



**EB-2010-0229**

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

**AND IN THE MATTER OF** an application under  
section 74 of the Ontario Energy Board Act, 1998 by  
Hydro One Networks Inc. for an Order or Orders  
approving exemptions to certain sections of the  
Distribution System Code

**BEFORE:** Marika Hare  
Presiding Member

Cathy Spoel  
Member

## **DECISION AND ORDER**

### **I. BACKGROUND**

Hydro One Networks Inc. ("Hydro One") filed an application dated June 30, 2010. The application consists of two parts. In Part A<sup>1</sup> of its application, Hydro One made specific requests regarding the application of the Board's new cost responsibility rules contained in the Board's October 21, 2009 Notice of Amendment to the Distribution System Code<sup>2</sup> ("DSC"), with respect to the connection of certain renewable generators. In Part B<sup>3</sup> of its application, Hydro One requested an order of the Board amending Hydro One's

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<sup>1</sup> EB-2010-0229, Exh. B

<sup>2</sup> Notice of Amendment to a Code – Amendments to the Distribution System Code, EB-2009-0077, October 21, 2009

<sup>3</sup> EB-2010-0229, Exh. C

electricity distribution licence (ED-2003-0043) to allow exemptions from certain sections of the DSC.

The Board issued a Notice of Application and Hearing on July 30, 2010. Intervention requests were filed by Energy Probe, the Association of Power Producers of Ontario (“APPrO”), the Independent Electricity System Operator (“IESO”), the Ontario Power Authority (“OPA”), and International Power Canada Inc. North Bay Hydro Distribution Limited filed a request for observer status. The Board granted all the intervention requests and the observer request.

On August 25, 2010, the Board issued Procedural Order No. 1, setting out an interrogatory process to provide the Board with additional information that is relevant for its consideration of the application. An oral hearing was held on October 6, 2010 providing parties with a further opportunity for examination of the application. Parties filed their submissions as directed at the conclusion of the Oral Hearing, with the reply argument filed by Hydro One Distribution on November 5, 2010.

The full record of the proceeding is available at the Board’s offices and on the Board’s website. The Board has summarized the record in this proceeding only to the extent necessary to provide context to its findings.

## **II. REQUEST FOR RELIEF RELATING TO UNFORESEEN TECHNICAL ISSUES AND COSTS**

### **A INTRODUCTION**

This application seeks to deal with unanticipated costs that have arisen as a result of the connection of certain renewable generation facilities. These generators applied to connect to the Hydro One system prior to October 21, 2009, and the costs of connection were attributed to the generators as required by the rules in force at the time.

In Part A of its application, Hydro One described certain technical problems that it has encountered with these connections. Three categories of technical issues are outlined by the applicant:

- Category 1 - excessive voltage fluctuation caused by generators connecting at a distance from the transformer station (“Distance Limitation”). Hydro One said that these excessive voltage fluctuations may damage the equipment of the connecting generators or other loads in the area. Hydro One’s evidence is that this issue involves 22 generators,<sup>4</sup> and the approximate total mitigation cost is estimated at \$42 million;<sup>5</sup>
- Category 2 - over-voltage conditions identified with generators using a step-up transformer with a Delta-Y winding configuration (“Delta-Y Transformers”). This investment is due to Hydro One changing its standard around the fall of 2008<sup>6</sup> in order to mitigate over-voltage conditions. Hydro One stated that the over voltages resulting from such Delta-Y transformer configuration could damage the equipment of the connecting generator or other customers on the system. Hydro One’s proposed solution to address this issue is to install a grounding transformer. This issue involves 9 generators. Hydro One has projected the cost of investments to address this issue to be in the range of \$4.5 to \$6.5 million;<sup>7</sup> and
- Category 3 - inability to sustain reverse flow at transformer stations with dual secondary windings (“Dual Secondary Winding Transformers”). Hydro One has stated that the design of transformers with dual secondary windings limits their ability to handle imbalance in the flow between windings as well as reverse flow and could result in damage to Hydro One’s equipment and in outages impacting Hydro One’s other customers.<sup>8</sup> Hydro One is proposing to monitor this issue and has indicated that the anticipated monitoring of this issue is projected to cost \$1.5 million. Hydro has also stated that it may have to replace 9 transformers, at a cost of \$5 million per transformer.<sup>9</sup>

Hydro One’s evidence was that these problems could not have been reasonably foreseen at the time they entered into connection agreements with the generators. There was no evidence that contradicted this assertion.

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<sup>4</sup> Hydro One Argument in Chief, Schedule B; Exh.B/T1/S2, p.4/Table 1

<sup>5</sup> Exh. B/T1/S 2, p. 6 and Tr. 90 line 4 through Tr. 91, line 3

<sup>6</sup> Exh. B/ T1/S 3/ p.1,

<sup>7</sup> Exh. B/ T1/S 3/ p.3; Tr. 74, line 28

<sup>8</sup> Tr 72, lines 23-27 and Exh. B/T1/S4,pgs. 2-4,

<sup>9</sup> Tr. 94, lines 8-16

## **B HYDRO ONE'S REQUEST**

Hydro One proposed that the investments required to resolve these issues be treated as if they related to generators that had applied for connection on or after October 21, 2009. Hydro One proposed that this be accomplished by classifying these investments as “eligible investments” under section 79.1 of the *Ontario Energy Board Act, 1998* by deeming these investments to be renewable energy expansions that would qualify for distributor funding.

Section 79.1 of the Act and subsections 1(2) and 1(3) of Ontario Regulation 330/09 create a regulatory mechanism in respect of investments made to connect or enable the connection of renewable generation.

Section 1(2) of Ontario Regulation 330/09 refers to the DSC which was amended on October 21, 2009 to change the cost responsibility rules for these investments by transferring some of the cost responsibility from a generator to a distributor. As well, certain qualifying costs incurred by a distributor can be recovered from all ratepayers in the province rather than exclusively from that distributor's ratepayers.

Hydro One seeks to apply these rules to the investments required to address the three categories of technical problems described earlier, even though the proponents of these projects had applied to connect to Hydro One's distribution system before October 21, 2009. Hydro One is of the view that these investments would qualify as “eligible investments” had these projects applied to connect to Hydro One's distribution system after October 21, 2009. Hydro One is requesting that the Board “deem” the investments to be “renewable energy expansions” for purposes of the DSC.

## **C SUBMISSIONS OF PARTIES**

Parties made submissions on several issues.

### Jurisdiction

Board staff argued that prior to Ontario Regulation 330/09 which was filed on September 9, 2009, there was no mechanism available to spread the costs associated with the connection of renewable generation across all provincial ratepayers. Board staff submitted that the Board does not have the jurisdiction to “deem” Hydro One's

proposed investments as renewable expansion investments in accordance with the DSC.

Board staff did, however, note that the costs associated with the investments for which Hydro One now seeks recovery are, for the most part, prospective. Board staff submitted that the Board does have the ability to grant relief for prospective investments which are clearly either expansions or renewable enabling improvements, given the prospective nature of the costs anticipated. However, Board staff's position was that with the exception of the Distance Limitation issue, these investments are not expansions or renewable enabling improvements. Furthermore the system assets impacted by the Category 3 projects (Dual Secondary Winding Transformers) are transmission assets and not distribution assets, and are therefore not subject to the DSC.

Hydro One submitted that the Board has the jurisdiction, pursuant to Ontario Regulation 330/09, to grant the relief requested, given that the mitigation costs are prospective and do not apply to any time period prior to the coming into force of the Regulation.

APPrO submitted that the subject investments are prospective and the Board has the authority to approve them as the responsibility of the distributor. APPrO suggested that the Board could apply the same "approval in principle" approach as was applied in the provisional approval of the applicant's Green Energy Plan, with a later prudence review of the investments, when more complete information is available.

### Fairness

Board staff and Energy Probe objected to Hydro One's request submitting that it would be unfair to other generators to allow these projects to benefit from the new regulatory mechanism while still allowing these projects to retain their capacity allocation on the distribution system. Board staff and Energy Probe argued that the Board's October 21, 2009 Notice of Amendments to the DSC made it clear that a renewable generator that has already applied to connect would, if it wanted to take advantage of the new mechanism created by Ontario Regulation 330/09, be required to withdraw its earlier application, rescind any earlier connection impact assessments and forfeit any earlier capacity allocation before it could reapply to connect and thereby take advantage of the new cost responsibility and socialization mechanisms.

Hydro One submitted that no evidence was provided to support the arguments of Energy Probe and Board staff that providing the relief requested would be unfair to other generators.

APPrO argued that it can only be assumed that the material costs related to these recently discovered issues would not be covered by the OPA contract awarded to the generators. APPrO argued that these unforeseen costs could compromise the viability of these particular projects and this result would be contrary to the Board's statutory objective, and the supporting legislative and regulatory framework, to promote the connection of renewable generation in a timely manner, and to promote the timely expansion of distribution systems to accommodate such connection. APPrO also argued that this result would be contrary to the principles of fairness embedded in the Board's connection process rules to the effect that prior to committing to paying connection costs, generators should be provided with the magnitude of those costs

#### Could the costs have been foreseen?

Hydro One and APPrO submitted that no evidence was provided by parties to contradict Hydro One's evidence that neither the generators nor Hydro One knew, or could have known, at the time, of the technical issues that have given rise to the additional work and costs that are now required to ensure stability of the system.

#### Interpretation of the DSC

APPrO argued that Hydro One filed this application based on the concern that a passage found in the Board's October 21, 2009 Notice of Amendment precludes application of the new cost responsibility rules to costs incurred to connect renewable generation projects for which an application to connect was made prior to the effective date of the amendments. APPrO submitted that a statement in a Board notice provides guidance on interpretation and application of the DSC, but as it does not form part of the code itself, it is not ultimately binding on this hearing panel.

APPrO also submitted that the panel should be guided by the entirety of the Board's stated intent regarding application of the new cost responsibility rules, and not simply by a portion of the statement of that intent. APPrO indicated that the statement in issue is also found in the Board's September 11, 2009 Notice of Revised Proposal to Amend a

Code, and referenced the following portion of the September 11, 2009 Notice, which it submits provides the rationale for this interpretive direction:

The Board does not believe that generation projects that commenced the connection process prior to the date of coming into force of the proposed new connection cost responsibility rules should be subject to those rules. Such projects were developed and proceeded with the connection process on the basis of the current cost responsibility rules and those rules and the resultant costs would have been factored in to the project economics.

## **BOARD FINDINGS**

As noted above, Hydro One is seeking to have the Board's cost responsibility rules applicable to investments made to connect or enable the connection of renewable energy generation facilities that came into force on October 21, 2009 apply to recover the costs of investments Hydro One says need to be made to address the identified technical issues. The central premise of Hydro One's application is that these costs would qualify for recovery under these rules, had the proponents of these projects applied to connect to Hydro One's distribution system after October 21, 2009.

In assessing Hydro One's cost recovery request, the Board is guided by the language in the Board's October 21, 2009 Notice of Amendment to the DSC regarding the coming into force of the new cost responsibility rules. In that Notice, the Board confirmed that, as it had stated in its June and September notices, the amendments to the DSC which changed the cost responsibility rules would apply only to investments associated with renewable generation projects for which an application to connect was made on, or after October 21, 2009. In response to requests for clarification on the term "application to connect", the Board stated that the date of application means the date on which the generator files with a distributor the necessary materials to formally request a connection to the distribution system as described in Appendix F of the DSC. The Board further confirmed that the new cost responsibility rules would also apply to a renewable generator who withdraws an earlier application to connect and reapplies for connection after October 21, 2009.

The Board is not persuaded by the argument made by APPrO and Hydro One that these investments are prospective in nature. In the Board's view, the October 21, 2009 Notice made it clear that the DSC amendments would only apply to proponents of generation projects applying to connect to a distributor's system after October 21, 2009.

The costs for which Hydro One seeks recovery relate to projects that were already connected or that had received a connection impact assessment prior to October 21, 2009. The Board finds that these projects do not, as a matter of principle, qualify for treatment under the new cost responsibility rules.

The Board recognizes that the investments required to address the identified technical issues could compromise the viability of some of the renewable energy generation projects and agrees that Hydro One should undertake the work necessary to address the technical issues.

The Board therefore directs that the costs to be incurred by Hydro One (i.e. capital and operation/maintenance costs) to address the technical issues in categories 1 to 3 be recorded in three sub-accounts of Account 1508, Other Regulatory Assets:

- “Subaccount Category 1 - Distance Limitation – Capital and OM&A Expenses”
- “Subaccount Category 2 - Delta-Y Transformers – Capital and OM&A Expenses”
- “Subaccount Category 3 - Dual Secondary Winding Transformers – Capital and OM&A Expenses”

Hydro One may apply to recover the amounts booked in these accounts in a future rates proceeding, subject to Hydro One providing evidence of the reasonableness of the costs incurred. Other issues that will be taken into account in deciding whether OM&A and capital costs that are recorded in the deferral accounts are allowed to be recovered in rates will be whether the amounts are material and whether Hydro One should have been able to absorb the costs of these system improvements into the existing OM&A and capital budgets for the years 2010 and 2011.

The Board notes that to address the dual winding transformer issue (Category 3 above), Hydro One has indicated that it will incur certain monitoring costs and may have to replace 9 transformers. These transformers are transmission assets owned by Hydro One Transmission. Hydro One Distribution has proposed to make a capital contribution to Hydro One Transmission for transformer replacements<sup>10</sup>. The Board finds that where such a capital contribution is made, Hydro One will need to provide evidence of need and reasonableness of the costs for this investment in requesting recovery of the costs through its distribution rate base.

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<sup>10</sup> Response to Board Staff IR#9(iv) and Argument in Chief, p.5



The Board finds this to be the most appropriate way to address these issues given the following circumstances of this case.

First, the Board notes that the costs of the proposed mitigation measures to address the three technical issues are not yet clearly defined and could vary substantially depending on the extent of the problems, which in some cases are still unknown, on the solution chosen to address them and the actual costs of the solution. The Board accepts that Hydro One is, in some cases, still in the process of monitoring the situation to determine the appropriate solution. However, it is necessary to have greater detail and specificity regarding the mitigation measures to be undertaken before a finding of reasonableness of costs can be made and approval of the proposed expenditures can be given by the Board.

Second, Hydro One indicated that if the Board does not approve the cost recovery as it has proposed, it will seek to recover the costs of these investments from generators.<sup>11</sup> Hydro One has also stated that it has the authority to charge additional material connection costs.<sup>12</sup> The Board agrees with APPrO that this result would be contrary to the principles of fairness given that prior to committing to paying connection costs, generators should have been provided with the magnitude of those costs. Those generators made investment decisions based on cost estimates provided by Hydro One. While Hydro One argued that it could not have foreseen the additional costs required, charging generators an additional amount after the fact is unfair in the Board's view. Hydro One should not be seeking payment from generators which have signed connection cost agreements and which, in many cases, are already connected to Hydro One's distribution system.

Finally, the Board is of the view that Hydro One customers will benefit from the improvements to the distribution system and therefore any recovery of costs of these proposed investments should be through its distribution rate base, in accordance with the process outlined above.

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<sup>11</sup> Response to Board Staff IR#2

<sup>12</sup> Tr.122, lines 17-23

### **III. REQUEST FOR EXEMPTIONS TO THE DSC RELATING TO CAPACITY ALLOCATION ISSUES**

#### **A INTRODUCTION**

In Part B of its application, Hydro One requested exemptions from sections 6.2.4.1e(i), 6.2.4.1c, 6.2.16, and 6.2.18 of the DSC stating that the timelines provided to develop connection cost estimates and associated offers to connect for 12 large generators that have applied for connection to Hydro One's distribution system are insufficient.

The evidence was that large generators wishing to connect to the distribution system are first required to apply for a distribution connection impact assessment ("CIA – Distribution"). They are then required to apply to the IESO for a System Impact Assessment ("SIA"), and a Customer Impact Assessment ("CIA – Transmission") from the licensed transmitter, in these cases Hydro One Transmission. Hydro One has stated that if upgrades to the transmission system are needed as a result of these assessments, additional time is required for the transmitter to develop the scope of work and detailed cost estimates. Hydro One indicated that the transmitter is not able to provide definitive timelines within which it can commit to provide the detailed cost estimates for required transmission upgrades.

The issue is that when upgrades to the transmission system are determined to be required, it may not be possible for the cost estimates for those upgrades to be provided in time for the parties to sign a connection cost agreement within the timelines prescribed by section 6.2.4.1e(i) of the DSC, which provides that a generator loses its capacity allocation unless a connection cost agreement has been signed with the distributor within 6 months. Hydro One is concerned that for some or all of the twelve generators that are the subject of Part B of Hydro One's application, this timeline may not be met and Hydro One will be required by the provision of the DSC to remove their capacity allocation.

#### **B SUBMISSIONS OF PARTIES**

Board staff, the OPA, and APPrO agreed that while additional processing time may be required for these large generators, the timeline should not be open-ended. The following is a summary of the parties' suggested timelines for the development of cost estimates:

Board Staff – six months, when cost estimates for either or both distribution and transmission upgrades are required.

OPA – six months, when cost estimates for distribution upgrades are required and nine months, when cost estimates for both distribution and transmission upgrades are required.

APPrO – the earlier of up to nine months for transmission cost estimation when needed and 45 days after both transmission and distribution cost estimates are complete, for the generator to arrange financing and execute the CCA.

At the Oral hearing, Board staff counsel introduced extracts from a Hydro One document approved by the Board entitled “Transmission Connection Procedures” which included a section entitled “Timelines for Connection Process”. This section of the document indicated that 45 days, on a best efforts basis, would be required to provide cost estimates to all transmission customers. Board staff has submitted that a 90 day time period for the preparation of a transmission cost estimate is, therefore, reasonable.

In its reply submission, Hydro One has stated that the proposal for a six month timeline is appropriate when only distribution upgrades are required. When transmission cost estimates are required, Hydro One submitted that it would try to work within the timeline proposed by APPrO. Hydro One also stated that a maximum nine-month period for producing transmission cost estimates would better reflect the time requirements of addressing the complexities introduced by the SIA review.

The OPA, APPrO, and Board staff submitted that progress reporting by Hydro One on the ‘processing’ of these affected generators would be helpful. The OPA and APPrO suggested monthly reports, and the OPA provided a sample table of milestone events and dates for each project. The OPA also requested that Hydro One be directed to distribute the Board’s Order from this proceeding to all the affected generators. Hydro One submitted that quarterly reporting is sufficient, with the proviso that material events for projects be reported as they occur. Hydro One stated that it was agreeable to distributing the Board’s decision on this proceeding to the affected generators.

Board staff, the OPA and APPrO submitted that the exemption request should be limited to the 12 generators identified by Hydro One, but agreed that this issue could

affect other large generators, and other distributors, and that the Board should consider a process which would provide for the application of any exemption granted here, to other distributors, and related issues.

## **BOARD FINDINGS**

The main request in Part B of Hydro One's application is for an extension of the timeline to process connection requests from 12 large generators that have applied to connect to Hydro One's distribution system.

The Board agrees that additional time is necessary to develop the connection cost estimates and the associated offers to connect for these generators. According to the evidence, all 12 projects have FIT contracts.<sup>13</sup> The Board finds that the timeline proposed by the OPA would be the most appropriate to address this issue. The OPA has actively participated in clarifying Part B of the applicant's pre-filed evidence during the oral hearing and by providing detailed submissions on this portion of the application. The Board accepts the OPA's submission that its proposed timeline is consistent with the typical six to nine month timeframe to connect for a FIT contract that Hydro One developed and publicly presented in November 2009.<sup>14</sup>

All parties including Hydro One have agreed that the applicant should be required to report on the progress of the 12 subject generation projects throughout the connection assessment process and that Hydro One should identify any obstacles that may prevent the connection of the projects in accordance with the timelines set by the Board. The Board finds that quarterly reporting would be useful to the Board by providing early notification of potential problems in meeting prescribed timelines.

The Board directs Hydro One to publicly file an updated and expanded version of the table of projects provided in the Response to Undertaking J1.1 beginning on December 31, 2010 and every quarter, thereafter. This table must include the completion dates for the following milestones:

- the SIA;
- the Transmission CIA;

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<sup>13</sup> Tr 45, lines 10-18

<sup>14</sup> Exhibit K1.3, Excerpt of webinar document put together jointly by the OPA and Hydro One, November 20, 2009; Tr.156-7, lines 16-22

- the delivery date for all the cost estimates and the draft connection cost agreement; and
- the deadline to execute the connection cost agreement.

The Board also directs Hydro One to distribute the Board's Decision and Order on this application to the affected generators.

As the Board has determined that it is appropriate to extend the timeline to connect these 12 generators to Hydro One's distribution system, the only exemption that will be granted is an exemption from section 6.2.4.1 e(i) of the DSC. The Board understands that other distributors may be faced with similar issues with respect to the processing of applications for connection by large generators and may also need to request exemptions. These will be addressed on a case-by-case basis.

In the Board's view, this capacity allocation issue suggests that amendments to the DSC and the Transmission System Code could provide greater clarity and certainty to generators and the regulated utilities. This panel of the Board recommends that a review of the overall process associated with large generators should be conducted, including the OPA's generation procurement process, the IESO's transmission connection assessment process, the transmitter's cost estimating process and the Board's distribution connection process. This review could be used to inform any specific amendments to the DSC.

## **COST AWARDS**

The Board may grant cost awards to eligible stakeholders pursuant to its power under section 30 of the Ontario Energy Board Act, 1998. The Board will determine such cost awards in accordance with its Practice Direction on Cost Awards. When determining the amounts of the cost awards, the Board will apply the principles set out in section 5 of the Board's Practice Direction on Cost Awards. The maximum hourly rate set out in the Board's Cost Awards Tariff will also be applied.

All filings with the Board must quote the file numbers EB-2010-0229 and be made through the Board's web portal at [www.errr.oeb.gov.on.ca](http://www.errr.oeb.gov.on.ca), and consist of two paper copies and one electronic copy in searchable / unrestricted PDF format. Filings must be received by the Board by 4:45 p.m. on the stated date. Parties should use the document naming conventions and document submission standards outlined in

the RESS Document Guideline found at [www.oeb.gov.on.ca](http://www.oeb.gov.on.ca). If the web portal is not available, parties may e-mail their documents to the attention of the Board Secretary at [BoardSec@oeb.gov.on.ca](mailto:BoardSec@oeb.gov.on.ca). All other filings not filed via the Board's web portal should be filed in accordance with the Board's Practice Directions on Cost Awards.

A cost awards decision will be issued after the following steps have been completed.

1. Intervenors found eligible for cost awards shall file with the Board, and forward to Hydro One Networks Inc., their respective cost claims within 21 days from the date of this Decision.
2. Hydro One Networks Inc. shall file with the Board and forward to intervenors any objections to the claimed costs within 28 days from the date of this Decision.
3. Intervenors shall file with the Board and forward to Hydro One Networks Inc. any responses to any objections for cost claims within 35 days of the date of this Decision.

**THE BOARD ORDERS THAT:**

1. The costs to be incurred by Hydro One Networks Inc. to address the technical issues identified in Part A of the application be recorded in three sub-accounts of Account 1508, Other Regulatory Assets:
  - "Subaccount Category 1 - Distance Limitation – Capital and OM&A Expenses"
  - "Subaccount Category 2 - Delta-Y Transformers – Capital and OM&A Expenses"
  - "Subaccount Category 3 - Dual Secondary Winding Transformers – Capital and OM&A Expenses"
2. For the purpose of amending Hydro One Networks Inc.'s Electricity Distribution Licence ED-2003-0043, Hydro One Networks Inc. file information which identifies the generator as well as the project name for each of the 12 large generation projects for which an exemption from section 6.2.4.1e(i) of the Distribution System Code is granted. Hydro One Networks Inc.'s exemption from section 6.2.4.1e(i) of the Distribution System Code will be effective when the licence is subsequently amended.
3. Hydro One Networks Inc. filed a status report on the 12 large generation projects that have applied for connection to Hydro One's distribution system (as identified in

Part B of the application). Hydro One is required to publicly file an updated and expanded version of the table of projects provided in the Response to Undertaking J1.1 beginning on December 31, 2010 and every quarter, thereafter. This table must include the completion dates for the following milestones:

- the SIA;
- the Transmission CIA;
- the delivery date for all the cost estimates and the draft connection cost agreement; and
- the deadline to execute the connection cost agreement.

4. Hydro One Networks Inc. distribute the Board's Decision and Order on this application to the affected generators.

**DATED** at Toronto December 20, 2010

**ONTARIO ENERGY BOARD**

*Original signed by*

Kirsten Walli  
Board Secretary