



Report to: General Committee

Date Report Authored: June 3, 2014

SUBJECT: Markham Pan Am Centre - Energy Services Agreement with Markham District Energy Inc.
PREPARED BY: Gary Adamkowski, Senior Manager Facilities Projects, x2678

RECOMMENDATION:

- 1) **THAT** the report titled “Markham Pan Am Centre - Energy Services Agreement with Markham District Energy Inc.”, dated June 3, 2014 be received;
- 2) **AND THAT** a monthly Fixed Capacity Charge payable to Markham District Energy Inc (MDEI) of \$10,278.63 (to be indexed annually) be approved;
- 3) **AND THAT** a one-time Capital Contribution be made to MDEI of \$2,760,000;
- 4) **AND THAT** Capital Project #13318 “Pan Am Centre Construction” be increased by \$1,260,000 with \$1,134,000 to be funded from the Recreations Development Charges Reserve and \$126,000 to be funded from the Non-DC Growth Reserve Fund, bringing the Markham portion of the total construction costs from \$39,842,526 to \$41,102,526;
- 5) **AND THAT** any surplus funds remaining in Capital Project #13318 “Pan Am Construction” following completion of the project, will be allocated to offset the Capital Contribution of \$1,276,000, and returned proportionately to the Recreations Development Charges Reserve and the Non-DC Growth Reserve Fund;
- 6) **AND THAT** variable Energy Charges based on actual metered hot and chilled water energy use, be approved, and payable to MDEI on a monthly basis;
- 7) **AND THAT** staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

The purpose of this report is to seek Council approval to increase the Capital Contribution to MDEI in order to reduce the monthly Fixed Capacity Charge for the term of the Energy Service Agreement for thermal heating and cooling energy for the Markham Pan Am Centre.

BACKGROUND:

At the February 14, 2012 meeting, Council resolved, in part;

“THAT Council authorizes the Mayor and Clerk to negotiate and enter into a long term Energy Service Agreement between the Town of Markham and Markham District Energy

Inc. (MDEI) for the provision of thermal energy services to the Pan Am facility, said agreement to be in a form and content satisfactory to the CAO, Commissioner of Community and Fire Services and the Town Solicitor;”

MDEI is a City-owned district energy service provider that primarily produces and sells thermal energy from their district energy plants to clients within Markham. City facilities served by MDEI include Markham Civic Centre, 8100 Warden Ave, Fire Station 99 and Cornell Community Centre & Library.

OPTIONS/ DISCUSSION:

The Markham Pan Am Centre facility is a shared capital project between the City and TO2015. Overall costs are shared in the ratio of 59.34% to the City and 40.66% to TO2015 for all expenditures within the project budget.

The budget includes a \$1,500,000 provision for a Capital Contribution to MDEI which can be used to offset a portion of the Fixed Capacity Charges related the initial capital investment. This sum can be considered as project capital in the sense that it represents part or all of the initial cost for the power systems and plant which would have been required for the facility if not connected to a district energy plant. Capital Contribution at this level would reduce the monthly Fixed Capacity Charge from approximately \$24,200 per month to approximately \$16,600 per month.

More recent and more reliable cost avoidance estimates have increased the potential Capital Contribution to \$2,760,000. This can be considered a project expense, and therefore a shared cost, if there is surplus funding remaining in the Pan Am Construction budget at close of the project. A Capital Contribution of \$2,760,000 would reduce the monthly Fixed Capacity Charges to approximately \$10,300 per month.

The Markham Pan Am Centre construction is well over 80% complete and will be Substantially Performed within the next several months. Thermal energy supply activation is imminent and the agreement must be finalized in the very near future.

FINANCIAL CONSIDERATIONS:

The charges for the energy services under the Agreement consist of a monthly Fixed Capacity Charge, a one-time up-front Capital Contribution, and monthly Energy Charges based on metered hot and chilled water energy use.

The monthly fixed capacity charge for Hot and Chilled water, as outlined in the Energy Services Agreement, is \$24,197.62/month (indexed annually) for a period of 30 years. This charge represents the cost avoidance of the total cost of ownership of a traditional boiler and chiller at the Pan Am Centre, including one time upfront capital, operating, maintenance, repair and replacement, and associated space.

The City has the option to make a one-time up-front Capital Contribution that will have the effect of reducing the monthly Fixed Capacity Charge.

Staff recommend using the external consultant, Turner & Townsend's, cost estimate of \$2,760,000 to justify the capital contribution amount, as that represents the avoided capital costs that would have otherwise been incurred if the Pan Am Centre was not using district energy. The benefit of a higher capital contribution is that Development Charges (DCs), and potentially T02015 funding, can be used for most of the payment, while acting to reduce on-going operating costs.

Since the Pan Am capital project #13318 includes only a \$1,500,000 capital contribution to MDEI, it is recommended to increase the project budget by \$1,260,000 from \$39,842,526 to \$41,102,526, to be funded 90% from the Recreation Development Charges Reserve and 10% from the Non-DC Growth Reserve Fund. The full \$2,760,000 capital contribution will be part of the project cost to be cost shared 40.66% by T02015, so long as the total T02015 contribution does not exceed their maximum contribution limit.

The net present value of the Fixed Capacity Charge is approximately \$6,700,000 and represents the cost of providing, operating, maintaining and repairing the power plant which would be required as part of the facility if thermal energy were not being provided by a district plant. The capital cost of constructing and equipping our own power plant has been estimated at \$2,760,000 (hence the Capital Contribution above). Asset Management staff is of the opinion that the remaining \$3,940,000 Fixed Capacity Charge reasonably approximates the cost of ownership in terms of operating expense, preventive maintenance and repairs, as well as, complete lifecycle replacement of the boilers and chillers and related equipment which would become necessary over the 30 year term of the agreement. In addition, the risks and responsibilities of owning and operating our own power plant will be avoided.

HUMAN RESOURCES CONSIDERATIONS

Not Applicable.

ALIGNMENT WITH STRATEGIC PRIORITIES:


The use of MDEI as the supplier of energy services to the Markham Pan Am Centre facilities aligns well with the corporate strategic priorities of Growth Management, Environment, and Municipal Services.

BUSINESS UNITS CONSULTED AND AFFECTED:

Sustainability Office
Finance Department
Legal Department
Asset Management Department
Recreation Department

RECOMMENDED

BY:



Phoebe Fu, P.Eng.
Director, Asset Management



Mary Creighton
Director, Recreation Services

Luc Simard.



Brenda Librecz
Commissioner, Community
& Fire Services