
FINANCE AND CIVIC DEVELOPMENT COMMITTEE

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

**SUBJECT: 2011/2012 ENERGY SERVICES - BUILDING PERFORMANCE
IMPROVEMENTS - PHASE 2**

RECOMMENDATION:

1. THAT Council authorize staff to enter into a contract in the amount of \$950,000 exclusive of HST with MCW Custom Energy Solutions for Phase 2 of the 2011/2012 Building Performance Improvements Project, and allocate the required funds from the Gaming Fund Reserves.

REPORT

The Finance and Civic Development Committee, at its meeting held on 2012 March 29, received and adopted the *attached* report seeking authority to enter into a contract with MCW Custom Energy Solutions to undertake the detailed design and implementation phase of the 2011/2012 building performance improvements project.

Respectfully submitted,

Councillor D. Johnston
Chair

Councillor C. Jordan
Vice Chair

Councillor P. McDonell
Member

Copied to:	City Manager Director Engineering Director Finance Director Parks, Recr. & Cult. Services Fire Chief Purchasing Manager
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TO: CHAIR AND MEMBERS
FINANCE AND CIVIC DEVELOPMENT
COMMITTEE

DATE: 2012 March 22

FROM: DIRECTOR ENGINEERING

FILE: 4220 02
Ref: Buildings - General

SUBJECT: 2011/2012 ENERGY SERVICES - BUILDING PERFORMANCE
IMPROVEMENTS – PHASE 2

PURPOSE: To seek authority to enter into a contract with MCW Custom Energy Solutions to undertake the detailed design and implementation phase of the 2011/2012 building performance improvements project.

RECOMMENDATION:

1. **THAT** the Committee recommend Council to:
 - a. authorize staff to enter into a contract in the amount of \$950,000 exclusive of HST with MCW Custom Energy Solutions for Phase 2 of the 2011/2012 Building Performance Improvements Project, and allocate the required funds from the Gaming Fund Reserves.

REPORT**1.0 BACKGROUND**

The City completed a successful energy performance improvement program in 2006 where the majority of the City facilities were retrofitted to reduce energy use under this program. The annual monitoring of actual energy savings concluded that the 2006 program has been successful, resulting in annual savings of approximately \$450,000 and reduced CO₂ emissions by over 1,200 tonnes annually.

Since the completion of the 2006 program, the City has also initiated other retrofit projects including lighting upgrades, control improvements and upgraded insulation to provide greater energy efficiency in City facilities and operations resulting in an additional 5% reduction on energy consumption or \$75,000 savings annually since their installations. In 2010, the City also established an Energy Coordinator position to manage energy conservation and efficiency goals.

As an ongoing building energy management initiative in 2011, the City commissioned a second Energy Services program. At its regular meeting of 2011 June 27, Council approved a report from the Finance and Civic Development Committee to retain MCW

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Committee
From: Director Engineering
Re: 2011/2012 Energy Services
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Custom Energy Solutions (MCW) to undertake the design phase of the 2011/2012 Building Performance Improvement Project – Phase 1.

2.0 2011/2012 BUILDING PERFORMANCE IMPROVEMENTS PROJECT

2.1 PHASE 1 – Energy Audits and Detailed Concept Development (*Completed*)

MCW has completed the Phase 1 - energy audit and detailed concept report for the 2011/2012 Building Performance Improvement Project. They conducted a review of 45 City facilities and developed an action plan to concentrate the facility audit on 23 buildings that offers the highest potential for improved efficiency. While many of the 10 years or less payback conservation measures have been previously implemented, there are still many opportunities to greatly reduce energy and CO₂ emissions, but it would require a greater investment and a slightly longer payback period.

The energy conservation measures recommended in the Phase 1 report include lighting retrofits and control improvements, LED lighting, building envelope improvements, and the installation of a renewable solar energy system. These improvements are proposed for a variety of City facilities ranging from ice rinks and pools to fire halls and libraries. The energy conservation measure implementation costs are estimated to be \$900,000 with energy savings calculated at \$61,000 for a simply payback of approximately 15 years. The implementation of the recommended measures would result in 4,200 GJ of energy saved and 105 tonnes of CO₂ avoided.

To further reduce the payback costs, the City and MCW are currently submitting incentive applications and the expected incentives from external funding partners (such as: BC Hydro Power Smart and Fortis BC) are estimated to be approximately \$90,000. With the inclusion of the incentives, the anticipated payback for the energy conservation measures would be reduced to less than 14 years.

2.2: PHASE 2 – Detailed Design and Program Implementation

With the completion of the Phase 1 energy audit and detailed concept report, staff is recommending that the City enter into a contract with MCW for the Phase 2 work that will include detailed design and program implementation.

The proposed new contract with MCW will include detailed engineering design for all the recommended conservation measures, prepare tender documents for a competitive bidding process with mutually agreed to sub-contractors. While MCW will act as the prime contractor for this project, the competitive bidding results from the sub-contractors will be fully disclosed and reviewed by the City. MCW will assume full responsibilities for the performance of the overall project and construction including the sub-contractor's installation. The City will pay the lowest compliant competitive bid through MCW, acting as the prime Energy Services Contractor.

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Committee

From: Director Engineering

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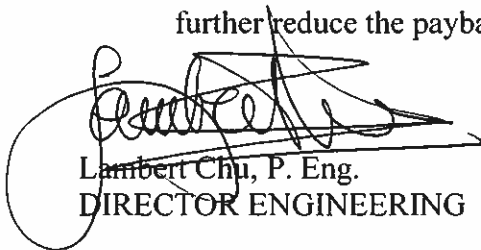
The conservation measure costs estimated at \$900,000 include all expenses for the design and construction, contract administration and inspection, and guarantee savings premium. A separate \$50,000 contingency budget is recommended to address miscellaneous and unforeseen issues which bring the total project budget to \$950,000 exclusive of HST. The project budget also includes an allowance of \$11,800 for a guarantee energy savings provision. If the City elects not to pursue a guarantee energy savings provision, this cost will be deducted from the final project cost. Staff will evaluate the need to pursue this guarantee option upon the completion of the detailed design work.

As part of this contract, MCW will provide a thorough Project Communication & Awareness Plan in order to minimize disruptions to occupants and facility users during the implementation phase. They will also offer specific training to operators to optimize new equipment and systems. In addition, MCW will coordinate environmental awareness sessions to broaden energy conservation awareness for City staff. Staff are satisfied with the work performed by MCW for Phase 1 and are confident that they have the required resources and knowledge to complete Phase 2. MCW has completed a similar project for UBC and is involved in other energy performance projects currently underway for the District of North Vancouver and BC Housing.

3.0 CONCLUSION

In 2011 June, the City commissioned a 2011/2012 Building Performance Improvement project and retained MCW to complete an energy audit and develop detailed concept report as Phase 1 of the project. Following the completion of the Phase 1 report, energy conservation measures for City facilities were identified and a total budget of \$950,000 (exclusive of 12% HST) is required for Phase 2 implementation. This project is included in the proposed 2012 – 2016 Annual Financial Plan.

It is recommended that staff be authorized to enter into a contract with MCW for the Phase 2, detailed design and program implementation, in the amount of \$950,000 exclusive of HST. As this project is related to energy conservation therefore, it is recommended the use of the Gaming Fund Reserves to finance the Phase 2 program. Staff and MCW are currently working with BC Hydro Power Smart on program incentives. Should external financial assistance be made available to the City, it would further reduce the payback period and enhance the cost/benefit of the program.



Lambert Chu, P. Eng.
DIRECTOR ENGINEERING

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City Manager
Director Finance
Director Parks, Recreation and Cultural Services
Fire Chief – Shaun Redmond
Purchasing Manager