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Re: EB-2014-0022
April 16, 2014
Ontario Energy Board
Attn: Kirsten Walli, Board Secretary
P Box 2319
27th Floor
2300 Yonge Street Toronto ON M4P 14

April 16, 2014

Dear Ms. Walli,

RE: Supplemental Interrogatory Questions - EB-2014-0022

**Suncor Energy Products Inc. ("Suncor")
Application for Leave to Construct Transmission Facilities in the Municipality of Lambton
Shores, Lambton County, Ontario.**

On behalf of the Concerned Seniors Lambton County and WAIT-PW, I respectfully request that the following supplemental interrogatory questions be included in the above proceeding. Specifically, we seek the indulgence of the Board in allowing a supplemental interrogatory at this point in the proceeding in order to seek responses from the Applicant, Suncor, to these further and substantive questions. We note that the Board has granted Suncor an extension of time for its response to previously filed interrogatories and this submission comes within the new time frame. By allowing the supplemental interrogatory, the Board will remedy a misunderstanding regarding the subtle but critical difference between the status of Intervenor and Commenter and ensure that all questions regarding this Application receive a response from the Applicant.

We respectfully request that the Board stay approval until the IESO and HONI can report that the proposed transmission facilities will have a beneficial impact on the grid and on the reliability and quality of electricity service.

Consideration of the public interest with respect to the construction of the work upon, under or over a highway, utility line or ditch.

1. **Reference:**

(a) Exhibit B Tab 2 Schedule 1 p. 2 **5. Description of the Project**

(b) Exhibit B Tab 2 Schedule 3 p.2 **2.The Proposed Transmission Facilities**

(c) April 7 2014 Suncor letter **Objection to the County of Lambton Request for an Oral Hearing**

Preamble

At 1 (a) Suncor notes that the transmission lines will be located “entirely on private property”.

At 1(b) Suncor states that the line travels “adjacent to and parallel to Thomson Line, Army Camp Road...” along the edge of the private land...” “...along the boundaries...”.

At 1(c) Suncor states that “Suncor would move its poles a short distance to another location on the private lands”.

Question/request

i. We request that Suncor discuss how it balances the competing pressures of public interest in the road allowances and the interests of private landowners. Specifically, we request that Suncor provide the analysis and supporting documentation that supports its decision not to place the poles in “another location” in the first place.

The interests of consumers with respect to prices and the reliability and quality of electricity service.

2. **Reference**

(a) Exhibit B Tab 2 Schedule 1 p.3 para 8. Impact Assessments

(b) Exhibit H Tab 2 Schedule 1 Disclaimers

(c) Exhibit H Tab 2 Schedule 1 Inertia Emulation Capability

Preamble

At (a) Suncor notes that it was issued a *Notification of Conditional Approval for Connection*.

At (b) the IESO states that “conditional approval means that there are no significant reliability issues or concerns that would prevent connection to the IESO-controlled grid”

... conditional approval does not ensure that a project will meet all connection requirements”. Hydro One notes that “Additional facility studies may be necessary to confirm constructability and the time required for construction. Further studies at more advanced stages of project development may identify additional facilities that need to be provided or that require upgrading.” In other words, there are reliability issues and concerns with the transmission facility, ones that, while not preventing connection, persist.

At (c) the IESO notes that the wind turbine Suncor has selected (in common with all IWTs) has no

“Inertia Emulation Capability”. This fact has implications for the transmission facility itself in its connectedness to the grid. Its location not only connects to our location for electricity service: it is simultaneously located to other transmission facilities conveying the same type of power source to the grid and therefore repeating and compounding the same reliability issues and concerns.

Donald Jones, in his article **“How wind affects Ontario’s power system dynamics and effect on CANDU refurbishment”** notes that

adding variable wind and solar generation to the Ontario grid displaces gas-fired generation and some hydro generation. Wind and solar have no inherent capability to help maintain frequency control of the grid.

...

The presence of large amounts of wind generation has changed the dynamics of the grid by displacing the synchronous generators that have provided passive inertial response and active primary frequency control. This is especially so at night and on weekends if wind generation is high when grid demand is low. The large gas-fired stations will be taken off line leaving the combined heat and power units, nuclear, and some hydro units on line. Primary frequency control would then be degraded and mostly left to the hydro units with inertial response from the nuclear and hydro units. The inherently variable wind generation in these circumstances could result in a jittery grid.

...

Modern wind turbine units ... cannot inherently contribute the inertia of their rotating masses, inertial response, to the grid when grid frequency changes or contribute to primary frequency control. <http://thedonjonesarticles.wordpress.com/2014/04/01/how-wind-affects-ontarios-power-system-dynamics-and-effect-on-candu-refurbishment/>

Questions/Requests

- i. Please request that the IESO discuss at which point the cumulative effect of wind energy transmission facility reliability issues and concerns will be deemed to have a significant adverse effect on grid operation.
- ii. Please request that HONI in its *Addendum: Customer Impact Assessment* at p.3 explain why it placed the Cedar Point Wind Project in the Township of Adelaide-Metcalf in Middlesex County.
- iii. Please provide evidence to refute the assertion that the absence of inertia emulation capability in the Transmission Facility could result in a jittery grid, and a consequent potential loss of reliability and quality of electricity service.
- iv. Please require that Suncor demonstrate due diligence in meeting the many complex requirements caused by the location of the transmission facility as specified in the SIA and CIA reports by implementing the following:
 1. Appoint an expert VP to oversee and be accountable and responsible for conducting annual in-house compliance reviews regarding the obtaining of all Transmission Facility permits and approvals and submit an Annual Compliance Report for public view and comment;

2. Charge the VP with primary responsibility for achieving due diligence with regard to implementation of wind turbine innovations, refurbishments, procurements that would stabilize reliability and quality of grid connection;
3. Develop and implement an inspection/investigation protocol to ensure that the transmission facilities do not compromise HONI reliability and quality performance indicators. The protocol must be developed in cooperation with HONI.
4. Commission an expert engineering consultant to annually assess Transmission Facility operation from a compliance/due diligence perspective having special regard to its impact on the price, reliability and quality of electricity service provided by HONI and the IESO.
5. Devise and implement quality performance indicators to assess the effectiveness of transmission facility maintenance procedures in mitigating the lack of inertia emulation capability and publish the results monthly.

Thank you for your cooperation.

Santo Giorno