



Meeting 2007 July 23

COUNCIL REPORT

FINANCE AND CIVIC DEVELOPMENT COMMITTEE

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

SUBJECT: ENERGY PERFORMANCE CONTRACT

RECOMMENDATION:

1. THAT this report be received for information purposes.

REPORT

The Finance and Civic Development Committee, at its meeting held on 2007 June 28, received and adopted the *attached* report providing information on a project wrap-up on the completion of the Energy Performance Contract.

The Energy Performance Contract with Honeywell Limited provides guaranteed energy savings. In addition, as the City moved towards sustainability, the retrofits on 49 City facilities have produced considerable savings by reducing the consumption of electricity, natural gas and water resources.

Respectfully submitted,

Councillor D. Johnston
Chair

Councillor N. Volkow
Vice Chair

Councillor G. Begin
Member

Copied to:	City Manager Deputy City Manager Director Parks, Recr. & Cult. Services Chief Building Inspector Fire Chief Director Engineering Director Planning & Building Director Finance
------------	---

TO: CHAIR AND MEMBERS
FINANCE AND CIVIC DEVELOPMENT
COMMITTEE

DATE: 2007 June 08

FROM: MAJOR CIVIC BUILDING PROJECT
COORDINATION COMMITTEE

SUBJECT: ENERGY PERFORMANCE CONTRACT

PURPOSE: To provide the Committee and Council with a project wrap-up on the completion of the Energy Performance Contract.

RECOMMENDATION:

1. **THAT** this report be received for information purposes.

REPORT

1.0 BACKGROUND:

In 2004 the City of Burnaby retained Honeywell Limited to review and define potential energy conservation measures for a variety of City facilities. In total fifty-seven buildings were investigated under their scope of work. Their findings were summarized in five Concept Reports, which detailed potential infrastructure upgrades while generating utility and operational savings. The reduced energy consumption from the implementation of the upgrades would help improve environmental conditions by eliminating wasted energy and the associated pollution to generate the energy, and furthermore, enhance comfort conditions within the facilities and lower maintenance and operating costs.

The implementation of the recommendations in the Concept Reports, were subsequently adopted and on 2004 June 07, Council approved the award of the Energy Performance Contract to Honeywell Limited, which was estimated to cost \$6.4 million.

The final program included a comprehensive energy analysis to reduce and conserve hydro, natural gas and water resources.

2.0 ENERGY PROJECT IMPLEMENTATION PHASE:

At the completion of the Concept Reports, potential upgrades were identified and recommended to 49 facilities along with the estimated costs and payback periods. The work comprised of

To: Finance and Civic Development Committee

From: Major Civic Building Project Coordination
Committee

Re: Energy Performance Contract

2007 June 08.....Page 2

replacing energy inefficient lighting systems, boilers and mechanical components and incorporated water conservation measures in several facilities. In addition, the project also included building envelope and insulation improvements and the installation of new Direct Digital Controls (DDC) in twenty-four buildings to monitor and regulate the operations of heating, ventilation and air-conditioning (HVAC) systems.

With regard to the specific energy savings accruing from the works, an estimated \$380,000 will be saved annually. It is anticipated that the annual electricity savings will be in the order of 4,022,980 kWh which would power 550 homes over a one year period. The estimated natural gas savings of 23,836 gigajoules (GJ) is equivalent to heating 200 homes per year based on an average monthly consumption of 10 (GJ) according to Terasen Gas statistics. This reduction of natural gas results in a corresponding reduction of CO₂ emission of 1,296 tonnes. There is also the expected non-monitored annual reduction of water at 8,941,000 litres.

The implementation work was completed over a two year period and received Substantial Completion in 2006 September. The project was completed within the contract budget of \$6,400,000. The final cost of the Energy project is \$5,853,303 of which \$652,000 was covered through grants from NRCAN (\$250,000) and BC Hydro (\$401,842). The guaranteed annual utility savings resulting from the work is \$380,000 based on 2007 energy prices, resulting in a payback period of the initial investment in 13.6 years.

The guaranteed savings period is 10 years, during which Honeywell does monitoring and verification. At any time during the 10 year period the City can opt out of the monitoring & verification and thereby forego the ongoing guarantee (at some point this will make sense, since if we experience the guaranteed savings for a few years running there is really no need to continue to monitor to “prove” the ongoing savings). There is a tie to the monitoring with the BC Hydro grant; however, as the year’s progress and the savings are ingrained, they will likely be of the same opinion about the need for ongoing monitoring. City staff will also be involved during the guaranteed energy saving period to ensure responsibility and accountability for sustaining, adjusting, monitoring and managing equipment warranty issues and energy savings.

In recognition for its energy efficiency program, the City has received the BC Hydro Power Smart Excellence Award in the “Outstanding Energy Efficiency Project” category, as well as by Philips Lighting with its PEAK award (for the use of low mercury lamps).

While the terms of the Energy Performance Contract are complete, additional energy efficient initiatives currently underway include a solar hot water heating system for Eileen Dailly Pool, for which council approved \$30,000 in 2006 for the feasibility and design. After a RFP process, Project Management has awarded the contract to Cobalt Engineering and it is currently in the study stage. BC Hydro Power Smart has also awarded the City of Burnaby \$57,000 toward an energy conservation project through the Epoints Program, which is being administered through the Engineering Department.

To: Finance and Civic Development Committee
From: Major Civic Building Project Coordination
Committee
Re: Energy Performance Contract
2007 June 08..... Page 3


3.0 CONCLUSION:

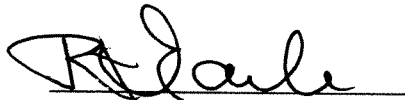
The Energy Performance Contract with Honeywell Limited was declared substantially complete in 2006 September and was completed within budget at a final cost of \$5,853,303. The project provides guaranteed energy savings estimated at approximately \$380,000 annually, which will be monitored by Honeywell Limited. In addition, considerable environmental benefits have resulted from the upgrades undertaken.

As the City moved towards sustainability, the retrofits on 49 City facilities have produced considerable savings by reducing the consumption of electricity, natural gas and water resources.

With the energy contract now complete, City staff will continue to monitor the upgrades to ensure that the energy saving targets are achieved through the guarantee period and beyond.


Lambert Chu, Chair
Major Civic Building Project Coordination Committee


B. Luksun, Director
Planning & Building


Rick Earle
Director Finance

JC:su

Copied to: City Manager
Deputy City Manager
Director Parks Recreation & Cultural Services
Chief Building Inspector
Fire Chief

Q:\Cusano\REPORT\Energy Performance Contract-Honeywell.doc