

September 19, 2011

**Delivered by Email, RESS and Courier**

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
2300 Yonge Street  
Suite 2701  
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: Board File No. EB-2011-0120 (CANDAS Application)  
Canadian Electricity Association – Responses to Interrogatories of the Ontario  
Energy Board Staff (Board Staff)**

Pursuant to Procedural Order No. 2, dated August 26, 2011, and the letter of the Assistant Board Secretary, dated September 7, 2011, extending the deadline for filing responses to interrogatories on intervenor evidence, please find attached the responses of the Canadian Electricity Association (the CEA) to the interrogatories of the Board Staff in the EB-2011-0120 proceeding.

Yours very truly,

**Goodmans LLP**



Robert Malcolmson  
Encls.

c.c. Helen T. Newland, CANDAS counsel (via e-mail)  
Michael Schafler, CANDAS counsel (via e-mail)  
Kristi Sebalj, OEB counsel (via e-mail and courier)  
All Parties (via e-mail)

**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 the **Canadian  
Distributed Antenna Systems Coalition** for certain orders  
under the *Ontario Energy Board Act, 1998*.

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**RESPONSES TO INTERROGATORIES OF  
BOARD STAFF  
(on the evidence of the Intervenor, the Canadian Electricity Association (the “CEA”))**

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**September 19, 2011**

**Questions 1-7**

**Reference:** Industry Report – Section 9 – Outdoor DAS: Different from other Utility Pole attachments

**Topic:** Wireless and Additional Safety Concerns:

“Since wireless attachments usually involve placing facilities above the power area of the pole, special attention must be given to safety because such facilities could fall over onto power lines in high wind conditions or in heavy wet snow conditions resulting in power outages. While National Grid allows wireless attachments, it has comprehensive safety standards and requirements for such attachments and reserves the right to refuse to put wireless attachments on its poles or increase the height of poles to accommodate wireless attachments.”

**Topic:** Wireless requires more careful analysis:

“Installing wireless antennas on pole tops above energized electric facilities raises a host of safety, reliability and engineering concerns and requires much more careful analysis than placing wireline attachments in the designated communications space. Pole top attachments require workers to pass through and work above energized lines. During installation and afterward, the antennas and other equipment could fall onto energized electric facilities.”

**Question 1**

When DAS antennas mounted on distribution poles protrude into the space allocated for power lines, is the clearance between live wires and grounded (earthed) objects mounted on the pole reduced?

**Response:**

LCC’s expertise relates to the various types of wireless systems that can be deployed to carry voice, data and video traffic and how those systems are deployed on various structures. While LCC has knowledge of the fact that utility companies in the US have extensive safety standards and requirements for attachments, LCC does not have direct knowledge of the specific issues that utility companies face regarding the installation of wireless systems on poles or other structures, only that such issues exist and are typically the subject of much discussion and negotiation between attachers and utility companies and the owner/operators of structures to which wireless equipment is attached.

## **Question 2**

If the answer to Question 1 is yes, does the reduced space between live conductors and grounded (earthed) objects mounted on the pole significantly increase safety hazard for power line workers during live-line work?

### **Response:**

Please see response to Interrogatory 1, above.

## **Question 3**

Do DAS antennas, when mounted on the side of a power distribution pole, significantly hinder the free movement of raised work platforms (buckets on a bucket truck) around live conductors?

### **Response:**

Please see response to Interrogatory 1, above.

## **Question 4**

If the answer to Question 3 is yes, does mounting of DAS antennas on the side of a distribution pole have an impact on worker productivity?

### **Response:**

Please see response to Interrogatory 1, above.

## **Question 5**

Is CEA or LCC aware of any specific instance in which wireless attachments have fallen onto power lines resulting in power outages? If so, please provide any details available (i.e., utility, type of attachment, year of occurrence, nature, duration and remediation of consequences/outage).

### **Response:**

CEA is aware of one instance where lightening hit a wireless installation in May, 2009, and the wireless installation fell across phase conductors and caused a power outage.

## **Question 6**

Is CEA or LCC aware of any specific instance in which wireless attachments have fallen onto energized electric facilities? If so, please provide any details available (i.e., utility, type of attachment, year of occurrence, description of event and remediation).

### **Response**

Please see response to Interrogatory 5, above.

**Question 7**

**Question 7(a)**

Please provide a copy of National Grid's standards and requirements for wireless attachments and a copy of that utility's standards and requirements, if any, for wireline attachments.

**Response:**

- a. LCC understands that other utilities have or are developing standards.

**Question 7(b)**

Please indicate whether such standards and requirements require the approval of a regulator, and if so, whether they have received such approval.

**Response:**

- b. National Grid Standards generally do not require regulatory approval. National Grid's terms and conditions for wireless installations generally do not require regulatory approval. In one instance, National Grid did have to file and obtain NY Public Service Commission approval for the terms and conditions for the wireless installation where the installation was being done with an affiliated company and was therefore a non-arms-length transaction.

**Question 7(c)**

Please provide the charges or charge structure applicable for wireless attachments to National Grid poles.

**Response:**

- c. LCC's understanding is that utilities that permit wireless attachments have different pricing structures for wireless as compared to wireline attachments due to the different space requirements, design considerations and safety issues associated with wireless attachments

National Grid, for example, requires wireless attachment charges in addition to the wireline attachment charge, i.e., if the attacher places both fiber and wireless facilities on the pole, the attacher is charged for the fiber attachment and additionally, for the wireless facilities installed. The wireless attachment rate recognizes that wireless facilities typically include an antenna, accessory panel(s) and vertical riser (coax between the antenna and accessory panels and fiber attachment).

**Question 7(d)**

Is the acceptance of wireless attachments compulsory (under legislation or regulation) or a voluntary policy for National Grid? If compulsory, please provide excerpts and references to the legislation, regulation, regulatory order or other instrument that makes it compulsory.

**Response:**

- d. National Grid service area encompasses four States. Three of the four states regulate pole attachments and these state regulators do not mandate “acceptance of wireless attachments”. In the fourth state, (Rhode Island), pole attachments are subject to Federal (FCC) regulations. The FCC in April 2011 established regulations broadly requiring pole owners to consent to pole top wireless facilities. A pole owner may in certain instances deny pole top wireless attachments provided such denial is based on safety, system operation/reliability or generally accepted engineering practice. National Grid’s policy in all areas is that it reserves the right to deny wireless attachments based on safety, system operation/reliability or generally accepted engineering practice. The decision to replace a pole to accommodate wireless facilities is also at National Grid’s sole discretion.

**Question 7(e)**

Is CEA or LCC aware whether there are instances of wireless equipment being installed in National Grid’s service territory on structures other than National Grid’s poles?

**Response:**

- e. LCC has knowledge of National Grid’s standards as described in the Interrogatory Responses 7(d), above.

**Question 7(f)**

Please provide the names of any other utilities of which CEA or LCC is aware that have developed standards and requirements for wireless attachments, and the charges or charge structures that apply to wireless and wireline attachments. If known, please indicate whether legislation or regulation in that jurisdiction makes it compulsory for the utility to accept wireless attachments to its poles.

**Response:**

- f. LCC is aware that utilities are developing standards and requirements for wireless attachments. National grid in the US has for example developed confidential standards. It is LCC’s understanding that in some cases wireless attachments are made compulsory by regulatory bodies subject to the rights of the utility to deny access due to safety, operational and/or engineering concerns. LCC is not an expert in regulation or legislation.

**Question 8.**

**Reference:** Industry Report – Section 9 – Outdoor DAS: Different from other Utility Pole attachments

**Topic:** Distributed Antennas and environmental concerns:

“Distributed antenna companies sometimes find themselves delayed in obtaining permits to use municipal rights-of-way because they seek to place their not-so-attractive antennas with unknown radio frequency emissions in close proximity to residences and the general public. Such routine municipal reviews and permitting processes render any imposed utility make-ready schedules meaningless in the context of wireless attachments.”

**Question:**

If DAS antennas are mounted at a lower height on a distribution pole, will they result in higher electromagnetic radiation levels on sidewalks? Is there a standard for a minimum mounting height of DAS antennas that must be met to ensure safe electromagnetic radiations exposure in public places?

**Response:**

Electromagnetic radiation exposure is always a safety concern in the design and deployment of radio apparatus. These safety concerns are addressed by standards at the local/municipal permit level and are also addressed in the design of the equipment being installed.

**Question 9.**

**Reference:** LCC Report, page 33:

“Wireless providers and network builders have multiple attachment alternatives when designing wireless networks, including those relying primarily upon ODAS. Manufacturers are aware of, and build to, the need for substantial flexibility in placing today's wireless hardware. Buildings, street furniture, stand-alone poles and other aesthetically designed apparatus exist, and are currently in use, to support ODAS and other wireless hardware.”

**Questions:**

Please respond to the following:

- (a) Is the author of this report familiar with the Toronto locations in which the Applicant proposes to install its outdoor wireless attachments?
- (b) If yes, please provide a specific comment as to whether the Toronto environment would offer suitable locations on buildings, street furniture, stand-alone poles or other apparatus for the proposed wireless attachments.

**Responses:**

- a) No the authors are not familiar with the specific locations in which the Applicant proposes to install its outdoor wireless attachments. Assuming that Toronto is a

typical urban environment however, it will be feature buildings , street furniture, signage and other structures that would be expected to be suitable for wireless attachments.

b) Please see response to Interrogatory 9 (a), above.

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