



Energy Efficiency Case Study

Brought to you by Cape Light Compact

Gallo Ice Arena

About Gallo Ice Arena

In 2017, The Gallo Ice Arena underwent an energy makeover. The rink is owned by the Bourne Recreation Authority (BRA) who were interested in replacing old equipment with new, efficient equipment as well as improving the skating experience for all who use the rink. They engaged Rethinking Power Management (RPM), an energy and sustainability consulting company, to help design and oversee the projects. BRA also worked closely with Sia Karplus, Science Wares Inc. on project development and Cape Light Compact to take full advantage of its energy efficiency incentive programs.

Project Summary

Beginning with upgrades to the boilers and lighting, the final project provided a variety benefits and changed the arena dramatically. In addition to energy savings, it improved the ice surface, expanded skating opportunities, improved rink aesthetics, and enhanced use by the community.

- Installed measures are expected to save about 25% on energy costs annually.
- The rink has a new look, thanks to LED lights, a new energy efficient ceiling, and some newly replaced wall panels.
- The rink is now easier to operate. Internet-enabled gateways positioned throughout the facility allow management to control the new heating and lighting systems from a local computer. A cell phone app allows control of these systems anywhere on-site or remotely.
- Management can now adjust light levels throughout the arena. The new system even takes advantage of natural light in the bleacher areas to reduce energy costs during daylight hours.
- The new lighting can be made bright enough for TV filming, allowing use by regional high school and college hockey tournaments that want to televise their games. It can be turned low enough so community skates are comfortable and fun.
- The tighter building envelope translates to a harder ice surface and opens more opportunities for additional figure skating clubs and events. It also means lighter refrigeration load and lower costs.

Total Project Cost

\$353,196

Mass Save Sponsor Incentives

\$102,073

Estimated Annual Energy Savings

7,832 therms

209,267 kWh

Estimated Annual Cost Savings

\$34,694

Project Partners

Rethinking Power Management

Science Wares Inc.

Cape Light Compact



Energy Efficiency Case Study

Measures Installed

- Boiler Replacement and Heating System Controls
- LED Lighting Upgrade and Controls
- Side Wall Panels
- Low E Ceiling Panels

Measure Details

LED Lighting Upgrade and Wireless Control Package

The purpose of this measure was to reduce energy use, improve light quality, and enable TV filming.

Technical Information

- Converted all the interior and exterior lighting to LED.
- Installed 43 high efficiency Fidelux 200W high bay lights over the ice surface to provide an average of 105-foot candles on the ice surface.
- Installed a wireless control package operating on a Magnum Venergy software application. All ice surface fixtures contain a control chip that can dim to 30%, 50%, and 70%.

Measure Benefits

- The full system cost was 100% covered by an incentive from Cape Light Compact.
- The lights operate at 100% when games or tournaments are being televised. Televising games was not previously possible at the rink.
- At other times, the system is set for lower light levels to accommodate a variety skating activities. Recurring settings can be programmed into the software platform eliminating the need for repeated manual adjustment.
- The bright new look achieved with the LED lights plus new ceiling and wall panels, has received compliments from both skaters and non-skaters alike.

“The project tasks were highly technical in nature and it was truly amazing to see how these very professional people came together as a team to accomplish each task in the best interest of the BRA. We have received very positive comments from our patrons on these renovations and this is something we can be very proud of for many years to come.”

Barry Johnson
Bourne Town Clerk



Lighting Before



Lighting After

About Mass Save:

Together, we make good happen for Massachusetts: Berkshire Gas, Cape Light Compact, Eversource, Liberty Utilities, National Grid and Unitil. As one, we form Mass Save®, with the common goal of helping residents and businesses across Massachusetts save money and energy, leading our state to a clean and energy efficient future.

WE ARE MASS SAVE®:



EVERSOURCE



nationalgrid

