EB-2014-0163

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.

COMPENDIUM OF MATERIALS OF TORONTO HYDRO-ELECTRIC SYSTEM LIMITED MAY 16, 2014

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SETTLEMENT PROPOSAL

TORONTO HYDRO-ELECTRIC SYSTEM LIMITED
Application Pursuant to Section 29 of the
Ontario Energy Board Act, 1998
EB-2013-0234

May 15, 2014

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I PREAMBLE AND OVERVIEW

This Settlement Proposal is filed with the Ontario Energy Board (the Board or OEB) in connection with the application of Toronto Hydro-Electric System Limited (THESL) for a determination and order pursuant to section 29 of the *Ontario Energy Board Act, 1998*, (the "Application and the "Act", respectively).

The Settlement Conference was held on May 12 and 13, 2014 and this Settlement Proposal arises from the Settlement Conference. The neutral facilitator was Chris Haussmann.

THESL and the following intervenors (the "Intervenors"), as well as OEB staff ("Board Staff"), participated in the Settlement Conference:

CONSUMERS COUNCIL OF CANADA (CCC)
ELECTRICITY DISTRIBUTORS ASSOCIATION (EDA)
ENERGY PROBE RESEARCH FOUNDATION (Energy Probe)
SCHOOL ENERGY COALITION (SEC)
VULNERABLE ENERGY CONSUMERS COALITION (VECC)

The role of Board Staff in the Settlement Conference is set out in page 5 of the Board's *Settlement Conference Guidelines* (the Guidelines).[1] Specifically, Board Staff presented options for the consideration of the Parties and advised on Board policy as required. Board Staff is not a party to this Settlement Proposal, as noted in the Guidelines Board Staff who did participate in the Settlement Conference are bound by the same confidentiality standards that apply to the Parties to the proceeding.

Any reference to "Parties" in this Settlement Proposal is intended to refer to THESL, CCC, Energy Probe, SEC and VECC. The EDA does not take a position on any issue in this Settlement Proposal.

THESL and the Intervenors have agreed upon a complete settlement. For the reasons described below, the Settlement Proposal is not, and does not need to be, based on the approved Issues List as described below.

The evidence in support of the Application consists of:

-THESL prefiled evidence;

-Report of Dr. Jeffrey Church;

-Report of Dr. Charles Jackson, Jackson Telecom;

-Report of Dr. Marc Van Audenrode, Analysis Group;

[1] Ontario Energy Board *Settlement Conference Guidelines*, page 3.

-Report of Nordicity Group;

-Report of Dr. George Hariton;

-Interrogatory Responses;

-Technical Conference Transcript and Undertakings arising from the Technical Conference.

(collectively, the "Evidence")

The Parties agree that the Evidence provided is sufficient to support the Settlement Proposal, and that the quality and detail of the Evidence will allow the OEB to make findings that accept the proposed settlement.

This document is called a "Settlement Proposal" because it is a proposal by the Parties to the Board to settle the issues in this proceeding. It is termed a proposal as between the Parties and the Board. However, as only to the Board's approval of this Settlement Proposal, this document is intended to be a legal agreement between the Parties, and subject, creating mutual obligations, and binding and enforceable in accordance with its terms. As set forth later in this Preamble, this agreement is subject to a condition subsequent, that if it is not accepted by the Board in its entirety, then unless amended by the Parties it is null and void and of no further effect. In entering into this agreement, the Parties understand and agree that, pursuant to the Act, the Board has exclusive jurisdiction with respect to the interpretation or enforcement of the terms hereof.

Unless otherwise expressly stated in this Settlement Proposal, the agreement by the Parties to the settlement shall be interpreted as being for the purposes of settlement only, and not a statement of principle applicable in any other situation. The Parties determined their positions in this Settlement Proposal with the intention of optimizing the overall settlement in the public interest within the context of the specific circumstances applicable to the Application. Where, if at all, the Parties have agreed that a particular principle should be applicable generally, this Settlement Proposal so states expressly. It is also acknowledged and agreed that this Settlement Proposal is without prejudice to any of the Parties re-examining these issues in any subsequent proceeding and taking positions inconsistent with the resolution of these issues in this Settlement Proposal.

Finally, unless stated otherwise, the Settlement in this Application is without prejudice to the positions Parties might take in other proceedings.

According to the Guidelines, the Parties must consider whether a settlement proposal should include an appropriate adjustment mechanism for any settled issue that may be affected by external factors. The Parties consider that no settled issue requires an adjustment mechanism.

None of the Parties can withdraw from the Settlement Proposal except in accordance with Rule 30 of the *Ontario Energy Board Rules of Practice and Procedure*.

The Settlement Conference and this Settlement Proposal are subject to the confidentiality provisions of the Guidelines. The Parties agree that all positions, negotiations and discussions of any kind whatsoever, that took place during the Settlement Conference and all documents exchanged during the conference that were prepared to facilitate settlement discussions are strictly confidential and without prejudice, and inadmissible except to the extent that any document or information is: a) filed with the Board or otherwise made public by or with the consent of the party who provided it; or b) relevant to the resolution of any ambiguity that subsequently arises with respect to the interpretation of any provision of this Settlement Proposal.

The Parties explicitly request that the Board consider and accept this Settlement Proposal as a package. None of the matters in respect of which a settlement has been reached is severable. Numerous compromises were made by the Parties with respect to various matters to arrive at this comprehensive Settlement Proposal. If the Board does not accept the Settlement Proposal in its entirety, then there is no Agreement unless Parties agree in writing that the balance of the Settlement Proposal may continue as a valid settlement, subject to any revisions that may be agreed upon by the Parties. In the event the Board directs the Parties to make reasonable efforts to revise the Settlement Proposal, the Parties agree to use reasonable efforts to discuss any potential revisions but no Party will be obligated to accept any proposed revision.

The Parties agree that all of the Parties must agree with any revised Settlement Proposal prior to its resubmission to the Board for its review and consideration as a basis for making a decision. THESL has applied for a determination and order pursuant to section 29 of the Act. The Parties have agreed that the essence of the relief agreed to by the Parties in this Settlement Proposal is encompassed within the relief that would be granted had THESL made an application under section 74(1) of the Act. The Parties further agree that the evidence which THESL has filed in support of the Application under section 29 is essentially the same as, if not identical to, the evidence it would file in an application under section 74(1). Given that the relief that THESL would obtain in an application under section 74(1) is narrower than, but encompassed within, the relief that THESL could be granted in its application under section 29, the Parties agree that public notice of the Application under section 29 is sufficient to give notice to all those who might be affected by the relief which would be granted under section 74(1). Finally, the Parties acknowledge that the granting of the relief, hereinafter described, will not prejudice any interest.

II TERMS OF SETTLEMENT

The Parties have agreed to settle the Application on the following basis:

1. The Parties agree that the provision, deemed to be included in THESL's Electricity Distribution Licence (ED-2002-0497) as a result of the Decision and Order dated March 7, 2005, in RP-2003-0249 (the "CCTA Decision"),and confirmed by the Board's Preliminary Decision and Order in EB-2011-0120 dated September 13, 2012 requiring THESL to charge a

fixed price of $22.35 per pole per year to wireless attachers is no longer required in the public interest (the "CCTA Pricing Provision"). The obligation in the said condition to allow wireless attachers access to THESL's poles shall remain, but with pricing and terms as set forth in 2(c) below.

2. The Parties agree that it would be in the public interest to amend THESL's Electricity Distribution Licence (ED-2002-0497), pursuant to section 74 (1) of the Act, to delete the CCTA Pricing Provision and substitute for it a provision containing the following terms:

   (a) THESL will annually report the net revenue, and the calculations used to determine that net revenue, earned from allowing wireless attachments to its poles. Net revenues will be accumulated in a deferral account approved by the Board pursuant to THESL's request for an accounting order;

   (b) THESL will credit that net revenue against its revenue requirement subject to Board approval in rate proceedings; and

   (c) THESL will provide access for wireless attachments to its poles on commercial terms normally found in a competitive market.

The relief agreed to by the Parties is a modification of the relief granted in the CCTA Decision.

Because the Settlement contemplates the issuance of an order under section 74(1) of the Act rather than under section 29, and because the Issues List was drafted with Section 29 in mind, most of the Issues on the list are not relevant to the Settlement, save as set out below.

With respect to Issues 1 to 3 inclusive, the Board is referred, for informational purposes, to the Reports of Dr. Charles Jackson and of Nordicity Group and to the joint statement of those experts.

With respect to Issue 11, the Parties agree that, whether the public interest consists solely of THESL's ratepayers or includes wireless attachers or telecom users, the evidence is that no wireless attachers or telecom users will be materially harmed by the granting of this relief. In addition, the Parties agree that THESL's ratepayers will benefit from the granting of this relief. Finally, the Parties agree that the granting of this relief supports the Board objectives described in section 1(1) of the Act in that the relief protects the interests of consumers with respect to prices and the adequacy, reliability, and quality of electricity service, and facilitates the maintenance of a financially-viable electricity industry.

Ontario Energy Board Act, 1998

S.O. 1998, CHAPTER 15
SCHEDULE B

Board objectives, electricity

1. (1) The Board, in carrying out its responsibilities under this or any other Act in relation to electricity, shall be guided by the following objectives:

1. To protect the interests of consumers with respect to prices and the adequacy, reliability and quality of electricity service.
2. To promote economic efficiency and cost effectiveness in the generation, transmission, distribution, sale and demand management of electricity and to facilitate the maintenance of a financially viable electricity industry.
3. To promote electricity conservation and demand management in a manner consistent with the policies of the Government of Ontario, including having regard to the consumer's economic circumstances.
4. To facilitate the implementation of a smart grid in Ontario.
5. To promote the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities. 2004, c. 23, Sched. B, s. 1; 2009, c. 12, Sched. D, s. 1.

Facilitation of integrated power system plans

(2) In exercising its powers and performing its duties under this or any other Act in relation to electricity, the Board shall facilitate the implementation of all integrated power system plans approved under the *Electricity Act, 1998*. 2004, c. 23, Sched. B, s. 1.

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29. (1) 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. 1998, c. 15, Sched. B, s. 29 (1).

Scope

(2) Subsection (1) applies to the exercise of any power or the performance of any duty of the Board in relation to,

(a) any matter before the Board;

(b) any licensee;

(c) any person who is subject to this Act;

(d) any person selling, transmitting, distributing or storing gas; or

(e) any product or class of products supplied or service or class of services rendered within the province by a licensee or a person who is subject to this Act. 1998, c. 15, Sched. B, s. 29 (2).

Where determination made

(3) For greater certainty, where the Board makes a determination to refrain in whole or in part from the exercise of any power or the performance of any duty under this Act, and does so refrain, nothing in this Act limits the application of the *Competition Act* (Canada) to those matters with respect to which the Board refrains. 1998, c. 15, Sched. B, s. 29 (3).

Notice

(4) Where the Board makes a determination under this section, it shall promptly give notice of that fact to the Minister. 1998, c. 15, Sched. B, s. 29 (4).

Licence conditions

70. (1) A licence under this Part may prescribe the conditions under which a person may engage in an activity set out in section 57 and a licence may also contain such other conditions as are appropriate having regard to the objectives of the Board and the purposes of the *Electricity Act, 1998*. 1998, c. 15, Sched. B, s. 70 (1).

Approvals, etc., with or without holding hearing

(1.1) The Board may, with or without a hearing, grant an approval, consent or make a determination that may be required for any of the matters provided for in a licensee's licence. 2009, c. 12, Sched. D, s. 10.

Examples of conditions

(2) The conditions of a licence may include provisions,

(a) specifying the period of time during which the licence will be in effect;

(b) requiring the licensee to provide, in the manner and form determined by the Board, such information as the Board may require;

(c) requiring the licensee to enter into agreements with other persons on specified terms (including terms for a specified duration) approved by the Board relating to its trading or operations or for the connection to or use of any lines or plant owned or operated by the licensee or the other party to the agreement;

(d) governing the conduct of the licensee, including the conduct of,

(i) a transmitter or distributor as that conduct relates to its affiliates,

(ii) a distributor as that conduct relates to a retailer,

(ii.1) a distributor or suite meter provider as such conduct relates to,

(A) the disconnection of the supply of electricity to a consumer, including the manner in which and the time within which the disconnection takes place or is to take place,

(B) the manner, timing and form in which the notice under subsection 31 (2) of the *Electricity Act, 1998* is to be provided to the consumer, and

(C) subject to the regulations, the manner and circumstances in which security is to be provided or not to be provided by a consumer to a distributor or suite meter provider, including,

(1) the interest rate to be applied to amounts held on deposit and payable by the distributor or suite meter provider to the consumer for the amounts,

(2) the manner and time or times by which the amounts held on deposit may or must be paid or set-off against amounts otherwise due or payable by the consumer,

(3) the circumstances in which security need not be provided or in which specific arrangements in respect of security may or must be provided by the distributor or suite meter provider to the consumer, and

(4) such other matters as the Board may determine in respect of security deposits,

(iii) a retailer, and

(iv) a generator, retailer or person licensed to engage in an activity described in clause 57 (f) or an affiliate of that person as that conduct relates to the abuse or possible abuse of market power;

(d.1) governing conditions relating to any matter prescribed by regulation in respect of retailers of electricity in relation to the retailing of electricity, subject to any regulations made under this Act;

(e) specifying methods or techniques to be applied in determining the licensee's rates;

(f) requiring the licensee to maintain specified accounting records, prepare accounts according to specified principles and maintain organizational units or separate accounts for separate businesses in order to prohibit subsidies between separate businesses;

(g) specifying performance standards, targets and criteria;

(h) specifying connection or retailing obligations to enable reasonable demands for electricity to be met;

(i) specifying information reporting requirements relating to the source of electricity and emissions caused by the generation of electricity;

(j) requiring the licensee to expand or reinforce its transmission or distribution system in accordance with market rules in such a manner as the IESO or the Board may determine;

(k) requiring the licensee to enter into an agreement with the IESO that gives the IESO the authority to direct operations of the licensee's transmission system;

(l) requiring the licensee to implement transmission requirements identified in an integrated power system plan approved under Part II.2 of the *Electricity Act, 1998*;

(m) requiring licensees, where a directive has been issued under section 28.2, to implement such steps or such processes as the Board or the directive requires in order to address risks or liabilities associated with customer billing and payment cycles in respect of the cost of electricity at the retail and at the wholesale levels and risks or liabilities associated with non-payment or default by a consumer or retailer. 1998, c. 15, Sched. B, s. 70 (2); 2003, c. 3, s. 47 (1); 2004, c. 23, Sched. B, s. 11 (1-3); 2010, c. 8, s. 38 (10, 11).

Deemed conditions of licences, transmitters and distributors

(2.1) Every licence issued to a transmitter or distributor shall be deemed to contain the following conditions:

1. The licensee is required to provide, in accordance with such rules as may be prescribed by regulation and in the manner mandated by the market rules or by the Board, priority connection access to its transmission system or distribution system for renewable energy generation facilities that meet the requirements prescribed by regulation made under subsection 26 (1.1) of the *Electricity Act, 1998*.

2. The licensee is required to prepare plans, in the manner and at the times mandated by the Board or as prescribed by regulation and to file them with the Board for approval for,

    i. the expansion or reinforcement of the licensee's transmission system or distribution system to accommodate the connection of renewable energy generation facilities, and

    ii. the development and implementation of the smart grid in relation to the licensee's transmission system or distribution system.

3. The licensee is required, in accordance with a plan referred to in paragraph 2 that has been approved by the Board or in such other manner and at such other times as mandated by the Board or prescribed by regulation,

i. to expand or reinforce its transmission system or distribution system to accommodate the connection of renewable energy generation facilities, and

ii. to make investments for the development and implementation of the smart grid in relation to the licensee's transmission system or distribution system. 2009, c. 12, Sched. D, s. 10.

Deemed condition of licences, unit sub-meter provider

(2.2) Every licence issued to a unit sub-meter provider is deemed to contain the condition that the unit sub-meter provider is required to comply with the *Ontario Clean Energy Benefit Act, 2010* and the regulations made under it. 2010, c. 26, Sched. 13, s. 17 (2).

Where no agreement

(3) If the parties to an agreement under clause (2) (k) cannot agree on a proposed amendment to the agreement, the parties may jointly apply to the Board for a resolution of the matter. 1998, c. 15, Sched. B, s. 70 (3).

Market rules

(4) Every licence shall be deemed to contain a condition that the licensee comply with the market rules that apply to that licensee. 1998, c. 15, Sched. B, s. 70 (4).

Abuse of market power

(5) Without limiting the generality of subsection (1), a licence to engage in an activity described in clause 57 (c), (d) or (f) may contain conditions to address the abuse or possible abuse of market power, including conditions,

(a) establishing minimum and maximum prices or a range of prices at which electricity may be offered for sale or sold through the IESO-administered markets or directly to another person or class of persons;

(b) restricting the duration of contracts between licensees and any other person; and

(c) restricting significant investment in or acquisition of generation facilities located in Ontario. 1998, c. 15, Sched. B, s. 70 (5); 2004, c. 23, Sched. B, s. 11 (4).

Non-exclusive

(6) Unless it provides otherwise, a licence under this Part shall not hinder or restrict the grant of a licence to another person within the same area and the licensee shall not claim any right of exclusivity. 1998, c. 15, Sched. B, s. 70 (6).

Distributors: connection of generation facilities

(6.1) The licence issued to a distributor shall contain conditions governing the connection of generation facilities to the distribution system, including the maximum cumulative generating capacity from generators to whom the regulations made under

clause 88 (1) (g.1) apply that the distributor must allow to be connected to the distribution system. 2002, c. 23, s. 4 (8).

Requirement to provide information

(7) Every licence shall be deemed to contain a condition that the licensee is required to provide such reasonable information to the IESO or the OPA as either of them may require, in the manner and form specified by whichever of them makes the request for the information. 2004, c. 23, Sched. B, s. 11 (5).

Conditions of OPA licence

(8) The Minister may issue, and the Board shall implement, directives that have been approved by the Lieutenant Governor in Council respecting conditions to be included by the Board in a licence issued to the OPA. 2004, c. 23, Sched. B, s. 11 (5).

Affiliates

(9) The licence of a distributor shall specify whether the distributor will comply with section 29 of the *Electricity Act, 1998*,

(a) directly;

(b) through an affiliate;

(c) through another person with whom the distributor or an affiliate of the distributor has a contract; or

(d) through a combination of methods described in clauses (a), (b) and (c), as specified. 1998, c. 15, Sched. B, s. 70 (9); 2002, c. 1, Sched. B, s. 7.

Exception

(10) Despite clause (9) (a) and any licence, a distributor shall not comply with section 29 of the *Electricity Act, 1998* directly after the date prescribed by regulation. 1998, c. 15, Sched. B, s. 70 (10).

Service area of distributor

(11) The licence of a distributor shall specify the area in which the distributor is authorized to distribute electricity. 1998, c. 15, Sched. B, s. 70 (11).

Non-discriminatory access

(12) If a transmitter or distributor is exempt from the requirement to provide non-discriminatory access to its transmission or distribution system in Ontario by regulation made under the *Electricity Act, 1998*, a licence under this Part shall not include a condition requiring the provision of non-discriminatory access unless the licensee has consented to the condition. 1998, c. 15, Sched. B, s. 70 (12).

Limitation

(13) A licence under this Part shall not require a person to dispose of assets or to undertake a significant corporate reorganization. 1998, c. 15, Sched. B, s. 70 (13).

Exclusion

(14) Despite subsection (13), a licence under this Part may require a distributor to establish an affiliate through which it shall comply with subsection (9) or section 73. 1998, c. 15, Sched. B, s. 70 (14).

Scope

(15) This section applies to the exercise of any power under this Act or the *Electricity Act, 1998* in relation to a licence referred to in section 57. 1998, c. 15, Sched. B, s. 70 (15).

Codes that may be incorporated as licence conditions

70.1 (1) The Board may issue codes that, with such modifications or exemptions as may be specified by the Board under section 70, may be incorporated by reference as conditions of a licence under that section. 2003, c. 3, s. 48.

Quorum

(2) For the purposes of this section and section 70.2, two members of the Board constitute a quorum. 2003, c. 3, s. 48.

Approval, etc., of Board

(3) A code issued under this section may provide that an approval, consent or determination of the Board is required, with or without a hearing, for any of the matters provided for in the code. 2003, c. 3, s. 48.

Incorporation of standards, etc.

(4) A code issued under this section may incorporate by reference, in whole or in part, any standard, procedure or guideline. 2003, c. 3, s. 48.

Scope

(5) A code may be general or particular in its application and may be limited as to time or place or both. 2003, c. 3, s. 48.

***Legislation Act, 2006*, Part III**

(6) Part III (Regulations) of the *Legislation Act, 2006* does not apply to a code issued under this section. 2003, c. 3, s. 48; 2006, c. 21, Sched. F, s. 136 (1).

Transition

(7) The following documents issued by the Board, as they read immediately before this section came into force, shall be deemed to be codes issued under this section and the Board may change or amend the codes in accordance with this section and sections 70.2 and 70.3:

1. The Affiliate Relationships Code for Electricity Transmitters and Distributors.
2. The Distribution System Code.
3. The Electricity Retailer Code of Conduct.
4. The Retail Settlement Code.
5. The Transmission System Code.

6. Such other documents as are prescribed by the regulations. 2003, c. 3, s. 48.

Proposed codes, notice and comment

70.2 (1) The Board shall ensure that notice of every code that it proposes to issue under section 70.1 is given in such manner and to such persons as the Board may determine. 2003, c. 3, s. 48.

Content of notice

(2) The notice must include,

(a) the proposed code or a summary of the proposed code;

(b) a concise statement of the purpose of the proposed code;

(c) an invitation to make written representations with respect to the proposed code;

(d) the time limit for making written representations;

(e) if a summary is provided, information about how the entire text of the proposed code may be obtained; and

(f) a description of the anticipated costs and benefits of the proposed code. 2003, c. 3, s. 48.

Opportunity for comment

(3) On giving notice under subsection (1), the Board shall give a reasonable opportunity to interested persons to make written representations with respect to the proposed code within such reasonable period as the Board considers appropriate. 2003, c. 3, s. 48.

Exceptions to notice requirement

(4) Notice under subsection (1) is not required if what is proposed is an amendment that does not materially change an existing code. 2003, c. 3, s. 48.

Notice of changes

(5) If, after considering the submissions, the Board proposes material changes to the proposed code, the Board shall ensure notice of the proposed changes is given in such manner and to such persons as the Board may determine. 2003, c. 3, s. 48.

Content of notice

(6) The notice must include,

(a) the proposed code with the changes incorporated or a summary of the proposed changes;

(b) a concise statement of the purpose of the changes;

(c) an invitation to make written representations with respect to the proposed code;

(d) the time limit for making written representations;

(e) if a summary is provided, information about how the entire text of the proposed code may be obtained; and

(f) a description of the anticipated costs and benefits of the proposed code. 2003, c. 3, s. 48.

Representations re: changes

(7) On giving notice of changes, the Board shall give a reasonable opportunity to interested persons to make written representations with respect to the changes within such reasonable period as the Board considers appropriate. 2003, c. 3, s. 48.

Issuing the code

(8) If notice under this section is required, the Board may issue the code only at the end of this process and after considering all representations made as a result of that process. 2003, c. 3, s. 48.

Public inspection

(9) The Board must make the proposed code and the written representations made under this section available for public inspection during normal business hours at the offices of the Board. 2003, c. 3, s. 48.

Amendment of code

(10) In this section, a code includes an amendment to a code and a revocation of a code. 2003, c. 3, s. 48.

Effective date and gazette publication

70.3 (1) A code issued under section 70.1 comes into force on the day specified in the code. 2003, c. 3, s. 48.

Publication

(2) The Board shall publish every code that comes into force in *The Ontario Gazette* as soon after the code is issued as practicable. 2003, c. 3, s. 48.

Effect of non-publication

(3) A code that is not published is not effective against a person who has not had actual notice of it. 2003, c. 3, s. 48.

Effect of publication

(4) Publication of a code in *The Ontario Gazette*,

(a) is, in the absence of evidence to the contrary, proof of its text and of its issuance; and

(b) shall be deemed to be notice of its contents to every person subject to it or affected by it. 2003, c. 3, s. 48.

Judicial notice

(5) If a code is published in *The Ontario Gazette*, judicial notice shall be taken of it, of its content and of its publication. 2003, c. 3, s. 48.

Amendment of licence

74. (1) The Board may, on the application of any person, amend a licence if it considers the amendment to be,

(a) necessary to implement a directive issued under this Act; or

(b) in the public interest, having regard to the objectives of the Board and the purposes of the *Electricity Act, 1998*. 2004, c. 23, Sched. B, s. 13.

Further power to amend

(2) In addition to its power to amend a licence under subsection (1), the Board may amend a licence under section 38 of the *Electricity Act, 1998*. 2004, c. 23, Sched. B, s. 13.

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.

NOTICE OF APPLICATION

TORONTO HYDRO-ELECTRIC SYSTEM LIMITED ("THESL") will make an application on a date and at a time to be fixed by the Ontario Energy Board (the "Board"), at the Board's Chambers at 2300 Yonge Street, Toronto, Ontario.

PROPOSED METHOD OF HEARING: THESL proposes that the application be heard orally.

THE APPLICATION IS FOR THE FOLLOWING ORDERS:

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.

2. Such further and other orders as the Board may require.

THE GROUNDS FOR THE APPLICATION ARE:

1. THESL is required by Decision and Order dated March 7, 2005 to allow access to its utility poles for Canadian carriers' and cable companies' wireless attachments at a regulated rate.

2. THESL proposes to charge a competitive rate for wireless attachments to its utility poles.

3. The public interest relevant to assessing whether competition is sufficient is the interest of THESL's ratepayers.

4. Ratepayers would not be harmed by allowing THESL to charge a competitive rate for wireless attachments to its utility poles. On the contrary, allowing THESL to charge a competitive rate for wireless attachments to those poles would benefit those ratepayers.

5. In the alternative, if the public interest relevant to assessing whether competition is sufficient is the public interest in wireless markets, competition will be sufficient to protect that public interest.

6. Such further and other grounds as counsel may advise.

THE FOLLOWING DOCUMENTARY EVIDENCE will be used at the hearing of the application:

1. The Pre-Filed Evidence of THESL dated June 13, 2013;

2. The Expert Report of Dr. Jeffrey Church, dated June 13, 2013;

3. The Expert Report of Dr. Charles Jackson, dated June 11, 2013; and

4. Such further and other material as counsel may advise and the Board permit.

Dated June 13, 2013

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Ontario Energy Board

Commission de l'Énergie de l'Ontario

Ontario

RP-2003-0249

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

AND IN THE MATTER OF an Application pursuant to section 74 of the *Ontario Energy Board Act, 1998* by the Canadian Cable Television Association for an Order or Orders to amend the licenses of electricity distributors

BEFORE: Gordon E. Kaiser
Vice Chair and Presiding Member

Paul Sommerville
Member

Cynthia Chaplin
Member

DECISION AND ORDER

The Applicant, Canadian Cable Television Association ("CCTA") seeks access to the power poles of the regulated electricity distribution utilities in Ontario for the purpose of supporting cable television transmission lines. Specifically, the CCTA is seeking an Order under section 74(1) of the *Ontario Energy Board Act* which would amend the licences of these utilities in a fashion that would specify the uniform terms of access including a province-wide uniform rate or pole charge for such access.

In the past, the CCTA members have rented space on the utilities' poles under private contract. That contract came to an end in 1996. Since then, the parties have been unable to reach further agreement with respect to rates.

Background

In early 1997, the CCTA applied to the Canadian Radio and Telecommunications Commission ("CRTC") to set a charge for access by cable companies to the poles of the Ontario electricity distributors. After a lengthy proceeding, the CRTC set an annual pole charge of $15.89.[1]

The Ontario Municipal Electric Association ("MEA") appealed that decision to the Federal Court of Appeal which held that the CRTC did not have statutory authority under the Telecommunications Act to regulate access by cable operators and telecommunication carriers to power poles.[2]

On further appeal by the CCTA the Supreme Court of Canada upheld the Federal Court of Appeal decision.[3] Given the Court's decision that the CRTC lacked jurisdiction, the CCTA filed an application with this Board on December 16, 2003 on behalf of the twenty-three cable companies that operate in Ontario. None of the parties questioned the jurisdiction of this Board.

The issues before this Board in this proceeding are as follows :

1. Is it necessary that this Board set access charges?
2. Which parties should have access?
3. What is the appropriate methodology?
4. How many attachers should be assumed in calculating the rate?
5. Should there be a province-wide rate?
6. What costs should be used in calculating the rate?
7. Should new licence conditions impact existing contracts?

The Need to Regulate Access Charges

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1 *Part VII Application - Access to supporting structures of municipal power utilities - CCTA v. MEA et al - Final Decision,* Telecom Decision CRTC 99-13, 28 September 1999. [hereinafter "Telecom Decision CRTC 99-13"]

2 *Barrie Public Utilities v. Canadian Cable Television Assn.,* [2001] 4 F.C. 237.

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

The CCTA Application is opposed by the Electricity Distribution Association ("EDA") and the Canadian Electricity Association ("CEA"). The EDA represents virtually all licensed electricity distributors in this province (sometimes referred to as LDCs) while the CEA is a national association representing electricity distributors, generators and transmitters. The position of these two parties is supported by Hydro One Networks Inc., Hydro One Brampton Networks Inc., and Hydro One Remote Communities Inc.

The position of the EDA *et al* is that regulatory intervention by this Board is not necessary. The argument largely is that the Applicant has not demonstrated that there has been a systematic abuse of monopoly power and absent that showing, the Board should allow the parties to continue to negotiate.

There has been some evidence on both sides with respect to abuse. In the end the CCTA says that the electricity distributors do have monopoly power and the fact that the parties have been unable to come to an agreement for over a decade demonstrates the exercise of that monopoly power whether this results in abuse or not.

The Board agrees. A showing of abuse is not necessary to justify the intervention of this Board in this matter. The fact is the parties have been unable to reach an agreement in over a decade. This degree of uncertainty is not in the public interest.

The Board agrees that power poles are essential facilities. It is a well established principle of regulatory law that where a party controls essential facilities, it is important that non-discriminatory access be granted to other parties. Not only must rates be just and reasonable, there must be no preference in favour of the holder of the essential facilities. Duplication of poles is neither viable nor in the public interest.

The Board concludes that it should set access charges.

The EDA *et al* further submits that if the Board is going to set rates it should set a range of rates based on its proposed methodology as opposed to a specific rate. The CCTA opposes this. The CCTA argument is that a range of rates would simply lead to continued delay, that monopoly power would continue to be exerted and in fact, the upper range would become the rate. In another words, the bargaining power of the cable companies would be as deficient with a range of rates as it is at present. The Board accepts this view. There is no rationale for a range of rates in the current circumstances.

Who should have access?

On this issue, the parties are in agreement. In the Settlement Agreement of October 19, 2004, all parties agreed that if the Board does set access conditions, these conditions should apply to access to the communications space on the LDC poles by all Canadian Carriers as defined in the Telecommunications Act and cable companies. The only exception is that these conditions would not apply to the current joint use agreements between telephone companies and electricity companies that grant reciprocal access to each others poles.

This Board has accepted the settlement agreement in this regard. In addition, the Board has heard submissions to the effect that the LDCs agree that their own telecommunication affiliates would access poles on the same conditions as other users of the communications space. The LDCs also confirmed that all users of the communications space should pay the same charge.[5]

This is an important clarification. This market is changing rapidly and industries are converging. Cable companies are now providing the telecommunication services just as the electricity distributors enter this industry. The fact that the two groups that have been warring over the past decade are fast becoming competitors is an additional reason for the Board to intervene and establish clear guidelines. From this Board's perspective, it is equally important that costs be properly allocated and that the electricity distributor (and ultimately, the electricity ratepayer) receives its fair share of revenue.

What is the appropriate methodology?

There are two elements to the proposed rate. The first is the incremental or direct costs incurred by electricity distributors that results directly from the presence of the cable equipment. Second, there are common or indirect costs which are caused by both parties. The parties agree that the direct or incremental costs should be borne by the cable companies.

The dispute relates to what share of the common cost each parties should pay. The cable companies say the portion of the fixed or common cost they should bear should be based on the cable companies "proportionate use" of the usable space on the pole. Electricity distributors claim that the portion of the common cost each of the parties bear should be equal. In other words, the common cost should be divided equally among attachers on a "per capita" basis.

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5 Tr. Vol. 2 at paras. 800 and 804.

Both parties called experts. The cable companies called Donald A. Ford while the electricity distributors called Dr. Bridger Mitchell. Reply evidence for the CCTA was presented by Patricia Kravtin and Paul Glist. All witnesses were qualified as experts.

The CCTA Application seeks a pole attachment rate of $15.65, a similar amount to that decided by the CRTC. The rates proposed by the EDA are substantially higher.

The principal argument advanced by the cable companies is that proportionate use is the methodology adopted by the CRTC and it has also been followed elsewhere in Canada and the United States. They point out that there have been numerous reviews of this rate methodology and the methodology has never been set aside.[6]

The response of the electricity distributors is that these rates are unduly low and are driven by considerations of telecommunication policy. In particular, they were designed to foster competition in that sector. The witnesses, however, were unable to point to any particular articulation of that policy goal as the justification for the rate levels at least in the Canadian context.

In Canada, the two decisions that follow the CRTC decision have in fact been divided on this issue. The Alberta Energy Utility Board ("AEUB") established a pole attachment rate of $18.34 in 2000 using the per capita approach.[7] The Nova Scotia Utility and Review Board ("NSURB") set a rate of $14.15 in 2002 following the CRTC approach.[8] The Nova Scotia Board did point out however, they had not conducted any cost allocation studies on their own.

An additional argument to support the lower rate advanced by the cable companies is that they are only tenants while the electricity distributors own the poles. They argue that pole ownership confers a benefit.

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6 *FCC v Florida Power Corp. 480 US 245, (1987); In the Matter of Alabama Cable Telecom Association v Alabama Power Corp.;* 16 FCC 12, 12, 209 (2001)

7 *TransAlta Utilities Corporation,* Decision 2000-86 (Alberta Energy and Utilities Board), December 27, 2000 online: <http://www.eub.gov.ab.ca/bbs/documents/decisions/2000/2000-86.pdf>.

8 *In the Matter of the Public Utilities Act and In the Matter of an Application by Nova Scotia Power Incorporated for Approval of an Increase in its Pole Attachment Charge,* Decision 2002 (Nova Scotia Utility and Review Board) NSUARB-1, January 24, 2004.

The electricity distributors deny this, claiming that ownership has costs; they have to install poles whether they have an attacher or not and may face stranded assets. In the end, the Board is not persuaded that the ownership of the poles should effect the level of rates. The Board agrees with the electricity distributors that the impact of ownership is neutral.

The CEA argues that electricity distributors should be allowed to raise the rates charged to the cable companies because cable companies are now generating "massive new sources of revenue" from the use of electricity distribution plant. In particular, they point out that revenues from high speed internet service have increased from $0 in 1995 to over $900 million annually by 2003. The CEA requested that the Board infer that a large portion of these revenues are from Ontario cable operations. The Board notes that there is very little evidence on this issue. Moreover, the Board believes that the methodology used to determine rates should be based on cost recovery, not some form of revenue sharing.

Another rationale advanced by the cable companies is that it makes no sense to have different methodologies for setting rates on power poles compared to telephone poles. The argument is that since the CRTC methodology is used to price access to telephone poles, the same methodology should be followed in pricing access to power poles. The Board is not convinced. This Board may have a different policy rationale than the CRTC particularly in terms of the electricity ratepayer and the serving utility. In any event, it is worth noting that the rental charge paid by the cable companies for access to telephone poles is $9.60 per pole. This is certainly not the rate being advanced by the cable companies in this proceeding.

The most persuasive argument for equal sharing of the common cost is the practice that appears to take place when parties are in position of equal bargaining power. The LDCs point to the reciprocal agreements between the telephone companies and the
power companies that have existed for a number of years. Under those agreements, each of the regulated utilities has access to the other's poles. They essentially split the common cost equally.

The cable companies question this proposition. They argue that these are regulated entities that have a bias to invest more than optional amounts of capital based on the Averch Johnson principle. [9] The Board notes however, that both sides face the same incentive in terms of investing capital in rate base assets. It can reasonably be assumed that the telephone companies and the power companies are in an equal bargaining position and the resulting solution is a meaningful guideline.

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[9] Harvey Averch and Leland L. Johnson, "Behaviour of the Firm under Regulatory Constraint," *Amer. Econ. Rev.* (December 1962) LII: 1052-1069.

The CCTA responds that its members are not in an equal bargaining position. In the Board's view, that is not relevant. The free and open negotiation between the telephone and power companies is offered as a proxy for a competitive market solution. No party holds an advantage over the other or is in a position to exercise monopoly power.

For many years, electricity and telephone companies in at least four provinces have openly negotiated reciprocal access agreements to telephone and power poles. In all cases, these agreements appear to reflect equal allocation of common costs. This suggests that the per capita or equal sharing methodology is the appropriate one. Moreover, as more and more parties attach to these poles, the notion that there is a discrete portion of space to be allocated to each becomes more problematic.

The Board recognizes that a case can be made for both the proportionate use and the equal sharing methodology. On balance, however, the Board prefers the equal sharing theory for the reasons stated.

How many attachers should be assumed?

When the CCTA filed its Application, it assumed two attachers. This position was amended in Final Argument when 2.5 attachers was proposed. The Reply Argument of the CCTA appears to revert back to two attachers with reference to the CRTC rate of $15.65.

Two attachers were assumed in the CRTC decision. The industry however, has changed dramatically over the last five years. There is evidence that in one municipality there are as many as seven different parties seeking attachment. There is also evidence that poles are used by municipalities for the purpose of street lighting and traffic lights.

In addition, an increasing number of telecommunication providers are entering the market to compete with incumbent telephone company providing voice and data services. A number intervened in this proceeding and by virtue of the settlement agreement will have access to the poles in question. Finally, in a number of major markets the Ontario electricity distributors have established their own affiliates to offer telecommunication services. The LDCs have agreed that these affiliates should pay the same rates as the other parties attaching to the power poles. There is also evidence that Hydro One which accounts for a third of the poles in the province has more than two attachers.

The Board considers 2.5 attachers to be reasonable. Things have changed since the days of the CRTC decision. If anything, there will be more than 2.5 attachers in the future.

Should there be a province-wide rate?

The cable companies argued for a standard province-wide rate. There is precedent for this in terms of the CRTC decision as well as the Nova Scotia and Manitoba decisions. A province-wide rate has the advantage that it is simple to administer. This is certainly one of the goals the Board hopes to achieve in this decision. Moreover, the cost data at the individual LDC level is incomplete. Calculating these costs for ninety different utilities will be a challenge for all concerned.

This is not to say there should not be relief available for electricity distributors who feel the province-wide rate is not appropriate to their circumstances. Any LDC that believes that the province-wide rate is not appropriate can bring an application to have the rates modified based on its own costing. Absent any application, the province-wide rate will apply as a condition of licence, as of the date of the Order.

What costs should be used to calculate the rate?

The annual pole rental charge of $15.65 proposed by the CCTA is a function of both the direct and the indirect cost as set out in Appendix 1. The direct costs consist of the administration cost and the loss of productivity. The total direct cost estimate of $2.61 is based on the CRTC decision.

The EDA claims that there is no reason why the Board should use a $1.92 estimate of loss of productivity as advanced by the CCTA. The EDA points to different data from five different LDCs which range from $0.67 per pole in the case of Hydro One Networks to $5 per pole in the case of Guelph Hydro. References are also made to the evidence of Manitoba Hydro filed by the CEA which calculated a loss of productivity of $6.39 per joint use pole.

There is no question that there is a wide variation in these costs and estimates. The EDA recommends that if this Board determines that it should use the CCTA model to arrive at a uniform annual pole charge, the Board should use the highest Ontario data available to set that uniform rate. That rate would be $32.81 using the Toronto Hydro data and the productivity loss estimate for Guelph Hydro. The Board disagrees and concludes that province-wide representative cost data are more meaningful in the circumstances. For the purposes of calculating the rate in this proceeding, the Board has adopted the direct costs set out in the CCTA application and reproduced in Appendix 1.

Next there are the indirect costs which consist of the net embedded cost per pole plus depreciation, maintenance expense and carrying costs. Again a wide range of costs were proposed by the EDA depending on the particular utility chosen. The Board has concluded that the depreciation, maintenance and carrying costs proposed by the CCTA are representative as set out in Appendix 1.

The CCTA's proposed rate is based on an average net embedded pole cost of $478. This embedded cost is derived from material filed by Milton Hydro in the proceeding leading to the Telecom Decision of the CRTC 99-13 and is supported by the evidence of Hamilton Hydro in this proceeding that the embedded pole cost is $477.47.

EDA argues that local costs vary significantly and if the Board considers it appropriate to set a uniform rate, the rate should reflect the cost of the utilities having the highest embedded pole cost. The EDA then submits that the parties should be free to apply to the Board for a lower rate where they can demonstrate lower costs.

While the Board recognizes local costs vary, there are advantages to having a province-wide rate. That rate should to a maximum extent possible, be based upon representative cost. The Board accepts the CCTA's estimated average net embedded pole cost of $478.

The rate proposed by the CCTA assumed a pre-tax weighted average cost of capital of 9.5%. In response to an undertaking, the CCTA provided a revised weighted average cost of capital based upon a debt equity ratio of 50/50, an interest rate of 7.25% and a return on equity of 9.88% as provided for in the Board's current Rate Handbook. This cost of capital applies to distributors with a rate base of less than $100 million. Given that a large majority of distributors in the province have less than this amount, the Board believes that this new weighted average of capital is an appropriate one to use in calculating a province-wide rate.

Calculation of the rate

To calculate the rate, it is necessary to define the number of attachers as well as the embedded pole costs discussed above. It is also important to define the spacing on a typical pole.

The CCTA proposal assumes a typical pole height of 40 feet with two feet of communications space, 3.25 feet of separation space and 11.50 feet of power space. Mr. Wiebe, on behalf of CEA proposed slightly different space allocations. The CCTA argues that the space allocations adopted by Mr. Ford are virtually identical to those put forward by the Municipal Electric Association in the CRTC proceeding. In addition, the EDA put forward a model agreement developed co-

operatively by a number of LDCs (the Mearie Group) where the assumptions regarding space allocation for a typical 40 foot pole were identical to those used by Mr. Ford. The Board finds that the CCTA estimates are acceptable.

As stated, the Board believes that a single province-wide rate is in the public interest. As indicated, the Board believes its more realistic to use 2.5 as the number of attachers. The Board agrees with the EDA and CEA that the common costs should be shared equally among all attachers. On these principles and the cost data described above, the annual pole charge is $22.35 per attacher as set out in Appendix 2.

Should there be a standard form of agreement?

Under the Settlement Agreement, the parties agree to negotiate the terms and conditions once the Board has made its determination as to the rate. The parties agree to report back to the Board in four months as to the progress of these negotiations. The Board accepts this approach.

Impact on existing contracts

In the Settlement Agreement all parties with one exception, agreed that any new rate set by the Board should not apply to existing contracts. The rate would only apply when the current term of existing contracts expired. Where no contract exists, the licence conditions would apply immediately.

The acceptance of this position appears to be driven by the fact that most existing contracts provide for retroactive rate adjustment in the event this Board determines a rate.

The CCTA states that it would not object to a Board ruling that existing contracts without a retroactivity clause are immediately subject to the Board's decision regarding new licence conditions. They claim however, that few contracts do not have retroactivity provisions.

MTS objects to the Settlement Agreement and submits that any pole access rates set by the Board should be applied to all existing contracts not just those with retroactivity clauses. The Board will provide that the new rates and conditions resulting from this decision will apply immediately to those agreements without a retroactivity clause. Those are apparently few in number. This should provide immediate relief to those who are unable to benefit from a retroactivity provision.

THE BOARD ORDERS THAT:

The licence conditions of the electricity distributors licenced by this Board shall as of the date of this Order be amended to provide that all Canadian carriers as defined by the Telecommunications Act and all cable companies that operate in the Province of Ontario shall have access to the power poles of the electricity distributors at the rate of $22.35 per pole per year.

Dated at Toronto, March 7, 2005.

_____
Gordon E. Kaiser
Vice Chair and Presiding Member

Appendix 1: CCTA Recommended Charge (2 Attachers)

	Price Component - Per Pole	*$*	*Explanation*
	DIRECT COST		
A	Administration Costs	$0.69	CRTC estimate 1999 $0.62, plus inflation
B	Loss in Productivity	$1.92	MEA estimate 1991 = $3.08, plus inflation, and divided between two pole attachers
C	Total Direct Costs	$2.61	A + B
	INDIRECT COSTS		
D	Net Embedded Cost per pole	$478.00	Milton Hydro 1995 = $478
E	Depreciation Expense	$31.11	Milton Hydro 1995 = $31.11
F	Pole Maintenance Expense	$7.61	Milton Hydro 1995 = $6.47, plus inflation
G	Capital Carrying Cost	$45.41	Pre-tax weighted average cost of capital 9.5% applied to net embedded cost per pole (D)
H	Total Indirect Costs per Pole	$84.13	E+F+G
I	Allocation Factor	15.5%	CRTC allocation
J	Indirect Costs Allocated	$13.04	H x I
K	Annual Pole Rental Charge	$15.65	C + J

Appendix 2: 2.5 Attachers - Shared Costs Evenly Spread Amongst All Users

	Price Component - Per Pole	*$*	*Explanation*
	DIRECT COST		
A	Administration Costs	$0.69	CRTC estimate 1999 $0.62, plus inflation
B	Loss in Productivity	$1.23	MEA estimate 1991 = $3.08, plus inflation, and divided between 2.5 pole attachers
C	Total Direct Costs	$1.92	A + B
	INDIRECT COST		
D	Net Embedded Cost per pole	$478.00	Milton Hydro 1995 = $478
E	Depreciation Expense	$31.11	Milton Hydro 1995 = $31.11
F	Pole Maintenance Expense	$7.61	Milton Hydro 1995 = $6.47, plus inflation
G	Capital Carrying Cost	$54.59	Pre-tax weighted average cost of capital 11.42% applied to net embedded cost per pole (D)
H	Total Indirect Costs per Pole	$93.31	E+F+G
I	Allocation Factor	21.9%	Allocation based on 2.5 attachers
J	Indirect Costs Allocated	$20.43	H x I
K	Annual Pole Rental Charge	$22.35	C + J

Joint Experts' Report on Technical Issues

1 Background

As part of the process for the proceeding initiated by Toronto Hydro before the Ontario Energy Board (Process OEB-2013-0234), an experts' conference was held to allow the expert witnesses for all parties to meet, discuss the issues, and prepare a joint statement on areas in which they agree, and identify any areas of disagreement. This report expresses the joint views of Nordicity, technical consultant to Board Staff, and Dr. Charles L. Jackson, technical consultant to Toronto Hydro. The report proceeds in three parts: (1) a summary of the experts' views generally, (2) observations on the expert's reports, and (3) a statement of the experts' views on the specific issues as set forth in the issue list specific to technical or technology matters.

2 Summary of Views

Both Dr. Jackson and Nordicity prepared technical reports for this proceeding. The authors wish to note that their respective reports were created at different points in the proceeding. Dr. Jackson's report was prepared as part of the initial evidence filed by Toronto Hydro in the proceeding, whereas the Nordicity report was created later in the process, and substantially written after the initial Issues conference. As a result, the narrative in each report will have slight variations in their approach. Regardless, it is the authors' views that these reports complement each other, and they agree on almost all substantial points on technical issues. Both reports support the following points:

- At present the use of small cells, such as would be served by wireless equipment attached to utility poles, is growing and is expected to grow substantially in the future.

- The use of wireless services is also growing and is highly likely to grow substantially in the future. Multiple sources indicate a majority of all wireless

traffic will originate indoors[1]. Consequently, most of the hardware supporting small cells will be located indoors where it provides the necessary coverage, where it is out of the weather, and where access to electricity and communications networks is usually easily available.

- Pole access is not a necessity for a wireless service provider. However, pole access is a useful option and, for a variety of reasons, a network designer would find the availability of pole access desirable.

The authors encourage board staff to refer to the specific reports for greater detail on these points, and others.

3 Observations on the Reports

The reports are complementary. Dr. Jackson's report was prepared in anticipation of THESL's filing the Notice of Application that led to this proceeding. The Nordicity report was prepared several months later. The Nordicity authors were familiar with Dr. Jackson's report and had participated in the development of the technology issue list. The Nordicity authors tried to avoid pointless duplication of the Jackson report; rather they offered commentary and perspective on material in the Jackson report and tried to provide detail on topics that they felt were not sufficiently covered in the Jackson report. Thus, although the reports address much the same topics, in large part they are complementary rather than duplicative.

The Nordicity authors and Dr. Jackson corresponded regarding the few significant differences in their reports and met in the Experts' Conference held at the OEB's facility on April 23, 2014. Through the correspondence and meeting, the experts were able to reconcile the differences in their views and prepare this joint report. The experts would note the following points regarding the content of the reports:

[1] For example, Qualcomm states that 70% of mobile traffic originates from indoors, see: http://www.qualcomm.com/media/documents/web1000x-mobile-data-challenge , a second example is from CISCO, who reports that almost 80% of mobile traffic is originating indoors. See: http://www.cisco.com/c/en/us/solutions/collateral/service-provider/service-provider-wi-fi/solution_overview_c22-642482.pdf

Regarding Table 1 in the Jackson Report, the Nordicity report states ". . .the content of this table itself is not a point of debate . . ."; however, they believed the table would be more useful and informative if an additional column were added to the table. Nordicity offers such an additional column in Figure 24 of the Nordicity Report. Dr. Jackson has no disagreement with the contents of that additional column. Dr. Jackson notes that there is a slight difference between the original (Jackson) item in row 3, column 2, and the corresponding Nordicity item in column 3. Dr. Jackson believes that the Nordicity item is the preferred of the two.

The Nordicity Report addresses machine-to-machine (M2M) communications, a topic that the Jackson Report does not discuss. Dr. Jackson believes that the discussion of M2M in the Nordicity Report is appropriate and informative; he does not note any technical errors. Both Dr. Jackson and Nordicity agree that (1) the likely proportion of wireless traffic that will be associated with M2M is reasonably characterized by the 5.7% share predicted by Cisco and that is quoted in the Nordicity Report; (2) M2M traffic will not be sufficiently different from other wireless traffic that it will have a significant impact on the design and deployment of wireless networks; and (3) as with other wireless systems, the option to mount M2M equipment on utility poles would be a useful option that either a network designer or an M2M application designer would value.

4 The Joint Expert Position on the Issues List

4.1 Issue 1: What is the current and likely future state of modern wireless networks?

The majority of both expert reports address this question; in large part, those reports are complementary, not duplicative, and should be read together. A one-sentence response to the Issue 1 question is: Wireless networks will be faster, more responsive, and carry much more traffic than they do today.

4.2 Issue 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?

The network elements most likely to be mounted on utility poles are antennas and associated equipment such as transmitter electronics, batteries, and/or solar cells. It may be the case that, from time-to-time, there will be other network elements that would also benefit from pole mounting. But, the experts are not aware of any such today. With respect to the question of what services and applications such equipment is used for, the authors jointly offer this: Equipment mounted on poles is generally used to provide network access to users in close proximity to such equipment, and not generally in moving vehicles. In other words, this equipment facilitates the use of mobile wireless services for individuals walking in the area, or dining nearby, etc. The services and applications used are identical to those used on the macro-cellular network, namely, data consumption and voice traffic.

(b) For each such element, are there siting alternatives to pole access?

In the vast majority of cases, there will be siting alternatives to pole access. Dr. Jackson quoted research results from Qualcomm, a leading wireless technology company, showing that indoor small cells provide "substantial outdoor coverage." Similarly, in the Nordicity report, the diagram included as Figure 18 illustrates where small cell equipment can be sited, indicating that alternatives to pole siting include indoor wall mounting, and the sides of buildings. The joint experts note that in rare instances there will be situations in which a utility pole is by far the preferred option.

(c) For each such element, are there technological alternatives?

Antennas are fundamental components of wireless systems. There are no alternatives to antennas in wireless systems, and the experts believe it unlikely that there will be in the future. However, the experts are of the view that in the context of technological alternatives to 'small cells', as an example, a network provider could deploy additional

macro cell (large cell towers) or perhaps also use more spectrum (which is, however, a scarce resource). However, in both cases, this 'technological alternative' may be at odds with the reasoning behind deploying a small cell, which is specifically to provide capacity and coverage in a limited geographic space.

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

The experts agree that there is no such expectation for change in the foreseeable future. The very nature of mobile wireless traffic growth dictates that greater amounts of equipment will be required to satisfy the needs of consumers. Accordingly, the current projections all indicated a steady growth of the use of wireless equipment such as small cells. For a good overview of the so-called "1000x" challenge (referring to the growth in wireless networks), the authors invite interested readers to refer to a presentation prepared by Qualcomm and can be downloaded here:

http://www.qualcomm.com/media/documents/web1000x-mobile-data-challenge

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

Jeffrey Church
George Hariton
Marc Van Audenrode

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 is broader than 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. THESL likely has market power in the provision of pole access for wireless attachments.	
Church	Disagree.
Hariton	Depends on geographic market.
Van Audenrode	Agree.
23. It is unlikely that THESL has 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. THESL has market power only in certain geographic areas 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 because of the exercise of market power by THESL.	
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.

Ontario

Electricity Distribution Licence

ED-2002-0497

Toronto Hydro-Electric System Limited

Valid Until

October 16, 2023

Original signed by

Jennifer Lea
Counsel, Special Projects
Ontario Energy Board
Date of Issuance: October 17, 2003
Date of Amendment: November 12, 2010
Date of Amendment: February, 22, 2012

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1 Definitions

In this Licence:

"**Accounting Procedures Handbook**" means the handbook, approved by the Board which specifies the accounting records, accounting principles and accounting separation standards to be followed by the Licensee;

"**Act**" means the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B;

"**Affiliate Relationships Code for Electricity Distributors and Transmitters**" means the code, approved by the Board which, among other things, establishes the standards and conditions for the interaction between electricity distributors or transmitters and their respective affiliated companies;

"**distribution services**" means services related to the distribution of electricity and the services the Board has required distributors to carry out, including the sales of electricity to consumers under section 29 of the Act, for which a charge or rate has been established in the Rate Order;

"**Conservation and Demand Management**" and "**CDM**" means distribution activities and programs to reduce electricity consumption and peak provincial electricity demand;

"**Conservation and Demand Management Code for Electricity Distributors**" means the code approved by the Board which, among other things, establishes the rules and obligations surrounding Board approved programs to help distributors meet their CDM Targets;

"**Distribution System Code**" means the code approved by the Board which, among other things, establishes the obligations of the distributor with respect to the services and terms of service to be offered to customers and retailers and provides minimum, technical operating standards of distribution systems;

"**Electricity Act**" means the *Electricity Act, 1998*, S.O. 1998, c. 15, Schedule A;

"**Licensee**" means Toronto Hydro-Electric System Limited;

"**Market Rules**" means the rules made under section 32 of the Electricity Act;

"**Net Annual Peak Demand Energy Savings Target**" means the reduction in a distributor's peak electricity demand persisting at the end of the four-year period (i.e. December 31, 2014) that coincides with the provincial peak electricity demand that is associated with the implementation of CDM Programs;

"**Net Cumulative Energy Savings Target**" means the total amount of reduction in electricity consumption associated with the implementation of CDM Programs between 2011-2014;

"**OPA**" means the Ontario Power Authority;

"**Performance Standards**" means the performance targets for the distribution and connection activities of the Licensee as established by the Board in accordance with section 83 of the Act;

"**Provincial Brand**" means any mark or logo that the Province has used or is using, created or to be created by or on behalf of the Province, and which will be identified to the Board by the Ministry as a provincial mark or logo for its conservation programs;

"**Rate Order**" means an Order or Orders of the Board establishing rates the Licensee is permitted to charge;

"**regulation**" means a regulation made under the Act or the Electricity Act;

"**Retail Settlement Code**" means the code approved by the Board which, among other things, establishes a distributor's obligations and responsibilities associated with financial settlement among retailers and consumers and provides for tracking and facilitating consumer transfers among competitive retailers;

"**service area**" with respect to a distributor, means the area in which the distributor is authorized by its licence to distribute electricity;

"**Standard Supply Service Code**" means the code approved by the Board which, among other things, establishes the minimum conditions that a distributor must meet in carrying out its obligations to sell electricity under section 29 of the Electricity Act;

"**wholesaler**" means a person that purchases electricity or ancillary services in the IESO administered markets or directly from a generator or, a person who sells electricity or ancillary services through the IESO-administered markets or directly to another person other than a consumer.

2 Interpretation

2.1 In this Licence, words and phrases shall have the meaning ascribed to them in the Act or the Electricity Act. Words or phrases importing the singular shall include the plural and vice versa. Headings are for convenience only and shall not affect the interpretation of the Licence. Any reference to a document or a provision of a document includes an amendment or supplement to, or a replacement of, that document or that provision of that document. In the computation of time under this Licence, where there is a reference to a number of days between two events, they shall be counted by excluding the day on which the first event happens and including the day on which the second event happens and where the time for doing an act expires on a holiday, the act may be done on the next day that is not a holiday.

3 Authorization

3.1 The Licensee is authorized, under Part V of the Act and subject to the terms and conditions set out in this Licence:

a) to own and operate a distribution system in the service area described in Schedule 1 of this Licence;

b) to retail electricity for the purposes of fulfilling its obligation under section 29 of the Electricity Act in the manner specified in Schedule 2 of this Licence; and

c) to act as a wholesaler for the purposes of fulfilling its obligations under the Retail Settlement Code or under section 29 of the Electricity Act.

4 Obligation to Comply with Legislation, Regulations and Market Rules

4.1 The Licensee shall comply with all applicable provisions of the Act and the Electricity Act and regulations under these Acts, except where the Licensee has been exempted from such compliance by regulation.

4.2 The Licensee shall comply with all applicable Market Rules.

5 Obligation to Comply with Codes

5.1 The Licensee shall at all times comply with the following Codes (collectively the "Codes") approved by the Board, except where the Licensee has been specifically exempted from such compliance by the Board. Any exemptions granted to the licensee are set out in Schedule 3 of this Licence. The following Codes apply to this Licence:

a) the Affiliate Relationships Code for Electricity Distributors and Transmitters;

b) the Distribution System Code;

c) the Retail Settlement Code; and

d) the Standard Supply Service Code.

5.2 The Licensee shall:

a) make a copy of the Codes available for inspection by members of the public at its head office and regional offices during normal business hours; and

b) provide a copy of the Codes to any person who requests it. The Licensee may impose a fair and reasonable charge for the cost of providing copies.

6 Obligation to Provide Non-discriminatory Access

6.1 The Licensee shall, upon the request of a consumer, generator or retailer, provide such consumer, generator or retailer with access to the Licensee's distribution system and shall convey electricity on behalf of such consumer, generator or retailer in accordance with the terms of this Licence.

7 Obligation to Connect

7.1 The Licensee shall connect a building to its distribution system if:

a) the building lies along any of the lines of the distributor's distribution system; and

b) the owner, occupant or other person in charge of the building requests the connection in writing.

7.2 The Licensee shall make an offer to connect a building to its distribution system if:

a) the building is within the Licensee's service area as described in Schedule 1; and

b) the owner, occupant or other person in charge of the building requests the connection in writing.

7.3 The terms of such connection or offer to connect shall be fair and reasonable and made in accordance with the Distribution System Code, and the Licensee's Rate Order as approved by the Board.

7.4 The Licensee shall not refuse to connect or refuse to make an offer to connect unless it is permitted to do so by the Act or a regulation or any Codes to which the Licensee is obligated to comply with as a condition of this Licence.

8 Obligation to Sell Electricity

8.1 The Licensee shall fulfill its obligation under section 29 of the Electricity Act to sell electricity in accordance with the requirements established in the Standard Supply Service Code, the Retail Settlement Code and the Licensee's Rate Order as approved by the Board.

9 Obligation to Maintain System Integrity

9.1 The Licensee shall maintain its distribution system in accordance with the standards established in the Distribution System Code and Market Rules, and have regard to any other recognized industry operating or planning standards adopted by the Board.

10 Market Power Mitigation Rebates

10.1 The Licensee shall comply with the pass through of Ontario Power Generation rebate conditions set out in Appendix A of this Licence.

11 Distribution Rates

11.1 The Licensee shall not charge for connection to the distribution system, the distribution of electricity or the retailing of electricity to meet its obligation under section 29 of the Electricity Act except in accordance with a Rate Order of the Board.

12 Separation of Business Activities

12.1 The Licensee shall keep financial records associated with distributing electricity separate from its financial records associated with transmitting electricity or other activities in accordance with the Accounting Procedures Handbook and as otherwise required by the Board.

13 Expansion of Distribution System

13.1 The Licensee shall not construct, expand or reinforce an electricity distribution system or make an interconnection except in accordance with the Act and Regulations, the Distribution System Code and applicable provisions of the Market Rules.

13.2 In order to ensure and maintain system integrity or reliable and adequate capacity and supply of electricity, the Board may order the Licensee to expand or reinforce its distribution system in accordance with Market Rules and the Distribution System Code, or in such a manner as the Board may determine.

14 Provision of Information to the Board

14.1 The Licensee shall maintain records of and provide, in the manner and form determined by the Board, such information as the Board may require from time to time.

14.2 Without limiting the generality of paragraph 14.1, the Licensee shall notify the Board of any material change in circumstances that adversely affects or is likely to adversely affect the business, operations or assets of the Licensee as soon as practicable, but in any event no more than twenty (20) days past the date upon which such change occurs.

15 Restrictions on Provision of Information

15.1 The Licensee shall not use information regarding a consumer, retailer, wholesaler or generator obtained for one purpose for any other purpose without the written consent of the consumer, retailer, wholesaler or generator.

15.2 The Licensee shall not disclose information regarding a consumer, retailer, wholesaler or generator to any other party without the written consent of the consumer, retailer, wholesaler or generator, except where such information is required to be disclosed:

a) to comply with any legislative or regulatory requirements, including the conditions of this Licence;

b) for billing, settlement or market operations purposes;

c) for law enforcement purposes; or

d) to a debt collection agency for the processing of past due accounts of the consumer, retailer, wholesaler or generator.

15.3 The Licensee may disclose information regarding consumers, retailers, wholesalers or generators where the information has been sufficiently aggregated such that their particular information cannot reasonably be identified.

15.4 The Licensee shall inform consumers, retailers, wholesalers and generators of the conditions under which their information may be released to a third party without their consent.

15.5 If the Licensee discloses information under this section, the Licensee shall ensure that the information provided will not be used for any other purpose except the purpose for which it was disclosed.

16 Customer Complaint and Dispute Resolution

16.1 The Licensee shall:

a) have a process for resolving disputes with customers that deals with disputes in a fair, reasonable and timely manner;

b) publish information which will make its customers aware of and help them to use its dispute resolution process;

c) make a copy of the dispute resolution process available for inspection by members of the public at each of the Licensee's premises during normal business hours;

d) give or send free of charge a copy of the process to any person who reasonably requests it; and

e) subscribe to and refer unresolved complaints to an independent third party complaints resolution service provider selected by the Board. This condition will become effective on a date to be determined by the Board. The Board will provide reasonable notice to the Licensee of the date this condition becomes effective.

17 Term of Licence

17.1 This Licence shall take effect on October 17, 2003 and expire on October 16, 2023. The term of this Licence may be extended by the Board.

18 Fees and Assessments

18.1 The Licensee shall pay all fees charged and amounts assessed by the Board.

19 Communication

19.1 The Licensee shall designate a person that will act as a primary contact with the Board on matters related to this Licence. The Licensee shall notify the Board promptly should the contact details change.

19.2 All official communication relating to this Licence shall be in writing.

19.3 All written communication is to be regarded as having been given by the sender and received by the addressee:

a) when delivered in person to the addressee by hand, by registered mail or by courier;

b) ten (10) business days after the date of posting if the communication is sent by regular mail; and

c) when received by facsimile transmission by the addressee, according to the sender's transmission report.

20 Copies of the Licence

20.1 The Licensee shall:

a) make a copy of this Licence available for inspection by members of the public at its head office and regional offices during normal business hours; and

b) provide a copy of this Licence to any person who requests it. The Licensee may impose a fair and reasonable charge for the cost of providing copies.

21 Conservation and Demand Management

21.1 The Licensee shall achieve reductions in electricity consumption and reductions in peak provincial electricity demand through the delivery of CDM programs. The Licensee shall meet its 2014 Net Annual Peak Demand Savings Target of 286.270 MW, and its 2011-2014 Net Cumulative Energy Savings Target of 1,303.990 GWh (collectively the "CDM Targets"), over a four-year period beginning January 1, 2011.

21.2 The Licensee shall meet its CDM Targets through:

a) the delivery of Board approved CDM Programs delivered in the Licensee's service area ("Board-Approved CDM Programs");

b) the delivery of CDM Programs that are made available by the OPA to distributors in the Licensee's service area under contract with the OPA ("OPA-Contracted Province-Wide CDM Programs"); or

c) a combination of a) and b).

21.3 The Licensee shall make its best efforts to deliver a mix of CDM Programs to all consumer types in the Licensee's service area.

21.4 The Licensee shall comply with the rules mandated by the Board's Conservation and Demand Management Code for Electricity Distributors.

21.5 The Licensee shall utilize the common Provincial brand, once available, with all Board-Approved CDM Programs, OPA-Contracted Province-Wide Programs, and in conjunction with or co-branded with the Licensee's own brand or marks.

SCHEDULE 1 DEFINITION OF DISTRIBUTION SERVICE AREA

This Schedule specifies the area in which the Licensee is authorized to distribute and sell electricity in accordance with paragraph 8.1 of this Licence.

1. The City of Toronto as of January 1, 1998.

SCHEDULE 2 PROVISION OF STANDARD SUPPLY SERVICE

This Schedule specifies the manner in which the Licensee is authorized to retail electricity for the purposes of fulfilling its obligation under section 29 of the Electricity Act.

The Licensee is authorized to retail electricity directly to consumers within its service area in accordance with paragraph 8.1 of this Licence, any applicable exemptions to this Licence, and at the rates set out in the Rate Orders.

SCHEDULE 3 LIST OF CODE EXEMPTIONS

This Schedule specifies any specific Code requirements from which the Licensee has been exempted.

1. The Licensee is exempt from the requirements of section 2.5.3 of the Standard Supply Service Code with respect to the price for small volume/residential consumers, subject to the Licensee offering an equal billing plan as described in its application for exemption from Fixed Reference Price, and meeting all other undertakings and material representations contained in the application and the materials filed in connection with it.

2. The Licensee is exempt from the requirements of section 2.4.26A, 2.6.5, and 4.2.2.4 of the Distribution System Code. These exemptions will expire December 17, 2012.

3. The Licensee is exempt from the requirements of section 7.7.1 of the Retail Settlement Code only with respect to the 10 day timeline to notify retailers and customers (whose accounts meet the criteria established in section 7.7.1) of a billing error. This exemption will expire December 17, 2012.

APPENDIX A

MARKET POWER MITIGATION REBATES

4. Definitions and Interpretations

In this Licence

"embedded distributor" means a distributor who is not a market participant and to whom a host distributor distributes electricity;

"embedded generator" means a generator who is not a market participant and whose generation facility is connected to a distribution system of a distributor, but does not include a generator who consumes more electricity than it generates;

"host distributor" means a distributor who is a market participant and who distributes electricity to another distributor who is not a market participant.

In this Licence, a reference to the payment of a rebate amount by the IESO includes interim payments made by the IESO.

5. Information Given to IESO

a Prior to the payment of a rebate amount by the IESO to a distributor, the distributor shall provide the IESO, in the form specified by the IESO and before the expiry of the period specified by the IESO, with information in respect of the volumes of electricity withdrawn by the distributor from the IESO-controlled grid during the rebate period and distributed by the distributor in the distributor's service area to:

i consumers served by a retailer where a service transaction request as defined in the Retail Settlement Code has been implemented; and

ii consumers other than consumers referred to in clause (i) who are not receiving the fixed price under sections 79.4, 79.5 and 79.16 of the *Ontario Energy Board Act, 1998.*

b Prior to the payment of a rebate amount by the IESO to a distributor which relates to electricity consumed in the service area of an embedded distributor, the embedded distributor shall provide the host distributor, in the form specified by the IESO and before the expiry of the period specified in the Retail Settlement Code, with the volumes of electricity distributed during the rebate period by the embedded distributor's host distributor to the embedded distributor net of any electricity distributed to the embedded distributor which is attributable to embedded generation and distributed by the embedded distributor in the embedded distributor's service area to:

i consumers served by a retailer where a service transaction request as defined in the Retail Settlement Code has been implemented; and

ii consumers other than consumers referred to in clause (i) who are not receiving the fixed price under sections 79.4, 79.5 and 79.16 of the *Ontario Energy Board Act, 1998.*

c Prior to the payment of a rebate amount by the IESO to a distributor which relates to electricity

consumed in the service area of an embedded distributor, the host distributor shall provide the IESO, in the form specified by the IESO and before the expiry of the period specified by the IESO, with the information provided to the host distributor by the embedded distributor in accordance with section 2.

The IESO may issue instructions or directions providing for any information to be given under this section. The IESO shall rely on the information provided to it by distributors and there shall be no opportunity to correct any such information or provide any additional information and all amounts paid shall be final and binding and not subject to any adjustment.

For the purposes of attributing electricity distributed to an embedded distributor to embedded generation, the volume of electricity distributed by a host distributor to an embedded distributor shall be deemed to consist of electricity withdrawn from the IESO-controlled grid or supplied to the host distributor by an embedded generator in the same proportion as the total volume of electricity withdrawn from the IESO-controlled grid by the distributor in the rebate period bears to the total volume of electricity supplied to the distributor by embedded generators during the rebate period.

3. Pass Through of Rebate

A distributor shall promptly pass through, with the next regular bill or settlement statement after the rebate amount is received, any rebate received from the IESO, together with interest at the Prime Rate, calculated and accrued daily, on such amount from the date of receipt, to:

a retailers who serve one or more consumers in the distributor's service area where a service transaction request as defined in the Retail Settlement Code has been implemented;

b consumers who are not receiving the fixed price under sections 79.4, 79.5 and 79.16 of the *Ontario Energy Board Act, 1998* and who are not served by a retailer where a service transaction request as defined in the Retail Settlement Code has been implemented; and

c embedded distributors to whom the distributor distributes electricity.

The amounts paid out to the recipients listed above shall be based on energy consumed and calculated in accordance with the rules set out in the Retail Settlement Code. These payments may be made by way of set off at the option of the distributor.

If requested in writing by OPGI, the distributor shall ensure that all rebates are identified as coming from OPGI in the following form on or with each applicable bill or settlement statement:

"ONTARIO POWER GENERATION INC. rebate"

Any rebate amount which cannot be distributed as provided above or which is returned by a retailer to the distributor in accordance with its licence shall be promptly returned to the host distributor or IESO as applicable, together with interest at the Prime Rate, calculated and accrued daily, on such amount from the date of receipt.

Nothing shall preclude an agreement whereby a consumer assigns the benefit of a rebate payment to a retailer or another party.

Pending pass-through or return to the IESO of any rebate received, the distributor shall hold the funds received in trust for the beneficiaries thereof in a segregated account.

ONTARIO POWER GENERATION INC. REBATES

For the payments that relate to the period from May 1, 2006 to April 30, 2009, the rules set out below shall apply.

1. Definitions and Interpretations

In this Licence

"embedded distributor" means a distributor who is not a market participant and to whom a host distributor distributes electricity;

"embedded generator" means a generator who is not a market participant and whose generation facility is connected to a distribution system of a distributor, but does not include a generator who consumes more electricity than it generates;

"host distributor" means a distributor who is a market participant and who distributes electricity to another distributor who is not a market participant.

In this Licence, a reference to the payment of a rebate amount by the IESO includes interim payments made by the IESO.

2. Information Given to IESO

a Prior to the payment of a rebate amount by the IESO to a distributor, the distributor shall provide the IESO, in the form specified by the IESO and before the expiry of the period specified by the IESO, with information in respect of the volumes of electricity withdrawn by the distributor from the IESO-controlled grid during the rebate period and distributed by the distributor in the distributor's service area to:

i consumers served by a retailer where a service transaction request as defined in the Retail Settlement Code has been implemented and the consumer is not receiving the prices established under sections 79.4, 79.5 and 79.16 of the *Ontario Energy Board Act, 1998*; and

ii consumers other than consumers referred to in clause (i) who are not receiving the fixed price under sections 79.4, 79.5 and 79.16 of the *Ontario Energy Board Act, 1998*.

b Prior to the payment of a rebate amount by the IESO to a distributor which relates to electricity consumed in the service area of an embedded distributor, the embedded distributor shall provide the host distributor, in the form specified by the IESO and before the expiry of the period specified in the Retail Settlement Code, with the volumes of electricity distributed during the rebate period by the embedded distributor's host distributor to the embedded distributor net of any electricity distributed to the embedded distributor which is attributable to embedded generation and distributed by the embedded distributor in the embedded distributor's service area to:

i consumers served by a retailer where a service transaction request as defined in the Retail Settlement Code has been implemented; and

ii consumers other than consumers referred to in clause (i) who are not receiving the fixed price under sections 79.4, 79.5 and 79.16 of the *Ontario Energy Board Act, 1998*.

c Prior to the payment of a rebate amount by the IESO to a distributor which relates to electricity consumed in the service area of an embedded distributor, the host distributor shall provide the IESO, in the form specified by the IESO and before the expiry of the period specified by the IESO, with the information provided to the host distributor by the embedded distributor in accordance with section 2.

The IESO may issue instructions or directions providing for any information to be given under this section. The IESO shall rely on the information provided to it by distributors and there shall be no opportunity to correct any such information or provide any additional information and all amounts paid shall be final and binding and not subject to any adjustment.

For the purposes of attributing electricity distributed to an embedded distributor to embedded generation, the volume of electricity distributed by a host distributor to an embedded distributor shall be deemed to consist of electricity withdrawn from the IESO-controlled grid or supplied to the host distributor by an embedded generator in the same proportion as the total volume of electricity withdrawn from the IESO-controlled grid by the distributor in the rebate period bears to the total volume of electricity supplied to the distributor by embedded generators during the rebate period.

3. Pass Through of Rebate

A distributor shall promptly pass through, with the next regular bill or settlement statement after the rebate amount is received, any rebate received from the IESO, together with interest at the Prime Rate, calculated and accrued daily, on such amount from the date of receipt, to:

a retailers who serve one or more consumers in the distributor's service area where a service transaction request as defined in the Retail Settlement Code has been implemented and the consumer is not receiving the prices established under sections 79.4, 79.5 and 79.16 of the *Ontario Energy Board Act, 1998*;

b consumers who are not receiving the fixed price under sections 79.4, 79.5 and 79.16 of the *Ontario Energy Board Act, 1998* and who are not served by a retailer where a service transaction request as defined in the Retail Settlement Code has been implemented; and

c embedded distributors to whom the distributor distributes electricity.

The amounts paid out to the recipients listed above shall be based on energy consumed and calculated in accordance with the rules set out in the Retail Settlement Code. These payments may be made by way of set off at the option of the distributor.

If requested in writing by OPGI, the distributor shall ensure that all rebates are identified as coming from OPGI in the following form on or with each applicable bill or settlement statement:

"ONTARIO POWER GENERATION INC. rebate"

Any rebate amount which cannot be distributed as provided above or which is returned by a retailer to the distributor in accordance with its licence shall be promptly returned to the host distributor or IESO as applicable, together with interest at the Prime Rate, calculated and accrued daily, on such amount from the date of receipt.

Nothing shall preclude an agreement whereby a consumer assigns the benefit of a rebate payment to a retailer or another party.

Pending pass-through or return to the IESO of any rebate received, the distributor shall hold the funds received in trust for the beneficiaries thereof in a segregated account.