

# TORONTO STAFF REPORT

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June 29, 2006

To: Policy and Finance Committee

From: Deputy City Manager and Chief Financial Officer

Subject: City Electricity Purchase Strategy – Green Power

Purpose:

To report back to the Policy and Finance Committee as directed by Council on the potential for including a purchase of green power in the City's electricity purchase strategy.

Financial Implications and Impact Statement:

There are no immediate financial implications to this report.

Recommendations:

It is recommended that this report be received for information.

Background:

At its meeting of June 27, 28, 29, 2006, Council adopted the recommendations of Policy and Finance Committee Report 5, Clause 12, as amended, authorizing a detailed electricity purchase strategy for implementation once the City's existing contract expired on December 31, 2006. Given the overall volatility of market pricing, along with the City's complexity and volumes involved, this report recommended a mechanism for reducing price risk through the use of a series of financial pricing hedges. City staff were authorized to enter into Master Agreements with a pool of five financial counterparties (Coral Energy Canada Inc., Direct Energy Business Services, Ontario Power Generation Inc., Powerex Corp., WPS Energy Services of Canada Corp), forming the City's competitive pool.

The Policy and Finance Committee added the following recommendation to this report, relating to the purchase of green power:

“ City staff be requested to report to the September 18, 2006 meeting of the Policy and Finance Committee on including green power in the City’s electricity purchase strategy, inclusive of financial implications, prior to the suppliers bid call in the fall of 2006.”

Previously, Council established the following in relation to “green” (i.e. renewable energy) power purchase targets:

1. April 11, 12, 13, 2000, Council adopted, in principle its “Clean, Green and Healthy – A Plan for an Environmentally Sustainable Toronto (Policy and Finance Committee Report No. 4, Clause 7)”, including that the City reaffirm its commitment to purchase 25 percent of its energy needs through green power; and
2. July 4, 5 and 6, 2000, Council endorsed and authorized the City’s participation in the Toronto Intergovernmental Clean Air Working Group (Planning and Transportation Committee Report No. 7 Clause 6, as amended). The “Toronto Intergovernmental Declaration on Clean Air” stated the City and Toronto Hydro’s commitment to purchase 25% of the City’s electrical needs from green power sources by 2005.

At its meeting of November 6, 7, and 8, 2001 (Policy and Finance Committee Report No. 14, Clause 13), Council adopted recommendations authorizing the City to enter into a retail electricity pricing arrangement with Toronto Hydro Energy Services Inc., in preparation for electricity market de-regulation, directing the following parameters relating to the purchase of green power:

- “(1) c) the purchase price for renewable energy sources (green power) that may be incorporated into the City’s electricity supply mix does not exceed the City’s average cost for other sources of electricity by more than 60%;
- d) a reduction in the City’s electricity consumption through demand side management initiatives be considered as a contribution towards the City’s renewable energy targets as previously adopted.” and

Council amendment

- “(2) for fiscal 2003 and subsequent years, all staff be directed to identify the cost of green energy to be purchased in their overall budgeted energy costs”

Although the City has not achieved the 25% purchase targets due to elevated pricing for green energy, some progress has been made. The City has implemented demand-side initiatives, which have reduced electricity consumption by such means as retrofitting City facilities. Since 2004, retrofits of City buildings have reduced City electricity demand by approximately 3.0%.

Furthermore, Council has authorized City staff to negotiate and enter into long-term agreements with Enwave Energy Corporation for the provision of Deep Lake Water Cooling (“DLWC”) for Metro Hall (Council, May 17, 18, 19, 2006, Administration Committee Report No. 4, Clause 26 (e)), and Old City Hall (Council, June 27, 28, 29, 2006, Policy and Finance Committee Report

No. 5, Clause 33). These contracts will provide for the purchase of renewable energy representing approximately 0.3% of the City's usage.

Comments:

The supply of electricity in Ontario is guaranteed to be delivered to the consumer, regardless of whether or not it is party to an electricity agreement. The only outstanding factor is price. Therefore, commencing January 1, 2007, the City's electricity purchase strategy will involve managing electricity commodity price risk by entering into financial price hedging arrangements, whereby the City will manage price risk by establishing an optimal portfolio of pricing and terms.

In general, a purchase of green energy within the current Ontario electricity marketplace means a purchase of the green attributes of energy, which may be purchased in the form of a "certificate". These purchases are essentially unrelated to financial price hedges, and may be executed sequentially. Therefore, the City can continue implementing its strategy of price risk management by entering into financial price hedges as anticipated, and at any time, layer on the purchase of separate green power certificates. (It is important to note that Aegent Energy Advisors Inc., the City's electricity consultant, has advised that in order to obtain the most favourable electricity price arrangements, it is important to retain the flexibility of transacting for the financial electricity price hedges without delay).

The purchase of green power certificates may be affected through those financial counterparties in the City's existing pool, or through Toronto Hydro Energy Services Inc. (the City's electricity retailer).

Current indications are that the cost of purchasing green certificates would add approximately 50%-70% to the City's annual electricity commodity cost. As the total estimated annual cost of electricity, for fiscal 2007, based on current usage and market pricing for the City is \$87 million, comprised of \$61 million for commodity and \$26 million for distribution and other charges, each purchase of 10% of the City's electricity demand from green sources would add approximately \$3 - \$4.3 million to the City's annual cost of electricity.

City staff have, and will continue to explore opportunities for purchasing green energy directly at favourable pricing, and to investigate options for undertaking energy-related capital projects, including demand side management initiatives, as a reduction in the City's electricity consumption through demand side management initiatives is considered as a contribution towards the City's renewable energy targets as previously adopted by Council.

In addition to implementing DLWC at Metro Hall and Old City Hall, City staff are currently investigating the potential to contract for DLWC at City Hall. Furthermore, capital renewable energy projects undertaken by the City include the installation of solar energy walls at three City facilities, solar heating at two City pools, and other solar installations to be completed in 2006 as part of ongoing energy retrofits in City facilities. Additionally, the City's agencies, boards and

commissions may be undertaking projects of their own, such as the installation of solar power on the Horse Palace at Exhibition Place.

Conclusions:

This report reviews the potential for including a purchase of green power in the City's electricity purchase strategy in accordance with Council direction. Each purchase of 10% of the City's electricity demand from green sources would add approximately \$3 - \$4.3 million to the City's annual cost of electricity. However, City staff have undertaken, and will continue to explore opportunities for purchasing green power directly at favourable pricing (such as Deep Lake Water Cooling), and to investigate options for undertaking energy-related capital projects, including demand side management initiatives.

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