

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 Hydro Ottawa Limited for an order approving just and reasonable rates and other charges for electricity distribution to be effective January 1, 2016

**VULNERABLE ENERGY CONSUMERS COALITION
("VECC")
CROSS-EXAMINATION COMPENDIUM**

September 28, 2015

HYDRO OTTAWA (EB-2015-0004)
2016-2020 CIR APPLICATION – ISSUE 4.11 (POLE ATTACHMENT RATE)
VECC CROSS-EXAMINATION COMPENDIUM

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TAB 1



Response to Carriers Interrogatory Question #6

Reference: Attachment H-7(a) which identifies a net embedded cost per pole of \$1,678.00.

Question # 6:

- a) For each of the years 2010-2015 (actuals for 2010-2014 and estimates for 2015), provide Hydro Ottawa's average embedded cost per pole. Identify the categories, descriptions and values of all asset accounts (both aggregate and sub-accounts) used to determine the average embedded cost and the total number of poles used to determine a per pole cost, if applicable.
- b) For each of the years 2010-2015 (actuals for 2010-2014 and estimates for 2015), provide Hydro Ottawa's net embedded cost per pole. Identify the categories, descriptions and values of all asset accounts (both aggregate and sub-accounts) used to determine the net embedded cost, as well as the total number of poles used to determine a per pole cost, if applicable.
- c) Describe in detail the methodology, including applicable cost inputs, that was used to determine the net embedded cost per pole of \$1,678.00. Describe the manner in which the costs of power-specific or power-only assets were excluded from the calculation. Include all supporting evidence, assumptions and calculations employed.
- d) Confirm that all of Hydro Ottawa's costs to replace poles for whatever reason are included in the average and net embedded cost of a pole.

Response:

- a. Hydro Ottawa's average net embedded cost, per pole, for the years 2011 to 2014 and estimated for 2015 are provided in Table 1, below. Hydro Ottawa does not use



any sub accounts for Poles, Towers and Fixtures. 2010 data has not been provided, as it is not comparable due to the change in capitalization policies.

Table 1: Average and Net Embedded Cost, Per Pole

	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Estimate	Average
Net Book Value Appendix 2-BA (\$M)	60.9	67.8	75.3	79.7	88.7	74.5
In-service Poles	48,377	48,298	47,978	47,825	47,650	48,026
Net Embedded cost per pole (\$)	1,259	1,405	1,569	1,666	1,861	1,552

b. Please refer to response a).

c. Hydro Ottawa followed OEB methodology in determining indirect cost inputs. For direct costs, see response to Allstream question #1 (a) and (b). The average net embedded cost per pole of \$1,678 was calculated by dividing the average net book value of Poles, towers and fixtures, as per Hydro Ottawa's 2013 financial records for external reporting purposes, by the total number of in-service poles. Average net book value of the pole assets is calculated by subtracting the accumulated depreciation from the cost of the pole asset. For year-end 2013, these values were:

i. Cost	=	\$147.1M
ii. Accumulated depreciation	=	\$ 66.6M
iii. Net book value	=	\$ 80.5M
iv. # of In-service HOL poles	=	47,978
v. Average net book value per pole	=	\$ 80.5M / 47,978
	=	\$ 1,678 *

*See Table 1 if the above calculation were based on the MIFRS information included in Exhibit B-2-1, Appendix 2-BA



1 Power-specific or power-only assets were excluded in the calculation of the pole
2 attachment rate by way of an attacher space allocation factor. Hydro Ottawa
3 calculated the allocation factor based on a typical 40-foot distribution pole, which
4 is divided into five vertical spaces and each defined space is then allocated to
5 Hydro Ottawa and/or the 3rd party attachers. Where the space is jointly-
6 allocated between Hydro Ottawa and the 3rd party attachers, Hydro Ottawa is
7 considered to be one user, based on the average number of users, per pole. The
8 model yielded individual third party attacher space allocation factor of 25.9
9 percent.

10
11 d. Confirmed.
12

TAB 2



1 **Undertaking JTC1.8**

2
3 A: With reference to Exhibit B, Tab 1, Schedule 2, page 89 of 2014, to provide the year
4 that the numbers reflected in table 2.2.5 stem from;

5 B: to provide what year the number is as reflected in the table on page 89 of 2014 and
6 as reflected in the first paragraph on page 93 of 2014;

7 C: to clarify any discrepancy between the numbers reported in Table 1 in response to
8 Carriers 6(a) and the numbers reported in this document we've just been looking at.

9
10
11 **Response:**

12
13 A: The poles numbers from page 93 of the DSP are from the 2014 Asset Management
14 Plan. These are end of year 2013 numbers.

15
16 B: The original filing of Exhibit B-1-2, page 93 lines 2-3 states, "HOL [Hydro Ottawa]
17 owns 47,815 wood poles and 537 non-wood poles and operates on an additional 11,635
18 wood and 126 non-wood poles which are owned by third parties".

19
20 C: Table 1 of interrogatory response to Carriers 6 a), Table 1 lists the amount of In-
21 service Poles in 2013 and 2014 as 47,978 and 47,825, respectively.

22
23 The numbers used in Table 1 of interrogatory response to Carriers 6 a) are Hydro
24 Ottawa owned wood poles. There is a minor discrepancy between these numbers and
25 the number stated in the original filing of Exhibit B-1-2, page 93 as a result of the source
26 of the information, GIS, providing current state data and non-coincident date of
27 information queries.

TAB 3



Response to Carriers Interrogatory Question #11

Reference: Attachment H-7(a) which identifies a pole maintenance expense per pole of \$12.61.

Question #11:

- a) Provide a detailed description of all activities undertaken as part of “pole maintenance”, including the tasks performed, the employee categories involved, the hourly wages, vehicle costs and time required to complete each task.
- b) Provide a detailed description of the methodology, assumptions and all data inputs (and data sources), including the number of poles, used to generate a “pole maintenance” expense of \$12.61 per pole.
- c) Indicate whether the costs of “pole maintenance” that are attributable to power-only assets were excluded from the calculation leading to the figure \$12.61. If yes, explain and demonstrate how these costs were excluded. Indicate whether the costs of maintaining Single Use Poles were excluded from the same calculation. If yes, explain and demonstrate how these costs were so excluded. In both cases, provide the methodology, assumptions and calculations used.
- d) Indicate whether tree trimming costs are included in the pole maintenance expense. If yes, confirm that Wireline Attachments are required to perform their own or pay separately for tree trimming in respect of their attachments and provide all amounts paid to Hydro Ottawa by third parties for tree trimming for each year from 2010 to 2015.
- e) For each year from 2010 to 2015, provide all amounts paid to Hydro Ottawa by third parties for any activities included in pole maintenance expense (excluding tree trimming) for each year from 2010 to 2015.
- f) Complete the table below with respect to the costs associated with the maintenance expenses for each of the years 2010 to 2015, using actuals for 2010-2014 and estimates for 2015. Provide the sources and supporting data for the values used to populate the table.



	2010	2011	2012	2013	2014	2015
Total pole maintenance expenses						
Number of poles						
Total pole maintenance expenses per pole						

Response:

- a. The pole maintenance expense captures the cost of these activities (pole testing, repairs and straightening) undertaken by HOL for the purposes of maintaining the structural integrity of its distribution poles.
- b. To arrive at this cost, the expenditures incurred by HOL were divided by the total number of poles to determine the cost per pole of executing its maintenance programs. The costs, per pole, of each program were added to derive the total annual pole maintenance expense per pole. As of yearend 2013, these values were:
 - i. Total pole maintenance = \$605,081
 - ii. In-service Hydro Ottawa poles = 47,978
 - iii. Maintenance costs per pole = $\$605,081 / 47,978$
 $= \$12.61 / \text{in-service Hydro Ottawa poles} / \text{year}$
- c. Pole maintenance costs are independent of having 3rd party attachers.
- d. Tree trimming costs were not included in the calculation of pole maintenance expense.
- e. Make-ready costs for HOL to accommodate 3rd party attachment requests on its power poles are not part of maintenance costs. Between 2010 and 2015, 3rd party



attachers did not pay any direct maintenance cost for their attachments other than the cost component built into the OEB pole attachment rate.

- f. With reference to Table 1, the 2010 to 2014 pole maintenance expenses for 2010 to 2014 are based on the 2013 calculation methodology for proposed pricing.

Table 1: 2010 – 2015 Pole Maintenance Expenses

	2010	2011	2012	2013	2014	2015
Total pole maintenance expenses (\$)	361,834	449,361	656,170	605,081	506,153	515,720
Number of poles	48,574	48,377	48,298	47,978	47,825	47,650
Total pole maintenance expenses per pole (\$/pole)	7.45	9.29	13.59	12.61	10.58	10.82

Notes:

- i. 2010-2014 Total pole maintenance expense data taken from JDE Enterprise.
- ii. In service Hydro Ottawa poles data taken from GIS data sheet.
- iii. 2015 Estimate based on average pole maintenance expense totals from 2010 to 2014. $\$ 2,578,598 / 5 \text{ years} = \$ 515,720$.
- iv. 2015 Estimate of number of poles in service = based on average decline in poles in service from 2009 to 2014 over 5 years = 874 over 5 years = 175 (rounded up). This amount is subtracted from the 2014 number of poles $47,825 - 175 = 47,650$.

TAB 4



Undertaking JTC1.5

To provide current data in response to carriers in 1(f), (g), and (h), using relevant definitions.

Response:

Table 1(f) (includes telecom cables ⁽¹⁾, street light ⁽²⁾)

Types of Poles	As of August 18, 2015
Single Use Poles	Do not differentiate from no wireline attachers
Poles with no Wireline Attachers	14,043
Poles with 1 Wireline Attacher	17,595
Poles with 2 Wireline Attachers	11,080
Poles with 3 Wireline Attachers	4,031
Poles with 4 Wireline Attachers	896
Poles with 5 Wireline Attachers	113
Poles with 6 Wireline Attachers	111
Poles with 7 Wireline Attachers	43
Total number of Poles	47,912

⁽¹⁾ Total of 43,825 wireline telecom attachers

⁽²⁾ Total of 13,516 street light attachers



13 Table 1(g) (includes antennas)

Types of Poles	As of August 18, 2015
Single Use Poles	Do not differentiate from no wireless attachers
Poles with no Wireless Attachers	47,911
Poles with 1 Wireless Attacher ⁽¹⁾	1
Poles with 2 Wireless Attachers	0
Poles with 3 Wireless Attachers	0
Poles with 4 Wireless Attachers	0
Poles with 5 Wireless Attachers	0
Poles with 6 Wireless Attachers	0
Poles with 7 Wireless Attachers	0
Total number of Poles	47,912

14

15 ⁽¹⁾ Telecom already has an attachment; therefore, does not pay an for the antenna

16

17

18 Table 1(h) (includes Tables 1(f), 1(g), and RCMP attachments @ 2)

Types of Poles	As of August 18, 2015
Poles with no Attachers	14,043
Poles with 1 Attacher	17,595
Poles with 2 Attachers	11,080
Poles with 3 Attachers	4,031
Poles with 4 Attachers	896
Poles with 5 Attachers	113
Poles with 6 Attachers	111
Poles with 7 Attachers	43
Total number of Poles ⁽¹⁾	47,912

19

20 ⁽¹⁾ Total Hydro Ottawa poles with attachers = 33,868

TAB 5



Response to Carriers Interrogatory Question #1

Reference: Exhibit H, Tab 7, Schedule 1, page 5, section 3.3

Hydro Ottawa states "As of yearend 2013, Hydro Ottawa had seven companies attaching to Hydro Ottawa poles. Telecom cables and street lighting represented the majority of attachments; however, Bell Canada and Hydro One ("HONI") also had attachments. With the exception of HONI, which applies its own OEB-approved rate, the remaining companies pay the current, province-wide annual pole charge of \$22.35 per pole."

Exhibit H, Tab 7, Schedule 1, Attachment H-7(a) (referred to herein as "Attachment H-7(a)") which identifies 35,663 poles with attachments.

Question #1:

- a) Confirm that the 35,663 poles with attachments are all Poles with Wireline Attachments. If not, how many Poles do not have Wireline Attachments?
- b) Indicate the year used to determine the 35,663 poles with attachments and whether this is based on the number of poles with attachments at year end or the average for the year.
- c) Provide a list of the Wireline Attachers that currently have Wireline Attachments on one or more Poles and indicate in each case whether or not the Wireline Attacher pays Hydro Ottawa's OEB-approved pole attachment rate of \$22.35 for all of its Wireline Attachments and, if not, indicate what compensation is paid by the Wireline Attacher, if anything.
- d) Provide a list of the Wireless Attachers that currently have Wireless Attachments on one or more Poles and indicate in each case whether or not the Wireless Attacher pays Hydro Ottawa's OEB-approved pole attachment rate of \$22.35 for all of its Wireless Attachments and, if not, indicate what compensation is paid by the Wireless Attacher, if anything.



- e) Provide a list of the Other Attachers that currently have Other Attachments on one or more Poles, indicating for each Other Attacher the types of Other Attachments it has on Poles and whether or not the Other Attacher pays Hydro Ottawa's OEB-approved Pole attachment rate of \$22.35 for all of its Other Attachments. If the Other Attacher does not pay the OEB-approved rate of \$22.35 for all of its Other Attachments, state what compensation it does pay, if anything.
- f) Complete the table below providing the number of Single Use Poles and Poles (at calendar year-end). Use actuals for 2010-2014 and estimates for 2015.

Types of Poles	2010	2011	2012	2013	2014	2015
Single Use Poles						
Poles with no Wireline Attachers						
Poles with 1 Wireline Attacher						
Poles with 2 Wireline Attachers						
Poles with 3 Wireline Attachers						
Poles with 4 Wireline Attachers						
Poles with 5 or more Wireline Attachers						
Total number of Poles						

- g) Complete the table below for Wireless Attachments on Poles.



Types of Poles	2010	2011	2012	2013	2014	2015
Poles with no Wireless Attachers						
Poles with 1 Wireless Attacher						
Poles with 2 Wireless Attachers						
Poles with 3 Wireline Attachers						
Poles with 4 Wireline Attachers						
Poles with 5 or more Wireline Attachers						
Total number of Poles						

1

2

3

h) Complete the table below for Attachers on Poles.

Types of Poles	2010	2011	2012	2013	2014	2015
Poles with no Wireless Attachers						
Poles with 1 Wireless Attacher						
Poles with 2 Wireless Attachers						
Poles with 3 Wireline Attachers						
Poles with 4 Wireline Attachers						
Poles with 5 or more Wireline Attachers						
Total number of Poles						

4

5

6

7

8

9

i) Provide the source of the data provided in response to (f). (g) and (h), indicating whether the data are based on a census of all Hydro Ottawa poles or on a sample or some other methodology and the date of any such census, sample or other methodology. If a sample was used, provide details regarding the nature and scope of the sampling undertaken. If some methodology other than a sample



1 or census was used, provide a detailed description of the methodology and all
2 data sources and inputs.

3 j) Describe in detail the methodology and data inputs, including data sources, used
4 to determine that Hydro Ottawa has 35,663 Poles with attachments.

5 k) Describe in detail the type of attachments HONI has installed on poles owned by
6 Hydro Ottawa (i.e., their purpose of the service they provide). How many Poles
7 have HONI attachments? Where on the pole are HONI's attachments installed?

8 l) Provide the rate that is paid by HONI for its attachments to Hydro Ottawa Poles.

9 m) Define what is meant by "telecom cables" and whether or not this term
10 encompasses attachments by Bell Canada.

11 n) Has Hydro Ottawa installed any of its own attachments or equipment within the
12 communications space of its Poles? If so, how many Poles have such
13 attachments and describe the type of attachments and their purpose or service
14 provided.

15 o) Provide the number of Poles with street lighting attachments and the name(s) of
16 all owners of such street lighting attachments.

17

18

19

20 **Response:**

21

22 Attachments: has the meaning ascribed to it as per ESA's O. Reg. 22/04 Guideline for Third

23 Party Attachments



1 a. HOL had 35,663 in-service power distribution poles with 3rd party attachers
2 including wireline attachments.

3 b. This total was determined at EOY 2013.

4 c. The following list of Wireline Attachers currently have Wireline Attachments on
5 one or more Poles and pays Hydro Ottawa's OEB-approved pole attachment rate
6 of \$22.35 for all of its Wireline Attachments:

- 7 1. Allstream – telecom attachments
- 8 2. BH Telecom – telecom attachments
- 9 3. Canadian P2P Fibre Systems - telecom attachments
- 10 4. Eastlink - telecom attachments
- 11 5. Rogers – telecom attachments
- 12 6. Telus – telecom attachments
- 13 7. Videotron – telecom attachments
- 14 8. Bell Canada - telecom attachments
- 15 9. Village of Casselman – street lighting attachments
- 16 10. City of Ottawa - street lighting attachments attachments

17
18 The following Wireline Attacher currently has Wireline Attachments on one or
19 more Poles and does not Hydro Ottawa's OEB-approved pole attachment rate of
20 \$22.35 for its Wireline Attachments:

- 21 1. HONI – electrical distribution

22
23 d. Rogers is the only 3rd party wireless attacher.

24
25 e. Since 2002, HOL has had third party telecom antennas (i.e. wireless attachment)
26 on its poles and currently charges the OEB-approved wireline attachment rate.
27 Since the 3rd party telecom attacher has existing wire attachments on the
28 specific HOL poles with antennas, the attacher does not pay additional
29 attachment rates for its antennas as per the OEB Decision RP-2003-0249. Over



1 the last several years, 3rd party telecom antennas on provincially regulated
2 power poles have attracted discussion with the OEB and across Canada.

3
4 HOL has an immaterial number (three-dozen poles) of community based 3rd
5 party decorative banner attachers that install for temporary festive periods lasting
6 only several weeks during a year. These 3rd party banner attachers are required
7 to provide insurance and meet technical standards, but do not pay for their
8 attachment other than any make-ready work done by HOL.

9
10 f. HOL's GIS system is used to track 3rd party attachments. This GIS system is a
11 dynamic database system such that data queries are made on the current data
12 since there are no historical fields. Historical tracking functionality can be added
13 to the GIS system, but, will increase the cost to the pole attachment rate to
14 recover those GIS modification costs.

15
16 g. Please see Interrogatory Response to Carriers Question #1, part f.

17
18 h. Please see Interrogatory Response to Carriers Question #1, part f.

19
20 i. HOL completed a field survey of its poles in 2003-2004 with the participation of
21 its major 3rd party attachers. At the conclusion of this field survey, the relevant
22 survey data was provided to its major 3rd party attachers. This field survey data
23 was imported to HOL's GIS system. Since this last field survey, HOL has used
24 the approved 3rd party attacher permits to update its GIS system.

25
26 j. HOL runs standard queries on its GIS data for 3rd party attachments on its poles.

27
28 k. HONI has distribution power attachments on HOL poles. The majority of these
29 602 poles (EOY 2014) are along service boundary roads between HONI and
30 HOL.



- 1 I. HONI applies for OEB-approved attachment rates for its agreement with local
2 distribution company ("LDC") pole attachments. These HONI OEB approved
3 rates can be found on the OEB website.
4
- 5 m. "Telecom cables" are cables used for telecommunication purposes. With respect
6 to telecom cables on HOL power poles. Bell Canada wireline attachments are
7 considered telecom cables.
8
- 9 n. Since HOL has electrical protection communication equipment attached to
10 twenty-four of its poles, this small quantity of HOL attachments is immaterial to
11 the total number of 3rd party attachments.
12
- 13 o. 13,265 of HOL poles have street light attachments that have an OEB Attachment
14 Rate. Both the City of Ottawa and the Village of Casselman pay for their street
15 light attachments on HOL poles.

TAB 6



Response to Carriers Interrogatory Question #4

Reference: Attachment H-7(a) which states that Hydro Ottawa has applied an allocation factor of 25.9% based on two third party attachers.

Question #04:

- a) Provide a detailed description of the basis for using 2 third party attachers, including all data inputs and the sources of all such data inputs.
- b) Complete the table below indicating the dimensions (in feet) for the space on a Pole used by Hydro Ottawa to generate an allocation factor of 25.9%.

Buried Portion	
Clearance Space	
Communications Space	
Separation Space	
Power Space	
Total length of Pole	

- c) Indicate whether or not street lights are located in the separation space and, if not, identify the space(s) on a Pole where street lights are located.
- d) Indicate whether power facilities, such as transformers, ever encroach on, or are attached in, the separation space on the Poles.
- e) Provide all steps in the calculation and all data inputs used to determine an allocation factor of 25.9%.
-



Response:

- a. HOL allows up to a maximum of three telecom support strand attachments, per pole, except for some restricted areas. HOL submits that the actual number attachments on its poles are less than 2.5 as per its end-of-year 2013 data:

$$\frac{\text{Total OEB Rate Attachments on Hydro Ottawa poles}}{\text{Hydro Ottawa Poles with OEB Rate Attachments}} = \frac{43,082 + 13,265}{35,633}$$

$$= \frac{56,347}{35,633} = 1.58 \text{ Attacher per pole}$$

For rate calculation purposes, HOL will use a value of 2.0 third party Attachers, per pole that provides future attacher opportunities. This value of 2.0 third party attachers, per pole may be considered optimistic considering the merger and acquisitions by telecom companies and other types of attachers, but is more representative than 2.5 attachers, per pole. Trending the telecom attachment count rate, HOL had 1.36 telecom attachments per pole in 2004, whereas, at the end of 2013, this value dropped to 1.21 telecom attachments, per pole ($43,082 / 35,633 = 1.21$).

- b. The allocation factor determines the percentage of indirect costs attributed to HOL and to the 3rd party attachers based on the usage of the pole. To calculate the allocation factor, a typical 40-foot (') distribution pole ($h=40'$) is divided into five vertical spaces, as explained below and as shown in the figure that follows the explanation. Each defined space is then allocated to HOL and/or the 3rd party Attachers based on the proportionate usage space on the pole.

- i. Buried depth ($b=6'$) – this space provides foundational support for the pole (typically 10% of the pole height + 2' for average soil conditions) and is allocated equally between all parties.
- ii. Clearance Space ($c=17.25'$) – this space is the height above grade to the lowest wires/fixtures and is allocated equally between all parties.
- iii. Telecommunication Space ($t=2'$) – this space is only used by the 3rd party attachers and is allocated solely to the 3rd party Attachers.



- iv. Separation Space (s=3.25') – this space is required to maintain a minimum clearance from the lowest electrical distribution wires to the highest telecommunication attachments as per CSA C22.3 No. 1 standard. This space is solely allocated to the 3rd party attachers because the separation space is required to accommodate their attachments on the pole and provide a safe working space for the telecom worker. Note that 3rd party street light attachments normally attach to the pole in this space due to their above roadway height requirements for proper illumination.
- v. Power Space (p=11.5') – this space is allocated solely to HOL, as telecoms attachers are not able to attach their equipment in this space.

The allocation space is calculated by dividing each defined space by the total number of users of that space. Where the space is jointly allocated between HOL and the 3rd party attachers, HOL is considered to be one user, based on the average number of users, per pole. Therefore, in total, the allocation factor assumes an average of 3 users per pole. This allocation model yields a space allocation factor of:

n = the average number of 3rd party attachers on a HOL pole = 2.0
e = number of electrical companies in the power space on a HOL pole = 1.0

Individual 3rd party attacher space allocation factor

$$= \frac{1}{h} * \left[\frac{s}{n} + \frac{t}{n} + \frac{c}{(n+e)} + \frac{b}{(n+e)} \right] = \frac{1}{40} * \left[\frac{3.25}{2} + \frac{2}{2} + \frac{17.25}{(2+1)} + \frac{6}{(2+1)} \right] = 25.9\%$$

c. Please see Interrogatory response to Carriers #4, part b.

d. HOL has limited legacy installations where it allowed third party attachers to install their wireline attachments in the separation space. This practice was done



1 to assist the 3rd party attacher in avoiding the associated make-ready costs of
2 changing the pole to be taller and provide CSA standard (C22.3 Part7) vertical
3 clearances. In such legacy circumstances, this effectively reduced the separation
4 space. This practice was stopped in 2001. The current HOL practice for its poles
5 without sufficient height to maintain the CSA standard separation space, is to
6 change the pole.

7

8 e. Please see Interrogatory response to Carriers #4, part b.

9

TAB 7



Response to Carriers Interrogatory Question #16

Reference: Exhibit H, Tab 7, Schedule 1; Exhibit H, Tab 7, Schedule 1, Attachment H-7(a)

Question #16:

- a) Complete the table below with respect to revenues from pole attachments for each of the years 2011 to 2016.

	2011	2012	2013	2014	2015 (estima te)	2016 (estima te)
No. of Wireline Attachers						
No. of Wireline Attachments						
Pole Attachment Fee	\$22.35	\$22.35	\$22.35	\$22.35		
Revenues from Wireline Attachers						
No. of Wireline Attachers						
No. of Wireline Attachments						
Pole Attachment Fee						
Revenues from Wireline Attachers						
No. of Wireline Attachers						
No. of Wireline Attachments						
Pole Attachment Fee						
Revenues from Wireline Attachers						

- b) Provide the underlying data inputs used to derive the estimated revenue from pole attachments for 2015; specifically, the number of Wireline and Other Attachers per Pole, the number of Poles with billable Wireline and Other



Attachments and the total billable Wireline and Other Attachments. Include in the response supporting evidence and assumptions employed.

Response:

a. For previous years number of wireline attachments, please see Interrogatory Response Carriers #1, part f. Hydro Ottawa Limited does not receive revenue from wireless attachers (see rationale in Response to Carriers Interrogatory Question #5(a)). Please see Interrogatory Response to Carriers #1, part d, for further details. Similarly, Hydro Ottawa Limited does not receive revenue from other attachers. Please see Interrogatory Response to Carriers #1, part e, for further details.

Table 1, below, summarizes the pole attachment revenues for the year 2011 to 2016.

Table 1: Pole Attachment Revenues for the Years 2011 to 2016

	2011	2012	2013	2014	2015* actual	2016* estimate
No. of Wireline Attachers	8	8	8	7	8	8
No. of Wireline Attachments	52,741	54,723	55,082	50,269	50,420	51,029
Pole Attachment Fee (\$)	22.35	22.35	22.35	22.35	22.35	57.00
Revenues from Wireline Attachers (\$)	1,034,593	1,082,773	1,092,680	1,007,064	1,013,914	2,552,583

*Note, 2015 revenues are billed in January based on number of attachments at EOY 2014 + EOY 2015 True-up. Estimated revenues for 2016 attachments based on 2015 attachment numbers and attachment rate submitted.

b. Please see Interrogatory Response to Carriers #16, part a.

TAB 8



Undertaking JTC1.17

(a) to provide an explanation for the differences between the number of wireline attachers as reflected in response to Carriers interrogatory 1(c) and contrast that to Table 1 that was provided in response to Carriers 16;

(b) to provide a description of what's included in wireline attachments in the second row;

(c), to confirm the difference between the values for specific charge for access to the power poles as reflected in Exhibit C, Tab 2, Schedule 2, page 2 of 3, with the number in Table 1 in response to Carriers 16;

(d), to reconcile the numbers in Carriers 4(a) with those numbers that are found in response to Carriers 16

Response:

a) Interrogatory Carriers 1(c) provided a list of attachers paying the OEB approved attachment rate (except RCMP). Interrogatory Carriers 16 – Table 1 provided an attacher count of only telecom companies.

b) As per Section 11 of the Competitive Local Exchange Carrier (CLEC) pole attachment agreement(s) with Hydro Ottawa, the OEB approved attachment rate of \$22.35 came into effect as of March 7, 2005. Prior to this date, the attachment rate was tiered and categorized by type of attachments, such as full attachment, clearance, overlash, and partial attachments. The clearance, overlash, and partial attachments pay a smaller percentage of the full attachment rate of \$22.35 and represent <5% of telecom attacher revenue. These types of telecom attachments were also included in the second row and added to revenue from wireline Attachers row (fourth row) of Table 1 of Carriers 16. See revised Table 1 below identifying different pole attachment rates currently being paid. Note, recent telecom attachers pay full OEB approved attachment rate and as older telecom wireline installations are upgraded, the clearance, overlash, and partial attachment rates will be removed or replaced with the full approved attachment rate.



Revised Table 1

	2011	2012	2013	2014	2015* (forecast)	2016* (estimate)
No. of Wireline Attachers	8	8	8	7	8	8
No. of Wireline Attachments (Full)	43,469	45,695	46,173	42,700	43,825	43,906
Pole Attachment Fee (\$)	22.35	22.35	22.35	22.35	22.35	57.00
Revenues from Wireline Attachers (\$)	971,532	1,021,283	1,031,967	954,345	979,489	2,502,642
	2011	2012	2013	2014	2015* (forecast)	2016* (estimate)
No. of Wireline Attachers	4	4	4	3	3	3
No. of Wireline Attachments (Clearance)	2,009	1,972	1,952	1,862	1,833	1,811
Pole Attachment Fee (\$)	11.18	11.18	11.18	11.18	11.18	11.18
Revenues from Wireline Attachers (\$)	22,461	22,047	21,823	20,817	20,493	20,247
	2011	2012	2013	2014	2015* (forecast)	2016* (estimate)
No. of Wireline Attachers	5	5	5	4	4	4
No. of Wireline Attachments (Overlash/Partial)	7,263	7,056	6,957	5,707	5,519	5,312
Pole Attachment Fee (\$)	5.59	5.59	5.59	5.59	5.59	5.59
Revenues from Wireline Attachers (\$)	40,600	39,443	38,890	31,902	30,851	29,694

*Note, 2015 revenues are billed in January based on number of attachments at EOY 2014 + EOY 2015 True-up. Estimated revenues for 2016 attachments based on 2015 YOD attachment numbers (see response JTC1.7) and estimated attacher increase.



1

2 c) The Specific charge for access to the power poles as reflected in Exhibit C, tab 2,
3 Schedule 2, page 2 of 3 is comprised of all pole attachments to HOL poles, including
4 the City of Ottawa, the Village of Casselman, HONI, the RCMP, and all
5 Telecommunication Company attachments. Table 1 of Carriers 16 contains all of the
6 telecom companies' attachments only. The difference being the total in revenue for
7 the City of Ottawa, the Village of Casselman, HONI, the RCMP attachments.

8

9 d) See response JTC1.7 for 2015 YTD attacher values.

10

11

TAB 9



Undertaking JTC1.7

To run the current GIS data for the question that was set out in carriers 4(a).

Response:

From Undertaking JTC1.5 as of August 18, 2015:

<u>Total OEB rate attachments on Hydro Ottawa poles</u>	=	<u>43,825 + 13,516</u>
Total Hydro Ottawa poles with OEB rate attachments		33,869
	=	1.68 attachers / pole
Looking only at telecom wireline attachments with OEB rates =		<u>43,825</u>
		33,869
	=	1.29 telecom attachers / pole

TAB 10



Response to Carriers Interrogatory Question #2

Reference: Exhibit H, Tab 7, Schedule 1; Exhibit H, Tab 7, Schedule 1, Attachment H-7(a)

Question #02:

- a) Does Hydro Ottawa currently have a joint use agreement with Bell Canada whereby Hydro Ottawa and Bell Canada have reciprocal access to one another's poles? If yes, please provide a copy of the agreement.
- b) Does Bell Canada pay Hydro Ottawa the OEB-approved Pole attachment rate of \$22.35 for its Wireline Attachments? If the answer is no, what compensation or other consideration does Bell Canada provide to Hydro Ottawa?
- c) Does Hydro Ottawa provide any services to Bell Canada for work done on Poles owned by Bell Canada, for example, for maintenance related to vegetation, storm or emergency repairs? If yes, provide the amounts received by Hydro Ottawa for any such work and indicate whether the amounts received fully recover Hydro Ottawa's expenditures for the work.
- d) Does Bell Canada provide any services to Hydro Ottawa for work done on Poles owned by Hydro Ottawa, for example, for maintenance related to vegetation, storm or emergency repairs? If yes, provide the amounts received by Bell Canada for any such work.
- e) Does Hydro Ottawa have any joint use agreements with any third party other than Bell Canada (for example, HONI) that provide for reciprocal access to one another's poles? If yes, provide the information identified in (a) and (d) for all such agreements.
- f) Is Hydro Ottawa aware of any plans by any entity which would significantly increase the number of Wireline Attachments or Other Attachments on the Poles such as, for example, the recently announced plan by Bell Canada to roll out new fibre facilities on 80,000 poles in Toronto? If so, please describe the plan and how many Poles may be potentially affected.



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4 **Response:**

5

6 a. Currently, HOL has a reciprocal pole attachment agreement with Bell Canada.
7 Release of this agreement requires Bell Canada's consent.

8

9 b. Yes, Bell Canada pays Hydro Ottawa the OEB-approved Pole attachment rate of
10 \$22.35 for its Wireline Attachments.

11 c. The relevance of this question to HOL's proposed pole attachment rate is not clear.

12 d. The relevance of this question to HOL's proposed pole attachment rate is not clear.

13 e. HOL has a reciprocal pole attachment agreement with Hydro One. Please see
14 Interrogatory Response to Carriers # 1 (I).

15

16 f. Currently, HOL is not aware of any 3rd party attacher plans which would significantly
17 increase the number of wireline attachments.

18

TAB 11



Response to Carriers Interrogatory Question #12

Reference: Attachment H-7(a) which identifies “Admin” costs of \$3.96 per Pole relating to the following three functions: (1) Invoicing, (2) GIS Tracking and (3) Permit.

Question #12:

- a) Describe in detail the activities performed for the three functions identified and the type and category of employee used to perform the tasks and the associated hourly wages.
- b) Provide a detailed description of the information contained in any database that contains GIS tracking information collected by Hydro Ottawa, including a listing of the fields in the database and the manner in which the data in the fields has been collected.
- c) Indicate whether or not the Admin costs stated are in respect of only Poles with one or more Wireline Attachments.
- d) Describe in detail the methodology and data sources and inputs used to determine the hourly rate of \$95.00.
- e) Describe in detail the methodology and data sources and inputs used to determine the 16 hours attributed to the “Invoicing” function.
- f) Describe in detail the methodology and data sources and inputs used to determine the 167 hours attributed to the “GIS Tracking” function.
- g) Describe in detail the methodology and data sources used to determine the \$123,906.00 attributed to “Permit” costs.
- h) Using the table below, please provide the historical and estimated Admin Costs, broken down by function. Use actuals for 2010-2014 and estimates for 2015.



	2010	2011	2012	2013	2014	2015
- Invoicing						
- GIS						
- Permit						
Total Admin Costs						
# of poles used in calculation						
Admin Costs per pole						

Response:

a. The administrative costs represent the on-going operational costs of managing and administering third party attachment permits and occupancy on those HOL poles that have 3rd party attachers. These costs capture the following operational expenditures in HOL's current work for others labour rate, which in 2013 was \$95 labour rate. The three components that comprise these direct administrative costs are:

1. Annual routine invoicing costs related to processing of the Attacher invoices:

- 16 hours/year x \$95/hour = \$1,520/year
- tracked by internal finance scheduling calendar

2. Annual routine updating of GIS permit tracking and reporting system with third party attachments:

- 167 hours/year x \$95/hour = \$15,865/year
- 2013 tracked internally to establish baseline estimated annual commitment.

3. Annual routine permit processing (both in office and field permit review) and O. Reg. 22/04 annual attachment installation audits for third party Attachers:

- \$123,906/year
- Tracked by dedicated internal tracking work order



- 1 b. In HOL's Geographic Information System (GIS), each pole has a 3rd party
2 attachment field that lists if a specific 3rd party attacher is attached to that pole.
3 The data collection is as identified in Interrogatory Response to Carriers #1, part
4 i.
5
6 c. The direct administrative costs are in respect to only HOL poles with 3rd party
7 attachers.
8
9 d. Please see Interrogatory Response to OEB #21, part ii.
10
11 e. HOL's accounts receivable department takes the annual pole attachment
12 statistics from HOL's GIS group, develops the invoices for each 3rd party
13 attacher, has it verified and approved before sending the annual attachment
14 invoice out to each 3rd party attacher.
15
16 f. After each 3rd party attachment permit is approved, the permit is sent to HOL's
17 Geographic Information System (GIS) group for input into the GIS. Each pole
18 associated with the permit is updated with the permit data.
19
20 g. This function receives the initial 3rd party attachment permit, reviews it for
21 completeness and pole ownership in the HOL Geographic Information System
22 (GIS). Any missing or incomplete items are communicated back to the 3rd party
23 attacher for follow up action. Once the permit is complete at the initial intake
24 stage, it is sent for HOL initial field review for feasibility (height, strength,
25 available space, location, and other technical requirements) and to identify or
26 confirm any required make ready work. The permit is returned for further review
27 with the HOL asset and design groups for any existing project conflicts or any
28 known upcoming projects. Final HOL review of the technical requirements is also
29 completed before the permit is approved or denied by HOL. Any make ready
30 work requirement by HOL is forwarded to the associated HOL lines area



1 manager. No installation can proceed before the make ready work by HOL is
2 complete.

3 This HOL work group also conducts the required annual O. Reg. 22/04 post
4 construction audit. In 2004, the province introduced O. Reg. 22/04 to ensure
5 public safety with power distribution systems. This regulation extends to third
6 party attachers on power system structures. The provincial authority (Electrical
7 Safety Authority - ESA), for O. Reg. 22/04 developed a "Guideline for Third Party
8 Attachments" as well as requiring minimum field audits of installations as per
9 Section 8 of the regulation. ESA's Technical Guideline for Section 8 - Inspection
10 and Approval of Construction (Section 2.4.5.6) specifies that the distributor audit
11 the 3rd party attacher's field installations for assurance of construction
12 compliance during each annual audit period. A minimum of ten percent annual
13 sample rate of the completed third party attacher's permits is audited as per
14 HOL's Construction Verification Program (CVP) as approved by ESA. HOL
15 provides its 3rd party attachers with the results of this annual audit with any
16 required corrective actions to be completed and follows up with further O. Reg.
17 22/04 audits if required during an audit period with the attachers. This mandated
18 regulatory routine construction compliance audit is beyond the originally
19 negotiated standard support structure agreement (with its audit period of five
20 years) and has been calculated into these direct administrative costs.

21
22 h. Table 1, below, provides the historical and estimated administration costs, by
23 function, using actuals for 2010 to 2014 and estimates for 2015.

24 **Table 1: Historical and Estimated Administration Costs by Function**

Function	2010 \$	2011 \$	2012 \$	2013 \$	2014 \$	2015 \$ (estimate)
Invoicing (\$)	1,520	1,520	1,520	1,520	1,663	1,663
GIS * (\$)	17,293	14,530	10,661	15,865	14,944	14,231**
Permit (\$)	41,907	71,245	171,254	123,906	139,069	127,813***
Total Admin Costs (\$)	60,720	87,295	183,435	141,291	155,675	143,706



# of poles used in calculation****	36,075	35,929	35,870	35,633	35,519	35,389
Admin Costs per pole (\$/pole)	1.68	2.43	5.11	3.97	4.38	4.06

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Notes:

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*For 2010-2012, 2014-2015 for GIS, time to update GIS extrapolated by using 2013 permit and cost data.

3

**For 2015 Estimate for GIS, took YTD June actuals (\$7,115) and averaged out over the year. $\$7,115 / 6$ months * 12 months = \$14,231.

4

5

***For 2015 Estimate for Permit, took YTD June actuals (\$63,906) and averaged out over the year. $\$63,906 / 6$ months * 12 months = \$127,813.

6

7

****For 2010-2012, 2014-2015, # of poles used in calculation estimated by using annual number of poles count * 35,633 / 47,978 (Using 2013 Actuals - total number of poles with third party attachments divided by Total number of poles).

8

9

TAB 12



Response to Carriers Interrogatory Question #18

Reference: Attachment H-7(a)

Question #18:

- a) Confirm that "Total Cost per Pole with attachments per year" of \$56.26 is an annual cost.
- b) Explain why Hydro Ottawa is seeking an initial pole attachment rate of \$57.00 when the calculations require only a rate of \$56.26.

Response:

- a. EOY 2013 calculated rate = \$56.26.
- b. Hydro Ottawa Limited's annual rate escalation factor for OM&A = 2.1% per year for its rate application. Escalating the 2013 EOY rate of \$56.26, increases this amount to \$57.46. This amount was then rounded down to \$57.00 for 2016.

TAB 13



Response to Carriers Interrogatory Question #13

Reference: Attachment H-7(a) which identifies costs for the following four functions:

- Pole Replacement – Field Verification
- Pole Replacement – Returning Crew
- Field Verification – Wires Down
- Field Verification – Tree on Wires

Question #13:

- a) Please describe in detail the activities performed for the above four functions including the tasks performed and the types and categories of employees involved and the associated hourly wages.
- b) Describe in detail the methodology, data sources and data inputs used to determine the number of hours of labour identified for each of the four functions.
- c) Complete the table below with respect to loss in productivity costs for the years 2010-2015, using actuals for 2010-2014 and estimates for 2015.

LIP Costs	2010	2011	2012	2013	2014	2015
Pole Replacement						
Field Verification						
Returning Crew						
# of poles affected						
# of poles used in calculation						
Field Verification						
Wires Down						
Tree on Wires						
# of poles affected						
Total LIP Costs per pole						



- d) Hydro Ottawa uses a labour rate of \$95 per hour. Provide the comparable labour rates for each of the years 2012 to 2015 inclusive.
- e) Describe in detail the methodology, data sources and data inputs used to determine the "rate/amount" identified for "Small Vehicle Time" for each of the four functions.
- f) Explain the variations for "Small Vehicle Time" in the Rate/ Amount column.

Response:

a. Pole replacements

When Hydro Ottawa Limited replaces an old pole with a new pole that has 3rd party attachments on it, the old pole cannot be removed until the 3rd party attachments(s) are transferred to the new pole. As a result, Hydro Ottawa Limited has a three step process in replacing its old poles, rather than a one-step process, as a result of a delayed 3rd party transfer:

- The Hydro Ottawa Limited crew installs the new pole and transfer its power equipment from the old pole to the new pole. The old pole remains until the 3rd party attachers transfer off to the new pole.
- After the transfer notice has been issued to the 3rd party(s), Hydro Ottawa Limited field verifies that the 3rd party(s) transfers are complete before scheduling its line crew to remove the old pole.
- The Hydro Ottawa Limited crew returns to remove the old pole.
- If there are no attachers on Hydro Ottawa Limited's poles, no site returns are required since Hydro Ottawa Limited crew removes its pole(s) at the same time of its equipment transfer work.

Wires Down

Hydro Ottawa Limited routinely receives reports of wire down or low from external sources. These reports are logged into Hydro Ottawa Limited's outage



management system (OMS) and Hydro Ottawa Limited field staff is dispatched to field verify the report. If the wires are not owned by Hydro Ottawa Limited, Hydro Ottawa Limited reports back to the wire owner about the wires down.

Trees on Wires

Hydro Ottawa Limited routinely receives reports of trees in wires from external sources. These reports are logged into Hydro Ottawa Limited's outage management system (OMS) and Hydro Ottawa Limited field staff is dispatched to field verify the report. If the wires are not owned by Hydro Ottawa Limited, Hydro Ottawa Limited reports back to the wire owner about the trees in the wires.

b. Pole Replacement

In 2013, Hydro Ottawa Limited changed out 1,087 poles of which 74.3% had 3rd party attachers. The annual incremental costs for the field verification, after transfer notice, for one site visit to confirm third party transfers are complete (although several field visits are the norm over several months with delayed transfers), were:

1 hour travel per site x (\$95/labour hour + \$5.80/car hour) x 1,087 poles x 74.3% of the poles had attachments = \$81,410/year

The annual incremental costs for the Hydro Ottawa Limited returning crew travel time to remove the old poles were:

1 hour travel per site x (\$95/labour hour x 2 person crew + \$44.00/truck hour) x 1,087 poles x 74.3% of the poles had attachments = \$188,988/year

The total old pole replacement annual incremental costs due to 3rd party attachers = \$81,410 + \$188,988 = \$270,398/year

Normally, 3rd party attachers are delayed from completing timely transfers causing incremental site visit costs with multiple site visits to Hydro Ottawa Limited. These delayed transfers from the old poles have caused frustration with the public and the road authority within Ottawa.



1

2 Field Verification3 Routine field verification of non- Hydro Ottawa Limited wires low/down, of which
4 there were 115 reported in 2013:5 1 hour travel per site x (\$95/labour hour + \$33.00/truck hour) x 115 reports
6 = \$14,720/year7 Routine field verification of non- Hydro Ottawa Limited tree-on-wires, of which
8 there were 251 reported in 2013:9 1 hour travel per site x (\$95/labour hour + \$5.80/truck hour) x 251 reports, which
10 equals \$25,300/year11 To date, Hydro Ottawa has not calculated the associated lost time with its staff
12 and contractors working around existing third party attachments on its existing in-
13 service poles or managing public inquiries or complaints about the removal of old
14 poles still having 3rd party attachers.

15

16 c. Table 1 outlines the loss in productivity costs for the years 2010-2015, using
17 actuals for 2010-2014 and estimates for 2015.

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Table 1: Loss in Productivity Costs

LIP Costs	2010	2011	2012	2013	2014	2015 Estimate
Pole Replacement						
Field Verification (\$)	48,007	72,797	70,251	81,410	79,163	100,743
Returning Crew (\$)	111,446	168,994	163,083	188,988	183,772	233,870
# of poles affected	476	722	697	1087	785	999
# of poles used in calculation	641	972	938	1,087	1,057	1,345
Field Verification						
Wires Down (\$)	1,664	1,408	5,504	14,720	896	4,838
Tree on Wires (\$)	21,974	24,898	18,043	25,301	20,866	22,216
# of poles affected	36,075	35,929	35,870	35,633	35,519	35,389
Total LIP Costs per pole (\$/pole)	5.08	7.46	7.16	8.71	8.02	10.22

2

3

d. The labour rate remained constant from 2012 to 2015 at \$95 per hour.

4

5

e. Field verification to confirm third party transfers are complete required a Hydro Ottawa Limited car for the site visit.

7

8

Return visits for returning crew travel time to remove the old poles required a Hydro Ottawa Limited line truck and pole trailer.

9

10

Routine field verification of non- Hydro Ottawa Limited wires low/down required a Hydro Ottawa Limited small line truck for the site visit.

11

12

Routine field verification of non- Hydro Ottawa Limited tree-on-wires required a HOL car for the site visit.

13

14

15

f. See Interrogatory Response to Carriers #13 part e.

TAB 14

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 Hydro Ottawa Limited ("**Hydro Ottawa**") for an order approving just and reasonable rates and other charges for electricity distribution to be effective January 1, 2016 and for each following year effective January 1 through to December 31, 2020;

AND IN THE MATTER OF Procedural Order No. 1 issued by the Ontario Energy Board on June 12, 2015 granting intervenor status to Rogers Communications Partnership, Quebecor Media and TELUS Communications Company (collectively, the "**Carriers**");

AND IN THE MATTER OF Procedural Order No. 2 issued by the Ontario Energy Board on June 29, 2015 setting dates for, *inter alia*, interrogatories of the parties and the intervenors.

**Evidence of
Kevin Richard,
Rogers Communications Partnership**

August 21, 2015

D. The pole replacement process

9. As I understand it, in its evidence Hydro Ottawa has asserted that, when it replaces poles with Wireline Attachments, it is required to engage in an additional field inspection of each pole for each third party attacher and incur additional travel costs of sending a second pole removal crew to each pole to complete the replacement process. Hydro Ottawa claims that the need for these additional visits is directly attributable to the presence of the Wireline Attachments on the poles and, if not for these Wireline Attachments, it could replace the poles in a single visit by a single crew.
10. Based on my experience, save for a handful of instances, the replacement of a pole always requires the deployment of at least two different crews at separate times, regardless of whether the pole has Wireline Attachments or not.
11. The process can be described in the steps set out below. The pole replacement process often involves an entire line of poles.
 - (a) In the first step, a crew will be used to auger or drill the holes for the new replacement poles. Then the new poles will be installed and secured. This step may not occur immediately after the drilling of the holes and may not necessarily employ the same crew.
 - (b) In the next step, "linemen" will move the power cables and equipment from the old poles onto the new poles. These linemen are specialized workers who have been qualified to work within the power space. By their very qualifications and nature of the work they perform, they will normally be a completely different crew than the one used to drill the holes or place the new poles.
 - (c) In the final step, Hydro Ottawa will send in another crew to remove the old poles and remediate the land that was affected (i.e., fill in the holes).
 - (d) If the poles have Wireline Attachments, the Wireline Attachers are notified and advised as to when they must relocate their Wireline Attachments to the new poles. The transfer of the Wireline Attachments must be done after the new poles are installed and after the power cable and equipment have been moved but before the old poles are removed.
12. As can be seen from the above description, pole replacement by its nature and complexity requires different visits by different Hydro Ottawa crews, regardless of whether there are Attachments on the existing poles.
13. Furthermore, to the extent that Hydro Ottawa considers it necessary to conduct a field inspection to confirm the Attachments have been moved prior to removal of the old pole rather than simply confirming this by phone with Communications

Attachers, this can be achieved by a single visit for all third party attachers and not a visit for each Communications Attacher.

14. In addition, to the extent Hydro Ottawa is replacing a group or line of poles within a single neighbourhood or on a single thoroughfare, which is very often the case, all such poles will be inspected in a single visit to the entire group of poles. Hydro Ottawa will not repeatedly send out a crew to inspect and to remove each pole within the group or line of poles.

TAB 15



Response to Carriers Interrogatory Question #7

Reference: Exhibit H, Tab 7, Schedule 1; Exhibit H, Tab 7, Schedule 1, Attachment H-7(a)

Question # 7:

- a) Confirm that the net embedded cost per pole of \$1,678 is based on the net book value of the "Poles, Towers & Fixtures" (account # 1830) provided in *Exhibit B, Tab 2, Schedule 1, Appendix 2-BA*, page 2 of 9. If not, identify the source and derivation of the net embedded cost.
- b) Reconcile the net embedded cost per pole of \$1,678 with the net book value of the "Poles, Towers & Fixtures" (account # 1830) provided in *Exhibit B, Tab 2, Schedule 1, Appendix 2-BA*, page 2 of 9 or other source identified in (a). Provide all calculations and source references to enable replication of the calculations.
- c) Provide the calculation used to determine net embedded cost per pole of \$1,678, and separately identify each of the following for fiscal year ends 2012 and 2013:
 - i. gross assets
 - ii. accumulated depreciation
 - iii. net assets
 - iv. depreciation expense
- d) Provide the amounts from each of the following accounts used to determine the net embedded cost per pole of \$1,678.00.

1830	Poles, Towers and Fixtures
1830-3	Poles, Towers and Fixtures - Subtransmission Bulk Delivery
1830-4	Poles, Towers and Fixtures – Primary
1830-5	Poles, Towers and Fixtures – Secondary
1835	Overhead Conductors and Devices
1835-3	Overhead Conductors and Devices - Subtransmission Bulk Delivery
1835-4	Overhead Conductors and Devices – Primary
1835-5	Overhead Conductors and Devices – Secondary
1840	Underground Conduit
1840-3	Underground Conduit - Bulk Delivery
1840-4	Underground Conduit – Primary
1840-5	Underground Conduit – Secondary
1845	Underground Conductors and Devices
1845-3	Underground Conductors and Devices - Bulk Delivery



1845-4	Underground Conductors and Devices – Primary
1845-5	Underground Conductors and Devices – Secondary
1850	Line Transformers
1855	Services
1860	Meters

Response:

- a. The net embedded cost per pole of \$1,678 was not based on the average net book value of the "Poles, Towers & Fixtures" (account # 1830) provided in Exhibit B-2-1, Appendix 2-BA, page 2 of 9, as it was based on Hydro Ottawa's 2013 financial records for external reporting purposes.
- b. Reconciliation of the average net embedded cost per pole of \$1,678 with the net book value of the "Poles, Towers and Fixtures" (account # 1830) provided in Exhibit B-2-1, Appendix 2-BA is shown in Table 1, below.



1

Table 1: Pole Rental Cost

		Original \$	Revised \$	Comment \$
A	Direct Cost	12.68	12.68	No change
B	Net Book Value (\$M)	80.5	75.3	Appendix 2- BA
C	In-service Poles	47,978	47,978	No change
D	Net Embedded Cost, per Pole	1,678	1,569	B / C
E	Capital Carrying Cost 6.7%	112.42	105.11	D x 6.7%
F	Depreciation	43.29	41.26	Appendix 2- BA
G	Pole Maintenance	12.61	12.61	No change
H	Indirect Costs	168.31	158.98	E + F + G
I	Indirect Costs Allocated	43.59	41.18	H x 25.9%
J	Pole Rental Cost	56.27	53.86	A + I
K	2016 Proposed Rate	57.00	57.00	Includes 2.1% Inflation factor

2

- 3 c. See response to b) for the average net embedded cost, per pole of \$1,678
 4 calculation. Gross assets, accumulated depreciation and depreciation expense for
 5 fiscal years 2012 and 2013 are shown in Table 2, below. Figures were based on
 6 Exhibit B-2-1, Appendix 2-BA, updated.

7

8

Table 2: Book Value for Poles, Towers and Fixtures

	2012 \$	2013 \$
Gross Assets	71,187,843	80,588,905
Accumulated Depreciation	(3,352,403)	(5,320,624)
Net book value	67,835,441	75,268,282
Depreciation Expense	1,783,190	1,979,636



- 1
- 2 d. To determine its average net embedded cost, per pole, HOL only used USofA
- 3 account 1830.
- 4

TAB 16



ONTARIO ENERGY BOARD

FILE NO.: EB-2015-0004

Hydro Ottawa Limited

VOLUME: Technical Conference

DATE: August 13, 2015

1 account 1830 and these GAAP -- and the GAAP number?

2 MS. COLLIER: It is the same account, it is just
3 historically it was under C GAAP, and now it's under IFRS.

4 MS. MILTON: I see, so there are two sets of accounts.
5 One is --

6 MS. COLLIER: Currently, yes.

7 MS. MILTON: Okay, MIFRS. Can you tell me why you've
8 decided, for the pole attachment rate and for that rate
9 alone, to use your external records rather than MIFRS?

10 MS. COLLIER: In response to Carrier 7, table 1, you
11 can see the side-by-side comparison. The original column
12 is the C GAAP numbers, and the revised column is the IFRS
13 numbers.

14 At the time this was prepared, the 2013 financial
15 results as audited was what was used. But we would likely
16 go with the revised IFRS numbers in concluding these
17 calculations.

18 MS. MILTON: So you are now proposing to base the rate
19 on the IFRS numbers?

20 MS. COLLIER: As you can see in table 1 to Carrier 7,
21 there are differences in net book value and differences in
22 depreciation. But the rate is almost identical in
23 totality.

24 MS. MILTON: I wonder if we could go to Exhibit B, tab
25 1, schedule 2, page 89? On the top of this page in table
26 2.2.5, the first row of the table talks about poles, and it
27 gives a number of 59,450 poles.

28 Can you tell me what year this pole count is for?

TAB 17

1 Carriers' questions.

2 MS. COLLIER: Carriers 10.

3 MR. HARPER: That's right. And Carriers No. 10, I was
4 just looking at the 6.7 percent average weighted cost of
5 capital that was used in the determination of the costs for
6 the pole attachment rate, and I was just asking to clarify
7 that the 6.7 percent did not include any provision for
8 income tax; is that correct?

9 MR. GRUE: So that 6.7 percent was taken from the
10 approved 2012 cost of capital, schedule E(ii), page 1,
11 which was the weighted cost of capital of 6.7 percent. It
12 does not have tax attached to the approved rate of ROE of
13 9.42 percent.

14 MR. HARPER: Would you be able to tell us what the
15 6.7 percent changed to if you were to gross-up the ROE to
16 include a provision for income tax?

17 MR. GRUE: I did that calculation on the break, and it
18 would be 8.04.

19 MR. HARPER: 8.04 percent. Thank you very much.

20 MR. GRUE: Based on -- just to qualify that, based on
21 the tax rate that was in effect in 2012, when that rate was
22 used.

23 MR. HARPER: It was 2012 that underpinned the
24 calculation of all this carrying cost.

25 MR. GRUE: That's correct.

26 MR. HARPER: And thank you very much -- and thank you
27 for reminding me, Mr. Aiken.

28 MS. HELT: Mr. Aiken?

TAB 18



1

Table 1 – Revised Service Charges

Service Charges – Revised	2012-2015	2016	2017	2018	2019	2020
Special Billing Service (formerly Other Billing Information Request), per hour	\$15.00	\$95.00	\$97.00	\$100.00	\$102.00	\$104.00
Temporary service install & remove – overhead – no transformer	\$500.00	\$797.00	\$813.00	\$830.00	\$848.00	\$866.00
Temporary service install & remove – underground – no transformer	\$500.00	\$1,156.00	\$1,180.00	\$1,205.00	\$1,230.00	\$1,256.00
Temporary service install & remove – overhead – with transformer	\$500.00	\$2,840.00	\$2,900.00	\$2,961.00	\$3,023.00	\$3,087.00
Specific Charge for Access to the Power Poles	\$22.35/pole	\$57.00	\$57.00	\$58.00	\$58.00	\$58.00
Dry Core Transformer Charge – Demand	Attachment H-7(A)	Attachment H-7(A)	Attachment H-7(A)	Attachment H-7(A)	Attachment H-7(A)	Attachment H-7(A)
Standard Charge, per Retailer	\$100.00	\$117.00	\$122.00	\$129.00	\$135.00	\$140.00
Monthly Fixed Charge, per Retailer	\$20.00	\$24.00	\$25.00	\$26.00	\$27.00	\$28.00
Monthly Variable Charge, per Customer, per Retailer	\$0.50	\$0.60	\$0.60	\$0.65	\$0.65	\$0.70
Monthly Billing Charge ("DCB"), per Customer, per Retailer	\$0.30	\$0.35	\$0.35	\$0.40	\$0.40	\$0.40
Service Transaction Requests ("STR") Fee, per request	\$0.25	\$0.30	\$0.30	\$0.30	\$0.35	\$0.35
Service Transaction Requests ("STR") Fee, per process	\$0.50	\$0.60	\$0.60	\$0.65	\$0.65	\$0.70
Micro-FIT and Micro-Net-Metering Energy Resource Facility Monthly Account Management Charge (formerly MicroFIT monthly account management charge)	\$5.40	\$18.00	\$18.00	\$19.00	\$19.00	\$19.00

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Table 2 – New Service Charges

Service Charges – New	2012-2015	2016	2017	2018	2019	2020
Disconnect/Reconnect at meter – regular hours (under account administration – new account)		\$65.00	\$65.00	\$65.00	\$65.00	\$65.00
Disconnect/Reconnect at meter – after regular hours (under account administration section – new account)		\$185.00	\$185.00	\$185.00	\$185.00	\$185.00
Interval Meter – Field Reading		\$347.00	\$355.00	\$362.00	\$370.00	\$378.00
High Bill Investigation – If billing is correct		\$213.00	\$218.00	\$222.00	\$227.00	\$232.00
Service Call – Customer missed appointment (Regular Hours)		\$65.00	\$65.00	\$65.00	\$65.00	\$65.00
Service Call – Customer missed appointment (After Regular Hours)		\$185.00	\$185.00	\$185.00	\$185.00	\$185.00
Energy Resource Facility Administration Charge – Without Account Set Up (one-time)		\$127.00	\$130.00	\$133.00	\$135.00	\$138.00
Energy Resource Facility Administration Charge – With Account Set Up (one-time)		\$157.00	\$160.00	\$163.00	\$165.00	\$168.00
FIT Energy Resource Facility Monthly Account Management Charge		\$119.00	\$121.00	\$124.00	\$126.00	\$129.00
HCI, RESOP, Other Energy Resource Facility Monthly Account Management Charge		\$259.00	\$264.00	\$270.00	\$276.00	\$281.00

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4 **3.0 REVISED SERVICE CHARGES**

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6 Hydro Ottawa is proposing to revise a number of Specific, Retailer and Generator
7 charges.

8

9 **3.1 Special Billing Service (formerly Request for other Billing Information)**

10 This proposed charge applies to all requests for billing information that involves sourcing,
11 compiling and presenting several months or years of billing information for customers or
12 their agents. Services of this nature were historically charged the \$15.00 “Request for
13 other Billing Information” charge. Typically, these services vary in terms of resource
14 effort and time; therefore, the proposed charge is based upon Hydro Ottawa's work for
15 others hourly labour rate. A one-hour minimum is proposed for all related services.

TAB 19



Response to Vulnerable Energy Consumers Coalition Interrogatory Question #50

Reference: E-H/T7/S1, pg. 2 and Tables 1 & 2

Question #50:

a. Please describe the formulaic inflation adjustment that will be used for the years 2017-2020.

b. With the exception of the Disconnect/Reconnect and Service Call charges, all of the revised and new service charges set out in Tables 1 and 2 escalate over the 2016-2020 period. In all cases, is this escalation the result of the application of the formulaic inflation adjustment described in part (a)? If not, please explain the basis for the annual changes.

Response:

a. The inflation adjustment that was applied to the years 2017 through 2020 was the same rate applied to OM&A, or 2.1 percent.

b. With the exception of depreciation and capital carrying cost, the cost drivers were inflated according to the Conference Board of Canada inflation rates from the year the respective rate was set, in order to determine the 2016 rate.

TAB 20



MANAGEMENT DISCUSSION & EXECUTIVE SUMMARY

1.0 INTRODUCTION

This schedule provides a summary of Hydro Ottawa Limited ("Hydro Ottawa or HOL or the Company", "the utility")'s Custom Incentive Regulation ("Custom IR") rate application for the five year period beginning 2016 and ending in 2020. This schedule describes Hydro Ottawa's business plan and identifies the funding the company requires in order to continue to serve its current and future customers in a manner that allows it to fulfil its mission to deliver safe, reliable, affordable and sustainable electricity to the homes and businesses in the City of Ottawa and the Village of Casselman and to meet the demands of a growing, expansive and complex urban/rural environment while pursuing productivity improvements to benefit the company's ratepayers and an appropriate rate of return for its shareholders. This Executive Summary is guided by the requirements set out in Sections 2.4.1 and 2.4.2 of Chapter 2 of the Ontario Energy Board ("the OEB" or "the Board")'s Filing Requirements for Electricity Distributors Companies' Cost of Service Rate Applications, based on the forward Test Years (the 'Chapter 2 Requirements').

This application represents Hydro Ottawa's assessment of its capital and operational needs and of its commitment to its customers over the next five years. The investments set out in this application are required in order to address the pressures of aging infrastructure, a continuously growing customer base, challenging weather, increasing urban and rural development and modernization, an aging workforce, and a growing customer appetite for innovative leading-edge and technology-based services. Hydro Ottawa's challenge is to finance its operations so that it may continue to provide its customers with a safe and reliable source of electricity, as well as, acceptable customer service levels at reasonable rates.

By way of this application, Hydro Ottawa seeks approval for its five year Custom IR rate application which is based on a rate-setting model wherein Hydro Ottawa's capital

requirements are recovered on a five year forecasted cost of service basis and its operations, maintenance and administrative (“OM&A”) requirements are recovered pursuant to an “I-X” formula. Hydro Ottawa seeks approval for final rates for a three year period beginning 2016 and ending 2018 and for its five year forecasted capital requirements. Hydro Ottawa proposes to apply to the Board to adjust its 2019 and 2020 rates to incorporate a revised inflation factor and updated cost of capital parameters. Finally, Hydro Ottawa reserves the right to file Y and Z factor applications during the course of its Custom IR period and proposes to share earnings with its customers based on increasing proportionality scale for earnings that rise above certain thresholds.

Recognizing its significant multi-year capital needs Hydro Ottawa has exercised the option provided to it pursuant to the Report of the Board entitled “Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach” (the “RRFE”) to account for its unique capital funding requirements that cannot be accommodated for under the OEB’s 4th Generation Incentive Regulation model. In filing a Custom IR application, Hydro Ottawa has applied the key tenants of the RRFE including, but not limited to;

- a) By applying for an initial rebasing (financial viability) then applying for a rate setting approach to recover forecasted capital needs but recovers OM&A needs pursuant to an I-X formula (operational effectiveness);
- b) By identifying historical and future productivity initiatives to achieve continuous improvement (operational effectiveness);
- c) By providing a total cost and reliability econometric benchmarking, as authored by Power System Engineering and based on the OEB’s benchmarking approach;
- d) By providing a customer engagement strategy to ensure responsiveness to identified customer preferences (customer focus);
- e) By providing a comprehensive asset management and infrastructure investment plan that is linked to the capital budget, prioritizes for total bill