CITY OF NANAIMO
THE HARBOUR CITY

Staff Report for Decision

File Number: A4-1-2 / E-20

DATE OF MEETING APRIL 11, 2018

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SUBJECT **TENDER #2095 – BEBAN PARK BOILER PLANT UPGRADE & REPLACEMENT OF HV-1 HEAT RECOVERY COILS**

OVERVIEW

Purpose of Report

To advise the Finance and Audit Committee with results of Request for Tender #2095 – Beban Park Boiler Plant Upgrade & Replacement of HV-1 Heat Recovery Coils, and request additional funding.

Recommendation

That the Finance and Audit Committee recommend that Council increase the budget for the Beban Park Boiler Plant Upgrade and Replacement of Heat Recovery Coils projects by $68,080, to be funded by a FortisBC incentive grant of $35,373 and an allocation of $32,707 from the Facility Development Reserve Fund.

BACKGROUND

In October 2016, Prism Engineering completed a Beban Park Thermal Energy Study analyzing the boiler plant and heating systems for the pool, arena, and social centre.

This study was part of the FortisBC Commercial Custom Design Retrofit Program and the City of Nanaimo received 50% funding for the study upon its completion ($11,975). If the City implements 51% or more of the recommended projects in the study by August 2018, the City is entitled to receive the remaining 50% of the study cost.

The study recommended several energy saving measures including replacement of the two existing low-efficiency atmospheric boilers from 1975 with high-efficiency condensing boilers, and at the same time, improvements to the heat recovery systems. A condition assessment of the boilers confirmed Boiler #2 is near the end of useful life and Boiler #1 has an estimated 5 to 10 years remaining.

Based on this information, the mechanical engineer for this project recommended that Boiler #2 be replaced with two new high-efficiency boilers, and Boiler #1 be kept as a back-up unit. Additional work will include modifying the hot water return piping and adding variable frequency speed drives for heating water pumps, installing intake and exhaust heat recovery coils to HV-1 and upgrading building automation controls.

The 2018 – 2022 Financial Plan includes $419,870 for the Boiler Plant Upgrade and $46,050 for the replacement of heat recovery coils for a total budget of $465,920. The current budget includes FortisBC incentives of $55,577.

Request for Tender #2095 closed on 2018-MAR-09 and received two bids with the lowest being $519,000. The tender cost, plus $5,000 for asbestos abatement, and with a project contingency of $10,000, brings the total projected project cost to $534,000.

OPTIONS

1. That the Finance and Audit Committee recommend that Council increase the budget for the Beban Park Boiler Plant Upgrade and Replacement of Heat Recovery Coils projects by $68,080, to be funded by a FortisBC incentive grant of $35,373 and an allocation of $32,707 from the Facility Development Reserve Fund.
    - **Budget Implication:** Additional funding will be allocated from the Facility Development Reserve Fund. The budget change will be included in a future 2018 – 2022 Financial Plan budget bylaw amendment.

2. That the Finance and Audit Committee recommend that Council cancel the project for 2018 and re-budget for a future year.
    - **Budget Implication:** The City would lose $102,925 in approved funding from the FortisBC incentive grant by missing the August 2018 deadline.

SUMMARY POINTS

By implementing the recommended bundle of Energy Conservation Measures, the following savings are expected to be achieved:

- Natural gas savings of 6,700 GJ or 42% of 2015 gas use;
- Electrical savings of 40,500 kWh per year or 2% of 2015 electrical use;
- An improvement in the building's energy intensity from 63.9 ekWh/ft^2/year to 46.4 kWh/ft^2/year;
- These savings will reduce annual costs by approximately $68,250 for natural gas, $2,750 for electricity and $5,750 for maintenance fees;
- This project will have a payback period of about 6.8 years;
- The City will receive a total of $114,900 in FortisBC incentives towards this project and the previous energy study

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Concurrence by:

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