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March 14, 2014

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
Suite 2700
2300 Yonge Street
27th floor
Toronto, ON
M4P 1E4

VIA E-mail

Dear Ms. Walli:

Re: Board File No. EB 2013-0234
Toronto Hydro-Electric System Limited (THESL)
Evidence of Vulnerable Energy Consumers Coalition (VECC)

As per Procedural Order No. 4, we have enclosed the Evidence of the Vulnerable Energy Consumers Coalition (VECC) in the above-noted matter. We have also directed a copy to the applicant as well as the interested parties via email.

Would you please add VECC Expert Mr. George Hariton to the list of interested parties.

George Hariton
13 Carlaw Avenue
Ottawa, ON, Canada
K2G 0P9

Telephone: 613 852 1177
e-mail: ghariton@sympatico.ca

Thank you.

Yours truly,

Michael Janigan
Counsel for VECC

Cc: THESL – Amanda Klein – aklein@torontohydro.com
Counsel – Rob Barrass – rbarrass@torontohydro.com
Interested Parties – via email

EB-2013-0234

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

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

EXPERT REPORT OF GEORGE HARITON

March 14, 2014

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Economic and Regulatory Concerns associated with Regulatory Forbearance of Wireless Pole Attachments of Toronto Hydro-Electric System Limited

INTRODUCTION

My name is George Hariton. I have worked in economic regulation for some thirty-seven years, as staff member of regulatory tribunals, employee of a major telecommunications service provider, and independent consultant and lawyer. In particular, I have played a role in regulatory proceedings regarding support structures of telecommunications carriers, and attachments to them, on multiple occasions from 1986 to 2011. My Curriculum Vitae is attached to this opinion.

Counsel for VECC has asked me to provide my views on the economic and regulatory aspects of the current application by Toronto Hydro Electricity Systems Limited (THESL) for forbearance of the rates for attachments of antennas to THESL's poles. I have done this in the present document.

This evidence addresses three aspects of THESL's application. First, I will discuss the test that should be applied by the Board in considering whether to forbear from regulating the prices charged by THESL for attachments to its poles. I conclude that the appropriate criterion is whether or not THESL has significant market power in the market for pole attachments.

Second, I examine whether THESL has significant market power in the market for pole attachments. I find that, at least in some geographic markets, it is likely that THESL does have significant market power.

Third, I consider the position of customers of electricity customers of THESL (or "ratepayers") if the Board were nevertheless to proceed to forbear from regulating the prices for pole attachments. Currently, ratepayers benefit from having both the revenues and costs associated with pole attachments included in THESL's rate base and revenue requirement calculation. This benefit should not be reduced because the Board decides to forbear from approving pole attachment prices. I discuss mechanisms which could ensure that such benefit continues under forbearance. Such a mechanism should be an integral part of a decision by the Board to forbear.

THE TEST FOR FORBEARANCE

The statutory test for forbearance is set out in s. 29(1) of the *Ontario Energy Board Act*, 1988, which states:

> On an application or in a proceeding, the Board shall make a determination to refrain, in whole or part, from exercising any power or performing any duty under this Act if it finds as a question of fact that a licensee, person, product, class of products, service or class of services is or will be subject to competition sufficient to protect the public interest.

The *Act* does not define the "public interest" which is to be protected. However, public utility regulation has, over the decades, evolved a set of notions that have been confirmed by the case law. In particular, such regulation involves setting rates that are just and reasonable. In turn, this requires the regulator to balance the interests of the service provider, on the one hand, and the various classes of user or customer on the other hand.[1]

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[1] For classic references, see James Bonbright et al, *Principles of Public Utility Rates*, 2nd ed. (Public Utility Reports, 1988) or Charles F. Phillips, *Regulation of Public Utilities: Theory and Practice*, 3rd ed. (Public Utilities Reports, 1993)

Under traditional regulatory approaches, balancing of interests means that the service provider is allowed to earn a reasonable return on its investment, and that various classes of customers contribute to this return in line with social and economic objectives. For example, in telecommunications, the goal of universal access to service historically meant that rates for residential service were set lower than rates for business services, even where the costs of providing the two services were the same.

In more general terms, when regulating utilities in the public interest, achieving equity among the parties (investors, various classes of users) is a very important objective, at least as important as maximizing economic efficiency. For example, maximizing economic efficiency (in technical terms maximizing consumer surplus or total social surplus) may lead, as a secondary effect, to large redistribution of money from some interests to others. Regulation that is limited to efficiency considerations might approve this. Regulation that takes into account equity considerations would not approve it.

A different way of looking at this situation is that regulation in the public interest is concerned with the exercise of market power by the service provider. Exercise of such power may be desirable, and in some cases unavoidable, but it is to be done under the supervision or review of a regulator. The creation of the market power in the first place is usually the result of government grant of a franchise, together with the power to obtain rights-of-way and other advantages. The resulting market power is to be exercised in the public interest, including both equity and efficiency considerations.

By contrast, competition law is not concerned with exercise of market power as such. Rather, it is concerned only if there is an abuse of market power and such abuse leads to substantial

lessening of competition in that market or a related market. This is a concern primarily with economic efficiency, and gives little weight to equity concerns.

For example, in his evidence for THESL in this proceeding, Dr. Jeffrey Church applies a test grounded in competition law to help the Board decide whether to forbear from regulating the prices for pole attachments.[2] According to this approach, to continue to regulate, not only must the Board find that THESL has market power in the market for pole attachments (the "upstream market"), the Board must also find that, absent regulation, such market power could result in significant harm (in the form of reduced economic efficiency or deadweight loss) in the market for wireless communications services (the "downstream market"). Absent such harm in the downstream market, the Board should not be concerned by exercise of market power in the upstream market.

But this runs counter to the principles of public utility regulation. In considering the exercise of market power by a regulated utility, the regulated utility does not look beyond the regulated market, to possible downstream markets.

For example, in regulation of telecommunications services, when examining prices for business services, the CRTC does not look at the impact of price increases on, say grocery stores. It may well be that telephone service accounts for a very small portion of the grocery store's costs, and that an increase in its price would not result in any diminution of amount of telephone service purchased, or of grocery services produced. Nevertheless, the telecommunications regulator considers that too high a price to the grocery store would not balance its interests with those of other participants, and so would not be just and reasonable.

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[2] Expert Report of Dr, jeffrey R. Church, June 12, 2013 (hereinafter Church Evidence) at paragraphs 40 ff

In conclusion, the task before the Board is to determine whether THESL has market power in the market for pole attachments. If THESL does, the Board should continue to regulate the prices for this service, so as to supervise THESL's exercise of its market power. Conversely, the Board should forbear if it finds that market forces are sufficient to constrain the exercise of THESL's market power. In particular, the impact of forbearance on the "downstream market" for wireless communications services, is irrelevant to a decision on forbearance for pole attachments.

MARKET POWER –DEFINITION OF MARKETS

The process to determine existence of market power usually proceeds in two stages. First, the relevant market is defined. Next, the ability of the supplier to raise prices significantly above competitive levels is examined. This involves such factors as market share and market structure, ease of substituting other products (substitutability on the demand side) and ease of entry by new entrants or expansion by existing suppliers (substitutability on the supply side).[3]

Here the issue is whether THESL has sufficient market power, in the market for access to poles, to impose a price that is significantly different from that which would prevail in a competitive marketplace. The discussion first defines the relevant product market and then the geographical market. In each case it considers the extent to which there are substitutes, both from the demand side and the supply side.

[3] This is the process laid out by the CRTC in considering whether to forbear from regulating telecommunications services . See Telecom Decision CRTC 94-19, *Review of Regulatory Framework*, 16 September 1994, at Section III.B. The process followed by the Competition Bureau to assess market power in analysing mergers and abuse of dominance is substantively similar.

Product market

All forms of wireless communications require antennas at, or close to, the sender and the receiver of the communication. It is common to attach such antennas to poles or towers (standing on the ground), to masts (atop buildings) or to the outside of buildings. Indoor antennas, which usually serve the inside of a building, can be mounted in a variety of ways.

There is no feasible substitute for antennas and their supporting structures. Thus structures to support antennas constitute the relevant product market. This includes poles, towers and masts. Depending on circumstances, it can also include the side of a building or an inside mount, and other structures.

Geographic market

The specific location for an antenna is of paramount importance. While there is some limited flexibility on exactly where an antenna is sited, it must be in a position to serve a designated cell. Further, in an attempt to increase spectrum efficiency through reuse, cells are becoming smaller and antennas must be at more specific locations. Small cells (SC) and distributed antenna systems (DAS) are examples of the way cells are shrinking and the number of antennas multiplying.

The need to ensure uniform coverage within cells and the spread of multiple antenna systems (e.g. Multiple In, Multiple Out or MIMO) may place further restrictions on antenna siting.

It follows that the geographic market for an antenna, and for the structure supporting it, is very narrow. Depending on the nature of the terrain and the network architecture, relevant markets can be a city block.

Dr. Church, in his evidence in this proceeding for THESL , has stated that, from a technical point of view, geographic markets are indeed small.[4] However, he argues that these narrow geographic markets can be aggregated and analyzed at the level of an entire city, for purposes of estimating market power. The reason he gives is that what matters for market power is the degree of competition for support structures at each location. However, he further argues, THESL has no way of distinguishing locations at which it faces fierce competition and locations where it is a monopolist. Therefore THESL cannot price discriminate among locations, and must treat all locations as if competition were equally intense.[5]

But this is questionable. Substitutes for pole attachments vary according to city zoning, among other factors. For example, in areas with tall commercial buildings, mounting antennas high up on the walls may be an acceptable alternative to siting them on poles. In residential neighborhoods, this substitute may not be economical. Accordingly, the ability to charge higher prices will likely vary by type of neighborhood. No deep knowledge is required to design a pricing scheme that discriminates between residential and commercial neighborhoods.

There are many other features of different neighborhoods that affect the supply of substitutes to electric utility poles. THESL has a detailed knowledge of the greater Toronto area. It is uniquely placed to price discriminate among locations, charging different prices in different places. This

[4] Church Evidence at paragraph 163
[5] Church Evidence at paragraphs 164 and 165

supports the conclusion that the proper geographic market is very narrow, a few city blocks in some instances.

It is not practical to define geographic markets as narrowly as city blocks, of course. Some meaningful aggregation of locations must be used. A significant degree of homogeneity of substitutes may be achieved according to City of Toronto zoning. As a first approximation, a residential zone geographic market should be distinguished from a commercial zone geographic market, with downtown core areas perhaps forming a third distinct geographic market.

MARKET POWER – EXTENT OF MARKET POWER

The usual criterion for significant market power is whether a supplier can raise prices significantly above competitive levels and maintain that higher price for a substantial length of time. In practice, this test can be difficult to implement, as the competitive price level may not be readily observable. Instead, a number of indicators are often examined. The two most important of these are (1) the ease with which the customer can switch to a different existing supplier ("substitution on the demand side"); and (2) the ease with which a new supplier can enter the market or an existing supplier can expand capacity ("substitution on the supply side").[6]

We first consider substitution on the demand side. Dr. Jeffrey Church and Dr. Charles Jackson, in their evidence for THESL, have stated that a party wanting to install an antenna at a given location has many alternatives to attaching to THESL poles. In particular, they can attach to the outside of buildings or to other outdoor structures, or in some cases locate antennas inside buildings.

[6] Market share is usually given considerable importance in such analyses, although it is not a determining factor. In the present case, THESL and THESI have a monopoly on utility poles. However, the important factor is the ease with which alternatives can substitute for these pole attachments.

However, attaching antennas to the side of buildings, while certainly technically feasible, nevertheless presents many practical problems. These are most starkly seen in attempts to provide outdoor coverage of residential neighborhoods via small cell or distributed antenna systems. In most residential neighborhoods, the only structures other than electric utility poles that are available are the sides of one and two story family homes. However, relying on these to attach structures is problematic:

- Many people object to antennas, claiming that they are not aesthetic and constitute an eyesore. Even if one householder might agree to an antenna on his or her house, neighbors might well complain and bring social pressure to bear. Experience with dishes serving to receive television signals from satellites illustrate these problems.
- Many people believe that electromagnetic radiation associated with wireless communications antennas is a threat to human health. This in turn may lead to significant opposition to wall-mounted antennas. In this context, it is not important whether such health concerns are well founded or not. It is the perception that counts. I note that similar concerns arise in the context of mast-mounted or tower-mounted antennas, even though the antennas are at greater distances from humans than would be wall-mounted antennas.[7]
- Use of wall-mounted antennas would require negotiation of individual agreements with hundreds of home owners, leading to potentially huge transaction costs, delays, and hold-ups (strategic delay by the home owner to extract as much from the antenna attacher as

[7] For recent health concerns with wireless communications see for example Bioinitiative Report 2012, available at http://www.bioinitiative.org (last visited 28 January, 2014). As concerns resistance to radio antenna sites, it does not matter that the fears expressed in this and similar reports are groundless; what matters is the perception that they are real. For an example of a group more generally opposed to installation of additional antennas, see Coalition for Local Oversight of Utility Technologies at http://cloutnow.org/ (last visited 28 January, 2014).

possible). By contrast, access to hundreds of THESL poles could be the subject of a single agreement.

- Wall-mounted antennas, like any antennas, require ongoing access for maintenance. This may be a nuisance for the occupiers of the home and an extra cost for the operator of the antenna. Note that, unlike most commercial buildings, most residential buildings are not readily accessible from city streets and sidewalks but rather are set back.
- Family houses can change hands frequently. Agreements with individual homeowners may have to be renegotiated every time there is a change in ownership. Alternatively, the original home owner must be persuaded to insert a covenant in his or her title providing that future owners must be bound by the original agreement.
- Because family homes typically are one or two stories high, antennas cannot be sited very far off the ground. This limits their range, and leads to a requirement for more antennas. By contrast, antennas can be situated on top of certain poles and well above house roof levels on others.

The above difficulties are most acute in the case of residential neighborhoods.[8] In such neighborhoods, there may occasionally be other structures that could be used to attach antennas, e.g. a school or a community center, but these pose problems of their own, and in any case do not cover sufficient locations to be a useful alternative. In general, there are no good alternatives to utility poles in residential neighborhoods.

In commercial neighborhoods, some of these concerns are less pronounced. Buildings are taller and so antennas attached to their sides can have a greater range. However, concerns with

[8] For examples of opposition to antenna sitings in residential neighborhoods, see Fred Hopengarten, *Antenna Zoning* (Focal Press, 2009) Chapter 7 deals with safety issues, Chapter 8 with aesthetic issues, Chapter 9 with environmental issues, and Chapter 10 with other issues.

aesthetics and "clutter" remain, as do worries (founded or not) as to the long term health impacts of radio antennas.

We next consider substitution on the supply side, i.e. provision of new structures for attachment of antennas, by either existing players or new entrants.

Unfortunately, supply of new support structures is not practical in most urban areas. The construction of new support structures, or adaptation of existing structures to support antennas, is becoming more and more problematic. Municipalities and other public bodies wish to avoid this. Indeed, in 2008 when the CRTC ordered continued regulated access to the support structures of telecommunications service providers, the primary reason was not that they are essential facilities, but rather that they are "public goods". As set out in Telecom Decision CRTC 2008-17:

> 90. Services in the public good category are those that the Commission has determined provide an important social benefit and are, therefore, mandated.
>
> .....
>
> 93. The Commission considers that engaging in the construction of duplicate support structure facilities would result in an inefficient use of public and private resources and would be an inconvenience to the public. Accordingly, the Commission determines that support structure services are to be classified as public good services.[9]

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[9] Telecom Decision CRTC 2008-17, Ottawa, 3 March 2008, *Revised regulatory framework for wholesale services and definition of essential service*

The CRTC is currently reviewing the regime it established in 2008.[10] In the initial submissions to that proceeding, no party suggested any deregulation of support structures, including pole attachments.[11]

Industry Canada also recognizes the problems associated with construction of new support structures for antennas. It requires the use of existing support structures wherever possible, rather than construction of new ones:

> Before building a new antenna-supporting structure, Industry Canada requires that proponents first explore the following options:
>
> - consider sharing an existing antenna system, modifying or replacing a structure if necessary;
> - locate, analyze and attempt to use any feasible existing infrastructure such as rooftops, water towers etc.
>
> Proponents are not normally expected to build new antenna-supporting structures where it is feasible to locate their antenna on an existing structure, unless a new structure is preferred by land-use authorities.[12]

As regards the rates that can be charged for access to existing towers, masts, and their sites, Industry Canada requires parties to try to negotiate a commercial agreement. If no agreement is reached within a reasonable time frame, the parties are directed to binding arbitration.[13]

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[10] Telecom Notice of Consultation CRTC 2013-551, 15 October 2013.

[11] Indeed, telephone companies who are the major owners of telephone poles explicitly endorsed continuation of the present regulatory treatment of attachments to these poles. See the initial submissions on 31 January 2014 of Telus (at paragraph 175), Bell Canada (at paragraph 68) and MTS Allstream (at paragraph 44)

[12] Industry Canada, CPC-2-0-03, Issue 4, Radiocommunications and Broadcasting Antenna Systems, Released: June 2007, Section 3

The CRTC also has jurisdiction over wireless communications. To date it has taken a "light touch" approach. While keeping its powers under sections 24 and subsections 27(2), 27(3) and 27(4) of the Telecommunications Act, it has not required prior approval by it for wireless service prices. Recently, however, the CRTC has begun a proceeding to consider whether it should more strictly regulate "wholesale" services, i.e. services offered by incumbents to other wireless service providers, including tower and site sharing.[14]

It should be noted that other jurisdictions also recognize the unique role that utility poles provide in the supply of telecommunications services, including wireless services. For example, the United States has long required electric utilities to grant regulated access to their poles to cable systems. This was extended to telecommunications carriers in 1996 and further elaborated in the FCC's Pole Attachment Order 2011, which found that pole attachment rates could not be left to commercial negotiation and should be subject to regulation.[15]

Further, it is worth noting that Canada's major providers of wireless communications services regard poles, and attachment to them, as strategic assets. Several investment companies on Bay Street have approached Bell, Rogers and Telus with a view to having them spin off their cell towers into a REIT. All towers, poles and masts would be held by a separate independent company, who would provide attachments and related services to all the wireless service providers in the jurisdiction. But the Canadian wireless suppliers aren't interested. According to Darren Entwhistle, CEO of Telus:

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[13] Ibid.
[14] CRTC, Telecom Notice of Consultation CRTC 2014-76, 20 February 2014. Initial submissions are due 1 May 2014.
[15] *In the Matter of Implementation of Section 224 of the Act,* Report and Order and Order on Reconsideration, 26 FCC Rcd. 5240 (April 7, 2011), at paragraph 6.

"I really like owning my towers and I consider [it] to be a competitive advantage to own the towers."[16]

This insistence of the major wireless service providers on pole ownership suggests that they see ownership and control of poles as a competitive advantage. This is not consistent with the view of THESL that the market for pole attachments is competitive.

Substitution of other alternatives for attachment to electric utility poles is not the only factor limiting market power in this market. Elasticity of demand for the final, or downstream product, must also be considered. Even if customers of THESL do not have the option of switching to other suppliers of structures, because no adequate substitutes are available, they still might choose to demand a lesser quantity of attachments. In the present case, this might happen if an increase in pole attachment rates caused wireless service providers (WSPs) to incur a significant increase in costs, which in turn they would have to pass on to their own customers in terms of lower quality. Lower quality would translate to larger cells and hence fewer antennas, i.e. a decline in demand for attachments. If instead of lower quality, wireless service providers tried to pass on higher costs through higher prices to their customers, this might lead to a reduction in the amount of wireless services purchased In turn, the WSPs would purchase less access from the electric utilities. If large enough, this could have some restraining effect on rates for pole attachments charged by the electric utilities.

But, while this effect does exist in theory, in practice its magnitude is likely negligible. Pole access costs are a small proportion of the total costs of providing wireless services, and an increase would likely not affect the quality of wireless service or its price.

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[16] Gary Marr, *Financial Post*, September 20, 2013, at page FP1

The last factor to consider is the rapid growth in wireless capacity. Over the next decade, mobile traffic is expected to increase extremely quickly.[17] A huge amount of additional capacity will be needed to accommodate this demand. Since radio spectrum is severely limited, sufficient new capacity will require (1) more efficient use of spectrum (bits per herz) (2) more off-loading of wireless traffic onto the landline network (e.g. use of femtocells) and (3) more re-use of spectrum, i.e. much smaller cells, and use of WiFi.[18] While spectrum efficiency is increasing, the vast majority of the new capacity will have to come from re-use of spectrum through splitting of cells.[19] In turn, this will require a multitude of new small cell and distributed antenna systems, and WiFi installations, and the support structures to mount their antennas. While much of the needed capacity expansion will be inside buildings, much of it will be outdoors. As a result, demand for support structures outdoors will grow quickly as well. This will serve to increase the market power of electric utilities such as THESL well beyond what it is today.

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[17] For example, Cisco forecasts global mobile Internet traffic to increase by an average of 66% per year over the period 2012 to 2017. See Cisco, Visual Networking Index: Forecast and methodology, 2012-2017, available at http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360_ns827_Networking_Solutions_White_Paper.html. Also UMTS Forum, Mobile Traffic Forecasts 2010-2020, available at http://groups.itu.int/Portals/17/SG5/WP5D/2-3%20UMTS%20Forum%20presentation%20at%20IMT-%20WS%20at%20AWG%20210311_final_v1.pdf . See also evidence of Drs. Church and Jackson on behalf of THESL and THESI in this proceeding.

[18] Some increase in capacity will come from government making available new spectrum frequency bands. However, new spectrum remains severely limited, and takes a very long time to become operational.

[19] For example, according to ARC Chart:

> Carriers are struggling to cope with the explosion of data traffic on their networks, and this has resulted in over 100 commercial LTE network deployments worldwide, with nearly 350 carriers committed to the 4G technology.... Driven by this evolution, ARCchart forecasts annual unit shipments of 1.4 million macro cells, 5 million small cells and 11.5 million Wi-Fi access points by 2017, representing a global market value of $42 billion.

Available at http://www.arcchart.com/reports/heterogeneous-networks-hetnets-report.asp. (Last visited 28 January, 2014.)

In summary, THESL has significant market power in at least some markets for attachment of antennas, particularly residential neighborhoods and perhaps others as well. As a consequence, forbearance of the rates for access to these poles is not in accord with the provisions of the *Ontario Energy Board Act 1998*.

IMPACTS ON RETAIL ELECTRICITY CUSTOMERS

Contribution to Fixed and Common Costs

If the Board nevertheless decides to forbear from regulating the rates charged by THESL for access to their poles, the impact of such a decision on retail customers of electricity services (hereinafter referred to as "ratepayers") must be weighed. In particular, ratepayers should be protected from immediate or long-term negative effects on the rates they must pay.

Such protective mechanisms should be an integral part of any forbearance decision. They should not be delayed to a further phase, after forbearance. Such delay could jeopardize the implementation of an appropriate mechanism since the incentives of THESL to agree will be reduced, once they have obtained forbearance.

Under the current regulatory regime, THESL's net investment in poles forms part of its rate base. Operating and maintenance expenses for the poles, as well as depreciation and a reasonable return on capital, are part of THESL's revenue requirement. Revenues from pole attachments serve to reduce the revenue requirement. To the extent that these revenues exceed incremental costs of the poles, and contribute to the recovery of fixed and common costs, that reduces the amount of costs to be recovered from ratepayers.

Under forbearance, there is a possibility that revenues from pole attachments will no longer be used to offset some part of fixed and common costs, but instead will flow through to the utility and its owners. To that extent, ratepayers will be worse off because of forbearance. The risk of a negative impact exists even if the incremental costs of pole attachments are also removed from the revenue requirement calculation.

To keep ratepayers whole, the difference between revenues from pole attachments and the corresponding incremental costs (hereinafter referred to as the "margin") should continue to be used to recover a portion of the utility's fixed and common costs. This will serve to maintain the balance between the interests of the utility and of the various ratepayers.

In practice, a portion of the margin should be kept by the utility and its owners. This is necessary to provide incentives to THESL to provide pole attachment services. This portion is arbitrary to some degree. It should be designed to balance the interests of ratepayers and the shareholders of THESL.

This proposed treatment of margins from pole attachments is reinforced by the fact that poles are an integral part of the electricity network and cannot be separated from it. Any spare capacity, in the form of unused space on the poles, results from the provision of the electric utility network. Even after attachment of antennas or other equipment, the poles will continue to be largely used in the provision of electricity services.

Upon coming into service poles and their costs have been included in the rate base and revenue requirement. As a result, they have been mostly paid for through the rates paid by utility ratepayers. In particular, ratepayers have largely borne the risks of the investment in poles. For example, if poles turned out to be under-utilized, or damaged through unforeseen circumstances,

or replaced early, the resulting costs have been passed through to ratepayers. In effect, ratepayers have been guarantors of these investments as regards shareholders.

Thus, the costs, and the associated risks, of the poles have historically been part of the utility business. To now effectively withdraw part of these assets from the regulated portion of the utility and use them instead for other purposes, without any further contribution to satisfying the utility revenue requirement, would be to deny utility ratepayers of the benefits of assets financed in large part through their rates.

THESL has agreed with implementation of such a revenue sharing agreement, at least in principle. In response to an interrogatory in this proceeding, it stated in part:

> "THESL contemplates a sharing of the revenues pursuant to a mechanism approved by the OEB. The specific allocation of revenues would depend on the terms and conditions governing it. For example, if the revenues were to be simply allocated as between the ratepayers and the shareholder, a 50/50 split might be a reasonable outcome-with half of the revenue going to offset revenue requirement and the other going to the shareholder. On the other hand, if the revenues were to be earmarked for a special purpose – for example assistance to low income consumers – a different allocation may be reasonable. An allocation made today may be time-limited to be re-visited at a later date."[20]

In my opinion, the percentage allocated to recovery of the revenue requirement should be higher, given that in the past, ratepayers have borne significant risks associated with poles. Nevertheless, THESL's proposal is a step in the right direction..

[20] Response to Consumers' Council of Canada, Issue 10, Question 15

Mechanisms for Sharing

A mechanism for ensuring that ratepayers obtain an adequate benefit from pole sharing should satisfy several criteria:

- It should allow the electric utility to recover the incremental costs caused by pole attachments
- It should provide an incentive for the electric utility to solicit and cooperate with parties wishing to attach their facilities to utility poles
- A significant portion of the net revenue (or margin) from such pole attachments should be used to help recover the revenue requirement of the electric utility business
- It should be "robust", i.e. not easily avoided or changed in favor of the electric utility and its investors; rather, forbearance should be conditional on it
- It should be relatively easy to administer, consistent with the other four objectives.

I know of two main approaches to implement such a mechanism.

1. The Board could require reporting of the actual margin (revenues less incremental costs) earned by the utilities on pole attachment services, and assigning most of that margin to cover the revenue requirement. This mechanism gives THESL an incentive to actively promote pole attachment services
2. The Board could impute a target contribution instead of one based on the actual margin earned. This could be in the form of a target amount per pole suitable for attachments.THESL's incentive is that its shareholders keep any revenues beyond that.

Both mechanisms would satisfy the criteria above. The first mechanism is consistent with past Board practices. It allows THESL explicitly to recover its incremental costs of pole attachments in priority to any sharing. Thus it continues to reduce the risk borne by THESL. It also provides incentives for THESL to pursue opportunities for pole attachments. It can provide benefits to ratepayers, with the size of th4ese benefits depending on the size of the allocation.

Finally, the first mechanism requires ongoing calculation of the incremental costs to THESL of pole attachments. This calculation is not always straightforward, and the costs involved can be controversial. Further, costs in a competitive environment are likely to be confidential and so not readily open to public scrutiny.

The second mechanism also provides an opportunity to recover its incremental costs. As well, the incentives to pursue business opportunities would be greater than under the first mechanism, since THESL would keep all of margins above incremental costs plus target contribution. The contribution to the revenue requirement can be more precisely targeted by the Board, given the explicit determination of the target contribution.

Finally, the second mechanism does not require ongoing calculation for regulatory purposes of any costs of pole attachments.[21] Rather the target contribution would be based on balancing the interests of the parties, including distributional factors. This would reduce the regulatory burden on the Board, on THESL, and on other parties. It would also reduce issues of confidentiality, and so improve transparency

[21] Some implementations might require a one-time calculation. For example, if historically the incremental cost of a pole attachment was $2 and the price charged was $22, then the target contribution per pole could be $15. This would allocate 75% of the margin of $20 to the revenue requirement, and 25%, or $5, to the shareholders as an incentive to rent more pole sites. This amount could be indexed for inflation over time, rather than being re-estimated each year.

CONCLUSIONS

I come to three conclusions that should inform the Board in its decision whether to forbear from regulating pole attachment services.

First, the proper criterion for forbearance is whether THESL has significant market power in the markets for attachments of antennas. This follows directly from a plain reading of section 29 of the Act. There is no need to look to other markets, in particular the market for wireless services. As long as THESL has market power in the market for pole attachments, that market power must be exercised under the Board's supervision.

Second, the operating territory of THESL does not constitute a single geographic market. Competitive conditions vary significantly as between residential neighborhoods and other parts of the territory, and may vary significantly in the downtown core as well.

Third, in residential neighborhoods, it is likely that alternatives to utility pole attachments are not sufficient substitutes to constrain THESL's pricing of these pole attachments. This may also be the case in other neighborhoods.

Fourth, if the Board does forbear from regulating pole attachments, it should simultaneously establish a sharing mechanism which would ensure that benefits to ratepayers continue. In particular, it could allocate margins from pole attachment services between the revenue requirement and the shareholders. Alternatively it could impute a target contribution per pole attachment.

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Appendix I

RESUME – GEORGE HARITON

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Fluent in French and English

Called to the Ontario Bar 2005

Education:

2011	M.Sc. Finance & financial law	University of London
2008	LL.M. Competition law	University of London
2004	J.D. Law	University of Toronto
1982	M.A. Economics	Carleton University
1972	Ph.D. Mathematics	University of Toronto
1966	B.Sc. Physics	McGill University

Work Experience:

1999 – 2014: Principal, TIA consulting

- Provide legal and economic services to a variety of public and private sector clients
- Consult in communications, financial institutions and services, competition policy, transportation, and consumer protection law and regulation
- Specialties include market structure and entry, pricing, essential facilities, and subsidies
- Expert witness in administrative law hearings on wholesale access and services, price caps, productivity, pricing, and economic costs of services
- Senior advisor to government policy reviews, resulting in significant reform of regulation

1995 – 1998: Vice President, Regulatory Matters, Bell Canada

- Expert witness, on local competition , price caps regulation, design of subsidies to high cost serving areas, and benchmarking service costs to other telecommunications carriers

1992 – 1995 Vice President, Finance, Bell Canada

- Chief economist
- Demand and revenue forecasts and analyses, including budgets and reconciliation of monthly results
- Expense analysis and cost estimation for new and existing services
- Examine alternative forms of regulation
- Evaluate business plans and marketing strategies

1989 – 1992 Assistant Vice President, Engineering Economics, Bell Canada

- Business cases and evaluation of new investments and services
- Designed and implemented Bell Canada regulatory strategy for the introduction of competition for long distance services

1988 --1989 Director of Business Analysis, Nortel

- Business cases and evaluation of new products, including frame relay and fiber to the home
- Portfolio analysis of research projects: potential returns, risks, and synergies

1981 --1988 Executive Director, Research, Canadian Transport Commission

- Economic and social research in rail, air, water and road transport, including deregulation
- Support for economic and social regulation for all modes, and for rail safety, including chairing public meetings after Mississauga derailment
- Design and help implement regulation to assist the physically disabled on federally regulated carriers
- Expert witness in hearings on airline deregulation

1979 – 1981 Director-General, Economic and Financial Analysis, Canadian Radio-Television and Telecommunications Commission (CRTC)

- Regulation of telecommunications and broadcasting in Canada

1972 – 1979 Various positions, Research Branch, Canadian Transport Commission

- Economic analysis and regulatory support for telecommunications, air and rail transport
- Formal cost inquiries into the costs of rail and telecommunications services
- Alternative forms of regulation, including price caps

Other Activities:

2001-2014	Volunteer providing financial education to individual retail investors (2009-2014 member of the Board of Directors of FWF Ltd, a non-profit educational forum)
1997-1999:	Consultant to Bell Canada International Evaluation of business cases for investments in Mexico and Brazil; presentations to national regulators
1995-1998:	Member, Advisory Committee, Conference Board of Canada study of regulated industries
1994-1996:	Member, Advisory Council, Centre for the Study of Regulated Industries, McGill University
1994-1995:	Sysop, Compuserve Moderated on-line discussion groups
1984-1985:	Chair, Canadian Institute of Guided Ground Transport, Queen's University
1984-1987:	Adviser, FCAR, Gouvernement du Quebec Evaluation of research proposals for government funding
1983-1984:	Member, Canada Grains Council
1983-1988:	Sessional Lecturer, Department of Civil Engineering, Carleton University Taught graduate courses in transportation engineering
1982-1988:	Member, Special Education Advisory Committee, Carleton Board of Education
1981-1982:	President, Briargreen Community Association
1979-1984:	Consultant, Transportation Water and Telecommunications Division, World Bank
1973-1976:	Union steward and organizer, PIPS and ESSA (federal public service unions)