

ONTARIO ENERGY BOARD

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

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

**INTERROGATORIES OF
ENERGY PROBE RESEARCH FOUNDATION
("ENERGY PROBE")**

February 14, 2014

**TORONTO HYDRO-ELECTRIC SYSTEM LIMITED
2014 RATES REBASING CASE
EB-2013-0134**

**ENERGY PROBE RESEARCH FOUNDATION
INTERROGATORIES**

Technology

1. What is the current and likely future state of modern wireless networks?

1-Energy Probe-1

Ref: BRG Report (Dr. Church) Page 6, Para 18, & Appendix Table 2

Preamble:

18. Downstream Product Market Definition: The relevant downstream market is a wireless service that meets both nomadic and mobile demand by users in Toronto, with an emphasis on high speed data transmission. Wireless services in the relevant market are likely to utilize Long Term Evolution ("LTE") technology to deliver increasingly high speed data transmission services, aimed at supporting the needs of smartphone and tablet users.

- a) Please explain the differences between LTE and 4G Networks and based on their differences, what is the outlook for penetration of each and secondly the market for attachments/connections.
- b) Please update Appendix Table 2 for most recent data. Please include information on 4G networks if available.

2. For the technical operation of a modern wireless network, are there certain kinds of wireless network elements for which pole access is an option?

- (a) For each such element, what purpose(s) does it serve and/or for what services and applications is it used?
- (b) For each such element, are there siting alternatives to pole access?
- (c) For each such element, are there technological alternatives?

3. For each of the elements discussed in Issue 2, is there an expectation that this is likely to change in the foreseeable future?

Competition

4. What is the relevant antitrust market in which THESL supplies pole access for wireless attachments? Specifically:
 - (a) What is the relevant product market?
 - (b) What is the relevant geographic market?

4-Energy Probe-2

Ref: BRG Report (Dr. Church) Page 1 Para 1

Preamble:

1. Toronto-Hydro Electric System Limited ("THESL") is owned by the City of Toronto. THESL is the local electric distribution company ("LDC") in the City of Toronto. One component of the electric distribution system owned, maintained, and operated by THESL is a network of hydro (or power) poles. These poles are an example of a support structure used by THESL to provide distribution services. THESL has a number of different types of poles, with the type of pole determined by its requirements. Some poles support both primary and secondary distribution of electricity, wireline attachments of the telecommunications and cable television providers, and streetlights. Other poles have a much more limited function, primarily supporting streetlights but available to provide distribution services.
 - a) Under the OEB CCTA decision the regulated rate for an attachment was set at \$22.35 per year. Please compare this rate/charge to the range of rates/charges in the market.
 - b) Please separate utility pole rate/charges from other non-utility attachment charges (buildings and other infrastructure).
 - c) Please explain an attachment compared to a connection for Streetlighting and USL customers?

4-Energy Probe-3

Ref: BRG Report (Dr. Church) at Para 42

The Canadian Competition Bureau guidelines on merger enforcement and abuse of dominance make no mention of an “antitrust market”. Similarly, the Canadian guidelines do not contain the concept of the “antitrust violation”. In its decision in the Superior Propane merger case, Canada’s Competition Tribunal discussed the relevant “competition market”.

- a) Recognizing that the enforcement agencies in both Canada and the United States have a similar approach to delineating relevant markets in merger and monopolization cases, does Professor Church believe that there are any significant differences between Canadian competition law and U.S. antitrust laws?
- b) If the answer to a) is yes, please briefly indicate any differences that Professor Church feels are significant?

4-Energy Probe-4

Ref: BRG Report (Dr. Church) at Para 17, 63. 99-143

At para 17, Professor Church states:

“Wireless service providers can utilize a number of alternative inputs to small cell wireless technologies and DAS deployments that use pole access to provide outdoor coverage and capacity. Wireless service providers can also utilize alternative siting facilities for small cell and DAS deployment, such as the side of a building. These possibilities for substitution suggest that there is a broad upstream ‘input market’, and not a market defined by monopoly control over the input provision of pole access for wireless attachments. ...”

At para 63 he states:

“The product dimension of the relevant market is found by considering the willingness and ability of customers to substitute to different products in response to a SSNIP (sic Small but Significant and Non-transitory Increase in Price). Products to which it appears that customers are readily willing to substitute in the face of higher prices are included in the market. Substitutes are often identified by the requirement of functional interchangeability, which means that substitute products have similar qualities that enable the same end use. The issue of whether products are reasonable substitutes, in aggregate, is resolved by the Hypothetical Monopolist Test and the threshold for the SNNIP.” (underlined emphasis added)

- a) **Does Professor Church believe that the mere existence of “possibilities for substitution” is sufficient to establish that the relevant market that the Board should adopt in this proceeding is broad?**
- b) **Would it be correct to infer that Professor Church puts substantial weight, throughout his report, on the concept of functional interchangeability to establish that there is a broad upstream input market?**
- c) **In EB-2011-0120, Professor Ware opined that functional equivalence was not determinative in product market definition:**

Dr. Schwartz: to Professor Ware: ... Do you believe as - and this is my take - as apparently Mr. Starkey and Professor Yatchew do, that:

"Functional equivalence is a sufficient basis for including products or technologies in the same product market under the Competition Bureau's guidelines."

And may I just add one thing? The guidelines refer -- use the phrase "functional interchangeability", not "functional equivalence" so I think it's a small distinction, but you might want to take that into account.

DR. WARE: Yes. Well, the answer is no. I don't believe that functional equivalence is a particularly precise way of defining product markets. ... Transcript, Technical Conference, November 4, 2011. 102, line 11-24

Professor Ware believes that functional equivalence/interchangeability is insufficient evidence to determine whether alternative products are in the same product market. Does Professor Church agree or disagree?

- d) **If, as the final statement in para 63 above states, the HMT and SSNIP resolve the issue substitutes in aggregate, why does Professor Church emphasize functional interchangeability? Is it possible for functionally interchangeable products to be excluded correctly from the relevant market on the basis of the HMT and the SSNIP?**
- e) **At paras 99-143, Professor Church provides a lengthy discussion of technical features of wireless telecom systems and alternatives to poles. Is it his view that such a demonstration is sufficient to include all functionally equivalent technologies that he describes in the same product market?**

4-Energy Probe-5

Ref: BRG Report (Dr. Church) at Para 17

In EB-2011-0120, Mr. M. Starkey, an expert for THESL, stated in his affidavit:

“... For example, even Public Mobile was able to deploy a macro cell site-based network in which it placed numerous traditional macro cell sites throughout the city as a complete substitute for the DAS network it intended to build utilizing attachments to power poles. Public Mobile apparently uses this macro-site network to offer its wireless services throughout Toronto today.” (Affidavit of M. Starkey on Behalf of THESL, September 2, 2011, line 10-14 at p.25)

“... Note that Rogers does not indicate that it will rely upon DAS to further its wireless capacity needs, instead it intends to rely on Wi-Fi offload and femtocell technology (both of which are direct substitutes for the DAS network CANDAS describes below):” (ibid., line 5-8 at p.33 parentheses in original)

In its Interrogatory #2(b), Energy Probe asked:

“Does he (Mr. Starkey) contend that these two technologies (macro cells and the DAS network) are good substitutes in the economic sense?”

The response to this interrogatory was:

“b) Yes.”
(Interrogatory Responses Tab 4 Schedule 2, filed 2011 Sep 20)

- a) **Applying his expertise in market definition, does Professor Church agree with Mr. Starkey’s statement that the macro cell site-based network is “a complete substitute for the DAS network” that Public Mobile intended to build and therefore be included in the relevant product market?**
- b) **Applying his expertise in market definition, does Professor Church agree with Mr. Starkey’s statement that Wi-Fi and femtocell technology are “direct substitutes” for the DAS network described by CANDAS and therefore be included in the relevant product market?**

4-Energy Probe-6

Ref: BRG Report (Dr. Church) at Para 59

Throughout his report, Professor Church Professor Church cites with approval the Competition Bureau's Merger Enforcement Guidelines' approach to market definition. Please consider the following extract therefrom:

“Various functional indicators help to determine what products are considered substitutes, including end use, physical and technical characteristics, price relationships and relative price levels, as well as buyer switching costs, as discussed below. Buyers may not view products purchased for similar end uses as substitutes. Therefore, functional interchangeability is not sufficient to warrant inclusion of two products in the same relevant market. In general, when buyers place a high value on the actual or perceived unique physical or technical characteristics of a product (including warranties, post-sales service and order turnaround time), it may be necessary to define distinct relevant markets based on these characteristics.” (Merger Enforcement Guidelines, March 2011 at para 4.14)

- a) Poles, rooftops and sides of buildings may be functionally interchangeable in the limited sense that they can enable the attachment of DAS systems. However, would Professor Church agree that, according to the market definition approach taken in the Merger Enforcement Guidelines, they would not necessarily be regarded as substitutes?**
- b) What evidence does Professor Church have that buyers of those products view them as substitutes? If some buyers do view them as substitutes but others do not, can it be concluded that they are?**

4-Energy Probe-7

Ref: BRG Report (Dr. Church) at Para 63

"The CANDAS Application in EB-2012-0120 indicates that DAScom entered into Agreements for Licensed Occupancy of Support Structures with THESL effective August 1, 2009 and with THESL effective September 4, 2009 (CANDAS Application, para 6.11, p.18).

On January 14, 2010, THESL advised DAScom that THESL had issued a Stop Work Order (ibid., para 7.5, p.20)

In June 2010, due to delays in construction and permitting, Public Mobile decided to launch its service using Macro Cell Sites on a temporary basis and delayed the introduction of its DAS Network. (ibid., para 7.10, p.21)

On August 13, 2010, THESL filed a letter with the Board advising that as a matter of policy, the attachment of wireless telecommunications equipment to THESL power poles would not be permitted. (ibid., para 8.1, p.21)

On August 17, 2010, Public Mobile received an e-mail message from Mr. Lawrence Wilde stating that neither THESL nor THESI would grant access for wireless attachments. (ibid., para 8.3, p.22)

According to Brian O'Shaughnessy, Public Mobile's chief technology officer, Public Mobile shifted to a permanent Macro Cell Site deployment and is upgrading its temporary structures on the building rooftops and special purpose towers. (Written evidence, July 26, 2011, p.8)"

THESL's expert Professor Yatchew opined that hydro poles and cell towers were in the same product market, relying in part on the fact that Public Mobile had launched service in Toronto on May 26, 2010 "despite the absence of access to utility poles in Toronto" (Yatchew evidence at p.15).

- a) Does Professor Church believe that Public Mobile's shift to permanent Macro Cell Site deployment supports the conclusion that cell towers and poles are in the same product market?**
- b) Does Professor Church believe that evidence of substitution/switching by Public Mobile after termination is also evidence of substitutability before termination?**
- c) In Professor Church's opinion as an independent expert economist, did Professor Yatchew and/or Mr. Starkey commit the well-known "cellophane error" in taking the evidence of switching after termination of the pole access agreements to indicate that cell towers and poles are in the same product market?**
- d) If functional interchangeability and the above evidence of actual switching do not necessarily support the conclusion that cell towers and poles are in the same product market, what evidence does Professor Church point to that supports to a different conclusion?**

4-Energy Probe-8

Ref: BRG Report (Dr. Church) at Para 55, 58-62, 63, 64, 65.

At para 55, Professor Church refers to the “functional definition of the market” as “identifying the levels of the supply chain or the different vertical levels of production that are relevant for assessing market power. At paragraphs 58-62, he outlines the Hypothetical Monopolist Test (“HMT”) in the enforcement guidelines of the Competition Bureau.

- a) Does “functional definition of the market” (para 63) mean including all products that are functionally interchangeable or functionally equivalent? If not, please explain what “functional definition” is.**
- b) Does Professor Church propose that functional definition of the product market would be a process that complements the HMT when vertical levels of production are involved? Does it replace the HMT in those circumstances?**
- c) If, as Professor Church states at para 65, the own price elasticity of demand summarizes all substitution possibilities, then further “functional definition” should not be necessary as it adds no information. Is this statement correct or incorrect?**
- d) The HMT is often illustrated by assuming that the market demand curve of a product is linear and that a monopolist of that product has constant marginal costs. If the SSNIP is 5%, and if the competitive price prevailed prior to the hypothetical monopolization, would Professor Church agree that the own-price elasticity of demand for the product in question must be at least 10 in order for consumer switching to make the 5% price increase unprofitable, thereby restraining the price increase by the monopolist to a non-significant amount?**
- e) On the basis of his knowledge of the telecom industry, does Professor Church believe that the price-elasticity of demand for pole attachment in Toronto by existing landline and cable attachers to be as large as 10?**
- f) Is it reasonable to believe that the demand elasticity for landline and cable attachers is inelastic, i.e. less than 1.0 in absolute value?**
- g) Assume that there is a large number of wireless attachers to THESL’s poles. Based on his knowledge of the telecom industry, does Professor Church believe that the price-elasticity of demand for pole attachment in Toronto by those attachers would be inelastic or elastic?**

- h) If he believes that the demand-elasticity for pole attachment by wireless attachers is elastic, does he believe that it is at least as large as 10?
- i) Please identify other commodity goods or services (i.e. not differentiated brands of the same product) that have a demand elasticity as high as 10.
- j) If Professor Church does not accept the premises of linear demand and constant marginal costs, what other premises would he propose that would justify a demand elasticity of 10?
- k) If Professor Church believes that the demand elasticity for pole attachments would be higher in the presence of pre-existing margins, does he believe that the CCTA decision erred in setting the attachment rate of \$22.35? Does Professor Church regard the regulated price of \$22.35 per pole per annum as being at or near (i) the marginal cost of access to a pole and (ii) the competitive level at the time it was imposed by the Board in the CCTA decision? If not, please briefly explain why not.

5. What is the relevant downstream market to which THESL's supply of pole access for wireless attachments is an input?

5-Energy Probe-9

Ref: BRG Report (Dr. Church) at Para 18, 22.

Professor Church states, inter alia, that:

“The relevant downstream market is a wireless service that meets both nomadic and mobile by users in Toronto, with an emphasis on high speed data transmission.” (para 18)

“Because pole access does not result in either a significant cost advantage or quality advantage, consumers do not distinguish between wireless services that utilize pole access as an input and those that do not. ...” (para 22)

- a) Does Professor Church mean to say that the downstream market consists only of wireless service?
- b) Is wireless service a single homogeneous product, or is it a differentiated product?
- c) Re: para 22, how does Professor Church know this? On what evidence does he rely?

- d) Supposing it were true that use of poles enabled a DAS deployment to deliver a clearer signal in certain areas than signals delivered (say) by cell towers, is it reasonable to suppose that consumers who valued greater signal clarity would distinguish among alternate wireless services?

6. Does THESL have market power in the provision of pole access to wireless service providers?

6-Energy Probe-10

Ref: BRG Report (Dr. Church) Page 5 Para 17 and 18, Appendix Table 2

Preamble:

17. *Upstream Product Market Definition:* The economic interest in the regulation of access to poles by firms wishing to make wireless attachments is linked to demand for such pole access by (cellular) wireless service providers in Toronto. While some parties might also wish to make wireless attachments to poles for providing other types of services—e.g., Wi-Fi or highly localised wireless networks—the economic importance of these is likely limited.¹⁰

Based on the above please provide qualitative estimates of the future market demand for attachments. Please include utility poles, streetlight and other, in Toronto.

6-Energy Probe-11

Ref: Dr. Jackson Report Page 32, Table 2

- a) Please explain whether the market for wireless utility pole attachments is expanding/contracting.
- b) Please update Table 2 for most recent data.
- c) Please include information on 4G networks if available.

6-Energy Probe-12

Ref: THC Annual Corporate Report April 2013, Page 18/19

Preamble:

4.4 Toronto Hydro Energy Services Inc.

TH Energy is a professional energy services company with \$22.2 million of Capital Assets. Until January 1, 2012, TH Energy owned and operated all of the street lighting assets located in the City and had the sole right to provide maintenance and capital improvements to the street lighting systems throughout the City until 2035, which services were sub-contracted to LDC. Effective January 1, 2012, TH Energy transferred a portion of its street lighting assets to LDC. TH Energy continues to provide street lighting system maintenance and capital improvement services to the City, and such services continue to be sub-contracted to LDC. See section 5.3 under the heading "Street Lighting Activities" for more information on the transfer of street lighting assets from TH Energy to LDC.

TH Energy also provides consolidated billing services to the City, which services are sub-contracted to LDC.

- a) What are the 2013 businesses of THESI? Please provide detail.**
- b) Please provide the aggregate 2013 net assets and revenues.**
- c) Does THESI provide Wi-Fi or other attachment/connection services on streetlights - either directly or as part of its SL maintenance arrangements with City and or THESI?**
- d) Please delineate each and numbers of attachments/connections.**
- e) Please provide copies of the relevant Inter-Corporate Agreements per ARC.**
- f) Are there any restrictions on THESI providing Wi-Fi/Wireless connection services in future? Please discuss.**

6-Energy Probe-13

Ref: THC Annual Corporate Report April 2013, Page 18/19

Preamble:

Potential Business reorganization

If THESL is allowed to deregulate services and prices for pole –related Wi-Fi services, then will THESI (or other THC subsidiary) either become service provider and/or acquire a service provider?

6-Energy Probe-14

Ref: BRG Report (Dr. Church) at Para 4-7, 20, 52-53

At para 4, Professor Church states that the

“key issue in assessing regulatory forbearance is whether, in the absence of regulation, competition is sufficient to discipline the exercise of market power”.

At para 5, he states:

“The goal of a market power analysis is to determine the extent to which a firm, in this case THESL, can profitably offer a service, in this case, pole access for wireless attachments, at rates in excess of competitive levels. If THESL cannot exercise market power in the provision of pole access for wireless attachments, then in the absence of some other compelling reason to continue regulation, competition is sufficient to protect the public interest.”

At para 20, he states:

“Market definition involves identifying substitutes that constrain the exercise of market power. If the relevant market was (on the product dimension) pole access for wireless attachments and (on the geographic dimension) a specific pole then THESL would have market power.”

- a) Does Professor Church regard the presence of market power and the exercise thereof as distinct issues, or are they the same?**
- b) Professor Church makes repeated reference to Canada’s Competition Act and the enforcement guidelines of the Competition Bureau. Does he believe that under s.92 of the merger provisions of the Act, the Commissioner must show both that the contested merger creates market power AND that the merged firm will exercise that market power?**

- c) **If the answer to b) above is yes, would Professor Church agree that his view differs from s.2.3 of the Bureau's merger guidelines:**

2.3 These guidelines describe the analytical framework for assessing market power from the perspective of a seller of a product or service ("product," as defined in section 2(1) of the Act). Market power of sellers is the ability of a firm or group of firms to profitably maintain prices above the competitive level for a significant period of time. The jurisprudence establishes that it is the *ability* to raise prices, not whether a price increase is likely, that is determinative.

- d) **At para 6, Professor Church states that an exclusive supplier may not have market power if it competes with differentiated products. Does he regard hydro poles, roof-tops, and sides of buildings as distinct products or as differentiated products in this case?**
- e) **At para 7, Professor Church states that the rationale for price and entry regulation requires an assessment, the first step of which is a determination that the technology is a "normative natural monopoly". Accordingly, does he believe that a hydro pole is NOT a natural monopoly? If so, please explain briefly why not.**
- f) **Please clarify para 20. Suppose that the product market consisted only of poles and that the geographic market were larger than a specific pole. Would Professor Church claim that THESL had market power?**

6-Energy Probe-15

Ref: BRG Report (Dr. Church) at Para 21-25, 53, 106

Professor Church states that:

"The key to the conclusion that THESL is very unlikely to have market power in the provision of pole access for wireless attachments is recognition of the limited role that pole access for such attachments will have in the deployment of high speed (broadband) wireless networks."
(para 21)

"... Both of these make demand for pole access for wireless attachments relatively price responsive and suggest that THESL will not have market power."
(para 23)

“The analysis of the extent to which wireless service providers can and will substitute to alternative inputs and sites is supported by the fact that at regulated rates, the use of THESL poles for wireless attachments to provide wireless services is extraordinarily small. (para 24)

“... THESL does not know the value of pole access at a given location to a wireless service provider and hence cannot price discriminate if rates were forborne.” (para 25)

- a) **Please explain why the supposed limited role of poles implies that THESL does not possess market power?**
- b) **Please explain the meaning of “relatively price responsive”. How large must the price responsiveness for pole access to wireless attachments be in order to conclude it is high enough to thwart THESL’s market power?**
- c) **Does Professor Church believe that if rates were forborne (presumably rate) regulation), THESL would not charge landline and cable attachers a different rate than wireless attachers?**
- d) **Re: para 53, please provide citations to decisions of the Competition Tribunal in which supply substitution was sufficient to reject the market power concerns of the Competition Bureau.**
- e) **In the absence of such litigated cases, can Professor Church cite instances where the Competition Bureau declined to challenge a merger or anti-competitive conduct on the basis that supply substitution was sufficiently strong?**
- f) **Re: paras 24 and 106, the litigation in and following EB-2011-0120 was lengthy and then THESL launched the current case by requesting forbearance. Would the regulatory uncertainty account for the low level of use of poles to which Professor Church alludes?**
- g) **Re: paras 24 and 106, it appears that Professor Church believes that there are many wireless services that would seek access to THESL poles. If so, can he indicate how many such wireless services would do so?**

- 7. Given the relevant upstream and downstream markets, what effects, if any, would the exercise of market power by THESL in the supply of pole access to wireless service providers have in the downstream market, and what is the significance of those effects?**

7-Energy Probe-16

Ref: BRG Report (Dr. Church) at Para 14, 48, 73

Professor Church states that his report deals, in part, with the following question:

“Could THESL’s exercise of market power result in a substantial lessening of competition in the relevant downstream market?” (para 14)

He also states:

“In the absence of either market power in the upstream market *or* a substantial negative effect from its exercise in the downstream market, the condition for forbearance is likely satisfied.” (para 48) (*italics emphasis in original*)

- a) The expression “substantial lessening of competition” is found in s.92(1) and s.79(1) of the Competition Act. As Professor Church uses this expression repeatedly in his report, is he intending that it have the same meaning as in those provisions of the Competition Act?**
- b) If the answer to a) above is no, please describe what the expression means to him.**
- c) If there is no vertically integrated incumbent, does Professor Church believe that upstream market power by itself does not justify mandated access at cost based rates?**
- d) In his discussion of derived demand (para 72+), Professor Church discusses market power in input markets, the appropriate measure of such power, and the conditions in which a single supplier of an input will or will not have market power. Does Professor Church agree that market power is measured in these circumstances by the demand elasticity that the single supplier faces?**
- e) Does he agree that if an input accounts for only a small share of total purchaser costs, then the elasticity of demand for that input will be lower than if the input share is high? Accordingly, if a wireless attacher’s cost of pole attachments was a small share of its total costs, then the single attachment supplier faces relatively inelastic demand and has correspondingly greater market power?**

- f) The presence of many close substitutes for pole attachments would reduce the market power of the single supplier thereof. Does Professor Church say that there are many such close substitutes?
- g) Taking these conditions in aggregate, does Professor Church say that the single supplier of pole access faces highly elastic demand, somewhat elastic demand or inelastic demand?

8. Is the “essential facilities” doctrine applicable in the circumstances of this case, and if so, to what extent?

8-Energy Probe-17

Ref: BRG Report (Dr. Church) at Para 40- 48

Professor Church refers to the “essential facilities framework” at several points in his affidavit. For example, at para 42, he states:

“The essential facilities framework is an antitrust concept that was developed to determine when refusal by a vertically integrated incumbent to provide access could be an antitrust violation.”

At para 45, Professor Church states:

“However, if the owner of the alleged essential facility is not vertically integrated, i.e. not active in the downstream market, then the issues are ... If the owner of the alleged essential facility is not vertically integrated, then mandated access at cost-based rates to control its market power in the upstream market is only warranted if the owner of the facility has market power upstream and the effects of its exercise in the downstream market are substantial.”

- a) **Does Professor Church maintain that the Board articulated an “essential facilities framework” in its CCTA decision when it ordered access at regulated access charges to all power poles owned by local electric distribution companies in Ontario?**
- b) **If so, please describe briefly the elements of the “framework” that the Board adopted.**
- c) **Does Professor Church believe the Board’s “framework” (assuming there is one) differs from the essential facilities doctrine found in U.S. antitrust law? If not, please so state. If so, please indicate what these differences are.**
- d) **Does Professor Church maintain that there is an “essential facilities doctrine” in the Competition Act or pursuant to decisions of the Competition Tribunal?**

- e) Please indicate the party in this case that is the “vertically integrated incumbent”. Is it THESL and if so, in what downstream market does it compete and with whom?
- f) If there is no vertically integrated incumbent in this case, why is the essential facilities framework (whatever it consists of) applicable in the circumstances of this case?
- g) Does Professor Church believe that the hydro poles owned by Toronto Hydro are essential facilities as that term is used in U.S. antitrust law?
- h) Does Professor Church believe that the hydro poles owned by Toronto Hydro are essential facilities according to his essential facilities framework?

General

- 9. If the Board were to forbear from regulating the terms, conditions and rates for the attachment of wireless equipment to THESL’s distribution poles, what are the potential impacts on THESL’s ratepayers in terms of rates and of service?

9-Energy Probe -18

Ref: THESL Prefiled Evidence Page 3, Para 16 and 17

Preamble:

- 16. As a result of the Decision and Order of the Ontario Energy Board dated March 7, 2005, THESL is authorized to charge \$22.35 for each pole attachment. That figure is intended to cover THESL’s direct and indirect costs. THESL’s direct and indirect costs for pole attachments are higher than that.
- 17. THESL proposes to charge a competitive rate for wireless attachments to its poles. Doing so will improve THESL’s ability to recover its true costs, and provide a benefit to its ratepayers and to its shareholder.
 - a) Does the \$22.35/yr rate/charge apply to wireless only or to cable or other attached utilities? Please clarify and provide any other rates/charges for other types of attachments/connections.
 - b) Please provide a breakdown of THESL’s costs and contribution to revenue requirement for the existing services/attachments.

- c) Provide 2013 revenue and calculate the cost recovery ratio(s) for each type of Attachment/connection.
- d) Discuss the Issue of cross subsidy and how this will change under forbearance.
- e) Please List # 2013 applicants/customers renting attachments under the THESL OEB rate \$22.35/yr. Provide 2013 revenues and costs.
- f) Please provide # (NO NAMES) 2013 applicants /customers renting attachments from THESI (specify rate(s)). Provide aggregate revenue

9-Energy Probe-19

Ref: THESL 2014 Rates

- a) With regard to Regulated Rates for Street-lighting and USL Rate Classes please provide:
 - i) Copy of Rate Schedules
 - ii) # customers/Class
 - iii) # of connections per class
- b) Please provide Revenues and costs for regulated service and estimated Revenue/Cost Ratio.
- c) Please discuss 2014 cross subsidy for these classes.

9-Energy Probe-20

Ref: Board Report EB-2013-0383: Review of the Board's Cost Allocation Policy for Unmetered Loads

- a) Please provide the latest OEB Cost Allocation Model inputs/outputs for each class (SL and USL).
- b) Do the costs include a standard connection cost? Please explain in the context of the CA Model.
- c) What changes to cost allocation is THESL proposing to make given the Board Report?
- d) How will these affect the Revenue/Cost ratios for each class?

10. If the Board does refrain, in whole or in part, from regulating the terms, conditions and rates of wireless attachments, what is the appropriate treatment of and/or disposition of the costs and revenues?

10-Energy Probe-21

Ref: THESL Reply Letter, Supplementary Evidence August 14, 2013, Page 2, Para 3

Preamble:

3. That any excess of revenues over costs will be used to the benefit of ratepayers, in a mechanism to be dealt with in a THESL rate application. The undertaking to that effect is found in our letter of July 19, 2013, to the Board.
- a) Does THESL agree that this is matter which in principle needs to be determined *now*? Please discuss.
- b) Explain this “Mechanism” in regulatory terms e.g. cost revenue offset.
- c) Provide an example of how it would work based on 2013 data.
- d) Compare to the actual cost recovery/benefit to ratepayers in 2013.

11. What is the public interest for purposes of this application?

11-Energy Probe-22

Ref: BRG Report (Dr. Church) at Para 13

Professor Church states that he was requested by counsel to prepare a report “assessing the extent to which wireless telecommunications in THESL’s service territory is, or will be, competitive if the OEB refrains from regulating the rates, terms and conditions upon which access for wireless telecommunications services is made available by THESL.”

- a) What concern does the OEB have with whether retail wireless telecommunications in THESL’s service territory are competitive?
- b) Are there other reasons that the OEB might take an interest in THESL’s extension of the use of regulated assets in areas/markets that do not come under the Board’s jurisdiction?

12. What options does the Board have if it determines that it will refrain in part from regulating wireless attachments to THESL's poles?
13. If the Board determines, pursuant to section 29 of the *Ontario Energy Board Act, 1998*, to refrain in whole or in part from regulating wireless attachments to THESL's poles, does the Board have the authority to impose conditions and, if so, what conditions should the Board impose?