



January 24, 2008

Delivered by e-mail to: stakeholder.engagement@ieso.ca
Independent Electricity System Operator
Stakeholder Engagement Unit
655 Bay Street, Suite 410
Toronto, ON M5G 2K4

Dear Sirs/Mesdames:

Re: Stakeholder Engagement SE-57 - Embedded Generation Discussion Paper

Ventus Energy Lakehead Windpower LP ("Ventus"), a subsidiary of SUEZ Renewable Energy North America, would like to provide the following comments on Stakeholder Engagement SE-57 - Embedded Generation Discussion Paper (the "Discussion Paper").

Ventus is actively engaged in becoming a significant provider and operator of embedded generation facilities in Ontario. In 2004 Ventus initiated development of its Lakehead wind projects in the Thunder Bay area. Since that time Ventus has invested significant resources in taking the necessary steps to establish the facility, including conducting or participating in wind assessments, connection applications/studies, an environmental assessment, a transmission connection application/study and system impact and customer impact assessments.

As mentioned in the Discussion Paper, projects such as this can make a significant contribution to the security of Ontario's energy supply, and can assist in achieving the Government's objectives for a clean and renewable energy supply.

One issue that has arisen involves the connection of embedded generating facilities to the IESO controlled grid. In some cases, including our proposed Lakehead facility, the total proposed generation capacity will exceed the power requirements of the area supplied by the transformer station to which the generation capacity will be connected. In that case, there can be expected to be reverse power flow through the station, with a consequent net injection (back feed) into the transmission system. Neither the Transmission System Code nor the Distribution System Code addresses reverse power flows.

We understand Hydro One's policy relating to reverse power flows to be as follows: (1) The reverse power flow from the low voltage side to the high voltage side through any of its transformers should not exceed 60% of the rating of the transformer; and (2) For the purpose of determining the maximum generation that can be connected to the distribution system, it should be assumed that one transformer is out of service.

The second part of this policy in effect limits the maximum generation on the distribution system to 30% of the combined capacity of the two transformers. Therefore, under normal operating conditions, with two transformers in service, the maximum reverse flow through each transformer will only be 30% of its rating.

Ventus feels that this policy does not enable the benefit of embedded generation facilities to be fully realized. Ventus has proposed to Hydro One and the Ontario Energy Board that the maximum embedded generation allowed be determined with all transformers in service, provided the generation developer agrees to limit the wind turbine operation output if and when the station transformers are out of service. This could be accomplished by a slight modification to the substation's protection and control scheme. This is in principle similar to the protection schemes currently being relied upon by Hydro One to prevent islanding.

In appropriate circumstances generation developers may be prepared to pay some or all of the costs of the additional protection and control systems necessary for this approach.

Recommendation

In order to allow consideration of these and other modifications that would facilitate the development of embedded generation while maintaining the safety and reliability of Hydro One's transformers, Ventus suggests that the following be added as an additional item at the end of Recommendation 2 in the Discussion Paper:

- Provision for obligations on the transmitter to review and make any appropriate changes to its facility designs and operational procedures in order to maximize the connection feasibility of embedded generation facilities, while maintaining reliability and efficiency of the transmission system, and taking into account opportunities to pass on the costs of such changes to generator developers.

We appreciate your consideration of this matter and look forward to participating in the stakeholders' meeting on January 31, 2008 to discuss stakeholder feedback.

Yours truly,



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