Interrogatory Responses

EB-2013-0234

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF an application by Toronto Hydro-Electric System Limited for an order pursuant to Section 29 of the *Ontario Energy Board Act, 1998.*

RESPONSES BY THE NORDICITY GROUP

TO THE

INTERROGATORIES OF
ENERGY PROBE RESEARCH FOUNDATION
("ENERGY PROBE")

April 2, 2014

RESPONSES TO ENERGY PROBE INTERROGATORIES

Interrogatory: 2-Energy Probe-1

Reference(s): Nordicity Group Technical Report, Page 33

ISSUE(S): 2

The Nordicity Report states that the "decision on whether or not to use a pole is dependent on a number of factors, including access to a power source, suitability from a coverage perspective, and business considerations."

(a) In Nordicity's understanding, do "business considerations" include the price that the attacher may have to pay the owner for attaching to a pole?

(b) Supposing that a pole owner denied access to a wireless attacher at any price, leading the wireless attacher to use an alternate siting or technological option, would Nordicity conclude that those options were close substitutes for poles?

(c) The record in EB-2011-0120 indicates that THESL discontinued pole access to wireless attachers including Public Mobile whereupon Public Mobile abandoned its DAS technology and moved to macro-cell towers. Does Nordicity conclude from this that macro-cell towers are a close substitute in technological terms for poles?

RESPONSE:

(a) The business considerations referred to in this context would include the price that an attacher may have to pay the owner for attaching to a pole. In addition, other business considerations could include whether they are offering a service for use primarily outdoors, or in a specific location / area. Additionally, it should be noted that when choosing different siting options, there may be additional costs or design trade-offs that need to be taken into consideration.

(b) In the scenario that a pole owner is denied access to a wireless attacher at any price, a wireless attacher would need to re-evaluate their siting options. As the question suggests, this could include an alternative siting such as a building roof or wall, or the attacher could look into other technological options such as installing a different type of equipment (e.g. a macro cell) somewhere else. They could also choose to not deploy any equipment at all for the time being. In our opinion, the mere fact that an attacher needs to look into alternatives does not make the chosen alternative a close substitute in technological terms for poles.

However, Nordicity also notes that this question does not merely ask about technical

substitution, and may be posing the question with economic notions of substitutability. While Nordicity was not retained to explore this question, we would note that the economic definition of substitution states that a good's demand is increased when the price of another good is increased. In this scenario, the two 'goods' in question could be pole access vs. alternative siting options *or* technological options. In this context, and in our opinion, there is no direct linkage to the price of pole access to the demand for macro-cell or DAS equipment, as an example. While these technologies or siting alternatives are related, they are not intrinsically tied to one another. For a greater exploration of the economic substitutability question, Nordicity advises reviewing the expert report prepared by the Analysis Group on that matter.

(c) The question posed seems to be a re-statement of (b) above. As such, a similar logic is applied here. A macro-cell tower can represent either a *siting alternative* (i.e. used as a structure on which to attach equipment) or can represent a *technological alternative* (i.e. used to attach a different type of equipment which has higher power and capacity, and can thus cover a broader geographic area).

The discussion regarding whether a pole or a macro-cell tower are close substitutes *technologically* can be explored using a scenario. Imagine you were standing with a utility pole to the right of you, and a macro-cell tower to the left of you. Could you use either interchangeably to physically attach that equipment? The answer would be yes, insofar as each *structure* can be used to attach the equipment to it. However, as noted above, the decision on whether to use one over the other (assuming they are in different geographic locations) could change the overall network design and method of serving customers. As a result, in this scenario, it is our opinion that they are not *substitutes,* but rather, *alternatives*.

Interrogatory: 2-Energy Probe-2

Reference(s): Nordicity Group Technical Report, Page 28

ISSUE(S): 2

(a) In Nordicity's understanding of THESL's pole network, does the placing of wireless attachments on those poles raise safety issues for THESL and its workers that do not arise when non-wireless attachments are placed on the poles?

(b) Does the addition of wireless attachments to a THESL pole raise safety issues if there are already other wireline on that pole?

(c) Given that there are already certain attachments on THESL poles, would the placement of wireless attachments impede the current functioning of those existing attachments in any way? If so, please discuss briefly.

(d) Please discuss the limits (if any) on the number and types of attachments that a THESL pole can accommodate.

RESPONSE:

(a) Nordicity is not in a position to comment on any possible safety issues arising from placing either wireless or non-wireless attachments to poles. This subject is outside of Nordicity's specific expertise being provided in this hearing.

It is Nordicity's basic understanding that safety concerns could arise when there is the presence of live power located near any equipment. Furthermore, there could be some safety concerns regarding attachments that physically impede workers from accessing the facilities they need to on utility poles. However, this matter is better raised with THESL / THESI themselves, or trade representatives that are involved in the actual work that occurs on or around utility poles and associated attachments.

(b) Nordicity is not in a position to comment on any possible safety issues arising from placing either wireless or non-wireless attachments to poles. This subject is outside of Nordicity's specific expertise being provided in this hearing.

As mentioned in the previous response, this matter is better raised with THESL / THESI themselves, or trade representatives that are involved in the actual work that occurs on or around utility poles and associated attachments.

(c) Nordicity is not in a position to comment on whether or not the placement of wireless attachments impede the current functioning of existing attachments to utility poles.

Nordicity simply notes that wireless attachments come in a wide variety of shapes and sizes, with each piece of equipment requiring its own type of fastening / attachment methods. It is Nordicity's understanding that during the permit application to utility pole providers, such issues would need to be explored and a determination would need to be made to ensure there are no concerns regarding impediments to the proper functioning of any other equipment already present on a utility pole.

(d) Any specific limitations on the number and types of attachments that can be supported by THESL poles is outside Nordicity's field of expertise in this hearing.

Practically speaking, it would stand to reason that there will be limits, based on the size and type of equipment which needs to be attached. As a general principal, Nordicity notes the following:

- THESL likely has a wide number of different utility poles types in its inventory
- Each type of pole will have different characteristics
- Characteristics likely include specific engineering considerations such as load bearing capacity (weight they can handle), and associated standards to adhere to with respect to distances from the ground where equipment can be mounted, and safe distances between different types of equipment