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BY COURIER

March 27, 2013

Ms. Kirsten Walli
Secretary
Ontario Energy Board
Suite 2700, 2300 Yonge Street
P.O. Box 2319
Toronto, Ontario
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Dear Ms. Walli

**EB-2012-0442 - Varna Wind Inc., Section 92 Leave to Construct
Hydro One Networks Intervenor Evidence**

In accordance with the Board's Procedural Order 2, I am attaching two (2) paper copies of the Hydro One Networks' Intervenor Evidence in the above-mentioned proceeding.

An electronic copy of this notice has been filed using the Board's Regulatory Electronic Submission System.

Sincerely,

ORIGINAL SIGNED BY SUSAN FRANK

Susan Frank

c – Intervenor (Electronic Only)

**VARNA WIND INC.
LEAVE TO CONSTRUCT TRANSMISSION FACILITIES
HYDRO ONE NETWORKS INC. EVIDENCE**

BACKGROUND

Varna Wind Inc. (“Varna”) has applied to the Board for leave to construct a 115kV transmission line and related facilities to connect the Bluewater Wind Energy Centre (“BWEC”) to Hydro One’s transmission system. This line, proposed for installation on 24 km of municipal rights of way through the East Huron and Bluewater communities, will be located on the opposite side of the road and parallel to, Hydro One’s distribution wires for 14 km of that route. At this time, Hydro One Distribution has, at Varna’s request, agreed to:

- relocate underground, about ten spans of two existing Hydro One overhead distribution lines, enabling Varna’s 115 kV line to cross the road allowance (thereby avoiding obstructions on their existing path); and
- relocate a station pole at Seaforth TS at the station exit in order to accommodate their installation of an access point driveway (enabling station and generator service).

Today, Hydro One Distribution serves about 17 customers who will lie behind Varna’s transmission line, on the opposite side of the road from Hydro One’s existing distribution line. In addition, for the next 20 years (and possibly longer, coinciding with Varna’s generating contract), in order to serve future home builders or others requesting a new electrical service connection, Hydro One Distribution will have to get its lines across the transmission line. The cost of a new customer connection will therefore rise, due to the added cost of either pole changes or underground road crossings.

Varna (as noted in response to Board Staff’s first Interrogatory), accepted Hydro One’s policy of not allowing over-building (or joint use) of high-voltage lines on Hydro One distribution poles along this route (due to safety and reliability concerns), and accordingly has located its transmission line on the road allowance on the opposite side of Hydro One’s distribution line. There are issues with this option, as well, however, leading to both immediate and future incremental costs for Hydro One’s Distribution business and customers. Hydro One notes that certain issues were raised by Haldimand County Hydro (“HCHI”) in the Summerhaven Application for Leave to Construct (EB-2011-0027, resulting in a Board Decision dated November 11, 2011) and the similar Grand Renewable Wind LP (“GRWLP”) proceeding (EB-2011-0063, Board Decision dated December 8, 2011). In both cases, the Board decided that the relevant generator-transmitter would be responsible for the distributor’s immediate incremental costs to accommodate the transmission presence. With respect to future distribution costs, the Board, in the Summerhaven case, decided that Summerhaven should also bear HCHI’s incremental costs for underground road crossings, if required, due to Summerhaven’s potential configuration needs arising from environmental permitting requirements. In the GRWLP case, the Board decided that GRWLP should not be held responsible for changes required to HCHI’s future plans, as this was beyond the scope of the proceeding.

SUBMISSION

Hydro One Distribution, as the local electricity distributor for the area, is required to provide services such as upgrades and expansions for current customers, connections of new customers, power restoration, and maintenance and repair of its assets. Provision of service to customers who lie on the other side of the new transmission line, therefore, entails consideration of technical and operational issues, such as how to:

- perpendicularly cross transmission wires with distribution voltage wires when needed, while maintaining the required clearances between the lines,
- provide restoration and other services, and
- address possible high risk scenarios of contact between high and low voltage wires.

Safety (of the public and employees of both companies), system reliability and service quality are primary considerations. Finding solutions which address all these obligations in an economic manner is critical to Hydro One. Hydro One therefore would like to correct the record in regard to Varna's statement in response to the Board Interrogatory 7a), that "Hydro One has not expressed concerns regarding the location of the Facility on the opposite side of the road of existing distribution lines." In fact, Hydro One did note these types of concerns during a January 24th meeting and a February 5th conference call with Varna. On February 18th, Hydro One sent a draft term sheet via e-mail with proposals to address these concerns to Varna. Hydro One's intent was and remains to obtain resolution on design requirements and cost sharing, and execute a contract satisfactory to both parties. To-date, an agreement has not been reached.

Business Impacts

Arrangements for Shared Rights of Way for Overhead Wires

Hydro One anticipated participating in an agreement addressing shared rights of way, having both joint use and operational components. That is, to obtain access to its customers across the road, Hydro One must have in place an arrangement which allows its distribution lines to cross the road and be attached to Varna's poles as needed, on a case by case basis. This raises both immediate and future issues, as follows:

Immediate Issues

- a) Operational considerations, such as:
 - i) Working arrangements respecting response times to trouble calls which allow Hydro One to maintain its obligations respecting service reliability and quality.
 - ii) Development of access and other protocols to resolve emergency situations and maintain public safety until resolution is achieved.
 - iii) Timely attainment of supporting guarantees and/or hold-offs (enabling Hydro One crews to work on Hydro One assets in the vicinity of Varna's facilities).
 - iv) The potential for increased use of live line work by Hydro One crews, to reduce the need for outages on Varna's transmission line. Hydro One's distribution crews generally are not trained in live line work related to voltages greater than 50kV, however, which

would mean an increase in training costs and/or the use of specialized crews brought in from other parts of Hydro One's service area, at higher cost.

- b) Incremental costs incurred by Hydro One, such as:
 - i) Costs arising from electrical and mechanical damage to Hydro One equipment. in the case of potential contact between high and low voltage wires.
 - ii) Additional costs arising from the operational considerations noted in a) above.

Future Issues

- c) Other incremental costs to Hydro One, to reimburse Varna for services, such as:
 - i) Installation of higher poles (in place of its existing poles, to ensure proper distance between high and low voltage lines) and other equipment, in response to changes in connection requirements for existing or new customers.
 - ii) Joint use charges.
 - iii) Potential easement crossing arrangements.
- d) Addressing customer impacts, such as:
 - i) Each customer requiring a non-standard connection or expansion which triggers arrangements such as those discussed in c) above, will incur greater individual costs, under existing Distribution System Code rules for service connection and expansion.

Relocation of Distribution Wires Underground

An alternative that would eliminate many of the above-noted technical and operational issues associated with the shared rights of way for overhead wires, which has been discussed on a preliminary basis with Varna, would involve Hydro One relocating the road crossing portions of its distribution line underground. Hydro One's current practice is to install overhead wires, particularly in rural areas, due to the generally lower cost of this approach vis-à-vis the underground alternative. However, in recognition of the increasing complexity of the issues related to overhead service noted above, and the number of projects similar to the current Application which are expected going forward, Hydro One is now considering making underground installations a policy requirement in these circumstances. For the Varna project, this would involve relocating underground, all of the existing road crossings along the shared route, at a preliminary cost estimate of approximately \$320 thousand. Future new connections would also be put underground at an estimated incremental cost above overhead wire installation of between \$5,000 and \$9,000 per connection. (Costs arising from road boring in a very rocky area could be much higher, however).

Responsibility for the Additional Costs for either Overhead or Underground Options

As can be seen, there are significant additional costs, now and into the future, imposed on the distribution system that are triggered by the need to accommodate Varna's new transmission line, regardless of whether the distribution lines remain overhead or are put underground. These costs can be recovered from either specific new and existing customers, all distribution ratepayers, Varna, or a combination thereof.

Under a beneficiary-pays principle, the costs would be borne by the triggering party. Given the continuation of these costs over the life of the generation project, this cost responsibility would logically extend for 20 years or the life of the contract (if extended).

Hydro One has raised the question of cost recovery with Varna in its contract discussions, but to-date, despite a willingness on both sides to engage in productive discussions, the parties have not reached an agreement. Hydro One acknowledges that this is due, in part, to competing priorities for both parties, but also notes that there is a regulatory gap in the Codes which complicates the resolution of these issues.

Finally, Hydro One notes that the concerns outlined above are not one-time items related only to the Varna Wind project. They are expected to recur as more generation-related transmission lines are built in areas of renewable generation, in proximity to existing distribution systems.

Conclusion – the Regulatory Gap

As Varna states in response to Hydro One's Interrogatory 1, the Board's Decision on Grand Renewable Wind LP (EB-2011-0063), directed that the generator-transmitter was responsible for Haldimand County Hydro Inc.'s immediate costs incurred to accommodate its presence. Costs of future plans, however, were declared, for several reasons, to be out of the scope of the Leave to Construct proceeding. Hydro One notes that the Transmission System Code and the Distribution System Code each directs the transmitter/IESO or distributor, respectively, in the assessment of impacts of a generation facility on their individual systems, and in the allocation of the immediate costs required to address the technical and other requirements involved in connecting them. Neither Code, however, addresses the longer-term cost impacts of generator-transmitters on local distribution systems. In the current case, as a transmission-connected customer, Varna is required to sign a connection agreement with Hydro One Transmission. That connection agreement, through the System Impact Assessment and Customer Impact Assessment, considers transmission system impacts and certain technical impacts on the distribution system, such as short circuit and voltage levels. But it does not address the distribution system operational and cost impacts noted above. However, since Varna is not connecting to the distribution system, there is no requirement for it to sign a connection agreement with Hydro One Distribution that would comprehensively address distribution system impacts, leaving a gap in the regulatory framework. In short, there are no existing regulatory mechanisms that directly address these questions. Hydro One therefore, believes it is appropriate to raise this issue again for the Board's consideration, and it will be providing further submissions in Argument on the matter.