

incrementally the amount of energy/gas required to maintain water temperature will be significantly reduced in comparison to the two large boilers currently being used.

Procon Engineering was commissioned by the City to undertake a cost/benefit analysis related to retro-fitting the existing AHUs with a heat recovery system and replacing the existing boilers with new high-efficiency boilers. The study concluded that with the new units in place, energy consumption (thereby energy costs) would be reduced by about fifty-two percent (-52%). This will result in a payback period for the cost of the new systems of approximately six years.

The refrigeration plant that serves the three arena ice sheets produces heat in the process of keeping the ice surfaces chilled. A heat recovery system is being installed to capture this heat that will be used to heat domestic water for the washrooms and showers at the facility. This will reduce gas consumption, energy costs and carbon gas emissions from the Complex.

To enhance the air quality in the pool environment four ultraviolet (UV) water disinfectant units are being installed. These will act to enhance patron comfort and the overall leisure experience as the use of UV for disinfection reduces the use of chlorine, which provides better water clarity, reduces the stinging effect on eyes caused by chlorine in the water and minimizes the chlorine odour caused by chloramines (i.e., chlorine mixing with ammonia).

DISCUSSION

A Request for Quotations (RFQ Ref. No. 1220-40-48-10) to supply and install the heat recovery system, boilers; UV system and: refrigeration heat recovery system was issued. Five separate proponents responded to the RFQ process, as follows::

- Davidson Brothers Mechanical Contractors Ltd.
- Division 15 Mechanical Ltd.
- Total Energy Systems Ltd.
- Dual Mechanical Ltd., and
- B.C. Comfort Air Conditioning Ltd.

The evaluation of the proposals was based on the following criteria:

- Experience of the Contractor;
- Construction Schedule;
- Mark-up costs for extras; and
- Total cost for materials and labour.

Based on the evaluation the proposal and quote from B.C. Comfort Air Conditioning Ltd. was determined to provide the best overall value to the City.

Funding for this project is available from the City's Energy Efficiency Program. Repayment of the project costs will be available from the pool operating budget as related energy cost savings are realized. It is expected that the costs will be fully repaid over the next six years. As energy costs increase, the repayment period will decrease.

SUSTAINABILITY CONSIDERATIONS

The Sustainability Charter commits the City, through its Action Framework, to incorporate sustainability elements in its daily business activities and move the City towards reducing its environmental footprint. This project falls within the "Corporate Operations Sphere of Influence" of the Charter. It supports two (Economic and Environmental) of the three "Pillars of Sustainability" within the Charter. The project will help reduce Greenhouse Gases that are emitted into the air, thus reducing carbon gas emissions and the City's overall carbon footprint.

CONCLUSION

Based on the above discussion, it is recommended that Council approve the award of a contract to B.C. Comfort Air Conditioning Ltd. for the supply and installation of a dehumidification/heat recovery system, four new high-efficiency boilers, four ultra violet (UV) water sterilizing units, and a refrigeration heat rejection recovery system at the Surrey Sport and Leisure Complex as generally described in this report in the amount of \$1,587,114.00, excluding HST.

Original signed by
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