

Subject: Proposed MCC Energy Saving Ice Technology installation

Recommendation:

BE IT RESOLVED THAT Council receive Report #2020-0061; and that Council support the installation of Magnavitalis energy saving ice technology at the Meridian Community Centre.

Background:

In the fall of 2019 staff presented to the Utility Sustainability Committee the concept of possibly installing energy saving ice technology that would allow the use of cold water (20C) instead of hot water (70C) flooding and still maintain the quality of ice. The reason for heating flood water is that it reduces the dissolved oxygen in the incoming cold water (bubbles). This technology reduces the bubbles in the cold flood water which reduces compressor time, boiler heat and dehumidifier usage. This technology has been around for years although with improvements, it is now being installed more in arenas across the Country.

Analysis:

Staff have visited or spoken to the following area facilities that have installed this technology: Town of Oakville, City of Mississauga, City of Guelph and Town of Caledon. All of the Municipalities are very pleased with the installation, have seen utility savings more than pay for the unit in less than a year, and provide equivalent or better quality of ice. Prior to COVID-19 the Utility Sustainability Committee had planned a tour of the Town of Oakville sports complex, unfortunately the tour had to be cancelled.

The Utility Sustainability Committee was supportive of the installation for the energy savings on: Compressor Running Hours, Natural Gas and water usage by:

- Running 40 degree Celsius (70F) colder water in the ice resurfacer
- Running 1 to 3 degree Celsius (3.5F) warmer ice slab temperature
- Due to significant reduction in compressor running times, breakdowns are less frequent and routine maintenance activity can be spread further apart.

- Saving in Natural Gas due to the reduction in temperature for the ice resurfacer
- as much as 20% less water use

The Town of Oakville Sixteen Mile Sports Complex (4 rinks) installed the Magnavitalis system on 2 rinks and had a savings of \$36,385 the first year of operation. Due to the energy savings and quality of ice the Town is now in the process of installing the same system on the other 2 pads.

Financial Considerations:

The Town of Oakville has installed Magnavitalis system. They selected this system since their neighbouring arena at Port Credit Arena in the City of Mississauga realized significant savings without any negative impact on ice conditions. Positive feedback from coaches using the ice has been that the ice conditions improved after Magnavitalis was installed.

Magnavitalis agreed to a trial period with the Town of Oakville where the municipality could use the system at no cost. After 3 months Oakville experienced substantial savings in utilities and the ice quality was as good, if not better. At that time Oakville purchased the unit and has continued to realize excellent results with it ever since. Oakville's first year savings in utility costs exceed the technology purchase price of \$18,000 for the unit.

The Utility Sustainability Committee endorses this project. It is new technology which has been proven to have offsetting savings in utility costs, excellent ice quality and competitive pricing by the Town of Oakville. The cost with the savings will be less than net \$10,000 for the Town of Pelham which is under section 25(1) of the Purchasing Policy for non-competitive acquisition. There is a time factor to get this installed now that the arenas are closed and to start realizing utility savings as soon as possible. The Town will pay for this technology out of the existing budget for MCC operations.

Alternatives Reviewed:

Magnavitalis system \$19,800. Plus tax & installation
Real Ice system \$35,380. Plus tax & installation

Strategic Plan Relationship: Financial Sustainability

The purchase and installation of this equipment will see operational savings in utility costs in 2020 for the purchase of the equipment.

Consultation:

Utility Sustainability Committee
Teresa Quinlin, Director of Financial Services

Other Pertinent Reports/Attachments:

NIL

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