CASSELS BROCK
LAWYERS

December 11, 2015

By Email, RESS, and Same Day Courier

Ontario Energy Board
2300 Yonge Street
27th Floor, P.O. Box 2319
Toronto ON M4P 1E4

Attention: Kirsten Walli, Board Secretary
Harold Thiessen, Case Manager
Jennifer Lea, Board Co-Counsel
Ian Richler, Board Co-Counsel

TIMOTHY PINOS
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Dear Sir/Madam:

Re: OEB File: EB-2015-0141 – Motion for Review and Variance of Decision EB-2013-0416/EB 2014-0247

Pursuant to Procedural Order No. 4 in this proceeding, the Carriers submit the following materials for filing:

1. Responses of the Carriers to Interrogatories of Hydro One;
2. Responses of the Carriers to Interrogatories of VECC;
3. Responses of the Carriers to Interrogatories of SEC; and
4. Responses of the Carriers to Interrogatories of Board Staff.

Yours very truly,

Timothy Pinos
TP/gmc
Enclosures

TAB 1

EB-2015-0141

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 Decision EB-2013-0416/EB-2014-0247 of the Ontario Energy Board (the "**OEB**") issued March 12, 2015 approving distribution rates and charges for Hydro One Networks Inc. ("**Hydro One**") for 2015 through 2017, including an increase to the Joint Use Pole Access Charge;

AND IN THE MATTER OF the Decision of the OEB issued April 17, 2015 setting the Joint Use Pole Access Rate as interim rather than final;

AND IN THE MATTER OF the Decision and Order issued June 30, 2015 by the OEB granting party status to Rogers Communications Partnership, Allstream Inc., Shaw Communications Inc., Cogeco Cable Inc., on behalf of itself and its affiliate, Cogeco Cable Canada LP, Quebecor Media, Bragg Communications, Packet-tel Corp., Niagara Regional Broadband Network, Tbaytel, Independent Telecommunications Providers Association and Canadian Cable Systems Alliance Inc. (collectively, the "**Carriers**");

AND IN THE MATTER OF Procedural Order No. 3 of the OEB issued July 29, 2015 setting dates for, *inter alia*, interrogatories of the parties.

Responses of the Carriers to Interrogatories of Hydro One

December 11, 2015

HONI-1
Reference: Carriers' Evidence #38

Should Carriers cover the underlying costs of services they request or incur or should these costs be recovered from the broader customer base of the LDC?

RESPONSE

The Carriers should pay the direct costs for those reasonable and verifiable services for which, and to the extent, they receive a direct benefit.

HONI-2
Reference: Carriers' Evidence #6

In Exhibit I, Tab 4, Schedule 4, the Carriers asked Hydro One to confirm the number of poles used to calculate the per pole costs in Table 16 of Exhibit G2, Tab 5, Schedule 1. In the response to that interrogatory, Hydro One acknowledged that there was an error in the pole count of 1,730,300. In the Oral Hearing for application EB-2013-0416 and in response to the Carrier interrogatory I-4-4, the pole count was corrected to 1,535,344. Using the corrected pole count and the formulae found in Exhibit I, Tab 1, Schedule 1, please calculate:

1. The Net Embedded Cost
2. Depreciation per pole
3. Capital Carrying Costs
4. Pole maintenance (Lines & Forestry) costs
5. Capital related costs
6. Allocated capital costs

Using the Loss of Productivity (part C) and Administration (part H) values found in Exhibit I-1-1, calculate what the Telecom Joint Use rate would be for 2012?

RESPONSE

The data required to complete the requested calculation is reasonably within Hydro One's possession. Hydro One is capable of completing the calculation itself. The Carriers submit that, if Hydro One desires this calculation be incorporated into the evidentiary record in this proceeding, it should supplement its own evidence in chief or submit reply evidence.

HONI-3
Reference: Carriers' Evidence #6 (Exhibit I, Tab 3, Schedule 2, Part b)

Using the acquisition cost (net of capital contributions) of $2,810,044,338 and the accumulated depreciation (net of accumulated depreciation for capital contributions) of $913,502,183 for USofA #1830 as per Tab I4 from Hydro One's 2015 Cost Allocation Model submitted with its pre-filed evidence, please calculate the following:

a. The Net Embedded Cost
b. Depreciation per pole
c. Capital Carrying Costs
d. Pole maintenance (Lines & Forestry) costs
e. Capital related costs
f. Allocated capital costs

Using escalated Loss of Productivity (part C) and Administration (part H) values found in Exhibit I-1-1 from 2012 to 2015 at 3% per year and the values calculated in parts a to f, determine the 2015 Joint Use rate for Telecom.

RESPONSE

The data required to complete the requested calculation is reasonably within Hydro One's possession. Hydro One is capable of completing the calculation itself. The Carriers submit that, if Hydro One desires that this calculation be incorporated into the evidentiary record in this proceeding, it should supplement its own evidence in chief or submit reply evidence.

HONI-4
Reference: Carriers' Evidence #7, part a

Please indicate where in the rate methodology from the 2005 Decision, the OEB states that vegetation management should not be recovered as part of the pole maintenance costs.

RESPONSE

The 2005 Decision adopts the methodology and pole maintenance number used by the CRTC. As directed by the CRTC, this number excluded tree-trimming costs.

HONI-5
Reference: Carriers' Evidence #7, part c, ii

In the Carriers' submitted evidence statement #7, part c, ii, states "poles with Wireline Attachments require dramatically different types and costs of vegetation management activities, it is unfair and inappropriate in principle for Hydro One to allocate vegetation costs to Wireline Attachers on a gross averaging basis based on its entire inventory of poles." Explain the "different types of costs of vegetation management".

RESPONSE

The Vegetation Management Benchmarking Study dated September 18, 2009, prepared by CN Utility Consulting, Inc., and filed with the OEB in EB-2009-0096 (the "**Benchmarking Study**") clearly indicates that the cost of vegetation management varies significantly among each of the Eastern, Northern and Southern zones in Ontario, as described in paragraphs 27-31 of the Carriers' evidence. Specifically, as stated at paragraph 30 of the Carriers' evidence, which refers to the Benchmarking Study:

> *"Reasons for the relative difference in cost of line clearing and brush control in the Eastern, Southern, and Northern zones include differences in vegetation density and physical size of service territory."*

HONI-6
Reference: Carriers' Evidence Appendix D

Please confirm that the Agreement for Licensed Occupancy of Power Utility Distribution Poles submitted as Appendix D to the Carriers' evidence is an assignment from the purchase of Mountain Cablevision Ltd by Rogers and is the same template Agreement and Contract Administration Guide that was executed by all Carriers January 1, 2006.

RESPONSE

The Carriers are unable to confirm. The Agreement in Appendix D was entered into by Rogers Communications Partnership, replacing numerous SSAs between Hydro One and various Rogers entities, including Rogers, Atria, Blink and Kincardine Cable.

HONI-7
Reference: Carriers' Evidence #21 and Appendix D:

The Agreement for Licensed Occupancy of Power Utility Distribution Poles submitted as Appendix D to the Carriers' evidence, clearly includes the performance of Line Clearing activities by Hydro One, the treatment of the costs and the line clearing specifications. This template agreement was signed by representatives of Rogers Cable Communications Inc. and Rogers Communication Inc. and by many other telecom companies in the province, and is still current. Why should these costs and provisions be excluded from this application, EB-2015-0141?

Why should Hydro One's rate payers bear the full cost of line clearing services around joint use poles, given that the Carriers benefit these services as indicated in the Agreement?

RESPONSE

The costs of Line Clearing, as defined in the Agreement for Licensed Occupancy of Power Utility Distribution Poles (the "**Joint Use Agreement**") should be excluded from this application because the Board directed the parties to follow the methodology which was approved in the 2005 Decision.

The Carriers did not suggest or propose that Hydro One's ratepayers should bear the full cost of line clearing services around joint use poles. Rather, it is the Carriers' position that they should only pay for those services for which they derive a direct benefit and should not contribute to the costs of services that serve the interests of only Hydro One, consistent with the rationale in the Joint Use Agreement and at paragraphs 20-21 of the Carriers' evidence.

The Carriers acknowledge that they should contribute fairly to a portion of Hydro One's tree trimming costs that are directly related to their facilities. However, the amount which the Carriers should contribute, as part of the Pole Rental Rate, is not within the scope of this proceeding.

The Carriers further state that they currently contribute to vegetation management costs when they are included as part of the make-ready costs the Carriers are required to pay when they install their equipment on Hydro One poles.

HONI-8
Reference: Carriers' Evidence #15

Statement #15 of the Carriers' evidence cites that the CRTC Decision (submitted by the Carriers as Appendix C) considers that "power utilities should be permitted to levy a separate charge on cable companies to reflect tree trimming activities."

Have the vegetation management services been provided by Hydro One?

Has the fee for these vegetation management services been charged outside of the OEB-approved rate?

Have the Carriers received any invoices outside of the OEB-approved rate, since 2006, for the vegetation management services performed by Hydro One around poles that the Carries are attached to, and which the Carriers don't own?

RESPONSE

Yes.

Yes, however, the Carriers have been charged outside of the OEB-approved rate for vegetation management services that are part of "make-ready" work, undertaken by Hydro One in response to a request by a Carrier to attach to a pole.

As the Carriers understand it, Hydro One performs vegetation management on its poles on a cyclical basis. Where a Carrier applies to make an attachment to a pole that has yet to receive its scheduled routine vegetation management, the Carrier will be charged for the necessary tree-trimming as part of the make-ready charges imposed by Hydro One. In other words, under the guise of make-ready costs, the Carrier is paying directly for vegetation management services that would have been performed as part of routine maintenance at a later point in time. In other words, the Carrier is incurring the cost of vegetation management for that pole and Hydro One is able to avoid or defer those costs to the next scheduled maintenance plan.

No.

HONI-9
Reference: Carriers' Evidence #15, #34 and #36

If the cost of the vegetation management services provided by Hydro One is to be invoiced outside of the OEB-regulated rate, do the Carriers agree that they would be liable to cover the costs of the vegetation management services provided, as well as the associated administration costs such as billing, tracking of services provided, record retention, update of records, etc.?

Please provide a detailed record of all of the Carriers' attachments including those Carriers that are over-lashed to another Carrier's strand which would, in the Carriers' view, be subject to such invoicing.

RESPONSE

The Carriers should pay the direct costs for those reasonable and verifiable vegetation management services for which, and to the extent, they receive a direct benefit, including a reasonable portion of administration costs.

With respect to the data requested in response to HONI-9 part 2, the time required to determine whether each Carrier has that information in its possession, and if so, to collect the data far exceeds the time for which the Carriers have been granted to complete their responses to interrogatories.

Furthermore, the effort required for the Carriers to assemble the requested records is disproportionate to its probative benefit in this proceeding.

Finally, the requested records are or should be in Hydro One's possession or is reasonably accessible to Hydro One.

HONI-10
Reference: Carriers' Evidence #20

In section 10, 10.1 (a) of the Agreement for Licensed Occupancy of Power Utility Distribution Poles submitted as Appendix D to the Carriers' evidence, the Carriers agree to pay 75% of the full pole rate of $22.35 which is $16.75 for "clearance poles". During negotiations, the reduced rate for clearance poles was agreed to by both parties as Hydro One did not perform maintenance Forestry activities for clearance poles at that time. Is this correct?

RESPONSE

This information is not available or accessible to the Carriers.

HONI-11
Reference: Carriers' Evidence #20

Statement #20 refers to Agreement for Licensed Occupancy of Power Utility Distribution Poles (for Telecommunications Attachments) between Hydro One and Rogers Communications Partnership, s. 11; and Decision Table 14 of the associated Contract Administration Guide. This statement is repeated below:

> "*The Pole Attachment Agreement also governs the means by which Hydro One is permitted to recover its "Line Clearing" costs from a Wireline Attacher (referred to as the "Licensee" in the agreement), stating that the Licensee's financial contribution to Line Clearing costs has been incorporated into the Pole Rental Rate of $22.35. Unfortunately, this is an incorrect statement because, as*

stated above, the Pole Rental Rate does not include vegetation management costs. At no point did the $22.35 rate include vegetation management costs."

Why did the Carriers sign the agreement if it contains a statement that they claim is incorrect? Was this issue raised and discussed with Hydro One at the time?

RESPONSE

The Joint Use Agreement was negotiated between the Carriers and Hydro One in 2006 and renewed in 2014. The Carriers did not know at the time that the statement was incorrect, as an in-depth analysis of the 2005 Decision, including the CRTC's 1999 decision, would have been required.

The Joint Use Agreement was largely developed by Hydro One based on the industry-approved MEAIRE agreement. The Carriers did not, individually, have significant negotiating leverage. The Carriers are unaware as to whether the issue was raised or discussed – in any event Hydro One should know that. Why did Hydro One sign the agreement if it contains a significant error that should have been known to it?

HONI-12
Reference: Carriers' Evidence #21, 22 and 23

Statements 21, 22 and 23 in the Carriers' evidence, cite specific sections of the Agreement for Licensed Occupancy of Power Utility Distribution Poles. Have the Carriers benefitted from the performance of the vegetation management activities performed by Hydro One specifically outlined in Section 14 of the agreement?

Have any of the Carriers ever requested Hydro One to perform any type of vegetation management activities for their benefit outside of Hydro One's vegetation management cycle for that specific area? If so, did Hydro One satisfy these Carriers' requests? Did Hydro One charge the Carriers any additional costs for these services?

RESPONSE

While in theory, the Carriers may benefit from the vegetation management activities of Hydro One, they have no direct or specific knowledge of actual benefits from such vegetation management activities as Hydro One does not notify the Carriers when it has completed tree-trimming around the poles as part of Hydro One's vegetation management cycle for that specific area nor does it advise the Carriers as to the nature or results of such activities.

The Carriers have benefitted from vegetation management activities undertaken by Hydro One as "make-ready" costs, for which the Carriers are invoiced . As discussed previously, when a Carrier is billed for vegetation management fees as part of make-

ready, it is paying for Hydro One's routine maintenance work that otherwise should have, or would have, been performed in any event.

HONI-13
Reference: Carriers' Evidence #23

Are the Carriers required to bond to the primary neutral in accordance with CSA standards? Does Hydro One provide the necessary vegetation management activities to maintain the required neutral clearance?

RESPONSE

Yes, but not for every pole.

Yes, however the Carriers do not verify this independently in respect of each pole with a Wireline Attachment.

HONI-14
Reference: Carriers' Evidence #26

If a tree were to fall and contact the Carriers' messenger, could it cause damage to the pole that could in turn result in a power interruption to Hydro One's customers, which damage or interruption would otherwise not have occurred? If repairs were required to the pole, could these also require an unplanned outage to Hydro One customers?

RESPONSE

Yes, however, it is unlikely that a fallen tree would hit a Carrier's messenger alone. If a tree were to hit the Carrier's messenger, AND was large enough to cause damage to the entire pole, it is likely that the tree would first strike Hydro One's power lines which are located above the Carrier's messenger.

HONI-15
Reference: Carriers' Evidence #31

Statement #31 of the Carriers' evidence, cites

> "*A similar diversity of line clearing and brush control requirements (and the associated costs) exists within the boundaries of each of vegetation zone. This diversity exists because poles within the boundaries of towns and communities (which are more likely to have Wireline Attachments) require less vegetation management than other poles.*"

Please substantiate the claim that "poles within the boundaries of towns and communities (which are more likely to have Wireline Attachments) require less vegetation management than other poles", giving specific consideration to urban complexities such as maintaining trees that are not accessible from travelled streets (*e.g.*, back lot construction), trimming to customers' specifications, remove debris, brush, tree trunks and wood chips and provision of customer notifications.

RESPONSE

There are fewer trees and other vegetation within the boundaries of towns and communities, generally resulting in lower vegetation management costs therein.

HONI-16
Reference: Carriers' Evidence #33

Statement #33 of the Carriers' evidence cites:

> "*Fewer Wireline Attachments exist on Hydro One poles in the Northern zone, where Hydro One asserts that vegetation management costs are highest, with a majority of the Wireline Attachments being on Hydro One poles in the Southern zone, where Hydro One asserts that vegetation management costs are lowest.*"

In reference to this statement, please corroborate the statements in the Evidence regarding the geographic locations of these attachments as follows:

a. Supply a detailed map of Ontario showing all registered Carriers and a map of their systems.

b. Provide the number of attachments (including over-lashing) for each registered Carrier on Hydro One-owned poles.

c. Provide a list indicating which are located in urban, suburban and rural locations.

d. Indicate which of these poles are accessible from a travelled road, back lot construction and any other off-road location.

RESPONSE

(a) Exhibit E of the Carriers' evidence contains a list of the general geographic location of the Carriers' systems which include Wireline Attachments. Maps as

requested are not available for all Carriers. In any event, the maps that are available do not depict information which is useful in this proceeding.

The time required to collect the data specifically requested in response to HONI-16(a) exceeds that which the Carriers have been granted to complete their responses to interrogatories.

(b) The requested record is in Hydro One's possession or is reasonably accessible to Hydro One, since Hydro One invoices the Carriers regularly for such attachments.

(c) Hydro One does not provide the Carriers with access to pole audits. Accordingly, the Carriers do not have the requested information in their possession; rather, the Carriers understand that the requested record is in Hydro One's possession or is reasonably accessible to Hydro One.

(d) Hydro One does not provide the Carriers with access to pole audits. Accordingly, the Carriers do not have the requested information in their possession; rather, the Carriers understand that the requested record is in Hydro One's possession or is reasonably accessible to Hydro One.

HONI-17
Reference: Carriers' Evidence #34

Supply the detailed evidence that line clearing activities are being managed by municipalities and local residents.

RESPONSE

The Carriers have no further evidence in respect of this statement.

TAB 2

EB-2015-0141

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 Decision EB-2013-0416/EB-2014-0247 of the Ontario Energy Board (the "**OEB**") issued March 12, 2015 approving distribution rates and charges for Hydro One Networks Inc. ("**Hydro One**") for 2015 through 2017, including an increase to the Joint Use Pole Access Charge;

AND IN THE MATTER OF the Decision of the OEB issued April 17, 2015 setting the Joint Use Pole Access Rate as interim rather than final;

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AND IN THE MATTER OF Procedural Order No. 3 of the OEB issued July 29, 2015 setting dates for, *inter alia*, interrogatories of the parties.

Responses of the Carriers to Interrogatories of VECC

December 11, 2015

VECC-1
Reference: Evidence of Michael Piaskoski, paragraph 4

Preamble: The evidence states:

> *"The Carriers have reviewed the evidence of Hydro One with respect to the costing inputs of the proposed Pole Access Charge and, with the exception of the calculations of pole maintenance costs, are of the view that Hydro One has calculated the Pole Access Charge in accordance with the OEB Approved Methodology, and do not intend to challenge these other cost inputs and factors submitted by Hydro One in its evidence."*

1.1 Is it also Mr. Piaskoski's view that, with the exception of the calculations of the pole maintenance costs, Hydro One has calculated the Pole Access Charge in accordance with the OEB Approved Methodology? 1.1.1 If not, what other costing inputs does Mr. Piaskoski take exception to and why?

RESPONSE

The Carriers did not conduct a comprehensive review of each line item included in Hydro One's calculation of the Pole Rental Rate. The Carriers perceived Hydro One's inclusion of vegetation management costs in calculating the Pole Rental Rate to be the only proposed change to the existing Pole Rental Rate which was not *de minimis* or reasonable. Conversely, for instance, the Carriers perceived Hydro One's proposal to inflate direct costs by 3% to be greater than the actual CPI over that period but nonetheless decided not to challenge it. Accordingly, the Carriers do not have a view regarding whether Hydro One has calculated the Pole Rental Rate in accordance with the OEB Approved Methodology, aside from inappropriately including vegetation management costs in the calculation.

VECC-2
Reference: Evidence of Michael Piaskoski, paragraphs 4 and 12

Preamble: At paragraph 4, the evidence states:

> *"The Carriers have reviewed the evidence of Hydro One with respect to the costing inputs of the proposed Pole Access Charge and, with the exception of the calculations of pole maintenance costs, are of the view that Hydro One has calculated the Pole Access Charge in accordance with the OEB Approved Methodology, and do not intend to challenge these other cost inputs and factors submitted by Hydro One in its evidence."*

At paragraph 12, the evidence notes that "*the OEB directed that its review of the Pole Access Charge would be conducted within the context of the OEB Approved Methodology*".

2.1 What aspects of Hydro One's calculation of the Pole Access Charge does Mr. Piaskoski consider to be defined by the "OEB Approved Methodology" and what aspects are costing inputs/assumptions that can be updated and/or revised as part as part of the current review? In responding, please address

2.1.1 If the choice of reference year used in the calculation (2012 in Hydro One's Application) is considered a "costing input", please explain why the use of 2012 is considered appropriate.

2.2 It is noted that no exception is taken to Hydro One's proposal to calculate Loss of Productivity and Administration costs by inflating the costs used in the RP-2003-0249 Decision by 3% per annum. Why is this considered acceptable instead of determining these costs based on 2012 values as was done for all other aspects of the calculation?

RESPONSE

2.1 In order to properly respond to VECC-2.1, the Carriers request clarification from VECC regarding the intending meaning of "current review". Review and revision of the OEB Approved Methodology is not an issue in this proceeding, as ordered by the OEB, and, therefore, any proposed revisions to the cost inputs/assumptions by the Carriers are not appropriately raised in these responses to interrogatories.

2.1.1 The Carriers' response to this question is dependent on VECC's response to the inquiry regarding VECC 2.1.

2.2 The Carriers were not given 2012 costs by Hydro One and accordingly, proceeded based on available cost information.

VECC-3
Reference: Evidence of Michael Piaskoski, paragraphs 14-20

Preamble: The evidence states:

> *"The Carriers have reviewed the evidence of Hydro One with respect to the costing inputs of the proposed Pole Access Charge and, with the exception of the calculations of pole maintenance costs, are of the view that Hydro One has calculated the Pole Access Charge in accordance with the OEB Approved Methodology, and do not intend to challenge these other cost inputs and factors submitted by Hydro One in its evidence."*

3.1 To Mr. Piaskoski's knowledge does Rogers or any of the other Carriers that have entered into the Standard Agreement (per paragraph 19), currently carry out any vegetation management activities on their own?

3.1.1 If yes, please outline which companies and what types of vegetation management activities they carry out.

3.2 To Mr. Piaskoski's knowledge does Rogers or any of the other Carriers that have entered into the standard Agreement (per paragraph 19) currently pay Hydro One separately for vegetation management costs?

3.2.1 If yes, how are the charges determined?

3.3 Given that the Standard Agreement entered into by most wireline attachers envisions (per paragraph 20) Line Clearing costs being part of the pole rental rate, why shouldn't, in Hydro One's case, the pole rental rate for each company in such cases be adjusted to include these costs, over and above what would be rate determined using the OEB Approved Methodology?

RESPONSE

3.1 The Carriers, in rare cases, may conduct vegetation management activities where the Carriers need to complete work on the poles and the branches or vegetation have not reached the power lines or Hydro One has not done any vegetation management in the area.

3.2.1 The Carriers currently pay for vegetation management costs that are required for and included as part of make-ready work, for which the Carriers are invoiced on an individual basis.

3.3 Under the current OEB Approved Methodology, Line Clearing costs are not to be included in the Pole Rental Rate. Any proposed variation of the OEB Approved Methodology is not properly within the scope of this proceeding.

VECC-4
Reference: Evidence of Michael Piaskoski, paragraph 26

Preamble: The evidence states:

> *"The vegetation management costs Hydro One seeks to recover through the Pole Access Charge clearly include costs associated with clearing vegetation from energized facilities ("power… conductors and electrical equipment").*"

4.1 Isn't it the purpose of the allocation methodology to appropriately apportion costs between the parties (i.e., Hydro One and Wireline Attachers) and, thereby address this issue?

4.1.1 If not, why not?

RESPONSE

The allocation methodology attempts to allocate the common costs of the pole as among the various occupants of the pole. It assumes that such common costs (like, for example, the embedded cost of a pole) are more or less uniform across the entire population of poles. If, then, an equal sharing approach was adopted, then Wireline Attachers could end up paying more than 50% of such common costs.

This approach would be entirely inappropriate as applied to vegetation management costs as these costs vary widely across the pole population and, more importantly, are primarily of benefit to Hydro One and its facilities. Under the same equal sharing approach, it would be entirely unreasonable for the Wireline Attachers to pay for over 50% of Hydro One's company-wide vegetation costs across the province.

VECC-5
Reference: Evidence of Michael Piaskoski, paragraphs 27-38

5.1 The evidence argues that vegetation management costs will vary by pole location and states that, since wireline attachers operate in different communities and areas of Hydro One's service area, the associated costs should not be included in the pole attachment rate but rather charged separately to individual carrier. Does Mr. Piaskoski agree that the cost of purchasing and installing a pole will vary across Hydro One's service area based on geography and local community requirements?

5.1.1 If not, why not?

5.1.2 If yes, why does Mr. Piaskoski consider it acceptable (per paragraph 4) to base the pole access charge levied against all wireline carriers based on the average cost of a Hydro One pole?

RESPONSE

The Carriers are unaware of Hydro One's cost of purchasing and installing a pole and do not have access to relevant cost information to determine that amount. Further, please see the response to VECC-4.1.

TAB 3

EB-2015-0141

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 Decision EB-2013-0416/EB-2014-0247 of the Ontario Energy Board (the "**OEB**") issued March 12, 2015 approving distribution rates and charges for Hydro One Networks Inc. ("**Hydro One**") for 2015 through 2017, including an increase to the Joint Use Pole Access Charge;

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AND IN THE MATTER OF the Decision and Order issued June 30, 2015 by the OEB granting party status to Rogers Communications Partnership, Allstream Inc., Shaw Communications Inc., Cogeco Cable Inc., on behalf of itself and its affiliate, Cogeco Cable Canada LP, Quebecor Media, Bragg Communications, Packet-tel Corp., Niagara Regional Broadband Network, Tbaytel, Independent Telecommunications Providers Association and Canadian Cable Systems Alliance Inc. (collectively, the "**Carriers**");

AND IN THE MATTER OF Procedural Order No. 3 of the OEB issued July 29, 2015 setting dates for, *inter alia*, interrogatories of the parties.

Responses of the Carriers to Interrogatories of SEC

December 11, 2015

1. [Piaskoski Evidence, para. 4] Mr. Piaskoski's evidence is that with the exception of the calculation of the pole maintenance costs, Hydro One has calculated the Pole Access charge in accordance with the OEB approved methodology.

   a. Please explain why Mr. Piaskoski believes that using certain 2012 data to calculate the pole attachment rate for 2015 is in accordance with the Board approved methodology.

   b. Please confirm that using certain 2012 data to set the pole attachment rates for 2015 will lead to a cross-subsidy between distribution ratepayers and pole attachers. If not confirmed, please explain why not.

RESPONSE

a. The data used to calculate the Pole Rental Rate for 2015 is not from 2012. Rather, it is 2005 data which has been grossed up using an inflation factor because, presumably, Hydro One did not have actual costs. The Carriers believe that the methodology should be based on historical costs and understand that Hydro One has used the most recent available cost information.

b. Not confirmed. The Carriers believe that the proper methodology should be based on historical costs. The Carriers are of the view that no subsidy results from the application of this methodology. SEC seeks to have the Carriers agree with one of its arguments, which the Carriers do not.

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2. [Piaskoski Evidence, para. 23] Please explain why it is fair and appropriate for the Carriers to believe it is inappropriate to include line clearing (i.e. vegetation management costs) in the pole attachment rate if its own signed agreements with Hydro One state that it should be included?

RESPONSE

For the purpose of this proceeding, it is appropriate to exclude the costs of line clearing from the Pole Rental because the Board directed that this parties use the methodology approved by the Board in the 2005 Decision. Notwithstanding what the signed agreements state in error, the methodology and the resultant rate from that Decision excluded line clearing or other tree-trimming costs.

3. [Piaskoski Evidence, para. 23] Do any of the Carriers1 undertake vegetation management activities related to the “neutral wire” for attachments on Hydro One poles? If so, please provide details.

RESPONSE

The Carriers, in rare cases, may conduct vegetation management activities where the Carriers need to complete work on the poles and the branches or vegetation have not reached the power lines or Hydro One has not done any vegetation management in the area.

Some Carriers contract out these vegetation management activities to third party contractors.

TAB 4

EB-2015-0141

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 Decision EB-2013-0416/EB-2014-0247 of the Ontario Energy Board (the "**OEB**") issued March 12, 2015 approving distribution rates and charges for Hydro One Networks Inc. ("**Hydro One**") for 2015 through 2017, including an increase to the Joint Use Pole Access Charge;

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AND IN THE MATTER OF Procedural Order No. 3 of the OEB issued July 29, 2015 setting dates for, *inter alia*, interrogatories of the parties.

Responses of the Carriers to Interrogatories of OEB Staff

December 11, 2015

OEB staff-1
Reference: Evidence of Michael Piaskoski, page 2

Preamble: In the table on Page 2, Mr. Piaskoski shows pole maintenance costs of $7.91 under the 'Carriers' column. Please provide the calculation that was used to derive this charge.

RESPONSE

All forestry related costs were removed from the calculation, leaving just "Line" maintenance.

	Hydro One			Carriers	
POLE MAINTENANCE	**Total ($M)**	**Per pole ($)**		**Total ($M)**	**Per pole ($)**
Lines					
- Line patrols	$ 8.65	$ 5.00		$ 8.65	$ 5.00
- Defect correction	$ 5.04	$ 2.91		$ 5.04	$ 2.91
	$ 13.69	**$ 7.91**		**$ 13.69**	**$ 7.91**
Forestry					
- Customer notification	$ 7.10	$ 4.10			$ -
- Brush control	$ 34.70	$ 20.06			$ -
- Line clearing	$ 87.10	$ 50.35			$ -
Total	**$ 128.90**	**$ 74.51**		**$ -**	**$ -**
TOTAL LIP	**$ 142.59**	**$ 82.42**		**$ 13.69**	**$ 7.91**

OEB staff-2
Reference: Evidence of Michael Piaskoski, page 6

Preamble: On page 6 of the evidence, at paragraph 15, Mr. Piaskoski includes a quote from the CRTC decision:

> *"The Commission considers that maintenance costs should exclude tree trimming. Rather, the power utilities should be permitted to levy a separate charge on cable companies to reflect tree trimming activities. The Commission considers that this matter is best left to be resolved by the parties in the first instance."*

2.1 Is Mr. Piaskoski aware of any other jurisdictions that set pole attachment charges in the manner described, that is, without maintenance costs that include tree trimming? If so, please provide examples.

2.2 Is Mr. Piaskoski aware of any other jurisdictions that have then levied a separate charge on cable companies to reflect tree trimming activities? If so, please provide examples.

RESPONSE

2.1 No. However, the Carriers are aware, from the study attached as Appendix "A", which was prepared for the OEB by Nordicity in or about March 2014, entitled Pole Attachment Regulation: Canada, U.S., U.K. and Other Jurisdictions that, aside from in Ontario, pole attachment rates are regulated by utilities review boards in Nova Scotia, New Brunswick, and Alberta.

As a result of the most recent Pole Attachment Rate decisions described in the aforementioned study, the Carriers are aware that in Nova Scotia, New Brunswick, vegetation management costs are incorporated into the Pole Rental Rate.

In respect of other Shared Services Agreements, Rogers specifically, has entered into shared services agreements with utilities in other Canadian provinces which treat routine tree trimming and line clearing costs as follows:

Alberta	Rogers is invoiced on a monthly basis for an additional charge per attachment, in addition to the Pole Attachment Rate.
Manitoba	Agreement with utility is silent on treatment of vegetation management costs.
Newfoundland	Agreement with utility is silent on treatment of vegetation management costs.
Nova Scotia	Make-ready costs are at cost to Rogers; all subsequent vegetation management costs included in the attachment fee rate.
Quebec (Utility #1)	Rogers is responsible for clearing growth around its installations. The city can conduct line clearing upon no less than 30 days' notice.
Quebec (Utility #2)	Rogers may undertake its own vegetation management with the consent of the utility, otherwise Rogers pays a proportionate amount of the vegetation management effort with other 3rd parties with attachments.

2.2 No.

OEB staff-3
Reference: Evidence of Michael Piaskoski, pages 10 – 16

Preamble: Over these pages, Mr. Piaskoski argues that vegetation management costs will vary by pole location and must be recovered outside the pole access charge.

3.1 Is Mr. Piaskoski, aware of any other jurisdictions where this methodology or a similar/related one is used to set pole attachment charges? If so, please provide examples.

RESPONSE

The Carriers have no further evidence in respect of this inquiry.

APPENDIX “A”

Pole Attachment Regulation

Canada, U.S., U.K. and Other Jurisdictions

Prepared for:

Ontario Energy Board (OEB)

Prepared by:

Nordicity

March 2014

About Nordicity

Nordicity (www.nordicity.com) is a leading consulting firm specializing in policy, strategy, and economic analysis for the public and private sector client in the media, creative, telecommunications, and information and communications technology sectors.

Table of Contents

Executive Summary

1. This report provides an overview of pole attachment regulation in Canada, the United States, the United Kingdom and other jurisdictions. For each jurisdiction, the report discusses the overarching regulatory framework for utility pole attachments, access and rate setting issues, as well as any evidence of forbearance. Table 1 summarizes key aspects of pole attachment regulation in Canada, the United States and the United Kingdom.

Table 1 Pole Attachment Regulation in Canada, United States and United Kingdom

	Canada	United States	United Kingdom
Regulatory framework	- Provincially regulated by utilities boards.	- Mix of federal, state, and local regulation. At the federal level, regulated by the FCC.	- Communications providers in the UK do not have regulated access to electricity poles and lampposts.
Access	- No evidence of major access issues.	- Non-discriminatory access mandated by the FCC. - Wireless attachment access to pole tops was frequently denied by utilities. In 2011, however, the FCC mandated that utilities allow pole-top access for wireless attachments.	- Communications providers have entered into commercial agreements with electric utilities and local councils in order to share poles, ducts or lamp posts.
Rates	- Some provinces – such as Ontario, Nova Scotia, and New Brunswick – actively regulate pole attachment rates. - A wide range of pole attachment (lease) rates varying from $8.00 to $45.20 per pole per year, with an average of $19.60 (inflation adjusted). - Rates for installation not specified in tariff. Notionally based on various standard components: engineering, consultation, shore power hook up, etc.	- Negotiated between parties. If negotiation fails, the FCC uses two formulas to calculate rate ceiling. - Rates charged by investor-owned utilities range from US$7 to US$15 per pole per year, although ILECs usually pay higher rates (around US$20 per pole per year). - Rates charged by municipally-owned utilities vary widely, and are usually within the US$5 to US$35 per-pole-per-year range.	- Rates for BT Openreach's poles and ducts are set by Ofcom on the basis of LRIC.
Evidence of	- Although the B.C. Utilities	- Federal regulation does not	- Pole attachment access and

Forbearance or Exemption from Regulation	Commission has jurisdiction over pole attachment rates, it has never exercised this right, letting instead market participants negotiate pole attachment rates between themselves.	apply to municipally-owned utilities (although munis are still subject to state and local regulation). - Federal regulation does not apply to states that opted to regulate pole attachment rates themselves.	rates are not regulated (with the exception of poles belonging to BT Openreach).

Canada

2. Utility pole attachments in Canada are regulated provincially by public utilities boards. In practice, however, not all utilities boards exercise their power. In British Columbia, for example, even though the Utilities Commission has the jurisdiction to regulate pole attachments, it has never exercised this right, letting instead market participants negotiate pole attachment rates between themselves.

3. Utility regulation in Canada has traditionally been applied to electrical infrastructure i.e. electrical poles. Toronto Hydro, however, owns both the lighting and electrical infrastructure and at least 30% of wireless attachments are found on light poles. In many Canadian cities, the lighting infrastructure is owned by the municipalities. In our research, we have not found evidence of wireless companies contesting municipal rental rates, initial installation rates or access conditions for mobile attachments.

4. Nordicity has found few cases of complaints to public utilities boards – whether by electric utilities or other parties – regarding pole attachments. Of the cases found, all involved the setting of pole attachment **rates**, with only few mentions to pole attachment **access**. No complaints were found regarding the cost of initial installation charges. The issue of wireless attachment rates, in particular, does not appear to have been raised elsewhere in Canada.

5. According to a survey conducted by Newfoundland Power, pole attachment (lease) rates charged by electric utilities in Canada ranged from $6.42 to $36.00 per pole per year in 2001, with an average of $15.63 per pole per year. Adjusting these figures by general inflation in the 2001-2013 period suggests a possible range of $8.00 to $45.20 per pole per year in recent years, with an average of $19.60 per pole per year.

United States

6. Utility pole attachments in the United States are regulated by a mix of federal, state, and local requirements. At the federal level, pole attachment access and rates are regulated by the Federal Communications Commission (FCC). At state and local levels, public utilities boards, as well as state and local legislatures, can play a role.

7. At the federal level, U.S. legislation mandates that *investor-owned utilities (IOUs)* allow non-discriminatory pole attachment **access** to cablecos and CLECs, although ILECs have

no statutory right of access to utility poles. Access requirements apply to both wireline and wireless attachments, but access can still be denied due to capacity, safety, reliability and operational concerns.

8. When IOUs and attachers cannot reach mutually beneficial, negotiated agreements, the FCC uses cost-based formulas to determine maximum pole attachment **rates**. Federal rate regulation requirements do not apply to municipal utilities or to states that choose to pre-empt federal regulation.

9. Federal pole attachment regulation does not apply to municipal utilities, which are regulated entirely at the state and local levels. In addition, states can choose to pre-empt federal regulation by regulating pole attachments themselves. Currently, 20 states and the District of Columbia have chosen to do so.

10. For cablecos, average pole attachment (lease) rate is around $7 per foot of vertical space occupied by attachment per year; for CLECs, rate was between $10 and $15 per foot per year, but after the FCC's 2011 Pole Attachment Order this rate is expected to go down to the cable level. Prior to the FCC's 2011 Pole Attachment Order, average pole attachment rate was around $20 per foot of vertical space occupied by attachment per year.

11. Rates charged by municipally-owned utilities (*MOUs*) and co-ops vary widely by state, with significant variation even within a state. Nordicity research has found examples of pole attachment rates charged by MOUs as low US$5 and as high as US$35 per pole per year, or even higher.

12. Nordicity did not find any forbearance petition by IOUs regarding pole attachment regulation in the United States. It is important to keep in mind, however, that IOUs have long tried to limit the scope of FCC regulation.

13. With respect to wireless attachments, in particular, even though the FCC asserted jurisdiction over wireless providers and wireless pole attachments in its 1998 Implementation Order, this order was challenged by IOUs. In 2002, however, the U.S. Supreme Court sided with the FCC, determining that the Commission indeed had jurisdiction over rates, terms, and conditions for wireless attachments by telecom providers. In addition, up until recently, IOUs still denied wireless providers access to pole tops, but this issue was dealt with explicitly by the FCC's 2011 Pole Attachment Order.

United Kingdom

14. Communications providers in the UK do not have regulated access to electric utility infrastructure (i.e. electricity poles) or municipal street infrastructure (i.e. lamp posts). However, the incumbent communications provider BT Openreach, wireless carriers such as O2 and telecommunications infrastructure companies such as Arqiva (and perhaps other communications providers) have entered into commercial agreements with utilities and local councils in order to share poles, ducts or lamp posts. Access to BT Openreach's poles and ducts are, however, regulated by Ofcom, and the price of this access is set on the basis of LRIC.

1. Canada

15. Utility pole attachments in Canada are regulated provincially by public utilities boards. Nordicity has found few cases of complaints to public utilities boards – whether by electric utilities or other parties – regarding pole attachments. Of the cases found, all involved the setting of pole attachment **rates**, with only few mentions to pole attachment **access**. The issue of wireless attachment rates, in particular, does not appear to have been raised elsewhere in Canada.

16. Utility regulation in Canada has traditionally been applied to electrical infrastructure i.e. electrical poles. Toronto Hydro, however, owns both the lighting and electrical infrastructure and at least 30% of wireless attachments are found on light poles.[1] In many Canadian cities, the lighting infrastructure is owned by the municipalities. In our research, we have not found evidence of wireless companies contesting municipal rental rates, initial installation rates or access conditions for mobile attachments.

17. Nordicity gathered relevant Canadian pole attachment data through primary and secondary research. This included a review of legal documents between utilities and utilities boards from various provinces. Additional information was requested through contacting public utilities boards directly, as well as various utilities and hydro companies in the provinces.[2]

18. Electric utilities were unable/unwilling to provide Nordicity with relevant information on pole attachment rates. However, Nordicity did talk to the utilities boards in British Columbia and New Brunswick, both of which were very knowledgeable about their respective pole attachment regimes.

1.1. Pole Access

19. While Nordicity found no evidence of any major disputes regarding access to utility poles in Canadian provinces, the subject did arise during the 2002 case before the Nova Scotia Utility and Review Board and NS Power. Although the main issue of the case was adjusting NS Power's pole attachment rates, pole access was also explicitly mentioned: "The issue of the ability of the cable companies to gain access to NSPI's *[Nova Scotia Power Inc.]* poles and the extent of control over these poles that is exercised by MTT / Aliant…" According to NS Power's Director of Regulatory Affairs and Rates, however, the

[1] Of the 200 wireless pole attachments that THESL had as of mid-February 2014, 63 were in THESI poles. From THESL's pre-filed evidence, we know that all of THESI's 23,000 poles are street lighting poles. Thus, at least 31.5% of wireless attachments are found on light poles. No inference can be made about the 137 wireless attachments on poles belonging directly to THESL, since THESL has both regular utility poles and street lighting poles.

[2] Hydro companies contacted include: Manitoba Hydro, ENMAX, Manitoba Hydro-Electric Board, Maritime Electric Company Limited, etc.

utility did "(…) whatever is required to accommodate the cable company on the pole (transcript, p.38)"[3]

20. Further to the Nova Scotia 2002 case, the Competition Bureau (one of the formal 'intervenors') commented on 'fairness of access'. The post-hearing submission is as follows:

> It appears that the joint pole agreement between NSP I and Aliant/MTT will not continue (NSPl Panel - Huskilson, Tr. p.119, Q304-305). Whether the joint use pole agreement does or does not continue, it is important that no party be permitted to deny others access to the communications space on the pole. Moreover, the Bureau believes that any advantages such as those received by Aliant//MTT under the present arrangement between NSPI and Aliant/MTT should be reflected in the rate paid by the user to whom the advantages accrue. In the present case, as discussed above, it is appropriate for Aliant/MTT to be allocated a larger share of the fixed common costs than is allocated to other users the communications space. (Competition Bureau - Post-Hearing Submission, p.9)[4]

21. Another intervenor in the Nova Scotia case was Seaside. Seaside submitted that their company was prevented access to NSPI poles because MTT had control of 'the communications space'. Seaside was thus forced to attach to the more expensive 'field' side of the poles. Seaside suggested that when the Board determined pole attachment rates, they should keep this situation in mind. Specifically, the expert witness noted:

> If the Board wanted to eliminate or even up the score, as it were, in terms of preferential treatment (…), it could presumably do so by arriving at what in its judgement [sic] is an appropriate rate reflecting those advantages. (Transcript, p.276-277)[5]

22. The finding in the NS 2002 case regarding pole access was that the Board "is not persuaded that the Intervenors are unduly impacted by the present NSPI-MTT joint-use pole agreement."[6]

1.2. Pole Attachment Rates[7]

[3] Nova Scotia Utility and Review Board (2002) "In the matter of the Public Utilities Act and in the matter of an application by Nova Scotia Power Incorporated for Approval of an increase in its Pole Attachment Charge," available at http://www.regie-energie.qc.ca/audiences/3653-07/Audi3653/C-6-15_TCE_NovaScotiaPower_3653_12mars08.pdf

[4] Ibid

[5] Ibid

[6] Ibid

[7] Our analysis focused on annual rates that would be considered comparable to the $22.35 rate charged by Toronto Hydro as part of a lease for wireless attachments. Where initial installation rates were part of the rate sheet, we have noted this as well in the text.

23. Table 2**Error! Reference source not found.** summarizes Canadian pole attachment rates based on information gathered by Nordicity.

Table 2 Canadian rates per pole per year

Jurisdiction	Rate per pole per year
Nova Scotia Power	$14.15 (2002)
Quebec (Hydro Quebec)	Beneficial leasing arrangement. (TBC)
Newfoundland (Newfoundland Power and Aliant)	$12.84 (2001)
Toronto	$22.35
New Brunswick	$18.91 (2014)
Alberta (TransAlta and TELUS)	$18.35 (2000)

24. The 2001 application by Newfoundland Power Inc. to the Board of Commissioners of Public Utilities in Newfoundland included survey results of attachment rates across Canada (Table 3**Error! Reference source not found.**).[8] Adjusting these figures by general inflation in the 2001-2013 period suggests a possible range of $8.00 to $45.20 per pole per year in recent years, with an average of $19.60 per pole per year.

Table 3 Canadian 'joint use' survey results, pole rental agreements and annual attachment fees

	Attachment Fee
Range	$6.42 to $36.00
Average	$15.63

Source: Newfoundland Power Inc. "Direct Evidence and Exhibits of Newfoundland Power Inc."

25. In addition to the current application by THESL, Nordicity found only four other cases where either utilities or attachers filed applications regarding pole attachment rates (Table 4**Error! Reference source not found.**). Provincial review boards have used different methods to calculate fair pole attachment rates.

[8] The survey included rates from Nova Scotia Power Incorporated, Maritime Electric Company Limited, New Brunswick Power Commission, Hydro Quebec, Toronto Hydro, Manitoba Hydro-Electric Board, Saskatchewan Power Corporation, Utilicorp Networks Canada (formally TransAlta distribution assets), Canadian Utilities Limited (formally Alberta Power), ENMAX Corporation (formally Calgary Power), West Kootenay Power Ltd., and BC Hydro.

Table 4 Provinces that have had experience with pole attachment rate regulation

Nova Scotia	Newfoundland and Labrador
Ontario	New Brunswick
Alberta	

26. In Nova Scotia, pole attachment rates have been regulated by the Nova Scotia Utility and Review Board since 1994. Currently, the pole attachment rate applies to attachments by both cable and telephone companies. In the past, however, telephone companies had different rates under a separate joint agreement.

27. In Nova Scotia, rate calculation used the annual cost per pole taking into account contribution, loss in productivity and administration costs. Among the research found in the various cases, there were several proposed ways of calculating pole attachment rates – these cases explored different weighting schemes for loss of productivity, etc. Although the proposed rate calculations are not detailed in this report, they can be explored in the cases themselves.[9]

28. In New Brunswick, Aliant has a joint use agreement with NB Power to use their poles, and therefore does not pay for attachments on a per pole basis. All other attachers pay an annual per pole rate, which is regulated by the province's Energy and Utilities Board. Currently, the rate is $18.91 per pole per year. In October 2013, the rate increased by 3%, the maximum increase allowed by the Board without requiring a full review. There has been no significant change in pole attachment rates in recent years.[10]

29. In Alberta, a December 2000 hearing of the Alberta Utilities Commission ruled that the electric utility TransAlta could charge $18.35 per pole per year to TELUS and any other telco or cableco who wished to attach to their poles. TransAlta went to the Alberta Utilities Commission after negotiations with TELUS regarding pole attachment rates

[9] See the following documents: 1) Newfoundland Power Inc. (2001) "Direct Evidence and Exhibits of Newfoundland Power Inc.," May 8; 2) Nova Scotia Utility and Review Board (2002) "In the Matter of the Public Utilities Act and in the Matter of an Application by Nova Scotia Power Incorporated for Approval of an Increase in its Pole Attachment Charge;" 3) Canadian Cable Television Association (2003) "Appendix C: Evidence of Donald A. Ford on Behalf of the Canadian Cable Television Association," December 15; and 4) Bull, Housser, & Tupper LLP on behalf of Shaw Cablesystems Limited (2009) "Application to the British Columbia Utilities Commission for an Order Allowing the Use of FortisBC Inc. Electricity Transmission Facilities," October 26.

[10] Phone correspondence with New Brunswick Energy and Utilities Board, Week of February 3, 2014.

broke down. The $18.35 per pole per year rate was determined using a cost-based calculation.[11]

30. In British Columbia, pole attachment rates are *de facto* not regulated. Although the BC Utilities Commission has jurisdiction (under BC's Public Utilities Act) to regulate attachment rates, it has never actively done so, and appears to have no intention of doing so in the foreseeable future – see FortisBC case below. In practice, market participants negotiate pole attachment rates between themselves.

31. In 2009, Shaw filed a complaint against FortisBC with the BC Utilities Commission (BCUC), arguing that FortisBC was charging unfair pole attachment rates. Since the BCUC had never dealt with this issue in the past, it was not sure if it had jurisdiction over pole attachment rates. The BCUC then launched an investigation on the issue, and found that, under Section 70 of the *Utilities Commission Act*, it did indeed have the jurisdiction to regulate pole attachment rates in the province. After this investigation, however, Shaw withdrew the complaint and negotiated privately with FortisBC for an acceptable rate. BCUC does not plan to actively regulate pole attachment rates.[12]

[11] Alberta Energy and Utilities Board "TransAlta Utilities Corporation 1996 Phase II – Constitutional Question Decision 2000-86," available at http://www.auc.ab.ca/applications/decisions/Decisions/2000/2000-86.pdf

[12] Phone correspondence with B.C. Utilities Commission, February 13, 2014.

2. United States

33. Utility pole attachments in the United States are regulated by a mix of federal, state, and local requirements. At the federal level, pole attachment access and rates are regulated by the Federal Communications Commission (FCC). At state and local levels, public utilities boards, as well as state and local legislatures, can play a role.

2.1. Pole Access

34. U.S. federal legislation mandates that *investor-owned utilities (IOUs)* allow non-discriminatory pole attachment access to cablecos and CLECs.[13] ILECs, however, have no statutory rights to pole access.[14] In the case of cablecos and CLECs, investor-owned utilities can still deny access, but only due to capacity, safety, reliability and operational concerns.[15]

35. States can pre-empt federal regulation by regulating pole attachments themselves.[16] Currently, 20 states and the District of Columbia have chosen to do so (Table 5).

Table 5 States that have certified that they regulate pole attachments

Alaska	Arkansas	California	Connecticut	Delaware	District of Columbia	Idaho
Illinois	Kentucky	Louisiana	Maine	Massachusetts	Michigan	New Hampshire
New Jersey	New York	Ohio	Oregon	Utah	Vermont	Washington

Source: FCC's 2011 Pole Attachment Order, Appendix C.

36. Federal access requirements do not apply to municipal utilities (municipal exemption). In practice, however, their behaviour is constrained by a number of factors, including:[17]

[13] 47 U.S.C. § 224(f)(1): "A utility shall provide a cable television system or any telecommunications carrier with non-discriminatory access to any pole, duct, conduit, or right-of-way owned or controlled by it."
[14] "See, for instance, § 207 of the FCC's 2011 Pole Attachment Order, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-50A1.pdf ".
[15] 47 U.S.C. § 224(f)(2).
[16] 47 U.S.C. § 224(c).

- *The Telecommunications Act prohibits local governments from imposing barriers to entry, determining that local management of rights of way must be provided on a competitively-neutral and non-discriminatory basis;*[18]
- *Some states apply federal standards (or variations of) to municipal entities; an*
- *Federal standards are often invoked as benchmarks.*

37. Pole attachment access regulated by the FCC includes not only wireline, but also wireless attachments. The FCC's 2011 Pole Attachment Order,[19] explicitly states that when an investor-owned utility denies access to wireless attachments, much like wireline attachments, it must provide a written statement of why access was denied, listing concerns with respect to "capacity, safety, reliability, or engineering standards" (§ 75).[20] In addition, the FCC's 2011 Pole Attachment Order also clarifies that telcos have a right to pole-top access for wireless attachments (§ 77).

2.2. Pole Attachment Rates

38. When *investor-owned* utilities and cableco and CLEC attachers cannot reach mutually beneficial, negotiated agreements, the FCC uses cost-based formulas – delineated in 47 U.S.C. § 224(d)-(e) – to determine the maximum pole attachment rates that these utilities can charge. The FCC's formulas do not apply to: 1) States that pre-empted federal regulation and chose to regulate pole attachments themselves; 2) Municipal utilities.

39. The FCC uses two formulas to determine maximum pole attachment rates, one for cable services and one for telecommunications services. Up until the FCC's 2011 Pole Attachment Order, the two formulas yielded very different results (Box 1). The reason for this difference was the "space factor" component of the formula. For cable service attachments, this factor was calculated based only on the attachment's share of *usable* space on a pole, whereas for the "old" telecommunications services formula it also depended on the attachment's share of *unusable* (or common) space.[21] As a result, pole

[17] Jim Baller and Sean Stokes (2002) "A Practical Primer on Pole Attachments," p. 2, available at http://www.publicpower.org/files/Member/BallerHerbstPrimerPoleAttachments.pdf

[18] 47 U.S.C. § 253(a)-(c).

[19] The 2011 Pole Attachment Order was contested by several electric utility companies after it was issued by the FCC on April 7, but the U.S. Court of Appeals for the District of Columbia upheld the FCC's order on February 26, 2013. On October 7, 2013, the U.S. Supreme Court denied a petition by electric utilities challenging the earlier decision by the D.C. Court of Appeals. For more information, see article by Troutman Sanders available at http://www.troutmansandersenergyreport.com/2013/10/fccs-pole-attachment-order-survives-challenge-at-the-supreme-court/

[20] The FCC's 2011 Pole Attachment order is available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-50A1.pdf

[21] Raymond Kowalski (2003) "Access to Poles, Ducts, Conduits and Right-of-Way by Cable and Telecommunications Companies – A Primer for Electric Utilities," p. 8, available at

attachment rates for telecommunications services were much higher than cable attachment rates (Table 6).

Table 6 Evidence on Pole Attachment Rates, 2006-2007 (US$ per foot of vertical space occupied by attachment per year)

Commenter	Cable Rate	CLEC Rate	ILEC Rate
Cable Industry	$5.25	$11.97, $17.01	..
CLEC Industry	$6.46	$15.09	..
ILEC Industry	$3.26	$4.45	$13.00
Utilities	$6.63	$10.02, $15.15	$20.40

Source: George Ford, Thomas Koutsky, and Lawrence Spiwak (2008) "The Pricing of Pole Attachments: Implications and Recommendations," p. 7, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1360940

40. Rates charged by municipally-owned utilities (MOUs) and co-ops vary widely by state, with significant variation even within a state. Nordicity research has found examples of pole attachment rates charged by MOUs as low US$5 and as high as US$35 per pole per year, or even higher. Seattle City Light, for instance, charges US$28.79 per pole per year (for a pole owned solely by City Light).[22] Cedar Fall Utilities, on the other hand, charges only US$11.25 per pole per year.[23]

41. Prior to 2011, ILECs had very limited rights regarding pole attachment rates. Traditionally, ILECs had been considered pole owners, not attachers. As such, the pole attachment rates paid by ILECs were not capped by the FCC's telecommunications services formula and ILECs had little to no room for filing rate-related complaints with the FCC.

42. The FCC's 2011 Pole Attachment Order made substantial changes to the existing regulation, reinterpreting the telecom services formula and essentially creating rate parity for telecommunications and cable services (§ 214-220). In addition, the Order concluded that, much like CLECs, ILECs are entitled to rates, terms and conditions that are "just and reasonable (§ 202). The FCC thus allowed ILECs to "file complaints with the Commission challenging the rates, terms and conditions of pole attachment agreements with other utilities" (§ 203).

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http://www.troutmansanders.com/files/FileControl/e7755b85-b44f-4870-b837-d5a0a5982b9a/7483b893-e478-44a4-8fed-f49aa917d8cf/Presentation/File/tele1.pdf

[22] http://www.seattle.gov/light/rates/summary.asp

[23] http://www.cfu.net/webres/File/2014%20Final%20Electric%20Rate%20Schedules.pdf

43. There are still significant differences between the FCC's treatment of ILECs and other players:[24]

    - *Existing "joint use" agreements (i.e., agreements between joint pole owners), which typically give reciprocal rights to the parties, will generally be considered reasonable.*
    - *The ILEC must show that it is similarly situated as a cable company or CLEC to obtain comparable rates, terms and conditions. For example, if an ILEC is not a pole owner but merely an attacher in a particular region, the FCC might find that the ILEC, in that instance, is "similarly situated" to a cable company/CLEC and in an inferior bargaining position to the electric utility pole owner.*
    - *The FCC's "old" telecom rate will be the starting point in any rate case where the ILEC is not similarly situated to account for particular arrangements (e.g., no make-ready payments) that provide net advantages to an ILEC relative to cable companies/CLECs.*
    - *ILECs do not have a right of access to electric utility poles under the federal law and any access challenge must be pursued at the appropriate state public utility commission.*

44. The FCC also has jurisdiction over rates, terms and conditions for wireless attachments by telcos. According to the FCC's 2011 Pole Attachment Order, wireless providers are "entitled to the same attachment rate formula as other telecommunications providers. Where a wireless attachment requires more than presumptive one-foot of usable space on a pole, a utility may impose a higher fee proportionate to the amount of space actually used on the pole" (§ 153).

45. Nordicity did not find any forbearance petition by IOUs regarding pole attachment regulation in the United States. It is important to keep in mind, however, that IOUs have long tried to limit the scope of FCC regulation.

46. With respect to wireless attachments, in particular, even though the FCC asserted jurisdiction over wireless providers and wireless pole attachments in its 1998 Implementation Order, this order was challenged by IOUs. In 2002, however, the U.S. Supreme Court sided with the FCC, determining that the Commission indeed had jurisdiction over rates, terms, and conditions for wireless attachments by telecom providers. In addition, up until recently, IOUs still denied wireless providers access to pole tops, but this issue was dealt with explicitly by the FCC's 2011 Pole Attachment Order.

2.3 Other infrastructure

[24] John Seiver and Jill Valenstein (2013) "SCOTUS Declines to Review Decision Granting ILECs Federal Pole Attachment Rights," available at http://www.lexology.com/library/detail.aspx?g=e8aab9bb-5845-4c30-a147-78317236f7c2

47. Most aspects of the federal regulatory framework described in the previous subsections apply not only to utility poles – regardless of whether they are owned by LECs or by a utility company – but also to ducts, conduits and rights-of-way.[25]

48. It is not clear to Nordicity at this point if streetlight poles are also covered under federal regulation. In the United States, "some cities own and maintain their own streetlights and pay their utilities for the energy they use," but it is more common for "utilities [to] own the lights and charge towns and cities a monthly rate that includes the fixture, maintenance and energy costs."[26]

[25] See 47 U.S.C. § 224(a)(1). Note, however, that rate ceilings for ducts and other shared infrastructure are calculated using different rate formulas.

[26] Kate Linebaugh (2011) "Cities, Utilities Are Poles Apart Over Streetlights," December 24, available at http://online.wsj.com/news/articles/SB10001424052970204083204577078202836500244

BOX 1: The Telecommunications Services Rate Prior to the FCC's 2011 Pole Attachment Order

The FCC's 2011 Pole Attachment Order revised the telecommunications rate, essentially creating rate parity between telecommunications and cable services. Prior to the 2011 Order, the two rates yielded significantly different results. Both rates can be expressed as:[a]

$$Rate = Space\ Factor\ x\ Net\ Cost\ of\ Pole\ x\ Carrying\ Charge\ Rate$$

where the carrying charge rate accounts for the percentage of a pole owner's "depreciation expenses, administrative and general expenses, maintenance expenses, taxes, rate of return, pro-rated annualized costs for pole audits or other expenses that are attributable to the pole owner's investment and management of poles."[b]. The space factor was defined differently in each formula. For the pre-2011 telecommunications formula, the space factor was defined as:

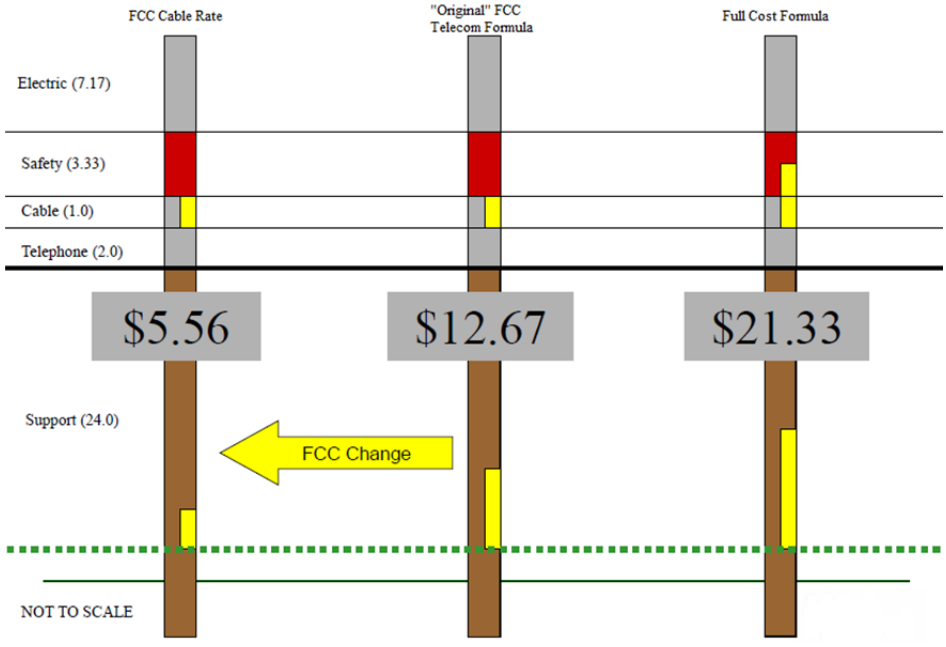
$$Space\ Factor = \frac{Space\ Occupied + \frac{2}{3}\left(\frac{Unusable\ Space}{Number\ of\ Attachers}\right)}{Pole\ Height}$$

For the cable services formula, the space factor is defined as:

$$Space\ Factor = \left(\frac{Space\ Occupied}{Total\ Usable\ Space}\right)$$

Under the standard FCC assumptions of an average pole height of 37.5 feet with 13.5 feet of usable space, and assuming three attachers, a pole attachment occupying one vertical foot of usable pole space would imply a space factor of 16.9% of the annual net pole cost for telecommunications services vs. only 7.4% for cable services. Electric utilities proposed a third formula, not adopted by the FCC, which arrived at a "full-cost" space allocation of attachments, yielding a space factor of 28.4%.[c] As an example, assuming a net cost of the bare pole of $250 and a carrying charge of 30%, Figure 1 provides a comparison of rates and space allocations according to different formulas.

Figure 1: Comparison of Rates and Space Allocations According to Different Formulas



Note: Areas in yellow represent the relative allocation of pole space (and therefore cost) according to each formula.
Source: Mark Smith (2013) "Pole Attachment Update," available at http://www.tvppa.com/SiteAssets/Pages/conferences/Conf_AF/Pole%20Attachment%20Legalities.pdf

[a] Reuben Kyle and Chris Klein (2007) "Analysis of Pole Attachment Rate Issues in Tennessee," p. 10, available at http://www.state.tn.us/tacir/PDF_FILES/Other_Issues/pole%20attachment%20rate%20issues.pdf

[b] Brian Grogan (2010) "Pole Attachments – Are Cities Asleep at the Wheel on the Information Super Highway?", available at http://municipalcommunicationslaw.com/docs/1644974.pdf

[c] Jim Ballard and Sean Stokes (2009), p. 12

3. United Kingdom

3.1. Utility poles

49. There is currently no regulation of communications providers' access to electric utility infrastructure (i.e. water/sewerage, electricity and natural gas).

50. Although there is no regulated access to utility infrastructure, the incumbent communications provider, BT plc (through its BT Openreach subsidiary) does both share infrastructure with electric utilities and access infrastructure owned exclusively by utilities. The agreements and associated rates for this access are set on commercial terms without intervention by Ofcom, Ofgem (the energy-sector regulator) or Ofwat (the water/sewerage sector regulator). Indeed, BT Openreach has "long-standing agreements" with several electricity distribution companies in the UK under which the electricity utilities provide access to low-voltage overhead poles in order to facilitate last-mile connectivity.[27]

51. In 2010, the Department for Business, Industry and Skills (BIS) released a discussion paper on Broadband deployment and sharing other utilities' infrastructure and launched an associated consultation.[28] Among other things, that consultation found that there was, in fact, little incentive for utility companies in the UK to "charge" for access to their physical infrastructure (i.e. poles or ducts), since the regulatory regime governing these utilities limits the amount of revenue they can earn from non-core activities. In effect, any income that electricity utilities earn from pole access would be clawed back through lower rates charged to their electricity customers.[29]

3.2. Lamp posts

52. In the UK, local councils (i.e. municipal governments) own lamp posts and other street infrastructure. In recent years, lamp posts have been identified as a type of infrastructure that could be used to install WiFi transceivers in order to offer public-space Wi-Fi services. Communications providers such as O2 and telecom infrastructure providers such as

[27] SSE (2012) "Relaxing the restrictions on the deployment of overhead telecommunications lines," pp. 1-2, response to Department for Culture, Media and Sport consultation, February 21, 2012, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/185620/SSE.pdf

[28] BIS (2010) "Broadband deployment and sharing other utilities' infrastructure: A discussion paper," July 2010, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/72845/10-1046-broadband-deployment-discussion-paper.pdf

[29] DCMS (2010) "Broadband deployment and sharing other utilities' infrastructure: Summary of responses to 15 July discussion paper," ¶3.8., December 2010, available at http://webarchive.nationalarchives.gov.uk/20130128202050/http://www.culture.gov.uk/images/consultation_responses/10-1308-broadband-deployment-sharing-infrastructure-summary-of-responses.pdf

Arqiva have entered into contracts with local councils to provide public-space WiFi services.[30] Where the communications provider or telecom infrastructure provider pay the local council for use of its infrastructure such as lamp posts, this has been negotiated on a case by case basis. For example, in 2013, Arqiva entered into a contract with Hammersmith and Fulham Council to provide public-space WiFi services. As part of the contract, Arqiva agreed to the pay the local council approximately £500,000 for use of its street infrastructure (i.e. lamp costs) along with a 20% share of any revenue generated by the WiFi services.[31] Arqiva struck a similar contract with Hounslow Council in London, which also included a £500,000 payment for use of infrastructure.

3.3. Access to BT infrastructure

53. In 2012, BT Openreach launched its physical infrastructure access (PIA) program whereby competitive communications providers can gain access to its poles or ducts. As part of the PIA program BT Openreach has published a price list. According to Ofcom, the rates reflected in this price list have been set by BT Openreach on the basis of its long-run incremental cost (LRIC) of provision.[32] From the price list, however, it is unclear, what the equivalent rate would be for the attachment of wireless equipment to a pole.

[30] Dan Worth (2012) "O2 switches on free London-wide Wi-Fi network for Olympics," *V3.co.uk*, July 25, 2012, available at http://www.v3.co.uk/v3-uk/news/2193834/o2-switches-on-free-londonwide-wifi-network-for-olympics

[31] Hannah Langston (2013) "Arqiva to bring free Wi-Fi to London borough," *Cable.co.uk*, May 16, 2013, available at http://www.cable.co.uk/news/arqiva-to-bring-free-wi-fi-to-london-borough-801586137/

[32] Ofcom (2010) "Review of the wholesale local access market," ¶1.23, March 23, 2010, available at http://stakeholders.ofcom.org.uk/consultations/wla/summary#Content

4. Other Jurisdictions

4.1. Australia

54. Electric utilities in Australia have provided access to their poles and ducts infrastructure to telcos and cablecos, but from our research it would appear that this access has been negotiated on a case-by-case basis rather than mandated by the government or regulated by the Australian Competition and Consumer Commission (ACCC). In 2008, for instance, the Queensland government launched a project in which "Ergon Energy agreed to construct optical fibre links along new high voltage power lines."[33]

55. Schedule 3 of the Australian Telecommunications Act, however, provides carriers with the power to "enter land to inspect land, maintain facilities and install certain types of facilities, and immunity from some state and territory laws, including planning laws, when carrying out those activities."[34] In April 2013 NBN Co. – the company responsible for rolling out the Australian broadband network – invoked Schedule 3 powers to access pole infrastructure after negotiations with the utility Ausgrid reached a stalemate.[35]

4.2. Portugal

56. In Portugal, non-discriminatory access to poles and ducts installed in state-owned property is mandated by law. Access issues are dealt with by local and state governments.[36]

[33] CSMG (2010) "Economics of Shared Infrastructure Access," p. 18, available at http://stakeholders.ofcom.org.uk/binaries/consultations/wla/annexes/csmg.pdf

[34] http://www.communications.gov.au/policy_and_legislation/carrier_powers_and_immunities

[35] John Taylor (2013) "NBN Co Invokes Federal Powers to Get Ausgrid Pole Attachment," available at http://www.zdnet.com/nbn-co-invokes-federal-powers-to-get-ausgrid-pole-access-7000013420/

[36] CSMS (2010), p. 25.