

# TUNE UP YOUR ARENA. PUT ENERGY WASTE ON ICE.

In the past few years, many arenas have upgraded their lighting from metal halides to LEDs. LEDs produce far less heat than other lighting technologies and reduce cooling loads in the summer. Many other factors change over time that may impact an arena's performance. **Existing building commissioning (EBCx) is a process to optimize a building's performance** based on current requirements, using operational funds.



## EBCx has many benefits, including:



Decreases maintenance and energy costs



Extends equipment life and ice plant reliability



Improves ice quality



Improves ventilation and air quality



Addresses persistent issues such as noise, temperature and pressure



Saves 5-15% on energy bills



Reduces greenhouse gas emissions



Enhances staff training and expertise

## Consider EBCx if:

- Ventilation systems are working 24/7
- You have difficulties with humidity control or have other ice quality issues
- There have been major operational or equipment changes – such as decreasing audience space or replacing a diesel Zamboni with an electric one
- Doors blow open or get stuck closed
- The number of arena users has changed by more than 20%
- Your arena uses more energy than similar arenas

## Managing EBCx Projects

Assign an internal leader such as a project or facilities manager to coordinate the process, provide information about the building, number of employees, operation schedules and current issues or complaints. The internal leader should expect to be closely involved in the planning stage and to accompany the EBCx provider for several days over six to twelve months during the investigation and implementation stages.

### What to look for in an EBCx provider

- Excellent communication skills
- Expertise in ventilation and mechanical systems and automation controls

### What to expect from your EBCx provider

- EBCx plan with current facility requirements (CFR)
- Investigation findings log
- Detailed implementation plan
- Persistence plan and staff training

## EBCx tools and resources

- [Natural Resources Canada \(NRCAN\) Energy benchmarking for ice rinks](#)
- [NRCAN EBCx Guide](#)
- [NRCAN EBCx Pre-Screening Tool](#)

## Save on Energy incentives are available for your next EBCx project!

- Receive a 50 percent incentive for completing [EBCx training courses](#)
- The EBCx program offers incentives to participants who undertake EBCx activities and achieve energy savings. [Learn more and apply here.](#)



## THE EBCx PROCESS

### 1. Planning

- **Building owner or internal leader** selects an EBCx provider from the list of [qualified commissioning providers](#) for the EBCx program.
- **EBCx provider** leads interviews and a building walk-through with operations and maintenance staff to plan and prioritize detailed investigation activities.
- **Deliverable:** EBCx plan that lays out the steps of the EBCx process for your arena.

### 2. Investigation

- **EBCx provider** conducts a detailed investigation of the site to ensure mechanical systems are operating properly and to identify performance issues. This involves on-site inspections and monitoring equipment performance with data loggers over several months.
- **Deliverable:** Findings log with savings estimates.

### 3. Implementation

- **Deliverable:** Implementation plan, including: recommended actions, roles and responsibilities, timeline, verification and monitoring requirements, and operator training and persistence activities.
- Implementation may be led by the internal leader or the EBCx provider, and should be guided by the implementation plan.

### 4. Hand-off

- **Deliverable:** Persistence plan to guide operations and maintenance actions over time, to maintain energy and performance improvements.
- EBCx provider trains building staff in persistence strategies.