ONTARIO ENERGY BOARD

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.

Joint Written Statement

Report of Economists on the Extent of Agreement and Disagreement on the Competition and General Issues Related to Regulatory Forbearance of Pole Access for Wireless Attachments

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May 2, 2014

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1. Preamble

Pursuant to Procedural Order No. 4 dated January 28, 2014 issued by the Ontario Energy Board (the Board), an Experts Conference was held on April 23, 2014 at the Board's offices. Experts engaged by Toronto Hydro-Electric System Limited (THESL), Board Staff and the Vulnerable Energy Consumers Coalition (VECC) (collectively the "Parties") met to discuss and delineate areas of agreement and disagreement regarding the experts' evidence in the matter before the Board in EB-2013-0234, namely THESL's application requesting from the Board:

1. An order, pursuant to section 29 of the Ontario Energy Board Act, 1998 (the "Act"), that the Board refrain from regulating the terms, conditions and rates for the attachment of wireless telecommunications devices ("wireless attachments") to THESL's utility poles; and,
2. Such further and other orders as the Board may require.

The experts participating in the conference were Dr. Jeffrey Church on behalf of THESL, Dr. Marc Van Audenrode on behalf of Board Staff, and Dr. George Hariton on behalf of VECC. They were accompanied at the Experts Conference by the Parties' counsel. Mr. Chris Haussmann acted as facilitator.

This report presents the propositions the experts consider relevant to the "competition" and "general" issues on the Board's Issues List dated January 28, 2014, and sets out the material points of agreement and dispute among them.

2. Summary of Expert Positions

2.1. JEFFREY CHURCH

This short statement identifies, in my view, the main areas of agreement and disagreement that are important for assessing whether competition in the relevant market that includes the provision of pole access for wireless attachments by THESL is sufficient to protect the public interest. All three experts agree that the focus for forbearance is on the extent and effects of THESL's exercise of market power in the provision of pole access for wireless attachments. All three experts agree that the essential facilities doctrine does not apply. There is agreement on the definition of market power, the role and the importance of defining markets, and the use of the hypothetical monopolist test, at least in principle. The experts, therefore, appear to agree on the appropriate conceptual framework to assess market power, but not the results of its application.

In particular Dr. Van Audenrode has concluded that the relevant antitrust market is the provision of pole access for wireless attachments by THESL in the City of Toronto. My assessment is that the relevant product market is broader than pole access for wireless attachments by THESL (though I agree on the geographic market). In my view the evidence on the relative costs and effectiveness of alternative network design means that outdoor siting of small cells and DAS will be important, i.e., difficult to substitute, in only limited sets of circumstances. In those circumstances superior alternative siting options likely exist for mounting small cells and DAS. The technical experts agree that only "in rare instances" will it be the case that "a utility pole is by far the preferred option." In conjunction with the relatively small number of poles used for wireless attachments, therefore, substitution away from poles at most locations is likely sufficient to discipline or minimize the exercise of market power by THESL.

Dr. Van Audenrode concludes that the substitution that I think is important is not economic substitution, i.e., not sufficient to discipline the exercise of market power. The evidence he uses to support this conclusion involves comparing the regulated rate to market rates charged by THESL, the City of Toronto, and other municipalities. Since the market rates are substantially above the regulated rate, Dr. Van Audenrode concludes that THESL has market power and the product market is not broader than THESL's pole access for wireless attachments.

As explored in the following tables I do not believe that the comparison of the regulated rate to the market rate implements the hypothetical monopolist test. The regulated rate is not the competitive price, the service provided by THESL at the market rate is very different than the wireless attachments assumed when the regulated rate was determined, and the wireless service providers were willing to opt for this new service at a higher price rather than the regulated service available.

Dr. Hariton appears to agree with me that in some geographic areas the possibilities for substitution will be sufficient to discipline the exercise of market power by THESL in the provision of pole access for wireless attachments. However there are other areas where he believes these substitution alternatives are not sufficient to discipline THESL's ability to exercise market power. The difference between Dr.

Hariton on the one hand, and Dr. Van Audenrode and I on the other, is that for there to be smaller relevant geographic markets THESL would have to be relatively well informed about the differences in the willingness and ability of wireless service providers to substitute away from pole access for wireless attachments by location to alternative sites and alternative network design that does not require small cell deployment. In my view THESL is unlikely to know this and, consistent with this lack of knowledge, THESL's market rate does not vary by geographic location of the pole. Indeed if Dr. Hariton's assessment were correct we would expect to see clustering of demand for pole access by the wireless service providers, but we do not.

Even if THESL had market power, Dr. Van Audenrode and I agree that the efficiency cost and the effect on welfare of participants (firms and consumers) in the downstream market for wireless services will be small. We also agree that the costs of regulation should enter into an assessment of whether competition is sufficient to protect the public interest. A consideration in favour of forbearance is if the costs of regulation exceed the negative consequences of the exercise of market power.

Dr. Van Audenrode has also concluded that the Board may opt for regulatory safeguards to protect the public interest. Dr. Hariton appears to agree. In my view there is no evidence on the record that establishes that these safeguards are necessary or appropriate. There is no evidence that THESL has the incentive to engage in conduct that these safeguards would prevent, and even if it did, that the effect of the conduct would justify these safeguards, or that these safeguards are the best response. In short there is no economic evidence that shows that the conduct restrained by these safeguards would be profitable because of its anticompetitive effect and that such a rationale for the conduct is consistent with the facts. Indeed it is not clear what exactly is the conduct that is the concern motivating these safeguards.

There might be agreement that an appropriate regulatory safeguard, consistent with concerns that THESL might be able to exercise market power in certain geographic locations, is an ex post mechanism under which a wireless provider could seek regulated access to a specific pole, or set of poles, by establishing that the commercial rate THESL is charging reflects the exercise of inefficient market power.

2.2. GEORGE HARITON

There are four high-level categories of issues.

The first set of issues centre on the test for forbearance. Disagreements turn on the interpretation of 'public interest' in the test. Dr. Hariton believes that the public interest includes considerations both of efficiency and of equity or fairness. He further believes that only the services offered by THESL are relevant. Dr. Church speaks principally to efficiency considerations. He believes that efficiency can be informed by looking at the consequences in the market for wireless services (the downstream market). He does not speak to the interpretation of the public interest. Dr. Van Audenrode believes that distributional considerations and efficiency are both relevant. He further believes that effects in the downstream market are relevant.

The second set of issues centre on THESL`s market power in the market for pole attachments. Dr. Hariton believes that there are several distinct geographic markets within Toronto, which can be approximated using city zoning. He further believes that THESL likely has significant market power in some of these zones, e.g. residential zones. Dr. Church believes that the geographic market is the entire City of Toronto. He further believes that THESL does not have significant market power in this geographic market. Dr. Van Audenrode believes that the geographic market is the entire City of Toronto and that THESL does have market power in this market.

The third set of issues centre on the impact of the exercise of market power by THESL (if it has any) on the downstream market of wireless services. Dr. Hariton believes that the impact of forbearance in the upstream market on conditions in the downstream market is irrelevant, as such impact is not part of the statutory test. Drs. Church and Van Audenrode believe that impacts on the downstream market are relevant. They both further believe that this impact will likely be very small.

The fourth set of issues centre on additional measures the Board should take if it decides to forbear. Dr. Hariton believes that there would be a need for safeguards, including sharing of revenues from pole attachments between THESL and its electric utility ratepayers. Dr. Church believes that no further measures would be mandated. Dr. Van Audenrode believes that safeguards would be necessary, including safeguards against certain forms of discrimination and also revenue sharing.

2.3. MARC VAN AUDENRODE

Experts agree that regulatory forbearance would lead to a substantial increase in pole access rates for wireless attachments, but disagree whether the price increase reflects THESL's exercise of market power.

The source of that disagreement lies in part in the experts' differences of opinions as to the relevant market to be considered for the purpose of evaluating whether THESL, in its role as a provider of pole access for wireless attachment, faces sufficient competition to protect the public interest. Dr. Church opines that the relevant market is broader and encompasses alternative siting facilities and other inputs that minimize the use of outdoor siting facilities in the City of Toronto. Dr. Van Audenrode opines that the relevant market is limited to the provision of pole access for wireless attachments by THESL. Dr. Hariton opines that the relevant product market is larger than THESL's network of poles, but the geographic market is limited to zones within the City of Toronto.

Dr. Church opines that the significant increase in price that would result from forbearance reflects an adjustment to a competitive price, while Dr. Van Audenrode and Dr. Hariton believe it reflects an exercise of market power by THESL. Further, Dr. Church opines that the finding of no market power for THESL by itself suggests that regulation of rates, and associated terms of service, are not required to protect the public interest. Dr. Van Audenrode and Dr. Hariton disagree and find that the Board might consider the full range of impacts from an increase in pole attachment rates following regulatory forbearance.

Dr. Church and Dr. Van Audenrode agree that the impact on downstream wireless prices will be miniscule. Dr. Hariton considers the downstream impact to be irrelevant, but in his view the effect on wireless prices would be small. Similarly, Dr. Church and Dr. Van Audenrode agree that regulatory costs should be considered for regulatory forbearance, Dr. Hariton considers regulatory costs relevant, but not determinative.

The experts disagree on the opportunity for the Board to consider partial forbearance. Dr. Van Audenrode and Dr. Hariton consider that if the Board were to decide to forbear from setting attachment rates, it might consider safeguard conditions to protect the public interest. Dr. Church finds these safeguards costly and unwarranted.

3. Propositions

COMPETITION ISSUES

3.1. Issue List #4: Market Definition

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?

Defining the Market

1. The appropriate starting point in assessing the potential for THESL to exercise market power in the provision of pole access for wireless attachments involves defining the relevant product and geographic market.	
Church	Agree.
Hariton	Agree.
Van Audenrode	Agree. Market definition is generally, but not necessarily, the starting point of an assessment of market power.
2. The objective of market definition in this matter is to identify substitution alternatives to pole access for wireless attachments that will constrain the exercise of market power by THESL.	
Church	Agree.
Hariton	Agree.
Van Audenrode	Agree.
3. The appropriate methodology to define the relevant product and geographic markets is the hypothetical monopoly test.	
Church	Agree.
Hariton	Agree.
Van Audenrode	Agree.

4. The base price to which the SSNIP in the hypothetical monopolist test should be applied is the competitive price.	
Church	Agree.
Hariton	Agree.
Van Audenrode	Agree.
5. The competitive price is the long-run average cost of providing service.	
Church	Agree, provided firms only produce one product and are identical. Market power is the ability to profitably raise price above competitive levels. Average cost is certainly the usual starting point in defining the competitive price, especially when there are economics of scale and scope. When introducing the concept of market power it is prudent to start at the basics and avoid complications. Two important complications relevant to this case are obscured by this simple statement. This statement is true for single product firms who all have the same costs. It is not true if there are multiproduct firms or firms have different costs of production. For single product firms whose costs are different, the statement is true if it is understood that the competitive price is the long run average cost of the marginal supplier, i.e., the least efficient supplier. The least efficient supplier in a competitive market must break even. The price can exceed the long run average cost of lower cost suppliers. Price might exceed a firm's average cost even if it does not have market power. The firm can be a price taker (not have any market power) and have lower costs than the marginal firm whose long run average cost sets the price (in the long run of course). In the case of multiproduct firms, long run average cost is not defined. The competitive price of a product cannot be the long run average cost of the least efficient supplier unless the marginal firm only produces that product. If the marginal supplier produces more than one product, then under competition there will be a set of prices (the competitive price) such that at those prices the marginal supplier breaks even: its revenues from all products cover its costs. This is, of course, the same condition that determines the long run competitive price if firms produce a single product: the profits of the marginal supplier are zero, since price equals its long run average cost.
Hariton	Depends on how costs are defined and how the long term is interpreted. Usually demand factors enter the determination as well.
Van Audenrode	Agree in general. If the marginal competitive firm is a multi-product firm, adjustments for common costs are required.

6. It is reasonable to assume that the regulated cost-based pole access rate is an appropriate proxy for the pole access rate that would allow firms to recover their long-run average cost of providing access.	
Church	Disagree. As explained in my response to #5, THESL's long-run average cost of providing pole access is not the competitive price. THESL is a multiproduct firm, so the long run average cost of pole access is not defined. The regulated rate is not a long run average cost. Instead it is an example of fully distributed cost pricing based (i) on historic costs and (ii) that pole costs are the only costs to be recovered. It is very unlikely to be the competitive price except by accident. Second, THESL may not be the marginal supplier and hence its costs are of limited relevance for inferring the competitive price.
Hariton	Depends on how costs are defined. Opportunity costs plus demand considerations may be at play.
Van Audenrode	Agree, given the evidence on record in this proceeding.[1] I have not done an independent assessment of the cost of providing pole access for wireless attachments. I have considered the evidence related to the cost of providing pole access for telecommunication attachments in the CCTA Decision, in other Canadian jurisdictions, and THESL's evidence filed in confidence. Based on these sources, I concluded that a rate in the range of regulated pole access rates in Ontario, regulated rates in other Canadian jurisdictions, or THESL's estimated direct and indirect cost filed in confidence would allow firms to recover their long-run average cost of providing pole access. If there is new, additional evidence produced in this proceeding regarding the cost of pole access, I would consider it and revise my opinions if warranted.
Upstream Market	
7. The relevant upstream product market <u>is broader than</u> the provision of pole access for wireless attachments by THESL.	
Church	Agree. See my response to #12.
Hariton	Depends on geographic market.
Van Audenrode	Disagree. The relevant product market is the smallest set of products for which a hypothetical monopolist would impose, and sustain, a small but significant, non-transitory increase in price (SSNIP). See also my response to #8 below.

[1] Regarding the Hypothetical Monopolist Test, the Competition Bureau stated in its submission in a previous CRTC forbearance hearing: "Similarly, in assessing forbearance, the Bureau is of the preliminary view that the base price that should be used to postulate a price increase is the prevailing regulated price. The forbearance analysis seeks to assess the likelihood that price will increase, above the prevailing regulated level, if regulatory constraints are removed. (Canadian Radio-Television and Telecommunications Commission (CRTC), Telecom Public Notice CRTC 2005-2, *Forbearance from Regulation of Telecommunications Services*, Evidence of The Commissioner of Competition, June 22, 2005, ¶166).

8. The relevant upstream product market is the provision of pole access for wireless attachments by THESL.	
Church	Disagree.
Hariton	Depends on geographic market.
Van Audenrode	Agree. THESL can profitably raise access rates for wireless attachments and impose a (SSNIP), which implies that the product market does not extend beyond THESL's network of poles (Hypothetical Monopolist Test).
9. Wireless service providers can substitute alternative bundles of inputs to provide wireless service when relative prices of inputs change. When the price of pole access for wireless attachments changes, wireless service providers can, do and will substitute to alternative inputs.	
Church	Agree.
Hariton	There will always be substitution effects if prices increase sufficiently. Result of SSNIP test is not clear.
Van Audenrode	Magnitude matters, the relevant criteria is economic substitutability: Do wireless service providers switch to close substitute inputs if the price of pole access for wireless attachments increases by a small but significant amount (typically interpreted as 5%)?
10. The demand for pole access for wireline telecommunications is different than for wireless telecommunications.	
Church	Agree.
Hariton	Agree. Pole access provides different functionality for wireline and wireless telecommunications.
Van Audenrode	Agree.

11. The relative costs and effectiveness of alternative network design means that outdoor siting of small cells and DAS will be important, i.e., difficult to substitute, in limited sets of circumstances. In those circumstances superior alternative siting options to poles likely exist for mounting small cells and DAS.	
Church	Agree. Consistent with the technical experts conclusion that only "in rare instances" will it be the case that "a utility pole is by far the preferred option."
Hariton	Agree, with the proviso that "limited" may be quite large.
Van Audenrode	Disagree (with the second part). The market for wireless pole attachment is small relative to THESL's network of poles. The technical experts assert that there are rare instances in which a utility pole is by far the preferred option from a technical perspective. Furthermore, economic evidence of a wireless service provider's willingness to replace poles within THESL's network, at its own expense, and pay a pole attachment rate multiple times in excess of the regulated rate, indicates that no reasonable economic substitutes to pole access are available for *these* poles.
12. The possibilities for substitution of pole access for wireless attachments are insufficient to constrain the exercise of market power by THESL.	
Church	Disagree: likely are sufficient. The reason is that if THESL cannot identify the rare instances when economic substitution is not effective, then substitution to other siting alternatives and other network architectures when it is economic will discipline the exercise of market power by THESL. The loss at the margin will likely exceed the gain on the inframarginal units and the HMT will likely not be passed.
Hariton	Depends on geographic market.
Van Audenrode	Agree.
13. The effectiveness or sufficiency of the possibilities for substitution for pole access for wireless attachments can be determined by comparing the regulated rate to observed market rates charged by THESL, the City of Toronto, and other municipalities.	
Church	Disagree. The HMT requires starting at the competitive price and then raising it by the SSNIP. A SSNIP or greater price increase is profitable if the gains on inframarginal units exceed the loss on marginal units. The comparison in the proposition only shows that at some locations there is a high willingness to pay for pole access for wireless attachments.
Hariton	Disagree.
Van Audenrode	Partially agree. It is not the comparison with the regulated rate per se that is informative. Rather, a wireless service subscriber's willingness-to-pay $5,000 for access to THESL's poles for wireless attachments suggests that for *these* poles, there are no close economic substitutes available at say $3,000 (or the regulated rate).

14. Market size itself, in the absence of price variation, is uninformative to the extent of economic substitutability.	
Church	Disagree. Present day small usage—and the forecast of limited usage even with an increase in demand—confirms that the relative costs and effectiveness of alternative network design means that outdoor siting of small cells and DAS will be important, i.e. difficult to substitute, in limited sets of circumstances. But in those circumstances superior alternative siting options likely exist for mounting small cells and DAS. The reason this is relevant for economic substitutability is that it indicates the extent of substitution at the margin. See my response to #11 above.
Hariton	Disagree. Likelihood of entry will likely depend on size of market. Fixed costs of entry will likely be more easily recovered in a larger market, all else equal.
Van Audenrode	Agree. Economic substitutability refers to the ability and willingness of buyers to switch away from a product in response to a price increase. What matters is the change in the quantity demanded in response to a price change.
15. The quantity sold is relevant to assessing the potential for the exercise of market power.	
Church	Agree. The profitability of raising price involves a trade-off between the gain on inframarginal units and the loss on marginal units. The usual analysis focuses on the extent of loss at the margin as consumers substitute when price increases. However, the gain depends on the quantity that will still be sold—the inframarginal units. The smaller the number of inframarginal units the less the gain in profits from raising prices and the less the incentive to exercise market power.
Hariton	Qualified agreement. While the exercise of market power, all else equal, will result in lower quantity demanded, there are many other factors affecting the quality sold.
Van Audenrode	Partially agree. Market power, the ability to profitably raise price above competitive levels, depends on factors such as price, costs, demand elasticity and the possibility of entry. Demand elasticity is related to the *change* in the quantity sold in response to a price change and the likelihood of entry may depend on market size.
Geographic Market	
16. The relevant upstream geographic market is the City of Toronto (which is THESL's service territory).	
Church	Agree.
Hariton	Disagree.
Van Audenrode	Agree.

17. THESL will be able to price discriminate on the basis of location and therefore geographic markets will be local. This means that the extent of substitution in the product market varies by location. In some geographic markets the relevant product market is broader than pole access for wireless attachments.	
Church	Disagree. See my response to #18.
Hariton	Agree.
Van Audenrode	See my response to #18.
18. THESL can observe differences in economic substitutability across neighborhoods within the City of Toronto.	
Church	Disagree. For THESL to be able to price discriminate it must be able to assess differences in the willingness and ability of wireless service providers to substitute away from pole access for wireless attachments by location to alternative sites and alternative network design that does not require small cell deployment. THESL's proposed rate does not vary by geographic location of the pole. If the willingness to pay for pole access was similar across wireless service providers at a location, then we would expect to see clustering of demand for pole access by geographic location by the wireless service providers, but we do not.
Hariton	Qualified agreement. THESL can observe differences across neighborhoods where availability of substitutes differ, e.g. certain zones. Need not go to the level of granularity of the individual neighbourhood.
Van Audenrode	Disagree. It is unlikely that THESL can identify the difference in availability of economic substitutes at the neighborhood level. Furthermore, there is no evidence that the rates currently charged by THESL (or THESI) that differ from the regulated rate vary at the neighborhood level.
19. Pole access is particularly important for providing coverage in residential areas.	
Church	Disagree. The evidence of the technical experts is that pole access is an option for outdoor coverage where demand for data traffic is significant. In these circumstances there are likely to be alternative structures with power and fibre access. The technical experts do not identify pole access as being particularly important for coverage in residential areas.
Hariton	Agree.
Van Audenrode	No position. Current wireless pole attachments providing cellular service are located on poles outside the downtown core; wireless pole attachments providing Wi-Fi service (OneZone) are located on poles within the downtown core.

20. Increased data traffic will drive deployment of small cells to augment capacity.	
Church	Agree.
Hariton	Agree. It is total traffic which will drive need for capacity, and data is likely the biggest driver.
Van Audenrode	Agree. (See joint written statement by technical experts).

3.2. Issue List #5: Downstream Market Definition

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

21. 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.	
Church	Agree.
Hariton	Irrelevant, as I interpret the 'public interest' in s. 29(1) to focus on the immediate market (pole attachment services) and not on other markets (in this case, wireless communications). In any case, data traffic is likely to be the single biggest driver. We should be technology agnostic here.
Van Audenrode	No position. It is not necessary to precisely define the relevant downstream market if the competitive analysis is unaltered.

3.3. Issue List #6: Market Power

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

22. <u>THESL likely has</u> market power in the provision of pole access for wireless attachments.	
Church	Disagree.
Hariton	Depends on geographic market.
Van Audenrode	Agree.
23. <u>It is unlikely that THESL has</u> market power in the provision of pole access for wireless attachments.	
Church	Agree.
Hariton	Depends on geographic market.

Van Audenrode	Disagree. THESL has, profitably presumably, raised the rate charged for wireless pole attachment to $5,000, which exceeds competitive levels for wireless pole attachments.
24. <u>THESL has market power only in certain geographic areas</u> where substitution to other alternatives sites and inputs is limited. This is likely to be the case in residential zones where small cells will be deployed.	
Church	Disagree. See my response to #18.
Hariton	Agree.
Van Audenrode	Disagree. See my response to #18.

3.4. Issue List #7: Consequences of Market Power

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?

25. If the Board were to forbear from regulating the rates of wireless pole attachments, the rates THESL charges for wireless attachments (providing cellular service) are likely to substantially increase from the current regulated rate.	
Church	Agree.
Hariton	Agree. Amount of increase depends on geographic market.
Van Audenrode	Agree.
26. If forbearance is likely to lead to an increase in rates for pole access for wireless attachments it is likely <u>because of the exercise of market power by THESL</u>.	
Church	Disagree. The price increase is unlikely to reflect the exercise of inefficient market power. It is more likely to reflect competitive alternatives, as well as efficient pricing and recovery of costs.
Hariton	Disagree as a general proposition. See also my comment on the next point.
Van Audenrode	Agree. The increase in rates is, in part, due to market power.

27. If forbearance is likely to lead to an increase in rates for pole access for wireless attachments it is <u>because of the exercise of market power by THESL in some relevant geographic markets</u> and it will vary by geography.	
Church	Disagree.
Hariton	Agree that exercise of market power will be one factor in price increases. Better reflection of various costs may be another.
Van Audenrode	See my responses to #18 and #26.
28. If forbearance is likely to lead to an increase in rates for pole access for wireless attachments it will <u>not likely be attributable to an exercise of market power by THESL</u>, but instead an increase to competitive levels.	
Church	Agree. See my response to #26. It is unlikely to be due to the inefficient exercise of market power.
Hariton	Depends on geographic market.
Van Audenrode	Disagree. Part of the increase in rates may relate to an adjustment to competitive levels (to the extent that the current regulated rate does not reflect the competitive level).
29. As a matter of economic principle, the size of the market is relevant for assessing negative consequences of market power.	
Church	Agree.
Hariton	Agree if we are looking at aggregate consequences, but not if we are looking at consequences on individual users.
Van Audenrode	Agree.
30. The use of pole access for wireless attachments is presently small and is likely to remain limited even when accounting for foreseeable future growth.	
Church	Agree.
Hariton	Disagree. Some traffic forecasts foresee rapidly increasing growth and if so, this could require significant increase in pole access.
Van Audenrode	Agree. The number of wireless pole attachments relative to THESL's network of poles, or relative to the number of wireline attachments is small, and is likely to remain limited. It is unclear to what extent the expected growth in M2M sensors will require pole access.

31. The difference between revenues from wireless pole attachments and the incremental costs of wireless pole attachments, if any, resulting from price increases due to forbearance likely <u>can be attributed to market power</u>.	
Church	Disagree.
Hariton	It depends on multiple factors. Various suppliers may have different cost levels. Recovery of fixed and common costs must take place even when there is no market power. Market power will play a role that depends according to geographic market.
Van Audenrode	Agree, the difference can be, in part, attributed to market power.
32. The difference between revenues from wireless pole attachments and the incremental costs of wireless pole attachments, if any, resulting from price increases due to forbearance likely <u>can be attributed to THESL status as a low cost provider of pole access</u>.	
Church	Agree, though perhaps not all of it. Even if THESL's costs were the same as all other providers, there would have to be a difference between revenues and incremental costs to cover common costs. So some of the price increase may reflect more efficient recovery of common costs. This will be the case if the regulated rate is less than the efficient price.
Hariton	It depends on multiple factors. See also my answer to #31 above.
Van Audenrode	Part of the difference could possibly be due to THESL being a low-cost provider of pole access.
33. Pole access costs are a small proportion of total costs of wireless service.	
Church	Agree.
Hariton	Agree for prices at or near the present regulated levels. Higher prices may lead to different conclusions. Also remember that what is important is the cost of providing coverage or increased capacity in a given location and not company-wide.
Van Audenrode	Agree.

34. The consequences of the exercise of market power in an input market can be informed by looking at the effects of its exercise in the downstream market.	
Church	Agree. The usual measure of the inefficiency associated with the exercise of market power is deadweight loss. The deadweight loss from the exercise of market power in an input market is the change in total surplus in the downstream market that uses the input when the downstream market is competitive. The objective is to measure the harm from the exercise of market power in the upstream market, the market for the input. In this case, perspective on the magnitude of the inefficiency is provided by considering the effect on the downstream market.
Hariton	Irrelevant to the present proceeding. In any case, while relevant to estimation of economic efficiency ('total welfare') other factors are important as well.
Van Audenrode	Agree.
35. The effect of the exercise of market power (if any) by THESL on an individual consumer of wireless services is likely to be small.	
Church	Agree.
Hariton	Irrelevant. In any case, the result depends on the size of any price increase, and may affect the capacity, and hence level of service, provided by wireless service provider.
Van Audenrode	Agree.
36. The effect on prices of wireless services in the relevant downstream market from increased rates for pole attachments is likely to be small because the effect on costs of wireless service providers from the exercise of market power for pole attachments will be small. Hence, even if the cost increase is largely passed on the effect on an individual consumer will be small, but the extent of pass-on in the short-run may be negligible.	
Church	Agree.
Hariton	Irrelevant. In any case, depends on magnitude of price increase. May be passed on as less capacity rather than increased price.
Van Audenrode	Agree.

37. If THESL has market power in pole access for wireless attachments efficiency costs (increased costs of wireless service provisions and lost value of reduced consumption of wireless services) associated with its exercise are small.	
Church	Agree.
Hariton	The impact on the price of wireless services and their consumption is irrelevant. In any case, the evidence to date concerns static effects, i.e. the situation under present circumstances. We have no evidence as to likely effects over time, e.g. in response to growth in demand. As well, efficiency effects will depend on the extent of market power and the consequent price increases. Distributional impacts should also be taken into account.
Van Audenrode	Agree, economic efficiency costs are likely small.
38. If THESL has market power in pole access for wireless attachments, the aggregate effect on wireless service providers and consumers of wireless services will be relatively small.	
Church	Agree. The financial loss in the downstream market will be relatively and likely absolutely small. The total loss to downstream market participants will be small because the effect on marginal costs of wireless service provision will be small. The effect on marginal cost is small since the use of pole access for wireless attachments in the provision of wireless services is relatively small and because of substitution to other inputs.
Hariton	See my response to #37 above.
Van Audenrode	Agree, the aggregate impact of THESL's market power on wireless service providers and wireless consumers is likely to be small.
39. If THESL has market power in the provision of pole access for wireless attachments, then some exercise of that market power is efficient. That is, the margin on pole access should be positive and that surplus could be used to reduce the burden of common cost recovery on other THESL services.	
Church	Agree. If THESL has technical market power then some exercise of that market power is efficient.
Hariton	Agree. This should be done under the supervision of the Board.
Van Audenrode	Irrelevant. (If THESL would like to use an efficient pricing methodology, it could apply to the Board to alter the rate-setting methodology.)

40. A regulatory implementation of efficient prices is unlikely to be warranted, given the potential for error, relative to the price that THESL would charge if it had market power.	
Church	Agree. If the exercise of some market power is efficient, then the costs of the regulator implementing the efficient prices (assuming they will) is unlikely to be warranted, given the potential for error, relative to the benefit of the price that THESL would charge (all assuming that THESL has the ability to exercise market power).
Hariton	There is potential for regulatory error. However, under forbearance, exercise of market power would likely lead to very inefficient prices.
Van Audenrode	Irrelevant.

3.5. Issue List #8: Essential Facilities

Is the "essential facilities" doctrine applicable in the circumstances of this case, and if so, to what extent?

41. The essential facilities doctrine does not apply because THESL does not participate in downstream markets that use pole access as an input.	
Church	Agree.
Hariton	Agree.
Van Audenrode	Agree.

GENERAL ISSUES

3.6. Issue List #9: Impact on THESL Ratepayers

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?

42. THESL and electric power ratepayers will both potentially benefit from forbearance if the market price is greater than the regulated price.	
Church	Agree.
Hariton	Depends on a suitable revenue sharing arrangement being put in place.
Van Audenrode	Partially disagree. For example, if THESL were not to share additional revenue from forbearance, ratepayers who are also cell phone users would most likely be worse off.

43. The welfare of THESL electric power ratepayers will increase if the net present value of the revenue requirement declines with forbearance relative to continued regulation, or will stay unchanged if the net present value of the revenue requirement is unchanged under forbearance relative to continued regulation.	
Church	Agree if welfare is based only on consumption of electricity. This is a bit more complicated otherwise since (i) consumers of electricity provided by THESL are not identical and (ii) the overall effect on aggregate welfare of consumers of electricity would include wireless markets. Whether the harm in wireless markets is greater than the gain in electricity markets depends on the relative elasticities of demand and whether there is actually harm in wireless markets from forbearance. For instance if regulation continues, it may well stifle innovation that leads to higher quality of wireless services. And it may be the case that in the short run the pass through to wireless bills is a rounding error. If the regulated rate is below the efficient rate then an increase in pole access rates, even without revenue sharing, might well benefit consumers: the losses from higher wireless prices are more than offset by the gains from lower electricity prices.
Hariton	Agree. The proper test is a 'but for' analysis over a reasonable future horizon. This means that future revenue requirements should be estimated in the absence of forbearance (including the effect of growth in quantities and prices of pole attachments), and discounted to a present value. The same exercise is repeated, this time assuming forbearance. The two present values are then compared.
Van Audenrode	Disagree. See my previous response. Most THESL electric power ratepayers are also cell phone users. If the revenue requirement is left unchanged, they will be worse off because of a (slightly) higher cell phone bill.

3.7. Issue List #10: Treatment of Cost and Revenues Under Forbearance

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?

No comments by experts.

3.8. Issue List #11: Public Interest

What is the public interest for purposes of this application?

44. If regulation is based on the premise that it is in the public interest to control the exercise of market power by a firm, then a finding that competition is sufficient to discipline its market power suggests that regulation of rates, and associated terms of service, are not required to protect the public interest.	
Church	Agree.
Hariton	No position. The answer depends on the Board`s interpretation of 'public interest' in s. 29(1).
Van Audenrode	No position.
45. Whether continued regulation of rates is in the public interest should depend on the Board's assessment of the cost of continued regulation.	
Church	Agree.
Hariton	Disagree. While costs of regulation are a relevant factor, they are not determinative. Rather, they should be one factor in the Board`s analysis, which should include equity (or fairness) considerations, as well as other economic efficiency objectives.
Van Audenrode	Agree. An economic analysis of regulation should consider, among other factors, the costs of regulation.
46. The costs of regulation are both direct and indirect. The direct costs of regulation are the costs incurred by the OEB, interveners, and THESL associated with the regulatory process. The indirect costs of regulation arise from the incentives created by regulation. For instance, if regulation results in prices below efficient levels, the indirect costs arise from the consequences of higher rates for THESL ratepayers, excessive use of poles for wireless attachments, and lower prices for wireless services.	
Church	Agree.
Hariton	Resource misallocation may happen both if prices are too low and if prices are too high. Regulation may result in prices that are too low. Exercise of market power may result in prices that are too high.
Van Audenrode	Agree.

47. Under the circumstances of the present application, granting forbearance may increase the direct cost of regulation.	
Church	No evidence on the record regarding why this might be the case. The assertion of "may" indicates it is a mere possibility. It is a possibility that is not worthy of consideration without evidence and analysis that is missing from the record.
Hariton	Agree. As long as regulation depends in part on THESL`s earnings, even if infrequently, there will be a need for sufficient safeguards of the interests of electric utility ratepayers, which can be expensive to implement and update.
Van Audenrode	No position.
48. The public interest, for purposes of forbearance under s. 29, includes concepts, not only of economic efficiency, but also of fairness, e.g. financial transfers resulting from the forbearance.	
Church	No comment. The role of an economist is to identify effects on market outcomes, for instance prices and quantities, and on the welfare of different participants, for instance consumers in the downstream market, firms in the downstream market, and producers in the input markets. The importance of these effects and which matter or do not matter with respect to the public interest is the responsibility and duty of the regulator, in this case the Ontario Energy Board. In this case the upstream financial transfers from forbearance are away from wireless service providers (Telus, Bell, and Rogers primarily) to THESL and consumers of electricity.
Hariton	Agree.
Van Audenrode	No position.
49. If the Board decides to forbear from regulating pole attachment services, users of THESL services should be no worse off than if the forbearance did not take place. This should take into account both present and future circumstances, e.g. the situation if the number of pole attachments were to grow rapidly.	
Church	No comment. See my responses to #42, #43, and #48.
Hariton	Agree.
Van Audenrode	No position.

50. One way to protect utility rate payers' interests is to make forbearance conditional on a mechanism to share revenues arising from pole attachment services on shared THESL poles.	
Church	Agree, but whether tying forbearance to a sharing mechanism that protects utility rate payers' interests should be relevant to whether forbearance is appropriate is a different issue. The efficiency and distribution implications of forbearance are logically distinct.
Hariton	Agree. Revenue sharing must be an integral part of any forbearance decision.
Van Audenrode	Agree. If none of the additional revenues are shared, THESL ratepayers are likely to be worse off because most of them are also cell-phone users. See also my responses to #42 and #43.

3.9. Issue List #12 and #13: Partial Forbearance

What options does the Board have if it determines that it will refrain in part from regulating wireless attachments to THESL's poles?

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?

51. The Board should choose to implement safeguard conditions (mandatory, non-exclusive, non-discriminatory access with disputes resolved by the Board, reporting requirements) if it determines to refrain from regulating rates.	
Church	Disagree. There is no evidence on the record that establishes that these safeguards are appropriate. There is no evidence that THESL has the incentive to engage in conduct that these safeguards would prevent, and even if it did, that the effect of the conduct would justify these safeguards, or that these safeguards are the best response. In short there is no economic evidence that shows that the conduct restrained by these safeguards is coherent and consistent with the facts. Economic coherency requires showing that the conduct is profit maximizing for THESL based on its anticompetitive effects and that in theory it would have an anticompetitive effect. Consistency requires that the theory is supported by the facts. Indeed it is not clear what exactly is the conduct that is the concern motivating these safeguards.
Hariton	Depends on degree and nature of competition.
Van Audenrode	If the Board has public interest concerns, it should still consider exercising its discretion to forbear from regulating the rates if safeguard conditions could ensure the public interest is protected.

52. Ex post complaint-based process which places the onus on the wireless service provider is an appropriate regulatory safeguard.	
Church	Agree. An ex post mechanism under which a wireless provider could seek regulated access to a specific pole, or set of poles, by establishing that the commercial rate THESL is charging reflects the exercise of inefficient market power is an appropriate safeguard.
Hariton	Depends on degree and nature of competition.
Van Audenrode	An ex-post complaint-based process could be a regulatory safeguard to protect the public interest if needed.