

Consolidated Clause in Policy and Finance Committee Report 8, which was considered by City Council on September 28, 29 and 30, 2005.

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**Energy Retrofit Program - National Trade
Centre, Exhibition Place**

City Council on September 28, 29 and 30, 2005, adopted this Clause without amendment.

The Policy and Finance Committee recommends that City Council adopt the recommendation of the Budget Advisory Committee contained in the communication (September 16, 2005) from the Budget Advisory Committee.

Recommendation:

The Budget Advisory Committee recommended to the Policy and Finance Committee that City Council adopt staff Recommendations (1), (2), (3), (4), (5), (6), (7) and (9) in the Recommendations Section of the report (September 7, 2005) from the Deputy City Manager and Chief Financial Officer.

Background:

The Budget Advisory Committee at its meeting held on September 16, 2005, considered a report (September 7, 2005) from the Deputy City Manager and Chief Financial Officer, seeking approval for the financing of a lighting energy retrofit project at the National Trade Centre, Exhibition Place, and to increase the financing of a previously approved project at Exhibition Place from the City's \$20 million Energy Retrofit Program.

Recommendations:

It is recommended that:

- (1) the previously approved allocation from the Energy Retrofit Program for the Firehalls energy retrofit project be decreased from \$3,624,000.00 to \$2,977,036.00, and that this reduction of \$646,964.00 from the Firehalls project plus the unallocated balance of \$363,000.00 in the Energy Retrofit fund be reallocated to fund the NTC lighting project and the additional cost of \$210,000.00 for retrofitting the five buildings at Exhibition Place;
- (2) Council approve a change in scope of \$210,000.00 and an increase in 2006 cash flow of \$210,000.00 for the Exhibition Place Buildings energy retrofit project previously

approved by Policy and Finance Committee Report 9, Clause 36 and adopted by Council at its meeting of December 1, 2004;

- (3) Council approve the lighting energy retrofit project at the National Trade Centre at Exhibition Place at a cost of \$800,000.00 as a sub-project of the Council approved \$20 million Energy Retrofit Program with a total gross project cost of up to \$800,000.00 of which \$50,000.00 is to be cash flowed in 2005 and the remainder in 2006; to be financed by a loan from the Federation of Canadian Municipalities for up to 25 percent of the capital costs and the remainder, 75 percent, to be financed by City debt;
 - (4) the Board of Governors of Exhibition Place be authorized to finalize the scope of the National Trade Centre lighting retrofit project and the appropriate gross costs, up to a maximum of \$800,000.00 in gross capital costs inclusive of all taxes and charges;
 - (5) the Chief Corporate Officer and the Deputy City Manager and Chief Financial Officer, in consultation with the City Solicitor, be authorized to enter into an agreement with the Board of Governors of Exhibition Place to ensure that debt service charges are budgeted and paid to the City and the FCM Green Municipal Infrastructure Fund;
 - (6) the Board of Governors of Exhibition Place, in consultation with the City Solicitor, the Chief Corporate Officer, the Deputy City Manager and Chief Financial Officer and the City Manager, be authorized to enter into a loan agreement with the Federation of Canadian Municipalities for financing in order to facilitate a disbursement of 25 percent of the project cost from an approved low interest loan of \$8.750 million to the City;
 - (7) energy and maintenance savings to be realized annually of up to \$150,000.00 for the lighting retrofit at the National Trade Centre and energy and maintenance savings of up to \$201,250.00 for the five building energy retrofit projects be budgeted separately in the operating budget of Exhibition Place and be used to fund the full debt service costs for the project in accordance with the policy adopted by Council in the report, entitled "A Framework for Establishing an Energy Retrofit Program and Financing Strategy", and that any excess savings identified in the cash flow forecast be applied to the outstanding debt charges to accelerate repayment, and that the operating budget be reduced by that amount after project financing has been repaid in full;
 - (8) this report be forwarded to the Policy and Finance Committee for consideration; and
 - (9) the appropriate City officials be authorized and directed to take any necessary action to give effect thereto, including the execution of any financing agreements in a form and substance satisfactory to the Chief Corporate Officer, the Deputy City Manager and Chief Financial Officer, the City Solicitor, and the General Manager and CEO of Exhibition Place.
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(Report dated September 7, 2005,
addressed to the Budget Advisory Committee
from the Deputy City Manager and Chief Financial Officer)

Purpose:

To seek approval for the financing of a lighting energy retrofit project at the National Trade Centre, at Exhibition Place and to increase the financing of a previously approved project at Exhibition Place from the City's \$20 million Energy Retrofit Program.

Financial Implications and Impact Statement:

The Energy Retrofit Program (ERP) has an unallocated balance of \$363,000.00 remaining in the fund from the Council approved \$20.0 million. To date, four projects have been approved for funding from the ERP fund. These projects are the City Arenas, the City Firehalls, a Tri-generation project at Exhibition Place and retrofitting of five buildings at Exhibition Place. The feasibility study for the Firehalls identified a less extensive scope of work than was submitted in the project application. As a result the initial project cost of \$3,624,000.00 approved by Council is reduced to \$2,977,036.00, making available \$646,964.00 for reallocation to other projects. It is recommended that the unallocated balance of \$363,000.00 in the ERP fund and the \$646,964.00 made available as a result of the reduced scope of the Firehalls project be allocated to the NTC Lighting project and the additional cost associated with the increased scope for retrofitting the five buildings at Exhibition Place.

The estimated gross capital costs for retrofitting the lighting system at the National Trade Centre at Exhibition Place is \$800,000.00 (including all taxes) of which \$50,000.00 is to be cash flowed in 2005 and the remainder in 2006. The project is expected to provide annual energy savings of approximately \$150,000.00 and will have a payback period of 5.4 years. This project is eligible to take advantage of the low interest loan from the Federation of Canadian Municipalities (FCM) for up to 25 percent or \$200,000.00 of the total project cost of \$800,000.00. This loan is to be repaid at a rate of 1.5 percent below the Government of Canada bond rate. This is part of a previously approved FCM loan of \$8.750 million to the City of Toronto. The balance, \$600,000.00, is to be financed from the Council approved \$20 million Energy Retrofit Program. The total debt attributed to this retrofit project will be repaid by Exhibition Place from projected energy savings allocated within its operating budget.

With respect to the increase in financing for the retrofitting of five buildings at Exhibition Place, approved by Council with a project cost of \$1.4 million, the energy audit for these five buildings identified additional energy retrofit work of approximately \$210,000.00 which met the ERP funding criteria. The total ERP funding now required for this project is \$1,610,000.00, of which \$43,000.00 has been spent as at June 30, 2005 (\$35,000.00 in 2004 and \$8,000.00 in 2005) leaving an unspent balance of \$1,357,000.00, plus the additional amount of \$210,000.00 requested in this report for a total of \$1,567,000.00. As a result the original 2005 cash flow request of \$1,365,000.00 is being reduced to \$608,000.00 and the new cash flow requirements for the retrofitting of the five buildings at Exhibition Place is \$608,000.00 for 2005, and \$967,000.00 for 2006.

Recommendations:

It is recommended that:

- (1) the previously approved allocation from the Energy Retrofit Program for the Firehalls energy retrofit project be decreased from \$3,624,000.00 to \$2,977,036.00, and that this reduction of \$646,964.00 from the Firehalls project plus the unallocated balance of \$363,000.00 in the Energy Retrofit fund be reallocated to fund the NTC lighting project and the additional cost of \$210,000.00 for retrofitting the five buildings at Exhibition Place;
- (2) Council approve a change in scope of \$210,000.00 and an increase in 2006 cash flow of \$210,000.00 for the Exhibition Place Buildings energy retrofit project previously approved by Policy and Finance Committee Clause 36 of Report 9 and adopted by Council at its meeting of December 1, 2004;
- (3) Council approve the lighting energy retrofit project at the National Trade Centre at Exhibition Place at a cost of \$800,000.00 as a sub-project of the Council approved \$20 million Energy Retrofit Program with a total gross project cost of up to \$800,000.00 of which \$50,000.00 is to be cash flowed in 2005 and the remainder in 2006; to be financed by a loan of from the Federation of Canadian Municipalities for up to 25 per cent of the capital costs and the remainder, 75 percent, to be financed by City debt;
- (4) the Board of Governors of Exhibition Place be authorized to finalize the scope of the National Trade Centre lighting retrofit project and the appropriate gross costs, up to a maximum of \$800,000.00 in gross capital costs inclusive of all taxes and charges;
- (5) the Chief Corporate Officer and the Deputy City Manager and Chief Financial Officer in consultation with the City Solicitor, be authorized to enter into an agreement with the Board of Governors of Exhibition Place to ensure that debt service charges are budgeted and paid to the City and the FCM Green Municipal Infrastructure Fund;
- (6) the Board of Governors of Exhibition Place in consultation with the City Solicitor, the Chief Corporate Officer, the Deputy City Manager and Chief Financial Officer and the City Manager, be authorized to enter into a loan agreement with the Federation of Canadian Municipalities for financing in order to facilitate a disbursement of 25 percent of the project cost from an approved low interest loan of \$8.750 million to the City;
- (7) energy and maintenance savings to be realized annually of up to \$150,000.00 for the lighting retrofit at the National Trade Centre and energy and maintenance savings of up to \$201,250.00 for the five building energy retrofit projects be budgeted separately in the operating budget of Exhibition Place and be used to fund the full debt service costs for the project in accordance with the policy adopted by Council in the report, entitled "A Framework for Establishing an Energy Retrofit Program and Financing Strategy", and that any excess savings identified in the cash flow forecast be applied to the outstanding debt charges to accelerate repayment, and that the operating budget be reduced by that amount after project financing has been repaid in full;

- (8) this report be forwarded to the Policy and Finance Committee for consideration; and
- (9) the appropriate City officials be authorized and directed to take any necessary action to give effect thereto, including the execution of any financing agreements in a form and substance satisfactory to the Chief Corporate Officer, the Deputy City Manager and Chief Financial Officer, the City Solicitor, and the General Manager and CEO of Exhibition Place.

Background:

The Energy Retrofit Program was established as a 2004 debt financed capital project by Council at its meeting of April 19 2004, through the Policy and Finance Committee Clause 1 of Report 3, entitled "A Framework for Establishing an Energy Retrofit Program and Financing Strategy". The clause set the procedures for approving financing and recovering debt service charges from eligible projects. The ERP was approved with an initial start-up amount of \$20.0 million, of which \$19.637 to four projects, leaving a balance of \$0.363 million in the fund. On May 18, 2004, Council approved Clause 11 of Report 4 of the Policy and Finance Committee which allocated Energy Retrofit Program funding of \$10.213 million for energy retrofits in the City Arenas.

On July 20, 21 and 22, 2004, Council approved Clause 28 of Report 6 of the Policy and Finance Committee which allocated Energy Retrofit Program funding of \$3.624 million for energy retrofits in the City Firehalls.

On November 30, and December 1, 2, 2004, Council approved Clause 10(a) of Report 9 of the Policy and Finance Committee which allocated Energy Retrofit Project funding of \$4.4 million for the Exhibition Place Tri-generation Project.

On November 30, and December 1, 2, 2004, Council approved Clause 36 of Report 9 of the Policy and Finance Committee which allocated Energy Retrofit Project funding of \$1.4 million for the Energy Efficiency Improvements Project in five buildings at Exhibition Place.

Comments:

National Trade Centre Lighting Project:

Staff at Exhibition Place have had an ongoing concern with the performance and efficiency of the lighting system in the National Trade Centre. The lamp ballasts are no longer being manufactured which has caused a maintenance problem. Improved energy efficiency can be obtained through the installation of new fixtures and or new lamps and ballasts.

Proposed Retrofit:

The main auditorium is lit using three types of metal halide high intensity discharge fixtures with lamp wattage of 1,000, 400 and 250 respectively. It has been determined that adequate lighting can be obtained for the main halls with much lower wattage lamps. It is proposed that all the lighting fixtures be retrofitted or replaced with new lower wattage lamps and ballasts. The

fluorescent fixtures would also be retrofitted with the latest T8 lamps/electronic ballasts. Exhibition Place staff propose to engineer, tender and manage this project.

Project Costs and Savings:

The estimated cost associated with this energy retrofit is \$800,000.00 and total annual savings of approximately \$150,000.00 are anticipated, with a payback period of 5.4 years.

The interdepartmental team established to review ERP applications has reviewed the funding application and recommends approval since this project meets the financial criteria and guidelines as set out in the report, entitled “A Framework for Establishing an Energy Retrofit Program and Financing Strategy”, as adopted by the Budget Advisory Committee at its meeting on April 8, 2004, as amended by the Policy and Finance Committee at its meeting in April 13, 2004 and adopted by Council at its meeting of April 19 to 24, 2004.

Below is a summary of the projected total capital cost and annual cash flow requirements for the proposed project:

Table 1

Exhibition Place NTC Lighting Retrofit – Cash flow estimate for 2005

	2005	2006	2007	2008	*2009- 2015
A. Capital Budget - Recommended Cash Flow					
Capital Budget - Expenditures					
Energy Retrofit Costs	50	750	0	0	0
Capital Budget - Financing					
Grants/Incentives	0	0	0	0	0
FCM Low-Interest Loan	12	188	0	0	0
Debenture Proceeds	38	562	0	0	0
Total Financing	50	750	0	0	0
B. Operating Budget Impact					
FCM Low-Interest Loan Charges	0	1	23	23	23
Debt Charges	0	5	75	75	75
Total debt service charges	0	6	98	98	98
Projected Energy/Operating Savings	0	75	150	150	150
Operating Budget Costs/(Savings)	0	-69	-52	-52	-52

*debt service charges are based on 10-year debentures

On repayment of the ERP loan, the savings will allow for a reduction in the operating budget of Exhibition Place. Additional benefits flowing from this project include reduced operating costs, increased energy efficiency, facility improvements and reduced CO2 emissions.

Energy Efficiency Improvements Project in Five Buildings at Exhibition Place

On November 30 and December 1, and 2, 2004, Council approved Clause 36 of Report 9 of the Policy and Finance Committee which allocated Energy Retrofit Project funding of \$1.4 million for the Energy Efficiency Improvements Project in five buildings at Exhibition Place.

On completion of the energy audit at these five buildings additional energy retrofit work was identified in the amount of approximately \$210,000.00 which met the ERP funding criteria. The additional work involves the installation of a ground source heating system for the Press building. The total annual cost savings of this expanded project is now estimated at \$201,250.00 with a payback period of eight years. On July 5, 2005, the Board of Governors of Exhibition Place approved the additional spending subject to obtaining the required ERP funding.

The interdepartmental team established to review ERP applications has reviewed the funding application and recommends approval since this project meets the financial criteria and guidelines as set out in the report, entitled "A Framework for Establishing an Energy Retrofit Program and Financing Strategy", as adopted by the Budget Advisory Committee at its meeting on April 8, 2004, as amended by the Policy and Finance Committee at its meeting in April 13, 2004 and adopted by Council at its meeting of April 19 to 24, 2004.

City Energy Retrofit Program Balance:

In order to provide room to fund these projects within the \$20 million approved Energy Retrofit Program, it is recommended that the unallocated balance of \$363,000.00 remaining in the ERP fund and a reallocation of \$646,964.00 made available by reducing the project cost of the previously approved Firehalls project from the \$3,624,000.00 to \$2,977,036.00, be applied to fund the NTC lighting project and the change in scope funding of \$210,000.00 for the retrofitting of five buildings at Exhibition Place. A reduction in the project cost for the Firehalls project is possible since, following the completion of the energy audits in all the Firehalls, it was concluded that the energy efficiency opportunities were lower than originally expected. This report has been reviewed with the Fire Services Division.

Approval of ERP funding for the NTC lighting project and the additional funding for Exhibition Place, will fully allocate \$20.0 million program funding. The following is a list of projects funded:

Table 2

Project	Total Project Cost \$	City Capital \$	FCM Funds \$8.75M \$	Other Funds (TAF) \$	Grants and Incentives \$
City Arenas	10,212,964	7,564,000	2,521,000		127,317
Firehalls *	2,977,036	2,007,777	669,259		300,000
Exhibition Place. Retrofit *	1,610,000	1,020,000	340,000		250,000
Exhibition Place. Trigen	4,400,000	2,325,000	1,075,000	1,000,000	
Exhibition Place. NTC Lighting	800,000	600,000	200,000		
Total	20,000,000	13,516,777	4,805,259	1,000,000	677,317

*reduced from \$3,624,000.00 to \$2,977,036.00

*increased from \$1,400,000.00 to \$1,610,000.00

Conclusions:

This report requests approval of funding for energy retrofit work related to the lighting system in the National Trade Centre at Exhibition Place in the amount of \$800,000.00 and \$210,000.00 for additional energy retrofit funding at Exhibition Place from the Council approved \$20.0 million Energy Retrofit Program. Up to 25 percent of the project cost would be financed by a low-interest loan from the Federation of Canadian Municipalities and the remainder would be financed by City debt. All debt is to be repaid with interest from saving resulting from the projects.

Cost-savings for the projects approved under the ERP will begin to be realized in 2006. As cost savings are realized they will be used to repay debt-financing.

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