

Ontario Energy Board



EB-2015-0304

Draft Report of the Board

**Framework for Determining Wireline Pole
Attachment Charges**

December 18, 2017

EXECUTIVE SUMMARY

In the fall of 2015, the Ontario Energy Board (OEB) embarked on a policy consultation with stakeholders to collect, analyze, and discuss cost data and to examine policy matters related to setting updated pole attachment charges.

This report is the culmination of the efforts of the OEB, the OEB's expert consultant, Nordicity, and the members of the Pole Attachment Working Group (PAWG) over the last two years.

As a result of this review, the OEB has determined that it will adopt a new province-wide wireline pole attachment charge of \$52 per attacher per year per pole. This charge was calculated based on updated data (2010 to 2015), including pole costs, and using an updated methodology that differs in some material respects from the methodology previously used by the OEB in 2005 to establish the current pole attachment charge. The new charge includes inflation from 2015 to 2018 based on the OEB's IPI. To ensure the pole charge remains appropriate and does not shift costs to ratepayers, the pole attachment charge will be adjusted annually based on the OEB's base inflation factor.

The current province-wide pole attachment charge of \$22.35 has not changed since 2005 and was based largely on data from 1991 to 1999. In three recent applications for an LDC specific custom charge, the OEB approved charges of \$42 for Toronto Hydro, \$53 for Hydro Ottawa, and \$41.28 for Hydro One. Collectively, these three LDCs represent roughly 90% of the electric utility poles in Ontario.

The new OEB charge will take effect the 1st of the month following the issuance of this policy on a final basis (expected in early 2018). The provincial wireline pole attachment charge will be implemented for all LDCs who do not have an OEB-approved specific charge in conjunction with a variance account to track the difference in revenues received under the new charge, as compared with the previous pole attachment charge. LDCs may choose to select the provincially approved charge at the time of rebasing or to use utility specific costs and pursue an LDC-specific pole attachment charge using the OEB's updated methodology in the event the provincial rate is insufficient to cover their costs.

As further described in the report, the OEB is planning to conduct a follow-up policy consultation – Part II of the Pole Attachment Review. Part II of the Pole Attachment Review will strive to better understand the value to third-party attachers of having access to Ontario's vast network of more than 200,000 km of low voltage distribution lines (for example, in terms of servicing their existing customers and providing new customer offerings such as broadband in rural areas). In addition, Part II will consider, in

light of the improved data that will be collected from LDCs, moving from a cost-based approach to a value-based approach which is more reflective of a competitive market and the OEB's approach to wireless attachments.

The Part II Review will be undertaken once sufficient data is available to inform the review of significant issues identified in this policy consultation that may require the province-wide rate to be updated, such as the allocation of vegetation management costs; whether charges should be collected for each attachment; whether to adopt a value-based approach to establishing charges; and any other issues that may arise in due course.

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1. INTRODUCTION

On November 5, 2015, the Ontario Energy Board (OEB) issued a letter¹ announcing that it was initiating a comprehensive policy review of miscellaneous rates and charges applied by local distribution companies (LDCs) for specific activities or services they provide to their customers.

These charges generate service revenues that result in lower base distribution rates. Without these revenues, the cost of providing these services would be allocated to distribution customer classes and embedded in distribution rates. The OEB noted that it would commence the review of miscellaneous rates and charges in phases, beginning with the review of wireline pole attachment charges. Subsequent to the commencement of this first phase of the consultation, the OEB commenced a second phase that is reviewing energy retailer service charges for electricity and natural gas distributors. In parallel, the OEB is also reviewing its customer service rules for electricity distributors, rate-regulated natural gas distributors and unit sub-meter providers to consider how existing customer service rules have been implemented, ensure that they continue to be relevant and serve the needs of consumers, and that they maintain an appropriate balance between customer protection and the ongoing operational needs of utilities. The focus of this Report is on the wireline pole attachment charge that carriers are required to pay for access to LDC poles.

In its November 5th letter, the OEB invited stakeholders from the sector to express their interest in participating in a Pole Attachment Working Group (PAWG) as part of the consultation process. In response to this invitation, the OEB selected participants for the PAWG representing three different groups: LDCs, carriers and ratepayers. A complete list of the PAWG members can be found in Appendix A.

OEB staff retained an expert consultant, NGL Nordicity Group Limited (Nordicity), to assist with the policy consultation and to produce an expert report.

A. Historical Context

Historically, members of the Canadian Cable Television Association (CCTA) rented space on electricity utilities' poles at negotiated rates under a private contract. After the

¹Letter found at: https://www.oeb.ca/oeb/Documents/EB-2015-0304/Brdltr_Misc_Rates_Charges_Review_20151105.pdf.

expiry of the contract in 1996, the carriers and LDCs failed to renew or reach further agreement with respect to pole attachment rates. The CCTA applied in 1997 to the Canadian Radio-television and Telecommunications Commission (CRTC) to set a pole attachment rate. After a lengthy hearing, the CRTC established a rate of \$15.89.² That decision was appealed by LDCs, who argued that the CRTC did not have statutory authority to regulate access by carriers to power poles. Ultimately, the Supreme Court of Canada agreed.³ The CCTA then filed an application with the OEB to set a pole attachment rate. In a decision issued on March 7, 2005 (the 2005 Decision),⁴ the OEB amended all LDC licences to require LDCs to, as a condition of their licence, provide access to their power poles to carriers. The OEB also approved a provincial pole attachment charge of \$22.35 per year per pole per attacher, while allowing LDCs to apply for a variance of the provincial charge if appropriate: “Any LDC that believes that the province-wide rate is not appropriate can bring an application to have the rates modified based on its own costing.”⁵

Although the 2005 Decision allowed for LDCs to make an application to the OEB to update the rate, the province-wide 2005 rate has remained in effect across Ontario and was applied by all rate-regulated distributors until the following three recent pole attachment decisions (collectively referred to as the “Three Applications”):

- a) In EB-2014-0116, the OEB approved a settlement agreement whereby Toronto Hydro’s annual pole attachment charge was increased to \$42 per attacher.
- b) In EB-2015-0004, the OEB approved an increase to Hydro Ottawa’s pole attachment charge to \$53 per attacher. The OEB’s decision was appealed by carriers but upheld by the Divisional Court.⁶

² Telecom Decision CRTC 99-13, September 28, 1999.

³ *Barrie Public Utilities v. Canadian Cable Television Association*, 2003 SCC 28.

⁴ RP-2003-0249, Decision and Order, March 7, 2005.

⁵ RP-2003-0249, Decision and Order, March 7, 2005, p. 8.

⁶ *Rogers Communications Partnership v. Ontario Energy Board*, 2016 ONSC 7810 (leave to appeal to Ontario Court of Appeal denied March 17, 2017).

- c) In EB-2015-0141, the OEB approved an increase to Hydro One's pole attachment charge to \$41.28 per attacher. The OEB's decision was appealed by carriers but upheld by the Divisional Court.⁷

The rate of \$22.35 per attacher remains in effect for all other LDCs in the province.⁸

In a proceeding brought in 2011 by the Canadian Distributed Antenna Systems Coalition, the OEB confirmed that the 2005 Decision (and therefore the \$22.35 rate) applied to both wireline and wireless telecommunications attachments by carriers.⁹ However, in a 2014 decision, the OEB approved a request by Toronto Hydro to limit the \$22.35 rate to wireline attachments, and to leave the rate for wireless attachments to the market.¹⁰ Following the Toronto Hydro decision, the OEB held a consultation to consider whether to adopt that approach on a province-wide basis. The OEB concluded that it was in the public interest to do so, and thus amended the licences of all rate-regulated LDCs to allow them to charge market rates for wireless pole attachments.¹¹ The result is that today, only wireline attachments are subject to a regulated charge rather than a competitive market rate.

B. The Need for this Review

The current province-wide pole attachment charge of \$22.35 has not changed since 2005. It was based largely on data from 1991 to 1999. Thus the charge reflects costing inputs and other assumptions that are nearly 20 years old. In the three recent applications for a custom charge based on LDC-specific data (Toronto Hydro, Hydro Ottawa and Hydro One), it became clear that the \$22.35 charge is no longer reflective of the costs associated with installing and maintaining joint use poles: it is too low. Revenues from pole attachment charges offset some costs of maintaining and operating the distribution network. If the costs and benefits of utilizing LDC assets are not appropriately allocated to carriers, ratepayers are at risk of subsidizing these costs.

⁷ *Rogers Communications Canada Inc. v. The Ontario Energy Board*, 2017 ONSC 3959 (leave to appeal to Ontario Court of Appeal denied October 27, 2017).

⁸ On November 28, 2016 InnPower Corporation filed a 2017 Cost of Service Application (EB-2016-0085) with the OEB that included a request to update the Pole Attachment rate to \$47.48. The application is currently in progress.

⁹ EB-2011-0120, Decision on Preliminary Issue and Order, September 13, 2012.

¹⁰ EB-2013-0234, Decision and Order, June 5, 2014.

¹¹ EB-2016-0015, Decision and Order, January 28, 2016.

In addition to refreshing the data, this review is an opportunity to revisit the methodology adopted in 2005 to ensure that it continues to be appropriate.

C. Scope of the Review

The key objectives of the pole attachment review are to:

- a) Assess the appropriateness of the 2005 cost methodology for setting wireline rates for pole attachments in the province of Ontario
- b) Determine the appropriate treatment and allocation of other costs
- c) Determine how to treat and allocate any revenues that wireline telecommunication providers may receive from third parties with respect to wireline pole attachments

The review is limited to wireline attachments by carriers and does not apply to wireless attachments or non-carrier attachments.

Wireless attachments will continue to be regulated and subject to market based pricing in accordance with the OEB's decision in EB-2016-0015.

An LDC may apply for a charge for non-carrier attachments to be included in its tariff of rates and charges; even if it does not, the OEB may take into account any revenue earned from non-carrier attachers when setting electricity distribution rates.

Whether or not this is a separate charge, in the context of this review all attachers, including non-carrier attachments (for example street lighting) have been taken into account for the purpose of calculating a province-wide charge for wireline attachments. This has the effect of lowering the share of the costs allocated to carriers (and therefore lowering the province-wide charge for wireline telecommunications attachments). Non-carrier attachments represent a much smaller proportion of overall attachments than wireline telecommunications attachments. LDCs are required as a licence condition to provide access to carrier attachments.

D. The Consultation Process

The PAWG was formed to provide advice to the OEB on establishing a new policy for wireline attachments. Specifically, the PAWG was established to provide guidance on matters such as costing data and the methodology used for determining charges, including the appropriate treatment of any revenues that carriers may receive from third parties.

Nordicity was retained to facilitate the PAWG meetings, along with OEB staff, and to provide expert input and analysis of the key issues for discussion and feedback from working group members. In addition, Nordicity was tasked with producing an expert report that would summarize the current pole attachment landscape within the province of Ontario by analyzing relevant regulatory decisions, pole attachment data, and findings from working group meetings. The report was to recommend an appropriate framework methodology for setting wireline pole attachment charges. Nordicity's report, entitled the "OEB Wireline Pole Attachment Rates and Policy Framework", is being released in conjunction with this draft Report.

The PAWG met four times between May 20, 2016 and January 31, 2017. Meetings consisted of Nordicity and OEB staff presentations; group comments/discussions; and breakout sessions related to technical, data, financial and policy matters impacting pole attachment charges. Minutes of each meeting were recorded and circulated amongst members for review. The minutes, along with the presentations, are posted on the OEB's website in the consultation page.¹²

In response to the discussions and comments from the members of the PAWG at the first two meetings, participating LDCs were requested to provide accounting data and information related to pole attachment costs. Five LDCs provided data: Hydro One, Toronto Hydro, Hydro Ottawa, London Hydro, and Horizon Utilities (now part of Alectra). In addition, this data was supplemented with data collected under the OEB's *Electricity Reporting and Record Keeping Requirements* (RRR) and the data submitted as part of the Three Applications. This set of data and information represents more than 90% of the pole population in the province and was considered by Nordicity to be one of the most comprehensive pole attachment data sets ever collected.¹³

During the consultation meetings, a number of key issues related to the pole attachment charge were identified. For each issue, a description and question was prepared and PAWG members were requested to provide collaborative responses on each issue. After the last PAWG meeting, participants were asked to provide brief written comments summarizing their positions on certain key methodological issues. A copy of those comments can be found in the policy consultation page on the OEB's website.

All responses and comments were thoroughly considered by the OEB in shaping this draft policy.

¹² <https://www.oeb.ca/industry/policy-initiatives-and-consultations/review-miscellaneous-rates-and-charges>

¹³ Nordicity report, OEB Wireline Pole Attachment Rates and Policy Framework, p. 3.

E. Organization of this Report

This report is organized as follows:

- **Chapter 2** provides a high-level summary of the Nordicity expert report.
- **Chapter 3** reviews the key issues that directly impact pole attachment charges that were identified and discussed during the PAWG meetings and provides the OEB's approach to each issue.
- **Chapter 4** sets out the next steps for implementing the conclusions reached by the OEB in this draft Report.
- **The Appendices** provide a list of the PAWG members and the calculation of the new pole attachment rate.

2. SUMMARY OF THE NORDICITY EXPERT REPORT

The following is a high-level summary of the Nordicity Expert Report. Interested parties should refer to the Nordicity Report for a full in-depth discussion of all the issues, findings, conclusions and recommendations.

A. Pole Structure and Space Allocation

The Nordicity report addresses the technical and policy issues associated with determining the charges for pole attachments by carriers to the wireline poles owned and operated by LDCs in Ontario. A pole attachment means any attachment by a carrier to an LDC distribution pole. The Figures below depicts two utility distribution poles, one with and one without carrier attachments¹⁴.



**Figure 1 a): A Joint-Use Utility Pole
(Without Carrier Attachments)**



**Figure 1 b): A Joint-Use Utility Pole
(With Carrier Attachments)**

¹⁴ Note: Provided for visualization purposes only.

A utility pole that is used by two or more attachers is referred to as a joint-use pole. That is, a typical joint-use pole supports three types of attachers: electric power, cable television, and telephone. Some joint-use poles also support other attachers, such as municipal street lights and traffic signals.

The pole space allocated to carriers is referred to as “communication space”. In order for the utility (the power attacher) and carriers (the communications attachers) to share the space on the pole safely, a joint-use pole is required to meet the Electrical Distribution Safety requirement of Ontario Regulation 22/04. This includes provision for separation space between the communication attachers and power attacher.

The existence of joint-use poles infrastructure has been led by broad socio-economic policy objectives, such as the avoidance of duplicative poles infrastructure to preserve the physical appearance and aesthetic value of communities, and the reduction of the cost of serving consumers of both types of attachers. This results in LDCs being obligated through their distribution licenses to deploy and maintain joint-use pole infrastructure according to the required standards. The public interest requires that pole attachment charges reflect a reasonable allocation of the costs and benefits associated with joint use.

The OEB 2005 Decision was based on pole specifications proposed by the CCTA, as depicted in Figure 2 below:

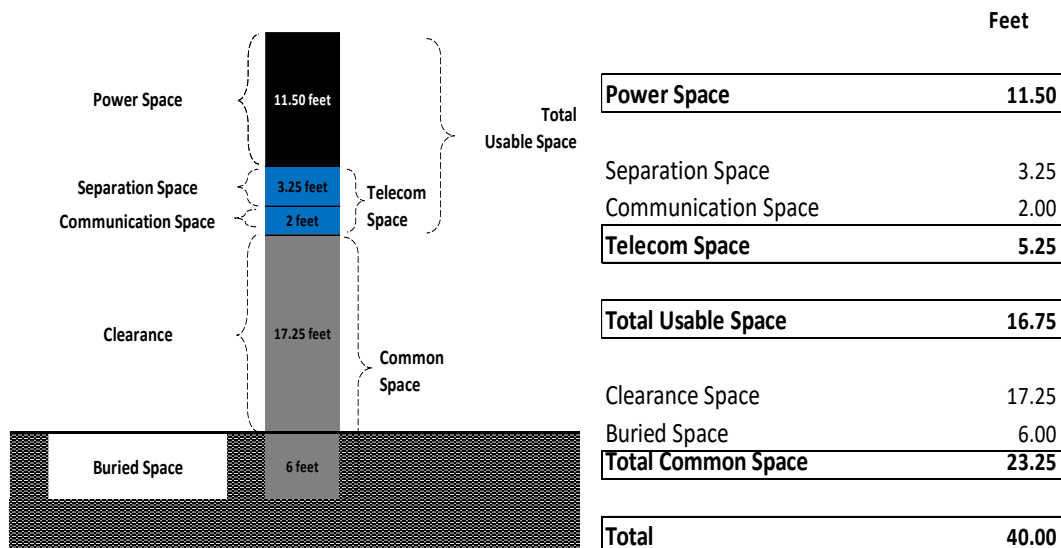


Figure 2: Pole Specification used in 2005 Decision

Nordicity found that other Canadian jurisdictions have also used an overall 40 foot pole height in their determinations, with some minor variation in the amount of space

attributed to the different areas. During the consultation process, it was confirmed that a 40-foot pole, as shown in Figure 2 above, is fairly representative of a standard pole in Ontario for rate making purposes.

B. Costing Approach

The first issue to be determined is the appropriate costing approach to be used in setting the charge.

The costs associated with installing and maintaining a utility distribution pole are made up of direct and indirect costs. Direct costs are costs directly attributed (causal) to the attacher. Conversely, indirect costs are costs that are shared between attachers in accordance with a specific allocation methodology. Indirect costs account for more than 90% of the total annual cost related to pole infrastructure. For this reason, estimating indirect costs and then allocating them to a telecommunication attacher has a major impact on the establishment of a pole attachment rate.

There are three main costing approaches that can be used for determining the cost base for a pole attachment rate calculation:

- 1) Historical Cost
- 2) Forward looking/Replacement Cost
- 3) Standard Cost (Benchmarking)

Each approach has its merits for determining a particular cost input.

Nordicity's report uses all three approaches for different cost inputs, however, the bulk of Nordicity's analysis relies on the historical data collected from the five participating PAWG LDCs. Although this is consistent with the 2005 decision, Nordicity points out that the use of historical costs underestimates rates because it does not capture inflationary factors and major pole replacement programs for aging pole infrastructure. Nordicity's report provides a more detailed explanation of each costing approach.

C. Rate Methodology

The next issue to be determined in setting the pole attachment charge is whether the rate should be based on the number of attachers rather than the number of attachments, and whether presumptive or actual data should be used. The current charge of \$22.35 is based on a presumptive number of attachers.

Nordicity concluded, based on the PAWG LDC data collected, that LDCs do not have the “capability to track and provide the number of attachment count on their poles.”¹⁵ Absent an accurate count of the number of attachments, Nordicity determined that the number of attachers, which is commonly used in the determination of pole attachment charges, should be utilized.

There are two approaches that have been used to determine the number of attachers. The first approach is based on an assumed number in the absence of information required to determine the actual number of attachers (the presumptive approach). The second approach is based on the actual number of attachers. In its 2005 Decision, the OEB used the presumptive approach and assumed the average number of telecommunication attachers to be 2.5 rather than the 2 which was assumed in the previous CRTC decision. In the Hydro Ottawa and Hydro One cases, the OEB relied on the actual number of attachers as submitted by the LDCs in their rate applications.

In its report, Nordicity concludes that it is more appropriate to use an average of the actual number of attachers if the calculation utilizes reliable and verifiable data that is representative of the pole population in the province.

Following the first PAWG meeting on May 20, 2016, participating PAWG LDCs were requested to provide attacher data. Based on the data submitted by London Hydro, Hydro Ottawa, Horizon and Hydro One, the overall average number of attachers per joint-use pole is determined to be 1.3 for the telecommunication space. These LDCs represent a significant (> 90%) proportion of the pole population in the province.¹⁶

D. Average Annual Cost per Pole

Another issue to be determined in setting the pole attachment charge is the average annual cost per pole.

Average Annual Direct Cost per Pole

Administration Costs: In the 2005 Decision, two costs incurred by the LDCs were identified as being directly attributable to telecommunication space attachers. These are Administration (ADM) costs and Loss of Productivity (LOP) costs. ADM costs are

¹⁵ Nordicity report, OEB Wireline Pole Attachment Rates and Policy Framework, p. 44.

¹⁶ Nordicity report, OEB Wireline Pole Attachment Rates and Policy Framework, p. 34.

defined as net incremental costs incurred by LDCs for the placement of the telecommunication companies' facilities on LDC poles.¹⁷ In the first data request, LDCs were asked to provide annual ADM costs attributable to telecommunication attachers for the years 2005-2015. Only Toronto Hydro responded to this request and it provided costs for only four years (2012-2015). Nordicity observed that Toronto Hydro's ADM costs per pole increased by 47% over the four years, from \$6.19 in 2012 to \$9.10 in 2015. In Nordicity's view, this significant increase in the ADM costs of Toronto Hydro implies either a major year-to-year change in their cost structure or an inconsistent accounting practice. On this basis, Nordicity stated that it is not reasonable to rely solely on Toronto Hydro's ADM costs for the updated rate model.

In the absence of detailed cost data, Nordicity proposes that ADM costs should be estimated using the median of the available minimum and maximum amounts, adjusted for inflation to 2015 prices. For this purpose, they considered the minimum as \$0.69, from the 2005 Decision, and the maximum to be \$6.19, which is the 2012 Toronto Hydro value, as stated above. Nordicity used a historical summary of Statistics Canada's Consumer Price Index for 1996-2015 to escalate the costs to 2015 dollars. On this basis, the ADM costs are estimated to be \$3.63 per pole, which is comparable to the ADM costs found in previous Canadian regulatory decisions as illustrated in Table 29 of Nordicity's report.

LOP Costs: LOP costs refer to the incremental costs resulting from the power utility crews having to work around the third party attachers' facilities.¹⁸ The OEB and the CRTC included LOP costs as a direct cost in their respective decisions. However, the New Brunswick Energy and Utilities Board (NBEUB) included LOP costs as common (indirect) costs in its 2015 decision.¹⁹

At the fourth PAWG meeting, LDC representatives indicated that they do not separately track and maintain records of LOP costs. This means that LOP costs are subject to variation from LDC to LDC depending on the accounting and business processes, and lacks verifiability. Nordicity believes that LOP costs (e.g. extra hours worked by LDC technicians) are implicitly captured in the tracked maintenance (account #5120), and

¹⁷ CRTC 99-13.

¹⁸ CRTC 1999, para. 188.

¹⁹ 2015 NBEUB (matter # 272).

repair and right of way (account #5135)²⁰ costs in accordance with the OEB's 2012 Accounting Procedures Handbook.

Nordicity believes inclusion of maintenance and repair costs for poles in the pole attachment calculation would also capture the costs associated with the LOP.

Therefore, Nordicity believes that if LOP is included in the rate as a separate line item, there are reasonable chances of duplication. Nordicity has not included a LOP value in its final rate projection. To avoid double counting, Nordicity concludes LDCs should be required to create sub-accounts and separately track the costs associated with LOP.²¹

Average Annual Common (Indirect) Cost per Pole

As illustrated in Figure 2, a pole is comprised of three main sections – common space, communication space and power space. Power and communication space are referred to as the useable space on the pole. The two primary costs associated with these sections include the capital cost²² and expenses for the ongoing maintenance and repair of the poles.

LDCs track these costs in the following three Uniform System of Accounts (USoA), in accordance with the OEB's 2012 Accounting Procedures Handbook as well:

- 1) Account #1830 – Poles, Towers, and Fixtures (Capital Cost)
- 2) Account #5120: Maintenance of Poles, Towers and Fixtures
- 3) Account #5135: Overhead Distribution Lines and Feeders – Right of Way

As indicated above, LDCs do not maintain sub-accounts that allow for separate tracking of attachment-related pole costs. In order to attribute relevant costs to carriers, power fixture related costs need to be removed from all three accounts. Participating PAWG LDCs were requested to provide an estimated distribution of costs between power fixture-related costs and attachment-related costs within these accounts. Based on the data provided by the participating LDCs, Nordicity updated the annual common cost per pole, as described below.

²⁰ Nordicity report, OEB Wireline Pole Attachment Rates and Policy Framework, p. 59, 61.

²¹ Nordicity report, OEB Wireline Pole Attachment Rates and Policy Framework, p. 62.

²² Capital costs include the capitalized cost of a pole, including the installation cost of the pole, replacements, capitalized upgrades and repairs.

Account #1830 Costs

Participating LDCs provided a breakdown of account #1830 into poles, power fixtures, and other capital costs from 2005 to 2015.

Since not all LDCs currently maintain sub-accounts to track costs that are directly related to third party attachments, a percentage adjustment factor was used to remove power-related costs. An estimated adjustment factor of 14.7% was utilized by Nordicity to remove power-related costs from the capital cost base. The 14.7% adjustment factor was based on the data submitted by participating PAWG LDCs. Nordicity asserted that this approach is supported by various regulatory precedents in the USA (e.g. Federal Communications Commission) and Canada (e.g. NBEUB).

Based on this data and the adjustment factor, Nordicity calculated the average embedded cost per pole between 2005 to 2015 to be \$1,280.28, which represents 85.3% of account #1830.

The net embedded cost of the pole is needed to determine the carrying cost of the net investment in poles. Once again, based on the data provided by the participating PAWG LDCs, Nordicity calculated the net embedded cost over the ten year period to be \$793.20.²³

The model used in the 2005 Decision by the OEB is based on straight line depreciation for a useful life of 25 years. Based on the data submitted by the participating LDCs, it was determined that three LDCs had changed their respective useful lives during the 10 year period and thus their depreciation rate. At the second PAWG meeting, it was agreed that a useful life of 40 years should be used. This results in a straight line depreciation rate of 2.5% and an annual average depreciation expense of \$32.00.

The carrying cost is a major component of the average annual common cost per pole and it represents the financing cost of the investment. Four of the five participating PAWG LDCs (Toronto Hydro, Hydro Ottawa, Hydro One, and Horizon) provided their year-to-year cost of capital rates. Based on this data, Nordicity calculated the cost of capital over the study period to be 7.24%, based on a simple average, and 8.17%, based on a weighted average. Nordicity recommended and used the weighted average to calculate the pre-tax, annual capital carrying cost per pole to be \$64.80.

²³ Net embedded cost of the pole refers to the gross book value of distribution poles in account #1830 less accumulated depreciation of poles.

Account #5120 Costs

Two PAWG LDCs (Hydro One and Hydro Ottawa) submitted maintenance costs for the three sub-components (poles, power fixtures and other). The distribution of maintenance costs for Hydro One and Hydro Ottawa for poles was applied against the data for the other three participating PAWG LDCs to calculate an average maintenance cost per pole of \$6.41. It should be noted that the range in the allocation of maintenance costs between power and third party attachers between Hydro One's data (5% allocation to carriers) and Hydro Ottawa's data (92% allocation to carriers) is significant and thus Nordicity assumed an average of the two at 48.5% for the calculation.

Account #5135 Costs

Two participating PAWG LDCs (Hydro One and Hydro Ottawa) provided cost data related to account #5135. PAWG LDCs were requested to provide the number of orders or jobs completed each year. This order volume information would have enabled further understanding of the year-to-year trends of key cost elements: labour, material, truck, and other, and to develop reasonable cost estimates for poles and telecommunication wires. However, order volume data was not submitted by the LDCs. Hydro One and Hydro Ottawa instead provided the following data:

- Hydro One: Average cost per pole of \$54.11 including Labour (81.4%), Material (1.2%), Truck (15.2%), and Other (2.1%)
- Hydro Ottawa: Average Cost per pole of \$62.64 including Labour (85%), and Truck (15%)

Without a detailed field study and examination of related operational data (truck roll/field dispatch orders), Nordicity concluded that it is not possible to clearly ascertain the cost attributable to poles and telecommunication wires in LDCs' account #5135. However, Nordicity assumed the same cost ratio used in account #5120 of 6.8% and applied this ratio against the data to derive a cost for account #5135 of \$4.83.

Based on the above calculations, Nordicity determined that the total maintenance cost, including repair and right of way, attributable to poles is \$11.24 (Account #5120 costs + Account #5135 costs).

Annual Common Cost (Indirect) Cost per Pole

Nordicity uses the cost inputs discussed above to calculate an updated annual common cost per pole of \$103.71, as compared to \$93.31 in the 2005 Decision. Table 1 below, duplicated from Nordicity's report, provides a comparative summary of the updated total annual average common cost for each input along with the costs in the 2005 Decision for comparative purposes. The details behind the calculations, including the assumptions, are provided in Nordicity's report.

Cost Components per Pole		2005 OEB	2017 NGL
Direct Cost	Administration Cost	\$ 0.69	\$ 2.85
	Loss in Productivity	\$ 1.23	n.a
	Total Direct Cost	\$ 1.92	\$ 2.85
Indirect (Common) Cost	Net Embedded Cost per pole	A \$ 478.00	\$ 793.20
	Capital Carrying Cost Rate %	B 11.42%	8.17%
	Depreciation Expense	C \$ 31.11	\$ 32.01
	Pole Maintenance Expense	D \$ 7.61	\$ 11.24
	Capital Carrying Cost	E = A x B \$ 54.59	\$ 64.81
	Utility Tax Cost	F -	-
	Loss in Productivity	G incl. above	incl. above
Total Indirect (Common) Cost	K=C+D+E+F+G	\$ 93.31	\$ 108.06
Capital Cost Base	Embedded Cost per pole	\$ 777.75	\$ 1,280.28
	Accumulated Depreciation	\$ 299.75	\$ 487.08
	Percent Accumulated Depreciation	38.54%	38.05%
	Depreciation		

Table 1: Updated Annual Average Common Cost per Pole

E. Pole Attachment Rate Model and Projected Rate per Telecom Attacher

Nordicity's pole attachment rate model comprises three key elements as follows:

- a) annual cost per pole
- b) ratio to allocate common (indirect) costs to the two types of attachers (power, and telecom)
- c) average number of attachers

As discussed in the Nordicity report, there are several methodologies for allocating the common costs between the different attachers, and two in particular that have been identified by Nordicity as being currently used by utilities: Proportional Use and Equal

Sharing. A third methodology was identified and recommended by Nordicity, which is a hybrid between proportional use and equal sharing – called the Hybrid Equal Sharing Approach.

The 2005 Decision used the equal sharing approach to allocate common costs, based on a presumptive number of attachers of 3.5, which included 1 power and 2.5 third party attachers.

Based on the attacher data provided by participating PAWG LDCs in this consultation process (excluding Toronto Hydro and CHEC member LDCs who did not provide the applicable data²⁴), the actual number of third party attachers was calculated to be 1.3 – which is much less than the presumptive number of 2.5. Using the same allocation of costs as the 2005 Decision with the number of 1.3 actual attachers, the revised allocation ratio to attribute common (indirect) costs to telecommunication attachers would be 35.37%. Similarly, the hybrid approach would result in an allocation rate of 32.45%.

Applying the allocation rate and actual number of attachers to the updated Annual Average Common Cost shown in Table 1, Nordicity calculated the updated attachment rates per telecommunication attacher to be \$42.19 for equal sharing and \$38.70 for the hybrid approach as shown in Table 2 below with no adjustment for inflation taken into account between 2015 and 2018.

Item	Explanation	2005 OEB Approach (Equal Sharing)	Hybrid Approach (Equal Sharing-Proportional)
Total Annual Common (Indirect) Cost	A	\$ 108.06	\$ 108.06
Equal Sharing Allocation Ratio per telecommunication attacher	B	35.368%	32.4519%
Annual Common (Indirect) cost per telecom attacher	C = A x B	\$ 38.56	\$ 35.07
Direct Annual Cost per telecom attacher	D	\$ 3.63	\$ 3.63
Annual Attachment rate per telecom attacher	E = C + D	\$42.19	\$38.70
Note: the above rates per attacher exclude loss of productivity, to avoid double counting and inherently include vegetation management.			

Table 2: Updated Pole Attachment Rate per Telecommunication Attacher

²⁴ The OEB reviewed the data from Toronto Hydro's filing in EB-2014-0116 and determined it would not have made a material impact to the attacher number calculated by Nordicity.

F. Nordicity Conclusions and Recommendations

Using the OEB's current equal sharing methodology to allocate indirect costs, Nordicity calculated the pole attachment rate to be \$42.19 per attacher. Simply adjusting for inflation to 2015 and reflecting the actual number of attachers (rather than utilizing a presumptive number) would have resulted in a projected rate of \$41.20. The difference between the current rate of \$22.35 and Nordicity's proposed rate of \$42.19 is a result of:

- Inflationary increases in the cost per pole, including (a) a 15.8% increase in the indirect cost per pole from \$93.31 in 2005 to \$108.06 in 2015, and (b) an increase in the direct (administration) costs from \$0.69 in 2005 to \$3.63 in 2015.
- A decrease in the average number of telecommunication attachers per pole from 2.5 in 2005 to the current average of 1.3.

Using Nordicity's proposed hybrid equal sharing approach, Nordicity projects an updated pole attachment rate of \$38.70 per attacher which represents an increase of 73.2% from the \$22.35 attacher rate determined in the 2005 Decision.

Both the \$42.19 and \$38.70 rates are based on Nordicity's proposed Pole Attachment Rate Framework with no adjustment for inflation between 2015 and 2018.

As part of establishing a pole attachment rate, consideration needs to be given to whether there should be a single pole attachment rate for the entire province or if it should vary according to geographic location. Based on the data submitted by participating PAWG LDCs, Nordicity stated that it was not possible to accurately determine the cost-per-pole according to different geographic locations, such as rural versus urban, without making assumptions about the data, or identifying cost differences. The examination of data submitted by LDCs did not reveal major systemic cost differences. On this basis, a single province-wide rate is recommended by Nordicity. Consistent with the process currently in place, Nordicity recommends that LDCs should be able to apply to the OEB to vary the rate if they believe that the provincial rate does not represent their cost structure, which they would demonstrate through submission of a detailed cost study.

Nordicity believes that an effective framework is required to implement updates to the rate on a going-forward basis. As noted in their report, a factor that can cause major year-to-year fluctuations in the rate is the number of pole replacements vis-à-vis the declining net book value (net embedded cost) balance due to depreciation expense. Other factors include inflation, higher cost due to increases in the labour rate and productivity improvements resulting from operational efficiencies. Nordicity believes these factors can be accounted for if the rate model and input data is periodically

updated (every three to five years), using LDCs' annual USoA general submission data to the OEB along with attacher data as described above.

As described above, indirect costs were calculated using pertinent LDC account data for capital costs and maintenance and repair expenses, annually submitted by LDCs to the OEB, for the period 2005-2015. The main issue with this approach is that the accounts also include costs strictly associated with the power assets installed on the poles. Although an adjustment factor was utilized to remove power-related costs from the calculations, Nordicity believes that costing information would be improved if all LDCs maintained sub-accounts for the main categories of the various pole-related cost elements. The adjustment factor utilized can have a significant impact on the overall pole attachment rate and thus can be the subject of major disagreement between LDCs and third party attachers. To avoid this situation in the future, Nordicity recommends that LDCs be required to set up appropriate sub-accounts and to submit details regarding the accounts as part of their annual general data filing to the OEB. The implementation of sub-accounts would allow the cost inputs to be updated automatically and efficiently, helping to accurately project pole attachment rates going forward either through a generic provincial rate or through LDC-specific rates.

To ensure transparency and reliability of the pole attachment rate, Nordicity also recommends that LDCs be required to enhance the attacher tracking system - linked to the invoicing system - so that they can not only track the number of attachers, but also the number of attachments in the future. Nordicity recommends including the number of attachments in LDCs' annual general data submission to the OEB.

3. OVERVIEW OF KEY POLICY ISSUES

This chapter is divided into sections that address the following key issues identified during the policy consultation meetings and set out in the Nordicity Report:

- Allocation Methodology – “Principles for Allocating Common Costs”
- LDC-Specific or Province-Wide Rate
- Inflationary Adjustments
- LDC Collection of Cost Data
- Separation Space
- Allocation of Vegetation Management Costs
- Allocation of Neutral Power Wire Costs
- Overlapping Revenues
- Bell Canada Agreement with LDCs

The OEB received comments from PAWG members on each of these key issues, and Nordicity also provided commentary in its report. The PAWG member comments on the key issues can be found in the policy consultation page on the OEB’s website.²⁵ The views of the various parties, as well as Nordicity’s views, will be discussed for each of these issues, and then the OEB’s proposed approach will be identified.

Aside from certain key issues discussed below, the OEB agrees with much of what is proposed in the Nordicity report as summarized in Chapter 2.

The principal differences between the OEB’s proposed policy approach and that outlined in the methodology proposed in the Nordicity report are:

- The OEB has used six years of historical cost data provided by the participating LDCs as opposed to the 10 years of data used by Nordicity. The OEB considers the six most recent years of data (2010 to 2015) to be more reflective of current LDC pole costs.

²⁵ PAWG comments found at: <https://www.oeb.ca/industry/policy-initiatives-and-consultations/review-miscellaneous-rates-and-charges>.

- Both the OEB's and Nordicity's models included vegetation management costs in the calculation of the pole attachment rate. The OEB used an allocation factor for vegetation management of 1/3 of USoA #5135, whereas Nordicity used 6.8%. The OEB has determined that an allocation of 1/3 of USoA #5135 for vegetation management to carriers, as proposed by Hydro One and presented at the fourth working group meeting, is a reasonable allocation for this costing. Both LDCs and carriers require and benefit from vegetation management and thus costs should be shared proportionately in accordance with the useable space on the pole that each entity occupies. Given that LDCs utilize roughly double the usable space on a pole that a carrier uses (11.5' for LDCs vs. 5.25' for carriers), 2/3 of the vegetation management costs have been allocated to LDCs and 1/3 to carriers.
- The OEB included a cost for loss of productivity (LOP) in the calculation of the pole attachment rate, consistent with its recent evidence based determinations in both the Hydro One and Hydro Ottawa applications.
- The OEB has included an inflationary adjustment to escalate costs from 2015 dollars to 2018 dollars. The OEB used the data submitted in the Three Applications to derive an Administration cost, whereas Nordicity based its Administration cost on only the data submitted by Toronto Hydro in its 2014 application.²⁶

These differences in costing inputs result in an OEB approved annual provincial wireline pole attachment rate of \$52.00, including inflation to 2018. The costing inputs are discussed within the context of the key issues below and the summary of the Nordicity report presented in Chapter 2.

A. Allocation Methodology – “Principles for Allocating Common Costs”

Description of the Issue

Indirect costs account for more than 90% of total annual costs for pole infrastructure, and thus the allocation rate to be applied against common (indirect) costs is critical in setting the pole attachment charge. Multiple users of an existing pole network create economies of scale and prevent wasteful duplication of rights-of-way and network

²⁶ EB-2014-0116.

hardware. As a result, many regulators, including the OEB, have considered pole networks to be essential facilities where access must be allowed by the owners on a non-discriminatory basis.

There are a number of options for allocating the costs and providing access in the "subsidy-free range", where one group is not subsidizing the other and it is economically efficient for the carriers and utilities to share infrastructure.

The lowest price for access that is consistent with economic efficiency is the incremental cost (also referred to as "direct cost") that the attacher imposes on the incumbent power utility owner of the pole network. These incremental costs are composed of the administration costs of the attachment and the loss of productivity cost.²⁷ At an attachment price set to cover these incremental costs, the incumbent network owner is held whole against the imposed costs of attachment. There is no subsidy going from the incumbent owner to the attacher(s) at this price. However, the attachers are also not bearing any of the burden of the common (or "indirect") cost of the pole network. This incremental cost price is the lower bound of the "subsidy-free range."

At the other extreme is the "stand-alone cost" of the attacher. This is the cost per pole that an attacher would pay to build its own duplicate network of poles. Any price for attaching to the existing pole network greater than this cost risks inducing the attacher to leave the arrangement and build its own poles – an outcome that is not desirable. At any price above the stand-alone cost, the attacher is subsidizing the incumbent pole network owner. Thus the stand-alone cost represents the upper bound of the subsidy-free range.

Figure 3 below gives an illustrative conceptual view of the subsidy-free range and how the other methodologies identified by Nordicity – Proportional Use, Equal Sharing, and Hybrid Equal Sharing – relate to it.

²⁷ These costs are discussed in more detail in section 2. D. .

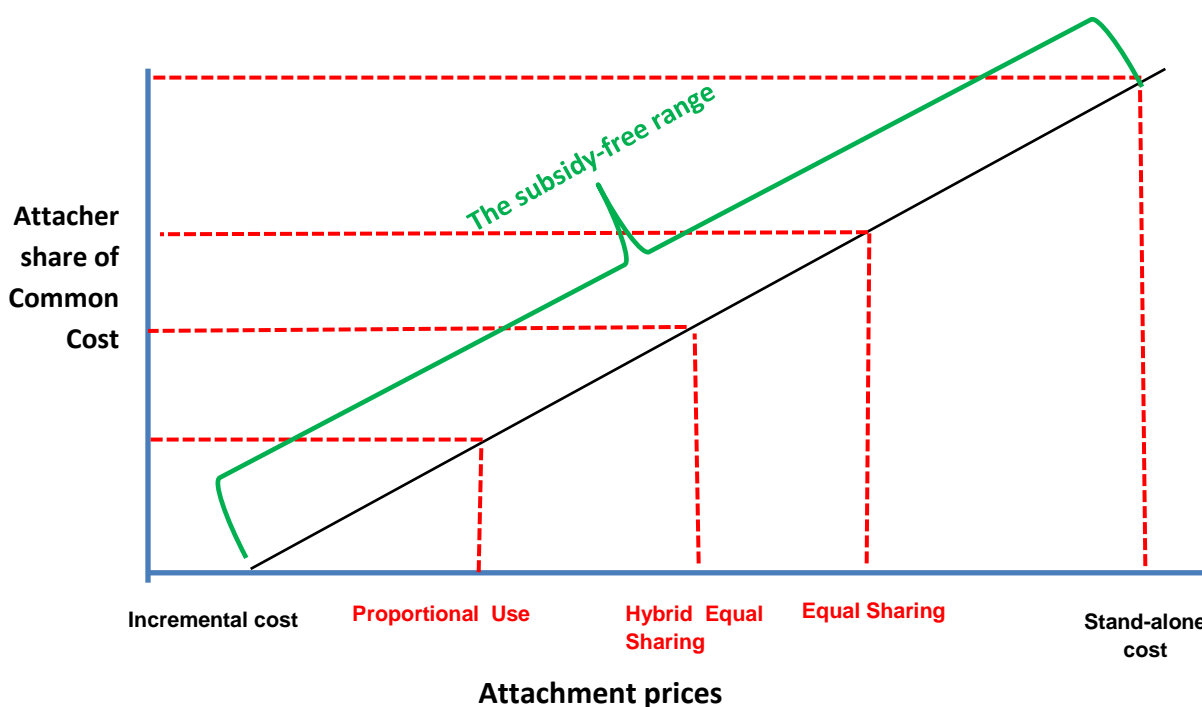


Figure 3: The Subsidy-Free Range

Any price for access within the subsidy-free range can be considered to be economically efficient. There is no inducement towards the construction of an inefficient duplicate network, nor are third party attachers subsidized into an inefficiently high degree of attachments on the pole network.

Economic theory does not provide firm guidance as to the best price to charge within the subsidy free range.

In regulatory economics and practice in most jurisdictions, it is uncontroversial that each attacher to the network will be responsible for the direct or incremental costs that the attachment drives.²⁸ The question that the OEB must answer is how much of the common costs of the pole network will be assigned to the incumbent power utility owners and each party wishing to attach to ensure that a reasonable rate is established. In addition, one must also consider the value that third party attachers obtain from leveraging an established network that spans the entire province.

²⁸ This approach regarding the treatment of direct costs was also accepted in the 2005 Decision.

Nordicity Comments and Recommendations

Two approaches have been identified by Nordicity through its literature review as being currently used by utilities to allocate the common cost of poles: Proportional Use and Equal Sharing. Both methodologies conform to the principle of economic efficiency and avoid any potential issue of cross-subsidisation. Both also lie between the minimum incremental cost and maximum standalone cost range of economic efficiency.

Figure below illustrates the differences between each method for a 40-foot joint-use pole.

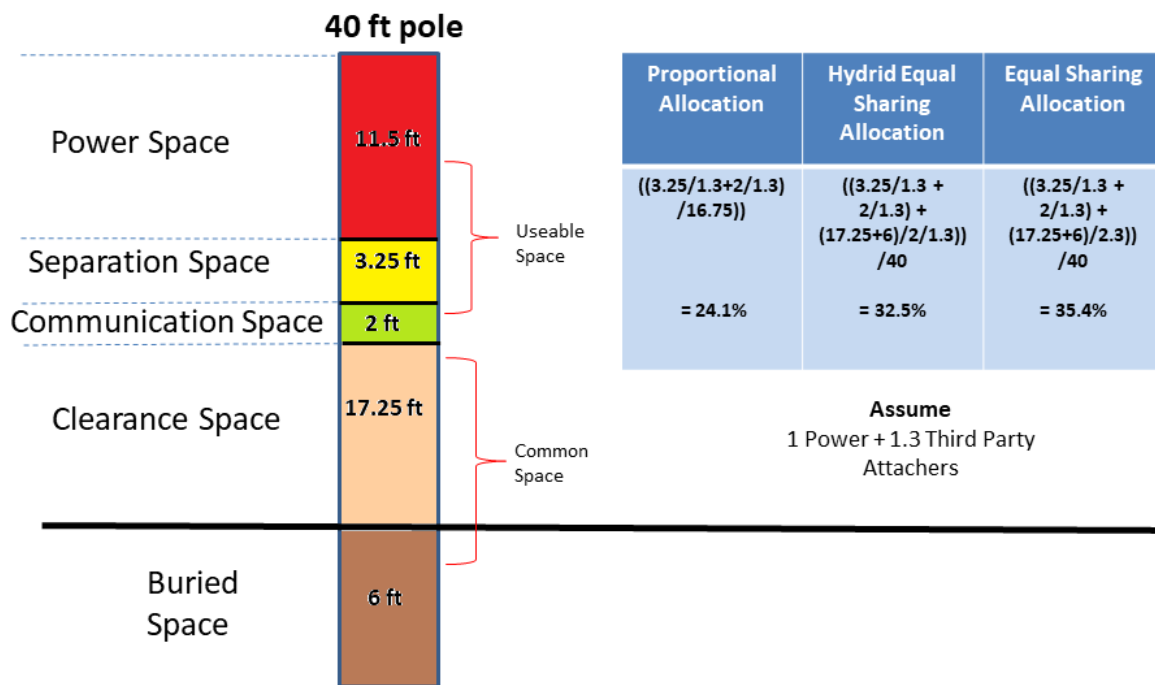


Figure 4 – Comparison of Allocation Methodologies

As illustrated in Figure , the proportional use methodology allocates the common cost to third party attachers in proportion to the third party attacher space that makes up the useable space on the pole. For a typical 40-foot pole, telecommunication space (separation + communication) makes up 31.3% of useable space $[(3.25 \text{ ft.} + 2 \text{ ft.})/16.75 \text{ ft.} = 31.3\%]$. Assuming 1.3 attachers, the allocation then becomes 24.1% of the common costs per attacher.

Equal sharing is consistent with the 2005 Decision. Under this approach, common costs are allocated equally between attachers. The common cost allocation is calculated by adding the total third party attacher space (3.25 + 2 feet) divided by the number of third party attachers ($5.25/1.3 = 4.04$), plus the common space (buried + clearance space = 23.25 feet) divided by the total number of attachers, counting the host LDC as one attacher ($23.25/2.3=10.11$). This establishes a proportion of space used by each attacher. This is then divided by the total pole length of 40 feet to determine the percentage of pole used by each attacher ($(4.04+10.11)/40=35.4\%$). Third party attacher space therefore makes up 46% of useable space under the equal sharing methodology ($35.4\% \times 1.3$ third party attachers).

With 1.3 third party attachers, each attacher would pay 24.1% of common costs under the proportional use methodology and 35.4% under the equal sharing methodology.

Nordicity recommends that the OEB consider a third methodology that is a hybrid between proportional use and equal sharing. This methodology assumes common space is allocated equally to power and third party attachers, and then the third party attacher portion of the costs is divided by the number of third party attachers. This methodology results in a slightly lower allocation rate of 32.5% to third party attachers. It should be noted that the application of this methodology has not been applied in any Canadian jurisdiction to the best of Nordicity's knowledge.

In its report, Nordicity discusses two other approaches: another variation of equal sharing adopted by TransAlta in the New Brunswick Energy and Utilities Board (NBEUB) Decision 2000-86 (December 27, 2000), as well as an incremental approach that has been discussed in other proceedings but not adopted to Nordicity's knowledge.²⁹ Nordicity does not recommend either methodology as the first lacks practicability in implementation and the latter results in cross subsidization of pole costs by ratepayers.

Nordicity believes that there is a need to determine a rate that is fair to both power and third party attacher groups. Nordicity recommends the hybrid equal sharing methodology for allocating common cost between power and third party attachers on utility joint-use poles.

²⁹ Nordicity report, OEB Wireline Pole Attachment Rates and Policy Framework, p. 42.

PAWG Comments

LDCs support the principle of allocating the common space equally between third party attachers and LDCs, as set out in the 2005 Decision. In their response on the key issues, LDCs point out that in addition to utilizing the third party attacher space, telecommunication attachers regularly use the common space of a pole for attaching their cables to rise/drop off the pole to underground equipment. In addition, they attach power supplies, complete with battery back up, to the common space on the pole.

Ratepayer groups support the principle of equal sharing because, in their view, there is no cost causality basis for using the proportional use method to allocate indirect costs.

Carriers argue for proportional use over equal sharing due to the greater number of attachments, weight, and stress the LDCs place on the pole, the superior rights of the LDC relative to a third party attacher, and the LDC requirements for bigger and more costly poles.

OEB's Approach

The OEB will adopt Nordicity's recommendation and move forward with allocating common costs based on the hybrid equal sharing methodology. Consistent with the 2005 Decision, third party attachers will be responsible for their direct costs.

In the OEB's view, the adoption of the hybrid equal sharing methodology for common costs is a compromise between the proportional use methodology and the equal sharing methodology.

In terms of the equal sharing methodology, where each attacher is allocated an equal share of the cost of the common space, the OEB notes that with more third party attachers, power attachers pay less. For example, if there were one power attacher and two telecommunications attachers, each attacher would pay a 1/3 share of the common costs. The addition of third party attachers, however, does not increase the space these attachers use on the pole – all third party attachers share the same third party attacher space.

Nordicity's hybrid approach first allocates common space equally on a 50/50 basis between power and third party attachers as two groups (rather than the number of total attachers), recognizing that both groups require their facilities to be elevated in accordance with applicable codes and standards and benefit equally from the sharing of costs and infrastructure.

For these reasons, the OEB is of the view that the hybrid equal sharing methodology is an efficient and fair cost allocation to be applied to third party attachers at this time. As

noted previously, however, given that Ontario's vast network of more than 200,000 km of low voltage distribution lines provide tremendous value to third party attachers, the OEB will consider moving from a cost-based approach to a value-based approach as part of the Part II review.

B. LDC-Specific or Province-Wide Rate

Description of the Issue

The issue of whether a provincial-wide rate should be established rather than an individual LDC specific rate is one of the original issues that the OEB evaluated as part of its 2005 Decision. In that Decision the OEB stated that "a province-wide rate has the advantage that it is simple to administer. This is certainly one of the goals the Board hopes to achieve in this decision."³⁰

The OEB noted in the 2005 Decision that cost data at the individual LDC level was incomplete and therefore calculating costs for the ninety utilities in Ontario at that time would pose a challenge.³¹

The OEB proceeded to order a single province-wide rate because it believed it was in the public interest. In the 2005 Decision, the OEB decided to allow LDCs to seek relief through an application to have rates modified based on its own costs if it felt the province-wide rate was not appropriate.

Nordicity Comments and Recommendations

Nordicity recommends a single province-wide rate with the same provision as in the 2005 Decision. This would allow LDCs to apply to vary the rate if they believe the province-wide rate would not recover their costs. Nordicity also considered the data collected from the participating PAWG LDCs during the consultation in making this recommendation: in their view, the data collected did not reveal any major systemic cost differences for such matters as rural versus urban geographical locations.

³⁰ RP-2003-0249

³¹ RP-2003-0249, p. 8.

PAWG Comments

LDCs, carriers and ratepayer groups all had different views on whether the OEB should move forward with a single province-wide rate or an LDC-specific rate. The LDCs' view is that the OEB should update the provincial rate, but allow for specific rates where inputs can be adjusted to reflect the utilities' operations and demographics (in effect, supporting the approach taken by the OEB in the 2005 Decision).

The ratepayer groups argued that setting a single provincial-wide rate is inappropriate as a long-term solution as the capital cost and operations and maintenance data collected from participating LDCs varies significantly. They suggested the use of historic cost data in combination with default factors for individual LDCs as an interim measure, and the use of LDC-specific forecast costs and LDC specific factors for allocation of telecommunication attacher costs at the time of rebasing.

The carriers' view is that while there may be merit in a single pole attachment charge for LDCs, it is critical for the charge to be reflective of the costs of the LDCs that apply it.

OEB's Approach

The OEB will implement a province-wide rate in 2018 of \$52 per attacher per year per pole (which has been rounded down from \$52.37). The new charge includes inflation from 2015 to 2018 based on the OEB's Input Price Index (IPI).

LDCs may wish to apply for a custom pole attachment rate using the OEB's methodology and their own specific costs where the province-wide rate would not cover their specific costs.³²

In considering this issue, the OEB has balanced the need to ensure that the rate is representative of costs on an ongoing basis, with avoiding an overly administrative and costly process for setting an LDC-specific rate for each LDC in the province. It is expected that LDCs will address utility specific charges at the time of rebasing.

As described in section 3.c, the province-wide rate will be subject to inflationary adjustments and will not include productivity improvements using the OEB's I-X adjustment mechanism.

³² The OEB has posted a workform that utilities must file when seeking a utility-specific charge.

C. Inflationary Adjustments

Description of Issue

The 2005 Decision and the Three Applications did not include any mechanism or factor to adjust the approved pole attachment rate annually for inflation. The lack of inflationary adjustment to the pole attachment rate from the 2005 Decision over time led to significant single step rate increases for the Three Applications. During the policy consultation meetings, members agreed that the Pole Attachment rate requires a mechanism to adjust the rate annually for inflationary factors. At the fourth PAWG meeting, staff proposed the use of the same inflationary adjustment mechanism as is used in the current LDC incentive rate-setting mechanism.

Nordicity Comments and Recommendations

Nordicity did not recommend any type of adjustment mechanism to the single province-wide rate that it calculated from the data collected as part of the consultation. However, Nordicity did recommend the OEB utilize a “levelized approach” as a means of ensuring rate stability over the long term.³³

PAWG Comments

LDCs supported adopting a mechanism to annually adjust the rate, and agreed with OEB staff that the method used in the current rate setting processes appear to be a reasonable method of doing this.

Ratepayer groups indicated that an annual adjustment factor will allow adjustment of the pole access charge in an easy manner during the incentive rate setting period and will mirror current LDC rate processes for adjusting base rates.

Carriers took the position that any escalator would also need to have a significant productivity offset.

³³ OEB Wireline Pole Attachment Rates and Policy Framework, Nordicity, June 30, 2017, p. 26.

OEB's Approach

The OEB will implement an annual inflationary adjustment mechanism to the single province-wide rate.

The adjustment will be based on the base IPI with no productivity and stretch factor applied. Pole attachment charge components are generally sunk costs and most underlying cost items are not easily impacted by productivity improvements. The IPI covers inflation in the prices of capital equipment used by the industry, as well as inflation in operating expenses, and thus provides a more accurate measure of inflation for utility pole capital expenditures and operating expenses than the CPI.

The OEB notes that all parties agree that some form of adjustment factor is needed to minimize the impact of inflation over time. The OEB agrees with ratepayer groups that an annual adjustment would help moderate the impact that is otherwise likely to occur in the pole attachment charge when rates are eventually rebased in the event that a utility-specific rate is approved.

D. LDC Collection of Cost Data

Description of the Issue

This consultation has resulted in a database of cost inputs for pole attachments representative of LDCs that account for roughly 90% of the pole population in the province. To continue to improve the accuracy and ensure that the data remains up to date going forward, LDCs could collect pole attachment specific-cost data in sub-accounts. Currently the OEB's 2012 Accounting Procedures Handbook does not require this level of granularity with respect to costs related to third party attachers. Implementing this further level of granularity will bring more certainty to cost inputs and help facilitate the ongoing determination of appropriate charges for pole attachments.

Nordicity Comments and Recommendations

In its report, Nordicity recommends LDCs be required to set up appropriate sub-accounts and submit details of these sub-accounts as part of their annual reporting to the OEB. Nordicity believes the implementation of a sub-accounts system will simplify updates to cost inputs in the pole attachment rate model. They believe this will also ensure long-term rate stability and predictability and avoid future complex pole attachment-related hearings.

PAWG Comments

LDCs support creating sub-accounts that would allow more accurate tracking of costs and adding the one-time costs associated with implementing these sub-accounts to the direct administrative costs allocated to telecommunication attachers.

Ratepayer groups also support the creation of sub-accounts, but did not agree with adding the costs associated with implementing these sub-accounts to administrative costs because they are of the view that the LDCs' current practices would allow the tracking with minimal effort.

Carriers took the position that it is essential for the OEB to ensure that LDCs collect and track data accurately so that it can be reviewed annually and reconciled with the pole attachment rate. The carriers did not agree with adding implementation costs to their administrative costs if they were significant.

The OEB's Approach

The OEB will require all LDCs to set up sub-accounts to track cost inputs related to the charge. The OEB notes that all three groups (LDCs, ratepayer groups and carriers) were supportive of this initiative. The OEB recognizes that implementation of a sub-account system may pose challenges for some LDCs. The costs associated with set up and maintenance of this system are permitted to be added to direct administrative costs. For simplicity, the OEB envisions that one sub-account be set-up per USoA account to track all costs dedicated to attachers within that account. The OEB notes that sub-accounts will improve tracking of costs related to pole attachments and assist the OEB in future pole attachment rate applications and policy consultations. It is anticipated that sub-account data would be directly entered into the OEB's work form for those LDCs applying for their own specific rate.

E. Separation Space

Description of the Issue

The 2005 Decision treated separation space as part of the communication space and thus costs are fully allocated to third party attachers. Canadian Standards Association (CSA) C22.3 No.1 relates to minimum clearance from the lowest distribution wire to the highest carrier attachment. An Electrical Safety Authority (ESA) guideline for Third Party Attachments defines the need for separation space for the safety of communication workers as required by Ontario Regulation 22/04 (Electrical Distribution Safety). At the fourth PAWG meeting, it was also identified that this space is needed to ensure

clearance between power and communication wires because of line sag during peak summer months and ice loading in the winter. During the consultation, the carriers argued that separation space should be treated as common space and thus allocated equally with power users.

Nordicity's Comments and Recommendations

In its report, Nordicity states: "Separation space is generally considered as part of communication space since it is required (causal) to provide for communication space in conformance with the safety standards of the province."

Nordicity's rate projection scenarios within their report are all based on treating separation space as part of communication space and not as part of common costs.

PAWG Comments

The LDCs took the position that separation space be treated as part of the communication space and be fully allocated to the telecommunication attachers to ensure the safety of the communications workers, as required under Ontario Regulation 22/04 (Electrical Distribution Safety).

Ratepayer groups agreed with the LDC position that separation space continue to be part of communication space because the separation is needed to accommodate carriers attaching to a pole.

Carriers took the position that the separation space provides benefits to all users and thus should be part of common space with the costs shared equally.

OEB's Approach

Consistent with the 2005 Decision, separation space will be included as part of communication space. ESA and CSA standards are clear that separation space is needed to ensure the safety of communication workers who need access to communication attachments on joint use poles. All pole costs related to the construction and maintenance of separation space on joint use poles will be allocated to carriers as part of the overall costs in the pole attachment rate calculation.

F. Allocation of Vegetation Management Costs

Description of the Issue

Vegetation management costs were not included in the calculation of the annual pole attachment charge approved in the 2005 Decision, nor were they included in the OEB's charges approved more recently for Hydro Ottawa and Hydro One.

However, other regulators have also considered this issue. The NBEUB in a 2015 Decision included planned and storm-related vegetation costs of approximately \$13/pole.³⁴ A 2002 decision of the Nova Scotia Utility and Review Board (NSURB) also accepted inclusion of vegetation management costs, as it was considered an essential part of maintaining the integrity of LDCs' overhead distribution system infrastructure.³⁵ The NSURB concluded that all pole tenants benefit from tree trimming, along with inspection surveys and audits, emergency repairs and pole tests. In the NSURB's view, vegetation management benefits all users of the overhead distribution system throughout the province.

During the PAWG meetings, carriers indicated that many of their joint use agreements with LDCs contain provisions for vegetation management. It was also noted that many LDCs do not charge carriers at all for vegetation management and thus provision of the service in these cases is borne by ratepayer groups.

Vegetation management is a significant cost to the LDC and fair allocation is important in determining an appropriate pole attachment charge that is reflective of costs and benefits to the attacher.

Nordicity's Comments and Recommendations

Nordicity noted in its report that vegetation management has been a major topic of discussion in recent pole attachment rate proceedings across Canada, including the 2015 NBEUB³⁶ and two of the applications heard by the OEB (Hydro Ottawa and Hydro One). Nordicity believes vegetation management costs are implicitly included in account #5135 based on the account description in the OEB Accounting Procedures Handbook, and are therefore fully accounted for in the cost per pole that they calculated. Nordicity

³⁴ Page 4 of New Brunswick Energy & Utilities Board Matter No. 272.

³⁵ Nova Scotia Utility and Review Board, January 24 2002 Decision [NSUARB-P-873].

³⁶ 2015 NBEUB (matter # 272).

does not believe additional costs should be included in the rate. The data provided by the participating PAWG LDCs did not allow for apportioning of these costs within account #5135 and thus is one of the reasons for Nordicity's recommending the establishment of sub-accounts.

PAWG Comments

Both LDCs and carriers both have taken the position that vegetation management costs should not be included in the rate, and should be negotiated as part of the joint use agreements. They suggest that the OEB could provide the principles/methodology for sharing vegetation management costs to allow for a fair and reasonable charge.

Ratepayer groups took the position that vegetation management benefits all users and should be charged to the beneficiaries based on the benefits they received. Ratepayer groups recommended that costs related to vegetation management be included in the derivation of an LDC-specific pole attachment rate at the time of rebasing.

OEB's Approach

The OEB will require vegetation management costs to be recovered through the wireline pole attachment charge.

The OEB notes the inconsistency in how vegetation management costs are being charged across the industry. Some utilities are recovering vegetation management costs through their joint use agreements, while others are not. Where these costs are not being recovered through joint use agreements, ratepayers are currently subsidizing these costs. The OEB will require these charges to be recovered through the wireline pole attachment rate going forward, rather than through joint use agreements.

The OEB will include the vegetation management costs embedded in account #5135 in the province-wide rate, based on the 33% allocation put forth by Hydro One.³⁷

The OEB recognizes vegetation management is a significant cost and as such, Part II will endeavour to analyze any new LDC data collected with respect to the allocation of

³⁷ The OEB sees merit in Hydro One's allocation because the telecommunication space represents approximately 33% of the useable space on a pole, as illustrated in OEB staff's slide 22 presented at the fourth working group meeting. Slide 22 depicts the vegetation that would require clearing within the power and telecommunication space.

vegetation management costs. This should provide a significant benefit to the OEB's next wholesale review of the default charge as better information would be available.

G. Allocation of Neutral Power Wire Costs

Description of the Issue

The neutral wire on a distribution system is a conductor that carries current back to the source. It dissipates momentary faults but typically does not carry current. CSA Standards require communication facilities to be bonded to the neutral at a minimum of every 300 metres. The ESA guideline for Third Party Attachments requires no undue hazards.³⁸ A 2016 Kinetrics study indicates carrier bonding to LDCs' neutral within 300 metres can keep induced voltages on communication cables under acceptable limits.³⁹ Without this bonding, there would be considerable risks to worker/public safety and equipment damage. Bonding typically occurs every third distribution pole. Currently, carriers are not allocated any costs related to an LDC neutral wire.

Nordicity's Comments and Recommendations

Nordicity does not recommend including the cost of an LDC distribution pole neutral wire into the common cost of the poles because it is not aware of any regulatory precedent that exists to support it.

PAWG Comments

Both LDCs and ratepayer groups agree that carriers receive a benefit from bonding to LDCs' neutral distribution wires in terms of worker/public safety and prevention of equipment damage. Therefore, both LDCs and ratepayer groups support carriers having to bear a portion of the costs.

Carriers took the position that the neutral wire is only required because there are power-specific assets on a distribution pole. Carriers stated that "Telecom do not require a

³⁸ Guideline for Third Party Attachments, Electrical Safety Authority, October 5, 2005.

³⁹ Bonding of the Telecommunications Sheath/Messenger to Power Neutral, Kinetrics Inc., CEATI Report No. T144700-50/121, June 2016.

neutral and a telecommunication-only pole does not have a neutral.”⁴⁰ Carriers further stated that if telecommunication attachers were required to contribute to the cost of the neutral, then any allocated cost should be based on tested data.

OEB’s Approach

The OEB will not allocate the costs associated with an LDC distribution pole neutral wire into the common cost of the poles at this time.

The OEB finds that this is a requirement of power utilities and the costs should not be shared by carriers. The OEB notes, however, that the costs of carriers bonding to the neutral should continue to be paid for by carriers, separate from the wireline pole attachment rate.

H. Overlapping Revenues

Description of the Issue

One of the objectives of this consultation was to determine how to treat and allocate any revenues that wireline carriers may receive from third parties with respect to wireline pole attachments.

The initial concern was that overlashers were not paying any of the costs associated with the joint use poles they were attaching to, however, through the consultation it was determined that LDCs receive the wireline pole attachment rate for any overlasher the carriers host on their attachments. In other words, all third party wireline telecommunications attachers, whether the initial attacher or the overlasher, pay the wireline pole attachment rate.

Figure 5 below illustrates overlapping in the telecommunication space on a distribution pole.

⁴⁰ OEB Pole Attachment Working Group – Key Issues Comments of the Carriers, p. 7, March 3, 2017.

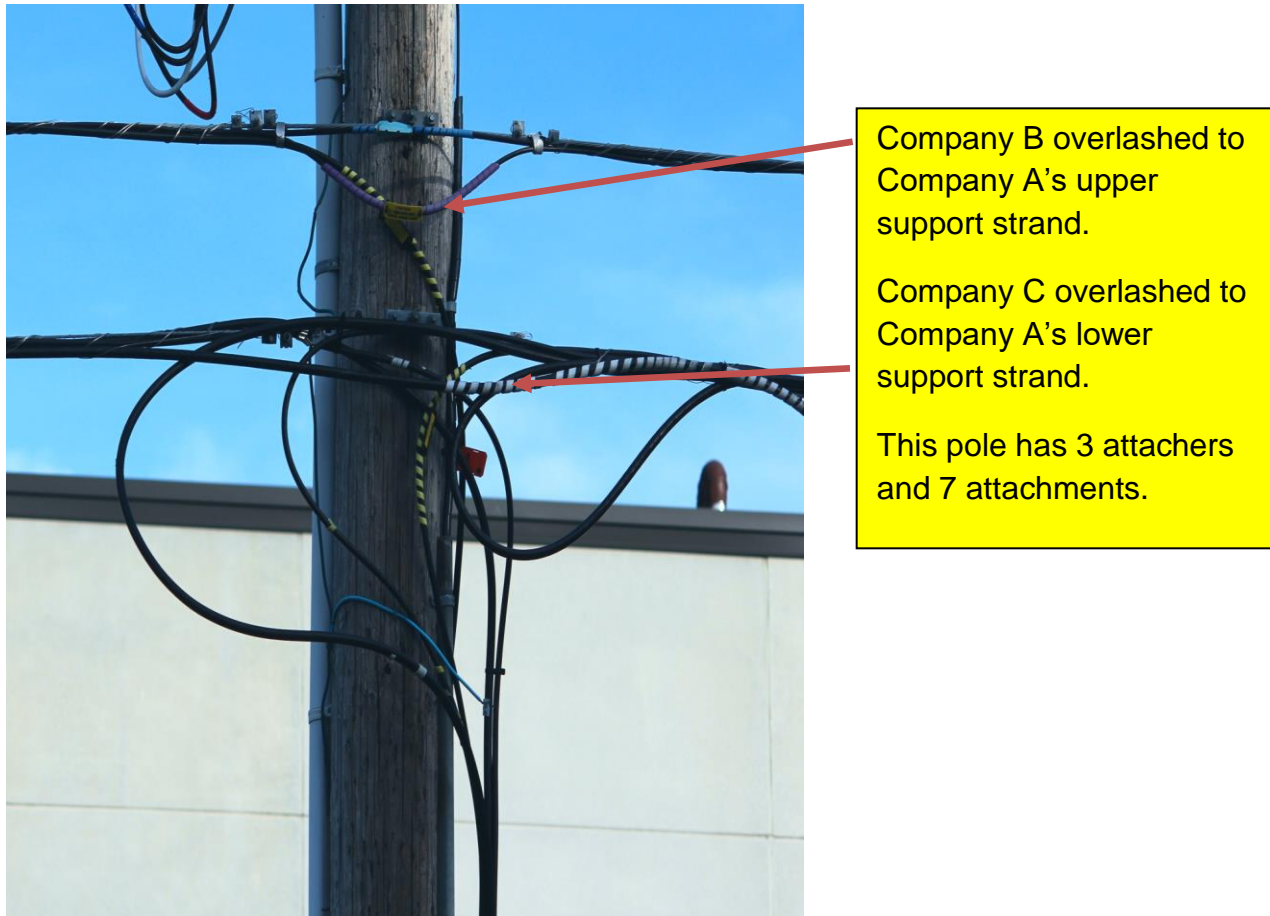


Figure 4: Overlashing on a Distribution Pole

Although it was confirmed that each overlasher pays the pole attachment rate, the OEB became aware that Carrier A, who owns the strand, also charges each overlasher a second charge through a commercial arrangement to recoup the costs of their strand. The value of this overlashing charge is not known, and so it is unclear whether there is a significant commercial benefit to carriers that is not being captured and shared with ratepayers through this arrangement.

Nordicity's Comments and Recommendations

In its report, Nordicity determined the issue of overlashing is not relevant for establishing a pole attachment rate because telecommunication providers indicated during the third PAWG meeting that LDCs receive \$22.35 for any overlasher they host on their attachments. LDCs confirmed that the attacher data they provided is based on their invoicing data, and is therefore reflective of the overlashers. Nordicity indicated that the issue had not been raised in any other Canadian jurisdiction, to the best of their

knowledge. Nordicity does not recommend including consideration of overlashing as it will increase the complexity of the rate calculation framework.

PAWG Comments

Participating ratepayer groups indicated this issue was linked to whether the pole access charge should be on a per attacher or attachment basis. Currently, LDCs track the number of attachers, or entities, and not the number of attachments on the pole. Ratepayer groups recommended that the OEB require LDCs to begin tracking the number of attachments to get more accurate data related to costs.

LDCs do not believe this issue is relevant for establishing a pole attachment rate because LDCs are charging for any overlasher they host on their pole. LDCs took the position that carriers be allowed to overlash until the design criteria of the pole is met, and that overlashers should be charged the same OEB-approved pole attachment rate as the initial attacher. LDCs noted that if overlashers were not included in the rate calculation, the number of attachers on a pole would decrease.

Carriers indicated that each new attacher who overlashes to an existing strand pays the same pole attachment rate to the host LDC for the first overlash on the pole. Carriers confirmed that some revenues are received by Carrier A, the strand owner who has attached to the pole, from Carrier B, who is overlashing on Carrier A's strand. Carriers do not believe that Carrier A's revenues are relevant to pole attachment charges. In their view, any incremental overlashing charges by Carrier A are set to recover its cost of the strand.

OEB's Approach

The OEB will require that LDCs collect and track carrier attachment data going forward so that the number of overlashers can be better understood.

One of the OEB's objectives in reviewing this issue was to confirm that overlashers pay the pole attachment rate to the host LDC. Based on the evidence supplied by the participating carriers and LDCs, the OEB is satisfied that overlashers do pay the pole attachment rate. However, the OEB believes that overlashing revenues received by Carrier A (the strand owner) are relevant to the pole attachment rate model that is being adopted as it is clear that overlashers see a value in overlashing existing telecommunication attacher networks, particularly in highly congested and competitive urban markets.

Although LDCs confirmed that each overlasher pays the pole attachment rate, the OEB notes that the second charge for the overlashing carrier means that Carrier A has a

distinct commercial advantage over the overloading carriers. The OEB notes that without a copy of the commercial arrangements, the value of this overloading charge cannot be verified and the terms of such arrangements cannot be confirmed. It is unclear whether there is a significant commercial benefit to carriers that is not being captured and shared with ratepayers.

Therefore, the OEB will require LDCs to begin collecting and tracking attachment data (in addition to the current tracking of the number of attachers), so that the number of overloaders, as compared to the number of carriers who own strand, can be better understood in the future. This may help determine the typical number of commercial arrangements per pole, as well as to provide information that may benefit a number of other areas of the rate-setting framework. The OEB notes that a change to setting a pole attachment rate on a per attachment basis, rather than on a per attacher basis, would require changes to the overall framework. As described earlier, Part II of the Pole Attachment Review will strive to better understand the value of joint-use poles for third party attachers. Part II will consider whether some of the compensation for each commercial arrangement between the carriers should be provided to the LDC, or whether some other arrangement is appropriate. As more data is available through the proposed modifications to LDC data requirements, the OEB will be able to further understand the value provided to both the strand owner and overloader.

I. Bell Canada Agreements with LDCs

Description of the Issue

A number of LDCs within the province have reciprocal agreements with Bell Canada (Bell) where no monies are exchanged for access to each other's poles.

During the PAWG meetings, carriers expressed concern regarding Bell's reciprocal arrangement with LDCs to use each other's poles at no cost, specifically whether there should be a deduction for the effective recovery of pole costs from Bell so that carriers do not over-contribute to the costs of a pole. Carriers were also concerned with how the agreements impact the number of attachers used in determining the allocation of costs to carriers.

Nordicity's Comments and Recommendations

Nordicity concluded that if they took the position of the carriers in determining the average number of third party attachers, that is, only counting poles that have attachers in addition to Bell rather than all poles, the result would be a number of third party

attachers per pole of 2 or more. This number is greater than the overall average number of third party attachers of 1.3 determined by Nordicity as it would use a smaller subset of all the data submitted by LDCs. The carriers' proposed approach is not, however, consistent with the cost per pole, which is based on the overall pole population – all poles, including those that have only one third party attacher. In order to implement the carriers' proposed approach, the cost per pole would need to be determined for the subpopulation of poles with telecommunication attachers less Bell poles. Nordicity concluded that given the limitations of the group asset accounting system used by LDCs, it is not practical to isolate those poles used by third party attachers and objectively determine the cost per pole. In addition, Nordicity concluded that Bell's arrangement with LDCs does not provide Bell any competitive advantage and thus is not a factor that should be considered in the pole attachment rate methodology.

PAWG Comments

LDCs took the position that reciprocal agreements between Bell and LDCs have no influence on the calculation of the pole attachment rate because no monies are exchanged in lieu of access to each other's poles. In addition, LDCs commented that removing the Bell attachments from the number of pole attachments in the province would cause the number of attachers to decrease, forcing the pole attachment rate to increase.

Ratepayer groups took the position that Bell poles should continue to be counted as part of the number of poles in the new rate methodology the OEB will approve.

Carriers' position is that these agreements need to be considered by the OEB in the new rate methodology as they are just as important as the allocation methodology, vegetation management and neutral costs. According to the carriers, only poles that have third party attachers in addition to Bell should be counted in determining the average number of telecommunication attachers. In addition, carriers believe that there should be a deduction for the effective recovery of pole costs from Bell so that other carriers do not over-contribute to the costs of the pole.

OEB's Approach

The OEB has determined that it will not consider the Bell and LDC reciprocal agreements as part of the new pole attachment rate methodology. The OEB observes that including the Bell pole attachments in the number of total pole attachments in the province provides a significant benefit to carriers as the number of attachers increases than otherwise would be the case resulting in a lower pole attachment charge.

The OEB has evaluated this issue not only from the perspective of this consultation but also has considered the findings in Hydro One's 2015 application.⁴¹ In that Decision and Order, the OEB stated that "Hydro One's reciprocal arrangement with Bell has no impact on the pole attachment charge".

The OEB is of the view that Bell and LDCs both have equal bargaining power, and access is not an issue as both own poles that have the possibility of accommodating the other party. Presumably, Bell Canada and LDCs have reached agreements that are reflective of parties' costs. The OEB assumes that the 60/40 ownership ratio selected represents the differences in space, costs, and other requirements essential for each of the parties to share a pole. The OEB also notes that LDCs and Bell are actively maintaining these balances – a recent OEB Decision and Order,⁴² for example, granted Hydro One approval to sell seven poles to Bell for the purpose of maintaining the ownership balance between Bell and Hydro One, as per the Joint Use Agreement. The OEB is of the view that Bell is effectively paying the rate "in kind" where there are these reciprocal agreements. Where there is no reciprocal agreement, Bell pays the OEB approved pole attachment charge.

The total number of third party attachers should be taken into account when determining how the costs should be split to ensure that other carriers are not overpaying. Whether Bell pays the rate in kind or in cash does not affect the calculation of the charge. This treatment means that each party is paying its fair share of the costs.

This view is consistent with the findings in Hydro One's 2015 application⁴³:

The OEB finds that Hydro One's reciprocal arrangement with Bell has no impact on the pole attachment charge. Bell "pays" for its attachments to Hydro One's poles by allowing free access for Hydro One to Bell's poles. No money changes hands. Contrary to the Carriers' repeated statements, Bell does not pay for 40% of Hydro One's pole costs.

If money were changing hands and the pole attachment charge went up, Bell would presumably have to raise the (unregulated) rate it would collect from Hydro One. Assume a hypothetical scenario where there are 1,000 poles with Hydro One and Bell attachments, 600 owned by Hydro One and 400 owned by Bell. If Bell were paying the pole attachment charge of \$22.35 per pole, then Hydro One

⁴¹ EB-2015-0141

⁴² EB-2017-0287.

⁴³ EB-2015-0141

would be paying about \$33.53 for it to be a wash. If Hydro One's rate increased to, say, \$42.00, and were applied to Bell, then Bell would have to raise its rate for Hydro One to \$63.00 to stay even. This process would not affect the Carriers or any other attacher in any way.

To be clear, the OEB has concluded that under the new pole attachment policy, this sort of reciprocal arrangement, where no money actually changes hands, is acceptable.

4. THE OEB'S PROPOSED WIRELINE POLE ATTACHMENT FRAMEWORK

A. Proposed OEB Pole Attachment Rate Framework

The OEB is establishing a mechanistic process for annually updating the wireline pole attachment charges that LDCs will charge attachers. Both sets of rates will be adjusted annually by applying the OEB's annual base inflationary adjustment (IPI).

B. Updated Single Provincial Pole Attachment Rate

The OEB intends to set a province-wide wireline pole attachment rate of \$52.00. Much of this increase is due to inflation from 2005 to 2018 with the availability of more current information on costs and adjusting for the actual number of attachers. As noted earlier, the current province-wide pole attachment charge of \$22.35 has not changed since 2005, and it is largely based on costing inputs and other assumptions that are nearly 20 years old. Simply adjusting for inflation and reflecting the actual number of attachers (rather than utilizing a presumptive number) would result in a projected rate of approximately \$43.21 for 2018. Much of the remaining increase can be attributed to the inclusion of vegetation management costs of \$8.70.

The OEB's proposed charge is different from the charge proposed in the Nordicity report because the OEB has not accepted all of Nordicity's costing inputs or its approach on several of the key issues. The OEB intends to have its new wireline pole attachment rate of \$52.00 effective the 1st of the month following the issuance of this policy on a final basis (early 2018). This rate will be applicable to all LDCs who do not have an OEB-approved specific rate. Appendix B provides a breakdown of all the input values that were used in deriving this rate, as well as a comparison to previously approved specific rates. The OEB plans to adjust the rate for inflation annually in accordance with the timing described in the filing requirements for incentive rate-setting applications.

C. LDC Specific Rates

At the time of rebasing, LDCs can choose a custom rate or simply to adopt the provincial rate for the next rate filing period. LDCs that choose to apply for a custom rate will be required to submit specific inputs from sub accounts that track costs directly attributed to carrier attachments and file the OEB workform. The OEB's filing requirements will provide additional details.

D. New Data Requirements

The OEB will require all LDCs to begin collecting and tracking the number of attachments on each pole, in addition to the number of attachers (parties) on each joint-use pole so that information regarding the number of overlashers and strand owners is available in the future. This may help determine the typical number of commercial arrangements per pole, as well as to provide information that may benefit a number of other areas of the rate-setting framework.

In addition, the OEB will require all LDCs to set up sub accounts to track pole attachment costs directly attributed to carrier attachments.

APPENDIX A

Pole Attachment Working Group Composition by Organization

Organization	Primary Representative(s)
LDCs and Associations	
1) Hydro One Networks Inc.	John Boldt
2) CHEC - Cornerstone Hydro Electric Concepts Association Inc. Representing a group of fifteen (15) distributors: <ul style="list-style-type: none"> • Centre Wellington Hydro • InnPower Corporation • Orangeville Hydro • Rideau St. Lawrence Distribution • Wellington North Power • COLLUS PowerStream • Lakefront Utilities • Midland Power Utility • Lakeland Power • Wasaga Distribution • Orillia Power • Renfrew Hydro • Ottawa River Power • Niagara-on-the-Lake Hydro • West Coast Huron Energy 	Roy Rogers (Midland Power)
3) Hydro Ottawa Limited	Casey Malone
4) London Hydro	Jagoda Borovickic
5) Horizon Utilities	David Haddock
6) Canadian Electricity Association	Arjun Devdas (Toronto Hydro)
Ratepayer Groups	
7) School Energy Coalition	Mark Rubenstein
8) Vulnerable Energy Consumers Coalition	William Harper
Carrier Companies	
9) BH Telecom	Kris Eby
10) The Carriers Representing a group of twelve (12) carriers: <ul style="list-style-type: none"> • Bragg Communications Inc. • Canadian Cable Systems Alliance Inc. • Cogeco Cable Canada LP • Independent Telecommunications Providers Association • Allstream Inc. • Niagara Regional Broadband Network • Packet-tel Corp. (o/a Packetworks) • Québecor Média Inc. • Rogers Communications Partnership • Shaw Communications Inc. • Tbaytel • TELUS Communications Company 	Michael Piaskoski (Rogers) Tim Brown (Cogeco) David Willkie (Tbaytel)

APPENDIX B

Provincial Rate Based on Default Values

	Input Costs	RP-2003-0249 Decision	EB-2015- 0141 Decision	EB-2015- 0004 Decision	New Provincial Rate
	DIRECT COST				
A	Administration	\$0.69	\$0.90	\$2.28	\$2.85
B	Loss in Productivity	\$1.23	\$3.09	\$1.96	\$3.30
C	TOTAL DIRECT COST (A+B)	\$1.92	\$3.99	\$4.23	\$6.15
	INDIRECT COST				
D	Net Embedded Cost per pole	\$478.00	\$944.49	\$1,479.02	\$916.24
E	Depreciation Expense	\$31.11	\$23.83	\$38.39	\$26.40
F	Pole Maintenance Expense	\$7.61	\$4.69	\$11.89	\$32.33
G	Capital Carrying Cost	\$54.59	\$80.19	\$118.91	\$75.57
H	TOTAL INDIRECT COST (E+F+G)	\$93.31	\$108.71	\$169.69	\$134.30
	No. Telecom Attachers	2.5	1.3	1.74	1.3
I	Allocation Factor	21.9%	34.3%	28.8%	32.45%
J	Indirect Costs Allocated (HxI)	\$20.43	\$37.29	\$48.80	\$43.58
	ANNUAL POLE RENTAL CHARGE (C+J)	\$22.35	\$41.28	\$53.03	\$52.00 Adjusted to 2018 (rounded)

Note: EB-2014-0116 Toronto Hydro Rate set at \$42.00 through settlement. \$52.00 rate does not include neutral; vegetation management represents \$8.70 of the 2018 rate. EB-2015-0141 – Hydro One Decision, EB-2015-0004 – Hydro Ottawa, rounded to \$53.00.