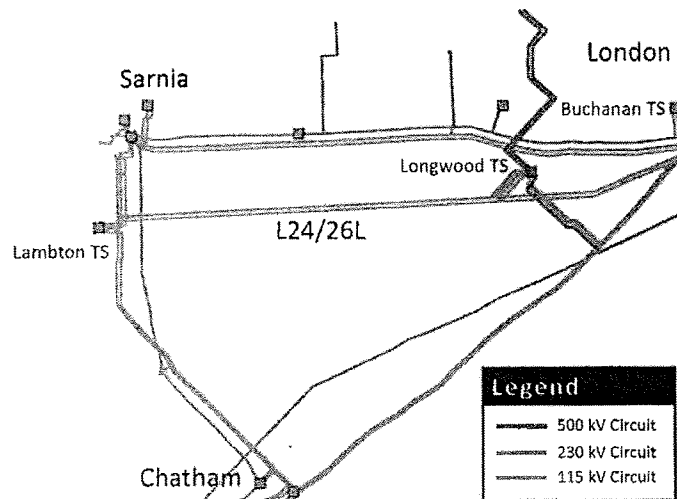


Figure 1 - West of London Transmission System

Power transfer into the London area from the west is limited by the thermal capability of the three transmission lines connecting the London area stations with Sarnia, Lambton and Chatham. Once the new Bruce-Milton transmission line comes into service, these circuits will limit the amount of additional renewable generation that can be connected in the west of London area. Upgrading one of the three circuits will increase transfer capability, and enable the connection of additional renewable generation. The upgrade project will maximize the capability of the system and require less lead time than a new transmission line.

The OPA recommends that Hydro One Networks Inc. proceed with reconductoring approximately 70 km of the two 230 kV circuits (L24/26L) from Lambton to Longwood with a higher ampacity conductor rated approximately 1700-1900 A (LTE capability at 35°C, 4km/hr wind speed). The upgrade project will enable the connection of approximately 300-500 MW of additional renewable generation in the west of London area, depending on such factors as generators' locations and system conditions. The required in-service date for the upgrade is December 2014. The OPA will continue working regularly with Hydro One to review progress and provide any further assistance in order to enable the successful project completion by the required in-service date.

The OPA's studies indicate reconductoring the Lambton to Longwood transmission line will provide the greatest capability to incorporate additional renewable generation west of London. The OPA has also worked closely with Hydro One's staff over the past several months to review the cost and feasibility of reconductoring alternatives. Based on this information, the OPA has identified this reconductoring project as the best alternative to meet the upgrade requirements, including the LTEP target in-service date of 2014. Should the final project specifications determined by Hydro One result in a conductor rating outside the 1700 - 1900 A range, Hydro One will seek the OPA's confirmation of the suitability of the rating for meeting project objectives.

Regards,

Amir Shalaby
Vice President, Power System Planning
Ontario Power Authority