

# **TORONTO** STAFF REPORT

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December 13, 2000

To: Works Committee

From: Commissioner of Works and Emergency Services

Subject: Co-operative Effort with Enwave District Energy Limited  
Siting of Anaerobic Digestion Facility

## Purpose:

The purpose of this report is to provide Works Committee with a status report on the co-operative study with Enwave District Energy Limited regarding the feasibility of siting an anaerobic digestion facility on City-owned property to process municipal waste to generate biogas for the district energy needs of the downtown core.

## Financial Implications and Impact Statement:

There are no direct financial implications arising from this report.

## Recommendations:

It is recommended that this report be received for information.

## Background:

At its meeting held on October 3, 4, 5, 2000, and its Special Meetings held on October 6, 2000, October 10, 11, 2000, and October 12, 2000, City Council adopted Amendment No. 2 (d) of Clause No. 1 of Report No. 17 of the Works Committee, headed "3Rs Implementation Plan for the City of Toronto", which states as follows:

“Amending the report dated September 1, 2000, from the Commissioner of Works and Emergency Services by deleting from Recommendation No. (3)(ii), the date “July 2001” and inserting in lieu thereof the date “January 2001”, so that such recommendation shall now read as follows:

“(3)(ii) conducting a study, in co-operation with Enwave District Energy Limited, on the feasibility of siting an anaerobic digestion facility on City-owned property which would process municipal waste to generate biogas for the district energy needs of the downtown core, and report back to the Works Committee in January 2001, on the findings of the feasibility study and with recommendations on how to proceed further, subject to approval of funding for the study by the Federation of Canadian Municipalities’ ‘Green Municipal Enabling Fund’.”

This report provides a status report on the steps taken to secure funding for the above cited feasibility study and the initiation of the process.

Comments:

Three sources of funding have been identified to finance a study on the feasibility of siting an anaerobic digestion facility to generate biogas for the district energy needs of the downtown core. They are as follows:

- an application has been submitted to the Federation of Canadian Municipalities’ Municipal Green Enabling Fund. Amount: \$60,000.00;
- Solid Waste Management Services 2001 Capital Budget. Amount: \$20,000.00;
- Enwave District Energy Limited Capital Budget. Amount: \$40,000.00.

The potential combined budget of \$120,000.00 is considered sufficient to conduct a feasibility study that will address such matters as:

- facility size requirements;
- energy value to be attained;
- required approvals;
- siting opportunities;
- agency and public consultation;
- feedstock requirements;
- strategic project schedule;
- estimate of capital and operating costs; and
- financing options.

In addition, \$70,000 in funding has been secured from the Ontario Waste Diversion Organization (“WDO”) to evaluate the impact of a source separated organics stream and a mixed waste stream on facility design and collection methods.

#### Initiation of Feasibility Study – Phase 1

In order to initiate a comprehensive feasibility study, Enwave has engaged Acres International to conduct an economic and environmental audit of potential technologies that could be engaged by Enwave to supplement natural gas as the heat source for the district energy needs of the downtown core. Senior consultants from Acres International will focus on anaerobic digestion, but will also review other waste to energy technologies that could be utilized by Enwave. This initial study will be known as Phase I of a two-part feasibility study.

Enwave will utilize their own funds to engage Acres International and apply any Federal funds that accrue to the project to offset costs. Should the complete funding portfolio (as listed above) be achieved the project will proceed to Phase II, which will entail completion of the other components of the feasibility study summarized above in point form.

Enwave and their consultants will provide the results of their Phase I study through a report scheduled to be presented at the March 2001 meeting of Works Committee (with the concurrence of the Chair and the Committee members).

#### Conclusions:

We are working in co-operation with Enwave to secure funding to undertake a study on the feasibility of siting an anaerobic digestion facility on City-owned property, which would process municipal waste to generate biogas for the district energy needs of the downtown core.

In order to initiate the feasibility study, Enwave has engaged Acres International to undertake an environmental and economic audit (Phase I) of potential technologies that could be engaged to provide an alternative heat source for the district energy needs of the downtown core. Senior consultants from Acres International will focus on anaerobic digestion, but will also review other waste to energy technologies that could be utilized by Enwave.

Enwave and their consultant are scheduled to present a report on the results of Phase I of the feasibility study to the March 2001 meeting of Works Committee.

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