

November 20, 2009

To: The Board of Governors of Exhibition Place

FOR INFORMATION

From: Dianne Young, Chief Executive Officer

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

Summary:

At its meeting in May 2009, the Board approved, subject to Council approval, the proposal from TREC Windpower Co-operative (No. 1) Incorporated (TREC) and Toronto Hydro Energy Service Inc. (THESI) to construct two (2) additional wind turbines on the grounds. As stated in that report TREC/THESI still had to undertake detailed siting and feasibility studies. TREC/THESI have now completed this work and have informed Exhibition Place that TREC/THESI have decided to place the project development on-hold due to unfavorable economics (NPV is negative). TREC/THESI would require a grant of approximately \$1.5M to \$2M to allow the project to proceed. The construction costs are relatively high given the caisson foundation requirement and relatively small project size and the *Green Energy Act 2009* funding under the Feed-in-Tariff (FIT) regulations are insufficient to provide economic returns.

Financial Implications & Impact Statement:

There are no negative financial implications to this report. Although with respect to the Exhibition Place net energy self-sufficiency goal this project was projected to have an expected yearly average yield of 900,000 kilowatt/hours for one machine or a total of 2.4 million kilowatt/hours annually which would be tied into the Exhibition Place grid and used on site.

Decision History:

At its meeting of May 2009, the Board approved of entering into a Letter of Intent with THESI/TREC for the construction of two additional wind turbines at Exhibition Place subject to approval of Council.

Issue Background:

The Board approved of a Letter of Intent with TREC/THESI with the full understanding that TREC/THESI was still examining the feasibility of this project and they have now determined it is not financially feasible.

Comments:

The full project as outlined by THESI in its final decision analysis was the development of three new 800kW wind turbines - two at Exhibition Place and one on City lands. The wind resource was analyzed based on the existing turbine's five year record and almost 11 months of LIDAR data. Baseline bird and bat studies were completed to help comply with the Renewable Energy Approval process. The preliminary configuration complied with NAVCAN guidelines and Ministry of the Environment setback and noise criteria for wind projects. Project development costs were approximately \$7.5M including development costs. FIT revenue projections were

based on net electrical yield of 5272 MWh per year for the installed capacity of 2.4 MW at the \$145/MWh 20-year contract price offered for community based projects. With debt cost assumed at 5% over 15 year term, the project from the standpoint of THESI is uneconomic given the small scale and high cost inputs even with the partnership with TREC and the new FIT prices.