

Boyle Millview Arena Installs Cost and GHG Saving System

On May 20, 2022, Boyle's Millview Recreation Complex (MRC) has said goodbye to its reliance on hot water to maintain its ice surface.

A mechanical ice rink flood water de-aerator (REALice) has been installed to reduce energy costs, and lower CO₂ emissions. What's best is the MRC operations team will still be able to provide great quality ice for its user groups despite using cold water to flood the rink.

The REALice system eliminates the need to use extremely hot water when maintaining the ice. The floodwater used to maintain the MRC ice used to be heated to 185°F via five natural gas on-demand hot water heaters. Starting in late August 2022, when the operations team puts the ice back in, the floodwater temperature is expected to go down to 60°F or less. That lower temperature will have a significant impact on both natural gas and electricity consumption.

The 3D-printed REALice water treatment system is expected to reduce annual electricity and natural gas consumption by 18,062 kWh and 127 GJ respectively. That's an expected annual cost savings of approximately \$2,189 per year using the arena's average energy and carbon costs for the 12-month period preceding June 2022. The MRC will reduce greenhouse gas emissions by 17 tCO₂e annually, avoiding an estimated \$15,309 in carbon tax between 2023 and 2030 when considering the increasing cost of carbon emissions over this period.

The installation was made possible thanks to a rebate grant provided by the Municipal Climate Change Action Centre's (MCCAC) Recreation Energy Conservation (REC) program. The program provides grants to municipalities for implementing energy-saving projects.

Boyle Mayor Colin Derko says, "saving on energy and carbon costs is win for the village!"

"Thanks to the REC funding from the MCCAC the simple payback on the REALice project should be less than 4 years, and with an expected equipment life of over 25 years the village will save money and reduce carbon emissions from ice making well into the future," says Mayor Derko. "This is a long-term advantage for our community!"

Municipal Energy Manager Kevin Jacobs is excited this project was embraced by the Village of Boyle.

"After salaries, a recreation facility's biggest operational cost is energy. REALice, is maintenance free, has an expected life of at least 25 years, was an easy install, will have a meaningful impact on costs, and will reduce CO₂ emissions for years to come."