

May 20, 2009

**ACTION REQUIRED**

To: The Board of Governors of Exhibition Place

From: Dianne Young, Chief Executive Officer

Subject: **Additional Wind Turbines at Exhibition Place**

Summary:

TREC Windpower Co-operative (No. 1) Incorporated (TREC) is the first community-based greenpower co-op in Canada and models itself on the highly successful Danish model and Toronto Hydro Energy Services Inc. (THESI) is an organization within the Toronto Hydro family that supports the development of green energy. Together, these organizations led the planning (including environmental approvals) for three demonstration wind turbines in Toronto, one of which was constructed at Exhibition Place in 2002 just east of the Liberty Grand.

Initially, the proposal from TREC/THESI was to locate all three wind turbines at Exhibition Place, however, following construction and after assessment of the energy production over a one-year period, the financial feasibility of constructing the other two turbines was questionable even with the purchase of the energy through the RESOP program introduced by the Ontario Power Authority in 2007. However, with the introduction of the *Green Energy Act 2009* and the potential increase in the Ontario Power Authority feed-in tariff, TREC/THESI has approached Exhibition Place to move forward on the construction of the other two turbines.

Exhibition Place staff are recommending that the Board enter into a Letter of Intent (LOI) with TREC/THESI to amend the existing Lease on the terms and conditions set out in this report for the construction of two additional wind turbines located generally as shown on the attached schedule. This LOI has several conditions that must be met in favour of the Board prior to the amendment proceeding.

**Recommendation(s):**

**It is recommended that the Board:**

- 1. Subject to all necessary approvals of City of Toronto Council, amend the long-term lease agreement between Toronto Hydro Energy Services Inc. and the TREC Windpower Co-operative (No. 1) Incorporated (collectively referred to as "THESI/TREC") for the construction and operation of two additional wind turbines generally at locations as shown on the attached plan and in accordance with the terms and conditions previously approved by the Board and City Council for the first turbine save and except for the amendments contained in this report and such other terms and conditions as required by the CEO and the City Solicitor; and**
- 2. Direct staff to take all necessary actions to give effect hereto.**

**Financial Implications & Impact Statement:**

During the initial term of 15-years these two additional wind turbines, TREC/THESI will pay gross rents of \$76,000.

### Decision History:

At its meeting of May 25, 2001, the Board approved of the terms and conditions of a long-term lease with THESI/TREC for the construction of a wind turbine at Exhibition Place which report was subsequently approved by City Council at its meeting of June 26, 27 and 28, 2001.

### Issue Background:

In 1999, THESI and TREC formed a joint venture to construct up to three utility-scale wind turbines on the Toronto waterfront. The purpose of this project is to showcase this form of emissions-free electrical generation that can help address urban smog and global climate change. In 2002, the first of these three turbines was constructed at Exhibition Place and in 2007 was accepted into the Ontario Power RESOP program which purchased the “green energy” produced by the turbine for 11 cents per kilowatt. While the financial feasibility of these “stand-alone” demonstration turbines was questionable with RESOP at the level of 11 cents, the higher feed-in tariff rates being proposed by the *Green Energy Act 2009*, would make construction of the additional turbines possible.

### Comments:

TREC is the first community-based greenpower co-op in Canada and models itself on the highly successful Danish model and THESI is an organization within the Toronto Hydro family that supports the development of green energy. Together, these organizations led the planning (including environmental approvals) for three demonstration wind turbines in Toronto, one of which was constructed at Exhibition Place just east of the Liberty Grand.

Initially, one proposal from TREC/THESI was to locate all three wind turbines at Exhibition Place, however, following construction and after assessment of the energy production over a one-year period, the financial feasibility of constructing the other two turbines was questionable even with the purchase of the energy through the RESOP program. However, with the introduction of the *Green Energy Act 2009* and the potential increase for the Ontario Power Authority feed-in tariff to 14.4 cents per kilowatt, TREC/THESI has approached Exhibition Place to move forward on the construction of the other two turbines.

In siting the existing wind turbine, THESI/TREC established the following essential criteria: greater than 200 meters to the nearest residents; not on lands governed by Transport Canada’s regulation for the Toronto Island Airport; clean winds averaging speeds greater than 5 m/s; suitable soil and ground water conditions; predominant SW and WSW wind exposure; able to accommodate a turbine of no less than 660 kW with a standard tower height; within 200 meters of the nearest interconnection point; and greater than 80 meters to the nearest hydro transmission line. The proposed locations of the second and third turbines as shown on Appendix “A” attached meet all these essential qualifications.

Some of the other issues that arose with construction of the first turbine and studied extensively was the level of noise produced by the wind turbine and the injurious effects on birds. The noise level directly under the turbine is approximately 70 db(A) and 45db(A) 200 meters from the turbine. Both these noise levels are well below the ambient noise levels produced by Lake Shore Boulevard, the Gardiner Expressway and general city noises. In fact, the 45 db(A) level is lower than ambient noise level in a typical office. There have never been any complaints about noise of the turbine from Exhibition Place tenants or our neighbours. With respect to birds, a six-month study was conducted and it was concluded that there was no evidence of bird deaths because of the turbine.

Finally, while all the energy produced by Turbine #1 and the energy that will be produced by Turbines #2 and #3 will be sold to the Ontario Power Authority, as a fact, the electricity is fed directly into the Exhibition Place substation behind the Toronto Hydro meter and consequently is used by Exhibition Place and counted towards our goal of 100% net self-sufficiency from the hydro grid. While dependent on winds, the existing wind turbine for the year 2008 produced 807,000 kilowatt/hours of green energy with an expected yearly average of 900,000 kilowatt/hours, and TREC/THESI are proposing that the two new wind turbines will produce 2.4 million kilowatt/hours annually although this is dependent on.

Exhibition Place staff are recommending that the Board enter into a Letter of Intent with TREC/THESI to amend the existing Lease and to construct two additional wind turbines on the terms and conditions set out in Appendix "A" attached to this report.

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Submitted by:

Dianne Young  
CEO

Appendix "A"  
Letter of Intent Terms and Conditions

Further to the successful installation of your first turbine at Exhibition Place pursuant to a lease dated as of the 15<sup>th</sup> day of February, 2002 between The Board of Governors of Exhibition Place as Landlord and 1512830 Ontario Inc. and TREC Windpower Co-operative (No. 1) Incorporated collectively as Tenant (the "Lease"), you have expressed interest in constructing two additional turbines within Exhibition Place. As a result of our discussions regarding your proposal, this letter will constitute a letter of intent ("LOI") to facilitate the construction of two additional turbines and to enter into a lease amending agreement on the terms and conditions outlined herein.

- a) **New Locations:** The new turbines will be constructed within the areas marked as E1 and E2 on the attached Schedule "A". The exact areas to form the Leased Property and Licensed Area associated with each turbine will be determined by agreement between the parties, acting reasonably, before the execution of a Lease Amending Agreement giving effect to these changes. For the purposes of this letter, the new locations are hereinafter referred to as the "Additional Leased Properties". On the Effective Date (as defined below), the definition of "Facility" in the Lease will be amended to include the two new turbines, the definition of "Leased Property" will be amended to include the Additional Leased Properties, and where it is necessary to refer to the Leased Property as it existed prior to the Effective Date, it shall be referred to as the "Original Leased Property".
- b) **Term:** For the Additional Leased Properties, the term shall be for a period of fifteen (15) years, commencing on a date (the "Effective Date") to be determined as discussed in Paragraph (c) below (the "Additional Leased Properties Term"), subject to adjustment as described in Paragraph 4 below, and subject to earlier termination on the basis of default by the Tenant. The Term for the Original Leased Property remains unchanged. On the Effective Date, the definition of "Term" in the Lease will be amended to include the Additional Leased Properties Term, and where it is necessary to refer to the Term as it pertains to the Original Leased Property, it shall be referred to as the "Original Term".
- c) **Renewal:**
  - (i) Provided the Tenant is not and has not been in default under the Lease, the Tenant shall have the option to renew the Additional Leased Properties Term for one additional term of five (5) years, provided that the Tenant has given the Board notice in writing of its desire to renew no less than six (6) months before the expiry of the Additional Leased Properties Term.
  - (ii) Further, the parties agree that the Tenant's option to renew the Original Term for the original Leased Property will be amended to last not for five (5) years, but for a period which ends on the date which coincides with the expiry of the Additional Leased Properties Term (before any renewal or extension thereof).
- d) **Rent:** Annual Basic Rent for the Additional Leased Properties during the Term will be as follows:
 

(i)	Years 1 – 7	\$4,000.00
(ii)	Years 8 – 15	\$6,000.00

And, if renewal option is exercised then Annual Basic Rent for Years 16 – 20 is \$8,000

- e) The Annual Basic Rent for the renewal term related to the original Leased Property shall be as presently stipulated in the Lease, namely \$4,000.00. All amounts set out are exclusive of GST. Basic Rent will be paid annually, on March 1<sup>st</sup> of every year, in advance.

- f) If the Effective Date, being the commencement date of the Additional Leased Properties Term, occurs on a day other than March 1<sup>st</sup>, then depending on whether the Effective Date occurs before or after September 1<sup>st</sup>, the first year of the Additional Properties Term will be either truncated or lengthened, so that it ends on February 28<sup>th</sup> (or 29<sup>th</sup> if the first year is a leap year) of the following calendar year.
- g) Deposit: Upon acceptance of this LOI, the Tenant will provide a deposit in the amount of \$1,000.00. This deposit shall be held by the Board, and shall be refundable if this LOI is terminated pursuant to Paragraph (l) below before a Lease Amending Agreement has been entered into. The Deposit shall be held by the Board, without interest, and otherwise applied to the first Annual Basic Rent falling due under the Lease Amending Agreement.
- h) Possible Adjustments: The parties acknowledge that further analysis and testing is necessary before the precise location of the new turbines and the Additional Leased Properties can be determined, and that the final determination of such matters shall be subject to the agreement of both parties. If the parties agree on a location which results in the displacement of any revenue-generating parking spaces within Exhibition Place, then in addition to Annual Basic Rent, the Tenant shall be required to reimburse the Landlord in respect of Landlord's loss of parking revenue caused by the displacement of parking spaces over the Term, the exact amount of such reimbursement to be based on a formula to be determined.
- i) Capital/Leasehold Improvements: The Tenant accepts the Additional Leased Properties "as is". The Tenant acknowledges and agrees that all of the provisions of the Lease, including those related to construction obligations and the provisions of section 6.2 of the Lease regarding financing, shall apply to the construction of the new turbines.
- j) Embedded Generation Interconnection Agreement: The Tenant acknowledges that it will be connecting the new turbines to a different hydro substation(s) owned by Exhibition Place from the one presently used by the existing turbine. The Tenant acknowledges and agrees that it will be required, at its sole cost and expense, to negotiate and enter into a new Embedded Generation Interconnection Agreement with Toronto Hydro-Electric System Limited in respect of the new turbines.
- k) Lease Amending Agreement: Subject to Paragraph (l) below, this letter agreement shall form the basis of a lease amending agreement containing such detail and further terms and conditions as may be required by the Chief Executive Officer and the City Solicitor. In all other respects, the Lease continues in full force and effect, unmodified except as described herein.
- l) Conditions: This letter of intent is subject to the following conditions:
  - (i) that the *Green Energy Act* is passed into law by the Province of Ontario and takes effect substantially in the form presently under discussion;
  - (ii) that the parties negotiate and settle the form of the Lease Amending Agreement;
  - (iii) that the Lease Amending Agreement has been approved by City Council of the City of Toronto; and
  - (iv) that the Effective Date occurs not less than ninety (90) days following approval by City Council,

and that all of the foregoing conditions have been satisfied or waived not less than two (2) years following approval of this letter of intent by the Board of Governors of Exhibition Place, failing which this letter of intent shall be terminated and be of no further force or effect.

# Proposed Turbine Locations at ExPlace

04/02/08

