



**EB-2014-0022**

**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 Suncor  
Energy Products Inc. for an Order granting leave to  
construct a new transmission line and associated facilities.

**BEFORE:** Ken Quesnelle  
Vice-Chair and Presiding Member

Ellen Fry  
Member

Peter Noonan  
Member

## **DECISION AND ORDER**

**February 26, 2015**

### **SUMMARY OF APPLICATION AND PROCEEDING**

On January 21, 2014, Suncor Energy Products Inc. (Suncor) applied under sections 92, 96(2), 97 and 101 of the *Ontario Energy Board Act, 1998* (Act) for leave to construct approximately 15 kilometers of 115 kilovolt electricity transmission line and associated facilities (Transmission Facilities) to connect Suncor's Cedar Point II Wind Energy Project to the provincial electricity grid. Suncor also applied for an order approving the forms of agreements offered to landowners and an order approving the construction of certain transmission facilities upon, under or over a highway, utility line or ditch.

Suncor is developing the 100 MW Cedar Point II Wind Energy Project pursuant to a Feed-in-Tariff (FIT) contract with the Ontario Power Authority (OPA)<sup>1</sup> dated July 2011. The Transmission Facilities are necessary to connect the Cedar Point II Wind Energy Project to the electricity grid.

The Transmission Facilities will be located in Lambton County and are scheduled to be placed in service in June 2015. They consist of:

- Approximately 15 km of single circuit 115 kV transmission line that will run from the transformer station to a substation owned by Jericho Wind Inc.
- A transformer station to step-up the voltage level of the generated electricity from 34.5 kV to the 115 kV transmission line voltage. The transformer station will contain two transformers, each with a nominal voltage rating of 115 kV/34.5 kV, as well as other ancillary equipment.

The Board issued a Notice of Application on February 18, 2014. The following parties have been granted intervenor status: Hydro One Networks Inc. (Hydro One), the Independent Electricity System Operator (IESO) Lambton County and a local resident group that has referred to itself as WAIT-PW. The Board granted cost eligibility to WAIT-PW.

Hydro One raised issues concerning the financial and operational impacts of the Transmission Facilities on Hydro One's distribution infrastructure located in the vicinity of Suncor's proposed infrastructure. The Board held an oral hearing on these issues on November 27, 2014.

For the reasons set out below, the Board grants the application, subject to the conditions of approval contained in the Order.

## THE BOARD'S JURISDICTION

The Board's power to grant an applicant leave to construct transmission facilities arises from subsection 92(1) of the Act which states:

92. (1) No person shall construct, expand or reinforce an electricity transmission line or an electricity distribution line or make an interconnection without first

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<sup>1</sup> Now the Independent Electricity System Operator

obtaining from the Board an order granting leave to construct, expand or reinforce such line or interconnection.

In discharging its duties in this proceeding the Board is also governed by the provisions of section 96 of the Act which states:

96. (1) If, after considering an application under section 90, 91 or 92 the Board is of the opinion that the construction, expansion or reinforcement of the proposed work is in the public interest, it shall make an order granting leave to carry out the work.
- (2) In an application under section 92, the Board shall only consider the following when, under subsection 1, it considers whether the construction, expansion or reinforcement of the electricity transmission line or electricity distribution line or the making of the interconnection, is in the public interest:
1. The interests of consumers with respect to prices and the reliability and quality of electricity service.
  2. Where applicable and in a manner consistent with the policies of the government of Ontario the promotion of the use of renewable energy resources.

Accordingly, the Board has been given a mandate to consider the public interest in applications arising under section 92 of the Act, but the only factors to be considered have been identified in section 96(2).

This proceeding only concerns the Transmission Facilities. It does not encompass the need for, location, or other aspects of the Cedar Point II Wind Energy Project generation facility.

Section 97 of the Act also gives the Board responsibility for approval of the forms of land agreements to be offered to landowners whose lands are affected by the approved route, or location, of a proposed transmission project. Section 97 of the Act states that:

97. In an application under section 90, 91 or 92, leave to construct shall not be granted until the applicant satisfies the Board that it has offered or will offer to

each owner of land affected by the approved route or location an agreement in a form approved by the Board.

Also, under section 101 of the Act the Board is empowered, after granting leave to construct to authorize the construction of a transmission line upon, under or over a highway, utility line or ditch.

Section 101 of the Act states as follows:

101. (1) The following persons may apply to the Board for authority to construct a work upon, under or over a highway, utility line or ditch:

1. Any person who has leave to construct the work under this Part

(3) Without any other leave and despite any other Act, if after the hearing the Board is of the opinion that the construction of the work upon, under or over a highway, utility line or ditch is in the public interest, it may make an order authorizing the construction upon such conditions as it considers appropriate.

Accordingly, the Board has considered this application within the parameters set by sections 92, 96, 97 and 101 of the Act.

## **FORM OF AGREEMENT OFFERED TO LANDOWNERS**

Suncor indicated that all affected lands are privately owned, and it had secured the necessary agreements with the affected landowners. Suncor also provided a copy of a form of land agreement offered to landowners for approval by the Board.

## **Board Findings**

The Board notes that all of the affected private landowners have executed agreements with Suncor. None of these landowners have indicated to the Board that they have issues with the form of agreement offered to them by Suncor. The Board approves the form of agreement offered to private landowners but notes that its approval in this context does not necessarily imply that the Board would, or would not, approve this form of agreement in any future proceedings.

## PROMOTION OF THE USE OF RENEWABLE ENERGY SOURCES

The generation source associated with the Transmission Facilities is wind power and is thus a form of renewable energy. Therefore, in accordance with section 96(2) of the Act, the Board is required to consider the promotion of the use of renewable energy sources in relation to the Transmission Facilities.

As indicated above, Suncor holds a FIT<sup>2</sup> contract with the OPA to sell the electricity to be generated at the Cedar Point II Wind Energy Project. The Transmission Facilities are required to transmit this electricity to the provincial electricity grid.

WAIT-PW argued that Suncor's proposed Transmission Facilities fail to meet the objectives of the FIT program. WAIT-PW submitted that an increase in renewables in general, and wind energy in particular, will result in an increase in greenhouse gas emissions from current levels. The reason given for this by WAIT-PW is that wind energy is unreliable and the mismatch with system demand requires that back-up natural gas generators be kept on standby. WAIT-PW submitted that the proposed Transmission Facilities will contribute to this increase in greenhouse gas emissions if allowed to provide the pathway for the electricity that is generated.

### Board Findings

The OPA, administering the FIT program as required by the Government of Ontario, awarded a FIT contract to Suncor. This leads the Board to the conclusion that the approval of the proposed Transmission Facilities would be consistent with the policies of the Government of Ontario favouring the promotion of the use of renewable energy sources.

## INTERESTS OF CONSUMERS WITH RESPECT TO RELIABILITY AND QUALITY OF ELECTRICITY SERVICE

### Customer Impact Assessment (CIA) Report

The Customer Impact Assessment (CIA) is prepared by Hydro One. It assesses the impact of the proposed connection on Hydro One's transmission customers in the area.

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<sup>2</sup> FIT contracts in Ontario are power purchase agreements that renewable energy producers enter into with the IESO as per government of Ontario directives to the IESO.

Suncor filed the CIA in the form of an addendum to the CIA dated June 8, 2012 for the Adelaide, Bornish and Jericho Wind generation projects. The CIA report concluded that the Transmission Facilities are not expected to have any adverse impacts on Hydro One's transmission customers in terms of reliability and quality of service, subject to the requirements specified in the CIA.

### **System Impact Assessment (SIA) Report**

The System Impact Assessment (SIA) is prepared by the IESO and assesses whether the proposed connection to the electricity grid, which is controlled by the IESO, will have an adverse impact on the quality and reliability of the electricity grid operation. The SIA is composed of the original SIA report dated July 8, 2012 and the SIA Addendum Report dated December 12, 2012.

The SIA concluded that the connection of the proposed Transmission Facilities with the electricity grid will not adversely affect the reliability and quality of electricity service subject to the requirements specified in the SIA.

### **Positions of the Parties With Respect to the Impacts on Reliability and Quality of Transmission Service**

WAIT-PW submitted that according to the SIA report, the Transmission Facilities will have a small adverse impact on the reliability of the electricity grid. WAIT-PW also submitted that the IESO cannot assess Suncor's proposed infrastructure in isolation, and that reliability can only be determined once the line is energized.

WAIT-PW also argued that the CIA report has no force because it references a different location than the one related to the proposed Transmission Facilities.

The Board sought and received an explanation from Suncor with respect to the discrepancy in locations cited by WAIT-PW. Suncor submitted that the discrepancy was due to a clerical error. Suncor also provided correspondence from Hydro One which included its attestation that despite the clerical error, the electrical characteristics of the proposed system have not changed and that the technical conclusions of the CIA remain accurate.

Board staff submitted that based on the conclusions of the SIA and CIA it was satisfied that the connection of the Proposed Transmission Facilities will not have an adverse impact on the interests of consumers with respect to the quality and reliability of electricity service.

## **Board Findings**

Subject to the Applicant meeting certain technical requirements the IESO has indicated in the SIA that it will grant final approval for the proposed connection of the Transmission Facilities to the provincial grid. The Board notes that the IESO was also an intervenor in this proceeding but it made no submissions to the Board on the impact on quality or reliability of electricity service. WAIT-PW did not file evidence on this subject to support its contention. Taking these factors into account, the Board finds that the assertion of WAIT-PW that approval of the application would cause an adverse effect on the quality or reliability of electricity service is not compelling.

The Board accepts Suncor's explanation for the discrepancy in locations between the CIA and its application as well as Hydro One's assurance that the CIA conclusions remain accurate.

Therefore, based on the conclusions of the SIA report and the CIA report, the Board finds that the proposed connection will not adversely impact the interests of transmission consumers with respect to reliability or quality of electrical service if the conditions of the SIA report and the CIA report are met.

## **EMERGENCY RESPONSE**

Hydro One submitted that, concerning its distribution operations, there needs to be an emergency services agreement between Hydro One and Suncor, given the proximity of their assets, to govern their relationship in emergency situations.

The Board asked Hydro One to describe what the impact would be on Hydro One distribution customers if Hydro One and Suncor did not have such an agreement. The impact identified by Hydro One was that a delay in Suncor response time in an emergency situation could delay the Hydro One response to a simultaneous emergency in another location. Hydro One testified that in this potential scenario it could take additional time to have a second crew mobilized to deal with the second emergency. In

the Board's view this scenario put forward by Hydro One requires consideration of the potential for impacts on both price and reliability.

As a distributor, Hydro One is obliged to respond to emergency situations involving its distribution facilities within 120 minutes in rural areas and 60 minutes in urban areas. Hydro One testified that its responding crews sometimes discover that the facilities involved in the emergency situations are owned by a third party such as Suncor rather than by Hydro One. In such circumstances, in order to render the site safe, a Hydro One crew may remain there until representatives of the third party arrive. During that time period, the Hydro One crew will not be available for dispatch to other potential incident sites, thereby potentially affecting quality or reliability of service for some of Hydro One's distribution customers. Mr. Boldt, a witness for Hydro One stated: "... now those men can't go [to] other places to restore power in another area, or we're forced to call other men out<sup>3</sup>."

The Hydro One witnesses testified that, unlike a licensed distributor such as Hydro One, an unlicensed transmitter such as Suncor does not have an emergency response time standard. Hydro One witnesses also testified that work crews have encountered difficulties in determining how to contact an unlicensed transmitter when its attendance at an emergency incident site is required. Hydro One considers that an emergency services agreement between Hydro One and Suncor would rectify these deficiencies.

Hydro One testified that at the present time Hydro One has 26 emergency services agreements with unlicensed transmitters, although they are rarely utilized. Mr. Boldt estimated that over a period of a year only one of these 26 emergency services agreements would be invoked, on one occasion.

Hydro One did not provide evidence to quantify any cost impact to Hydro One in the event that it did not have an emergency services agreement with Suncor.

Suncor made no submissions concerning emergency response.

Board staff submitted that there could be direct incremental costs to Hydro One in relation to the proposed emergency response agreement with Suncor and its

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<sup>3</sup> Transcript, page 75



operational duties as laid out in the Distribution System Code and other industry practices, but did not focus their submission on any specific type of costs.

## Board Findings

The Board agrees that operational arrangements for emergency situations involving neighboring facilities of parties such as Hydro One and Suncor may be desirable. However, the Board's mandate in this proceeding is to address these operational relationships in the context of the factors prescribed by section 96(2) of the Act.

Hydro One has raised two issues concerning its operational relationship with Suncor that require consideration in relation to the factors in section 96(2), as outlined above:

1. The potential impact on Hydro One's ability to respond to simultaneous emergencies involving Suncor's transmission facilities and its distribution facilities; and
2. Hydro One's need to have emergency contact information for Suncor.

Concerning the first issue, Hydro One's testimony indicated that simultaneous emergencies that require it to invoke its emergency services agreements with third party unlicensed transmitters are rare. There was also no evidence about the amount of any costs to Hydro One potentially resulting from such situations. Accordingly, the Board is not convinced that the lack of a prescribed emergency response time for Suncor is likely to have a significant impact on quality and reliability of service or prices for Hydro One's distribution customers.

Concerning the second issue, the Board notes that Hydro One is both a transmission company and a distribution company. Hydro One's primary relationship with Suncor is in its capacity as a transmission company which receives electricity generated and transmitted by Suncor under its FIT contract. Under the Transmission System Code Form of Connection Agreement for Generator Customers, there are a number of provisions which require a generator, such as Suncor, to provide information to a transmission company such as Hydro One that will assist in an emergency<sup>4</sup>. This includes the requirement to provide telephone contact information for those persons involved in operations and outage planning.

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<sup>4</sup> Transmission System Code, Appendix 1, Version B – Form of Connection Agreement for Generator Customers, sections 27.4.1 27.4.2, 27.12.3

Although this information is provided to Hydro One's transmission operations rather than its distribution operations, the Board is confident that Hydro One will be able to distribute this information internally to the distribution employees who need it. Accordingly, the Board does not consider it necessary to impose any further obligations on Suncor to provide emergency contact information to Hydro One.

## **INTEREST OF CONSUMERS WITH RESPECT TO PRICES**

### **1) Price Considerations Relating to the Cost of Construction**

#### **Positions of the Parties**

Suncor submitted that it will own, construct, operate and maintain the Transmission Facilities and will bear all associated costs. Accordingly, no costs will be passed on to consumers through transmission rates.

WAIT-PW argued that although the cost of the Transmission Facilities will be borne by Suncor, the costs of adding wind power in an overall situation of oversupply causes economic inefficiencies that must ultimately be borne by consumers through increased rates. WAIT-PW also submitted that the Transmission Facilities will have an adverse impact on the price of electricity because consumers will ultimately pay costs needed to upgrade the electricity grid.

Board staff submitted that since Suncor will bear the costs of the Transmission Facilities those facilities will not affect electricity transmission rates.

Hydro One did not make any submissions on this issue.

#### **Board Findings**

As indicated above, Suncor has committed to paying all the costs of constructing the Transmission Facilities. No costs relating to construction of this project will be passed on to Ontario consumers.

In considering the interests of consumers with respect to prices under subsection 96(2) of the Act the Board's review pertains to the direct price impact of the Transmission Facilities. Accordingly, the issues raised by WAIT-PW concerning the impact of

renewable generation on electricity prices in general are not within the scope of this proceeding.

## **2) Price Considerations Relating to the Impact on Distribution Customers**

Hydro One submitted that the construction of the Transmission Facilities will have a cost impact on Hydro One's distribution customers and thus affect the price they pay for electricity. As indicated above, the Board held an oral hearing to deal with this issue.

### **Positions of the Parties**

Hydro One has argued that the location of Suncor's transmission line will impose current and potential costs on Hydro One's distribution customers. Hydro One provided examples of the work and costs that would be imposed on its current and future distribution customers.

Hydro One's witnesses provided technical evidence and discussed various scenarios which would lead to incremental work and associated costs.

Suncor questioned the appropriateness of Hydro One providing evidence related to future costs given the Board's direction that it was only interested in current impacts.

Hydro One submitted that for the purposes of determining what price impact should be taken into account; the test should not be whether the affected Hydro One infrastructure is current or future infrastructure. In its view the test should be whether the existence of the Transmission Facilities cause Hydro One to undertake work to maintain reliability and quality of service at appropriate levels in terms of immediate adjustments to the existing distribution infrastructure as well as future work that would not be needed but for the existence of the Transmission Facilities.

Hydro One submitted that the Board should require Suncor to pay all incremental costs incurred to undertake the work described in its testimony for ten years. Hydro One also asked the Board to order Suncor to file executed agreements which reflect this.

Suncor submitted that once its transmission facilities are built they become part of the existing infrastructure too and therefore they should be afforded the same rights and

obligations as other existing infrastructure owners that occupy space in the road allowance.

Board staff argued that direct incremental costs should be covered by Suncor and not by Hydro One's customers.

## Board Findings

### Scope of the Board's Consideration

As stated in Procedural Order No. 8 the scope of the Board's consideration with respect to distribution customers is to address the cost impacts that are current impacts on existing distribution infrastructure. The Board will not address impacts that may arise in relation to future impacts on distribution assets. This scope is consistent with the Board's determinations in *Re Grand Renewable Wind LP*<sup>5</sup> and *Re Summerhaven Wind LP*<sup>6</sup>.

The existence of transmission facilities such as those proposed by Suncor are contemplated and accommodated in the provincial legislative and regulatory framework. The Board concurs with Suncor's submission that its facilities, once built, become part of the existing infrastructure and therefore should be afforded the same rights and obligations as any other infrastructure owner that occupies a municipal roadway. The Board notes that costs related to the expansion or relocation of infrastructure in a road allowance are typically borne by the owner of the infrastructure to be expanded or relocated.

Hydro One takes the position that Suncor should be obliged to pay costs that Hydro One or its customers may incur now and in the future and that as the licensed distributor it has an obligation to ensure that it has arranged for that Suncor obligation through contractual arrangements. In other words, Hydro One considers itself responsible to contractually ensure that the price consequences which it interprets as being in scope in this application have been dealt with appropriately. The Board does not agree.

The Board has the sole authority to permit the construction of facilities that require a section 92 approval. The price, reliability and quality of service considerations that are

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<sup>5</sup> EB-2011-0063

<sup>6</sup> EB-2011-0027

to inform the Board's determinations in a section 92 application must be considered as part of an open and transparent process. Elements of any agreement between Hydro One and an applicant seeking a section 92 approval that pertain to price, reliability or quality of service must be provided to the Board for its consideration of the granting, denial, or conditioning of its approval. The matters that are subject to a section 92 application could possibly be negotiated and agreed to by the parties prior to being provided to the Board but they would then need to be made publically available in the Board's section 92 proceeding. The parties could also decide to include other matters in their agreements that would not be subject to Board approval.

The Board does not consider it necessary to require an executed agreement between Hydro One and Suncor in order to deal with the matters pertaining to its section 92 approval in this decision.

### **Scenarios Concerning Distribution Price Impacts**

The following scenarios were presented by Hydro One to show the costs that would result from the construction of the Suncor transmission line in its proposed location, on the opposite side of municipal road allowances from the distribution line owned by Hydro One. Hydro One submitted that Suncor should pay the costs associated with all these scenarios.

The Board has previously ruled that renewable generation proponents will pay the current costs that the construction of the connecting transmission facilities causes to existing distribution infrastructure. The Board will not depart from its past treatment of this matter in this case, and has assessed the Hydro One scenarios accordingly.

#### **Scenario 1**

The first scenario concerns an existing overhead secondary connection. Hydro One submits that there would be a safety hazard if Suncor's proposed transmission line were located above the perpendicular secondary connection to the residence of Hydro One's distribution customers. A detailed description of this scenario is found in Appendix 1.

Hydro One submitted that the way to prevent this hazard is to put the existing overhead secondary connection underground. Hydro One proposed removing the overhead wire from its current location crossing the municipal road allowance between its distribution

line and the existing road crossing pole and placing it underground beneath the road allowance.

Hydro One provided evidence that the cost for making this proposed change is approximately \$7300.00 per secondary crossing.

### **Board Findings**

The cost of construction of the underground secondary connection to replace the existing overhead connection is a current cost impact on existing Hydro One infrastructure. Accordingly, the Board considers that Suncor should pay it.

### **Scenario 2**

The second scenario involves the construction of a new secondary connection for a potential new Hydro One customer. Under this scenario Hydro One may be called upon to construct a new underground secondary connection for a new customer because, as a result of the construction of the Suncor transmission line it will no longer be feasible to construct an overhead crossing.

### **Board Findings**

This scenario relates to potential future events. As indicated above, the Board has ruled in past cases that in this type of proceeding it will not order the applicant to pay costs for potential future events. Accordingly, the Board does not consider that Suncor should pay the costs associated with this scenario.

### **Scenario No. 3**

The third scenario presented by Hydro One involves existing private primary connections.

In this instance there are 5 existing private primary connections that would be affected by the construction of Suncor's transmission line. A detailed description of this scenario is found in Appendix 2. Hydro One submits that Suncor should ensure there are Hydro One standard clearances between Suncor's transmission lines and Hydro One's private primary connections, to allow Hydro One's workforce to work under Suncor's line safely.

Hydro One testified that its standard clearances meet and in some instances exceed the clearances prescribed by the Canadian Standards Association.

## **Board Findings**

This scenario describes a current cost impact on existing Hydro One infrastructure. Accordingly, the Board will require Suncor to ensure that the clearances between its transmission line and the existing five Hydro One primary connections meet Hydro One standard clearances.

## **Scenario No. 4**

Hydro One submitted that any new private primary connection required by a customer of Hydro One will require the construction of an underground primary connection. This is because in its view construction of the Suncor transmission line will mean that it will no longer be possible for Hydro One to maintain the required clearances.

## **Board Finding**

As discussed concerning scenario 2, this scenario addresses future events and hence the Board does not consider that Suncor should pay the costs associated with this scenario.

## **Summary of Board Findings on Distribution Price Impacts**

As indicated above, the Board finds that Suncor should bear the cost of the work discussed in scenarios 1 and 3, to ensure that the construction of the Transmission Facilities has no price impact on the current electricity distribution customers of Hydro One.

## **Section 101 Approval**

The proposed route of the Suncor Transmission Facilities was described in plans filed with the Board as part of the application. Suncor proposes to locate its proposed transmission facilities on private lands, often adjacent to municipal road allowances. Two road crossings are contained within the route plans. These would be crossings over road allowances owned by Lambton County. As indicated above, Suncor has applied to the Board under section 101 of the Act for authority to construct portions of

the Transmission Facilities upon, under or over a highway, utility line or ditch. Road crossings constitute construction “under or over a highway” as contemplated by section 101.

WAIT-PW submitted that the proposed locations for road crossings are not aligned with County planning, but did not provide any evidence in support of this.

Suncor submitted that under section 41 of the *Electricity Act*, it has a right to have the Transmission Facilities cross road allowances. Accordingly, in Suncor’s view the question for the Board to determine is only where to construct the crossings of the roads by the Transmission Facilities, which in turn is largely determined by the route of the line.

### **Board Findings**

Section 41(1) of the *Electricity Act* provides that:

A transmitter...may, over, under or on any public street or highway, construct or install such structures, equipment and other facilities as it considers necessary for the purpose of its transmission...system, including poles and lines.

The Board agrees with Suncor that, as a transmitter, it has the right under section 41 of the *Electricity Act* to have the Transmission Facilities cross road allowances. Accordingly, the Board agrees with Suncor that the only question for the Board to consider under section 101 of the Act is the location of the crossings.

As indicated above, the crossings in question would be crossing road allowances owned by Lambton County. Although Lambton County is an intervenor in this proceeding, it did not make submissions concerning the location of the crossings. WAIT-PW did not provide evidence to indicate that the location of the crossings would be inappropriate.

Accordingly, the Board does not consider that the evidence leads to the conclusion that the proposed location of the two crossings is inappropriate.



The Board finds that it is in the public interest to authorize Suncor, pursuant to section 101 of the Act, to construct the crossings of the roads by the Transmission Facilities in accordance with its application.

## **BOARD DECISION**

The Board approves the agreements offered to landowners submitted to it by Suncor pursuant to section 97 of the Act. The Board finds that it would be in the public interest to grant Suncor leave to construct the facilities pursuant to section 92 of the Act, and to authorize the construction of the proposed road crossings under section 101 of the Act. The Board's decision is subject to conditions set out in the Order below.

The Board notes that Suncor is responsible for obtaining all necessary approvals, permits, licenses, certificates and easement rights required to construct, operate and maintain the Transmission Facilities.

## **THE BOARD ORDERS THAT:**

1. Pursuant to section 92 of the Act, the Board grants Suncor leave to construct the Transmission Facilities in accordance with the Board's Decision in this proceeding, the fulfillment of the requirements of the SIA and CIA, and Suncor commencing construction within 12 months of the date of the Board's Order.
2. Pursuant to section 97 of the Act, the Board approves the forms of agreement offered to landowners by Suncor.
3. Pursuant to section 101 of the Act the Board authorizes Suncor to construct the proposed road crossings for the Transmission Facilities.
4. Suncor shall construct its Transmission Facilities at a sufficient height to maintain the applicable Hydro One standard clearances from the five existing Hydro One private primary connections.
5. Suncor shall pay the cost of construction of an underground secondary connection to replace the existing Hydro One overhead secondary connection at

the point of intersection of the existing Hydro One overhead secondary connection with Suncor's Transmission Facilities.

6. A cost awards decision will be issued after the steps set out below are completed:
  - a. WAIT-PW shall file with the Board and forward to Suncor its cost claim within 20 days from the date of this Decision.
  - b. Suncor shall file with the Board and forward to WAIT-PW any objections to the claimed costs within 25 days of this Decision.
  - c. WAIT-PW shall file with the Board and forward to Suncor any response to any objection for cost claims within 35 days of the date of this Decision.
7. Suncor shall pay the Board's costs incidental to this proceeding upon receipt of the Board's invoice.

**ISSUED** at Toronto, February 26, 2015

**ONTARIO ENERGY BOARD**

*Original Signed By*

Kirsten Walli  
Board Secretary

## **APPENDIX 1 – Technical Background for Scenario No. 1**

A secondary connection is a low-voltage distribution wire of less than 600 volts. The secondary connection consists of a bare neutral (a bare wire) that supports two insulated energized wires that conveys the electricity. In this case, a secondary connection has been used to cross a municipal rural road to a landowner's home. The existing configuration consists of the Hydro One distribution line poles located opposite the proposed Suncor transmission line. The Hydro One secondary conductor is strung across the road from a Hydro One distribution line pole to another pole located on the opposite side of the road, known as a road crossing pole, to which the secondary line is attached. From there, the secondary connection is carried onto private property to connect to the customer's home.

Hydro One provided evidence that if Suncor's proposed 115 kV transmission line is located on the opposite side of the road from Hydro One, above the perpendicular secondary connection to the Hydro One customer's residence, a safety hazard is created. Hydro One submitted that the hazard is the possibility that, in a severe weather disturbance, or vehicular accident, the 115 kV line could be dislodged from the Suncor pole and land on top of the bare neutral. Hydro One submitted that it had performed studies that indicate that the voltage on the bare neutral may increase between 6000 and 8000 volts for approximately 3 seconds in the event of the contact with the 115 kV line. The Hydro One witness testified that with that kind of voltage on the bare neutral there is a high probability that a fire would erupt in the electrical panel located in the home.

## **APPENDIX NO. 2 – Technical Background for Scenario No. 3**

A private primary service is installed where the distance between the location of a transformer and the location of the customer (a farmhouse or barn in the rural Ontario context) is beyond the technical distance for which a secondary connector can be used (e.g. 30 meters). In such cases the technical solution is to expand the primary connector and locate the transformer closer to the point at which the load is required. This is described as a private primary connection by the industry because most of the poles are sited on private property and this type of connection is regarded as a private expansion of a basic service, thus attracting private customer cost responsibility and cost allocation.