



BOARD STAFF INTERROGATORIES

SUMMERHAVEN WIND LP

**LEAVE TO CONSTRUCT TRANSMISSION FACILITIES
EB-2011-0027**

April 8, 2011

Interrogatory #1: General

Reference: Exh. A/ Tab 2/Sch. 1/p. 1/paragraphs 1 and 2

Preamble: “

NextEra Energy Canada, ULC and NextEra Energy Resources Inc., through their respective wholly –owned subsidiaries, both carry on the business of developing, owning, and operating energy generation facilities”.

“...the Applicant is deemed to be a generator pursuant to section 56 of the OEB Act”.

Question/Request:

- (i) What is the Applicant’s experience in constructing and operating a transmission interconnection facility?
- (ii) Please indicate what corporate organization capabilities exist to complete the applied for Transmission Line project.
- (iii) Please indicate whether the company intends to make use of contractors. Please identify what the capabilities of any contractors are or would be and provide a summary of the experience of each contractor.
- (iv) Where applicable, for each of (ii) and (iii). please provide information with respect to:
 - Project Management;
 - Design;
 - Construction;
 - Operation and Maintenance; and
 - Examples of similar projects that have been undertaken.

Interrogatory #2: Connecting Other Generation

Preamble:

The line is privately owned and located in areas where other renewable generation facilities could be sited, and that may wish to connect to the line.

Question/Request:

- (i) As a privately owned line, does Summerhaven see the possibility of accommodating additional connections?
- (ii) On what basis would Summerhaven expect to address such requests and, where appropriate, facilitate such connections?

Interrogatory #3: Status - Permits and Other Applications

Reference: (a) Exh. B/Tab 5/Sch. 1/p. 1
(b) Exh. B/Tab 5/Sch. 1/p. 2
(c) Exh. C/Tab 1/Sch. 1/Notice of Proposal under section 81 of the *Ontario Energy Board Act, 1988*

Preamble:

Reference (a) provides a construction schedule for the transmission facilities, but does not include a list of permits and licences that will be required during the various phases.

Reference (b) also highlights that the “construction of the Facility will be commensurate with the construction of the SWEC”.

Question/Request:

- (i) Please provide a list of required permits and approvals for completion of the Facility and include the current status and the timeline for obtaining each permit and approval.
- (ii) Please provide an update on the status of construction of the SWEC.
- (iii) Is the expected in-service date of December 2011/January 2012 for the transmission facilities still valid?
- (iv) Please discuss the Applicant’s strategy to deal with delays for either the SWEC or the Facility construction. Indicate how this kind of contingency is incorporated into the construction schedule that has been submitted. Does the Applicant foresee any cost consequences for delays? How does the Applicant intend to address such cost consequences.
- (v) Please provide an update on the Notice of Proposal, filed with the Board under Section 81 of the OEB Act, 1998 as set out in Reference (c).

Interrogatory #4: Switchyard Construction and Cost Responsibility

- Reference:**
- (a) Exh. B/ Tab 2/ Sch. 1/ page 1
 - (b) Exh. C/ Tab 1/ Sch. 1/ Page 5
 - (c) Compliance Bulletin 200606, issued on September 11, 2006 titled "Allocation of Costs to Customer Connections to Transmission System"/copy included as Attachment (I) to this Interrogatory #4
 - (d) Exh. B/ Tab8/ Sch. 3/Customer Impact Assessment ("CIA")/Introduction

Preamble:

To connect the SWEC to the Hydro One Networks Inc. transmission system, the Applicant is proposing three different elements [transmission line, substation, and switchyard]. The first two will be built by Summerhaven while the last one will be built by Hydro One.

According to Reference (a), Hydro One will construct and own the switchyard.

Reference (b) mentions that "the Applicant will also own and operate the interconnection facilities (the "Facility") used to connect the SWEC to the IESO-controlled grid..."

Reference (c) requires that apportionment of cost for facilities that are classed as Network, where the proposed cost responsibility is consistent with what is described as minimum connection requirements and it states in part that:

Section 6.1.2 of the TSC requires that transmitters ensure that new or modified connections to its transmission system do not materially reduce the reliability or performance of its transmission system. This must be a consideration in determining the minimum connection requirements. The minimum connection requirement will generally consist of the following:

- a) Connection interface equipment including i) terminating structures, ii) disconnect switches and iii) line or bus connections which may include line taps or bus extensions if required.
- b) Automatic interrupting devices such as breakers or circuit switchers as required by the IESO or the transmitter located at the connection interface (or alternate location as discussed above), their associated structures and disconnect switches. As noted in the discussion above, some apportionment of cost may be necessary if these devices are located in a network facility.
- c) Protection and control and associated telecommunication directly related to the minimum connection requirement interrupting devices, and/or the connecting customer's interrupting devices.
- d) Incremental additions to existing special protection systems such as load or generation rejection required to incorporate the connecting customer.

Therefore I expect that transmitters should allocate costs associated with these minimum connection requirements to the connecting customer.

Reference (d) does not include a Connection Cost Recovery Agreement.

Question/Request:

- (i) Please clarify whether the Applicant or Hydro One is constructing the switchyard.
- (ii) Please clarify the cost responsibility arrangement for the construction of the switchyard. Please provide the details of the cost responsibility arrangement, in particular with respect to whether the arrangement is consistent with the provisions reproduced in Reference (c) in regard to the “minimum connection requirements”.
- (iii) Please confirm that regardless of the costs contributed by the Applicant towards the construction of the switchyard, Hydro One will be the owner and operator of that switchyard.
- (iv) Please confirm that Hydro One will include in its Connection and Cost Recovery Agreement as referenced in (d), the financial obligations by the Applicant in regard to the switchyard connecting the Applicant’s transmission line to Hydro One’s N1M 230 kV transmission line.

Attachment (I)
To Board Staff Interrogatory #4

**Compliance Bulletin 200606, issued on September 11, 2006 entitled
“Allocation of Costs for Customer Connections to Transmission System”**

**Ontario Energy
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Compliance Office

September 11, 2006

Compliance Bulletin 200606

To: All Licensed Electricity Transmitters

Re: Allocation of Costs for Customer Connections to Transmission Systems

This Bulletin clarifies how electricity transmitters are to allocate costs for customer connections to transmission systems.

Section 6.3 of the Transmission System Code (TSC) addresses cost responsibility for new and modified connections. With regard to customer connections, the TSC deals with cost allocation of *connection* facilities and *network* facilities differently. Costs associated with additions or upgrades to *connection* facilities are allocated to the connecting customer while costs associated with additions or upgrades to *network* facilities are generally allocated to the transmitter. The TSC contemplates that some assets in a *network* facility may, in fact, serve a connection function. The cost responsibility principles of the TSC require that a customer be allocated the full cost of connection to the transmission system.

It is my view that, in keeping with the TSC requirement that connecting customers be allocated the cost of connection, connecting customers are responsible for costs that are directly related to the physical interface connection with the transmission system regardless of where, on the transmission system, the connection occurs. It is my view that the costs of these “minimum connection requirements” are to be borne by the connecting customer even when the assets necessary to achieve the minimum connection requirement will be located within the transmitter’s *network* facilities. It is also important to note that in some cases, all or some of the minimum connection requirement may be physically located away from the actual connection interface point for practical or economic reasons. Where a customer connects to a line, for example, and a breaker is required to mitigate reduced reliability resulting from the new connection, it may be better to install that additional breaker at an upstream station rather than at the point of connection to the line. In such cases, the additional required breaker should be considered part of the minimum connection requirement even though it is not physically located at the actual interface connection point.

Where all or some modifications involve *network* facilities, some apportionment of cost may be necessary to reflect the fact that not all the network modifications form part of the minimum connection requirement. If a customer connection is made to a *network* station, for example, it will often require two terminating breakers in a ring-bus arrangement rather than a single radially connected breaker terminating on a station bus. In such circumstances, it is my view that the TSC requires that one breaker forms part of the minimum connection requirement and its cost should be allocated to the connecting customer while the second breaker is for the benefit of all ratepayers and its cost should be allocated to the transmitter.

Section 6.1.2 of the TSC requires that transmitters ensure that new or modified connections to its transmission system do not materially reduce the reliability or performance of its transmission system. This must be a consideration in determining the minimum connection requirements. The minimum connection requirement will generally consist of the following:

- a) Connection interface equipment including i) terminating structures, ii) disconnect switches and iii) line or bus connections which may include line taps or bus extensions if required.
- b) Automatic interrupting devices such as breakers or circuit switchers as required by the IESO or the transmitter located at the connection interface (or alternate location as discussed above), their associated structures and disconnect switches. As noted in the discussion above, some apportionment of cost may be necessary if these devices are located in a *network* facility.
- c) Protection and control and associated telecommunication directly related to the minimum connection requirement interrupting devices, and/or the connecting customer's interrupting devices.
- d) Incremental additions to existing special protection systems such as load or generation rejection required to incorporate the connecting customer.

Therefore I expect that transmitters should allocate costs associated with these minimum connection requirements to the connecting customer.

Please direct any questions you may have on this matter to the Market Participant hotline at 416-440-7604 or by e-mail at market.operations@oeb.gov.on.ca.

Brian Hewson
Chief Compliance Officer
Compliance Office

No statutory power of decision has been delegated to the Chief Compliance Officer, and the views expressed in this Information Bulletin are not binding on the Board. The Chief Compliance Officer may seek enforcement action by the Board under Part VII.1 of the *Ontario Energy Board Act, 1998*, in relation to non-compliance.

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Interrogatory #5: Preferred Alternative Arrangement - Switchyard

- Reference:**
- (a) Exh. B/ Tab 8/ Sch. 2/SIA Report/SIA Findings/p. 7/Recommendations
 - (b) Exh. B/ Tab 8/ Sch. 2/SIA Report/Section 3.1 Proposed Connection Arrangements/p. 16
 - (c) Exh. B/ Tab 8/ Sch. 2/SIA Report/Section 6.6/p. 34//paragraph 4 and 5
 - (d) Exh. B/Tab 6/ Sch. 1/pp.1-2/paragraph 29

Preamble:

In Reference (a), the SIA stated in part that:

Considering that another FIT wind project, Port Dover and Nanticoke Wind Farm (PDNW), will be connected to N2M at a point about 1 km away from the connection point of this project, it is strongly recommended that a common switching station be built for both projects instead of two separate stations.

In Reference (b) it is indicated that the common switching station (for the PDNW and this Project), shown in Figure 2, which has been suggested by Hydro One (see Reference (a) above).

In Reference (c), the SIA indicates that with a common switching station, any N-1 condition (meaning a single contingency) involving N1M/N2M would allow the production from the two generating facilities to be evacuated through the three remaining lines, resulting in more secure connections for Summerhaven and PDNW. For any N-2 condition (meaning a double contingency) it would still allow injection from both generating stations. The SIA further stated:

The full switching station would also allow for future expansions to accommodate system upgrades or new generation connections. In addition, a common switching would likely involve overall cost savings when compared to two separate switching stations.

Question/Request:

- (i) Please update the Board on whether this design is being considered by Hydro One in view of the advantages listed in Reference (c).
- (ii) Have there been consultations with the IESO regarding this matter?
- (iii) Please update the Board in regard to recommendations (2) and (3) from Reference (a), respectively on, the Wind Farm Management System, and the Under Load Tap Changer (ULTC) step-up transformer that will be installed.

- (iv) In the event the recommended common switchyard is adopted for the two wind farms (Summerhaven Windfarm and the Port Dover and Nanticoke Windfarm), please provide the proposed steps the Applicant and Hydro One will undertake to facilitate this course and update the status of the Option to Purchase referred to in Reference (d) in regard to the land considered for the point of connection and the switchyard.

Interrogatory #6: Stranded Assets and Decommissioning

Reference: Exh. B/ Tab 6/ Sch. 1/p. 1/ Paragraphs 24 and 27

Preamble:

Useful life of the equipment, and useful life of the SWEC.

Question/Request:

- (i) Please acknowledge the Applicant's responsibility for removing transmission and related facilities if the Facility construction does not proceed or is interrupted due to unforeseen events such as the inability to acquire or secure rights over the necessary lands or a *force majeure* event?
- (ii) Are funds for this purpose set aside, or guaranteed by any means? Please provide details.
- (iii) Please confirm that decommissioning costs are the responsibility of the Applicant.

Interrogatory #7: Customer Impact Assessment (CIA)

Reference: (a) Exh. B/Tab 8/Sch. 3/Introduction/last paragraph
(b) Compliance Bulletin 200606, issued on September 11, 2006 entitled "Allocation of Costs for Customer Connections to Transmission System"

Preamble:

At Reference (a), Hydro One states that:

The study does not evaluate the impact of the Summerhaven Wind Energy Centre on the network Protection and Control Facilities. Protection and Control aspects will be reviewed during the preparation of the Connection cost Estimate and will be reflected in the Connection and Cost Recovery Agreement.

Question/Request:

- (i) Please provide an update on the Connection cost Estimate, covering the following:

- capital contribution based on the principles outlined in Reference (b);
 - estimates of cost upgrades to the Network facilities related to the protection and control requirements to accommodate this project.
- (ii) Please provide an update on the status of the Connection and Cost Recovery Agreement (CCRA).

Interrogatory #8: Renewable Energy Approval (REA) Application

- Reference:**
- (a) Exh. B/Tab 1/Sch. 1/p. 2/paragraph 6
 - (b) Exh. B/Tab 5/Sch. 1/p.1/ paragraph 21 and Table
 - (b) Exh. B/Tab 7/Sch. 2

Preamble:

In Reference (a), the Applicant indicated that it expects to receive a decision from the Ministry of Environment regarding its REA early in the third quarter of 2011.

In Reference (b), expected receipt of the REA is July 2011.

At Reference (c), a placeholder in the pre-filed evidence has been allocated to the REA documentation.

Question/Request:

- (i) Please provide an update on developments in regard to the Renewable Energy Approval process, and whether or not the REA approval is still expected in third quarter of 2011. If there is a change please provide the information and reasons for any delays.
- (ii) Have there been any objections to granting REA approval, and if so by which parties?
- (iii) Please confirm the Applicant's understanding that should the REA decision result in a material alteration to the route of the transmission line as proposed in the Application to the Board, any Board decision and order would be predicated on the original route would therefore no longer be valid.
- (iv) Upon completion of the REA, please file a copy of the REA approval with the Board along with a copy of the REA document/application.

Interrogatory #9: Industry Standards and Impact on Distribution Facilities

Reference: (a) Exh. B/ Tab 4/ Sch. 1/pp.1-2/ Paragraph 20
(b) Exh. B/Tab 6/Sch. 1, Updated March 2, 2011/p.1/paragraph 24

Preamble:

At Reference (a), the Applicant stated in part that:

The Facility will be designed to meet technical and safety specifications and standards outlined in the Transmission System Code, National Electric Safety Code (NESC 2007), the Ontario Electric Safety Code (2009), the IESO Market Rules.....The facility will be designed to exceed the more stringent of the Applicable Code requirements...

At Reference (b), the last sentence of paragraph 24 states in part that:

Circumventing the County Lands would not involve acquiring any additional property rights or changing the proposed route of the Transmission Line, but rather would involve moving one to two poles 20 metres to one side, all within the proposed Corridor.

Question/Request:

- (i) Please confirm that the proposed Facility would meet the requirements of the Canadian Standard Association, for all items listed in paragraph 20 (Reference (a)).
- (ii) For each of the relevant standards for design and construction of the transmission facilities, including the ones listed in Paragraph 20, please provide in tabular form a comparison of the required vs. planned criteria.

CRITERIA	STANDARD (REQUIRED)	PLANNED
Cable Tension		
Cable & Conductor Sagging		
Structure Loading		
Load & Strength Factors		
Vertical Clearance		
Horizontal Clearance		
Galloping		

- (iii) Please identify any existing facilities, non electrical facilities, such as water pipes, railway lines etc. in the proposed right-of-way which might affect or

- be affected by construction of the Facility. Please identify proposed approaches to avoid possible disruption for such facilities
- (iv) Please provide the locations, and for each such location, the length along municipal roadways where the Facility will be sharing the right-of-way with distribution line(s) owned by Haldimand County Hydro. In listing these locations, please indicate for each location, the voltage level of each of the distribution lines and type of configuration e.g., single phase or two-phase distribution line lateral(s), or three phase distribution line.
 - (v) For each location identified in (iv) above, please provide the configuration proposed to accommodate both the transmission line and the distribution feeder(s) involved.
 - (vi) Please provide the design features proposed to alleviate and minimize any identified risks to the distribution customers attributed to sharing the right-of-way with distribution feeders.
 - (vii) Please provide details on proposed construction procedures for the new line in relation to continuing operation of the existing distribution facilities in the locations identified where the transmission line may be sharing the right-of-way, as identified in the question (iv) above.

Interrogatory #10: Land Matters

- Reference:**
- (a) Exh. B/ Tab 4/ Sch. 1/p. 1/ paragraph 15
 - (b) Exh. B/Tab 6/Sch. 1/p.4/paragraph 38
 - (c) Exh. B/ Tab 6/ Sch. 1/p. 1/paragraph 24
 - (d) Exh. B/ Tab 6/ Sch. 1/p. 1/paragraph 27
 - (e) Exh. B/ Tab 6/ Sch. 1/p.1/paragraph 23
 - (f) Exh. B/ Tab 6/ Sch. 1/pp.2-3/paragraph 31, Table
 - (g) Intervention Request dated March 12, 2011 by Glenfred Gaswells Ltd

Preamble (1):

In Reference (a), it is stated in part that:

It is possible that certain sections of the Transmission Line will be constructed within County road right-of-way, and the remaining sections will be built on easements acquired from private land owners.

In Reference (b), it is stated in part that:

The Applicant has consulted with the County and Haldimand County Hydro (the "LDC" which is wholly owned by the County).....In a letter to the Applicant dated December 8, 2010, the LDC indicated that it is, generally speaking,

opposed to the installation of transmission lines within and along road right-of-way within the County (other than approximately perpendicular crossing of roadways)....The Applicant and LDC are continuing discussions..

In Reference (c), it is stated in part that:

...the Applicant is exploring whether it is possible and more economically efficient to place the Transmission Line entirely on private lands, thereby circumventing the County Lands..

Questions:

- (i) In regard to References (a) and (b) as reproduced in the Preamble (1) above, please provide an update in regard to the negotiations with:
 - The County of Haldimand; and
 - Haldimand County Hydro.
- (ii) Please provide the status of alternative plans to consider placing the entire Transmission Line on private lands as noted by the Applicant in Reference (c).
- (iii) Please provide an update to the status of negotiations in regard to the Option Agreement between the Applicant with the two landowners referred to in Reference (d).

Preamble (2):

Reference (e) indicates that temporary and permanent easements are required in respect of the project, and that negotiations are underway, and in Reference (f), the Applicant is seeking land interests in fourteen properties.

Question/Request:

- (iv) For each of the fourteen properties listed in Reference (f), please provide an updated table and indicate the type of interest in land being sought for each of these. Please indicate the status of negotiations and settlements of these easements.

Registered Property Owner Name(s)	Legal Description of Land	Interest Sought	Status of Negotiations/Settlement

- (v) In regard to the application for intervention by Glenfred Gaswells Ltd. [see Reference (g)], please provide an update on the status of discussions.