



Énergie NB Power

Arenas

Energy consumption generates greenhouse gases (GHG) and accounts for a significant business expense. By implementing energy efficient measures and practices, businesses get more value from the energy they purchase while lessening their impact on the environment. Many opportunities exist for municipal arenas to decrease energy consumption and realize cost savings. The energy efficiency measures listed include recommendations for upgrades that can improve aesthetics, enhance user experience and lower maintenance costs. All of these measures should be evaluated for each individual building first by a professional and a comprehensive energy audit may be beneficial.

Typical energy efficiency measures

- **Heat recovery on exhaust:** Recover heat energy leaving the building in the form of exhausted air to preheat outside air introduced for ventilation.
- **Subfloor heating using heat recovery:** Install insulation under the concrete slab of the ice surface to prevent it from freezing.
- **Domestic hot water and surfacing water requirement:** The refrigeration gas superheat available at the compressor outlet offers an excellent opportunity to heat domestic hot water.
- **Brine Pump:** Modify the distribution of the brine in the floor slab under the ice by cycling the brine pump in sequence with the compressors.
- **Heat recovery for heating:** All heat removed from the ice could be used for heating spaces.
- **Low emissivity-ceiling:** Install a low-e ceiling (commonly a composite of aluminum, fiberglass and fire-resistant material) under the structural trusses of the ceiling. This reduces the amount of heat radiating from the warm ceiling to the cold ice below, resulting in a smaller annual refrigeration load. Low-e ceilings also reduce condensation and improve lighting.
- **Efficient refrigeration equipment:** Energy efficient measures include modulation of the condensing pressure, liquid sub cooling, electronic expansion valves, flooded-type evaporator, variable frequency drive on compressor, thermal storage, etc.
- **Efficient lighting system:** Lighting level can vary according to activity. Install high performance T-8 lighting products

Financial incentives available

NB Power's *Energy Smart Commercial Buildings Retrofit Program* provides financial incentives of up to \$3,000 towards an evaluation to determine the potential for energy efficiency upgrades and a maximum of \$75,000 towards the energy retrofitting project costs. For more information about making your arena more energy efficient visit www.nbpower.com or phone 1-800-663-6272 and press 5 for Energy Efficiency Services (after choosing your preferred language).