

BELi - Building Enclosure Labs Inc.

Energy Audit for GICB Program at BMO Centre London

Building Type: Indoor Sports Complex

Location: London, Ontario

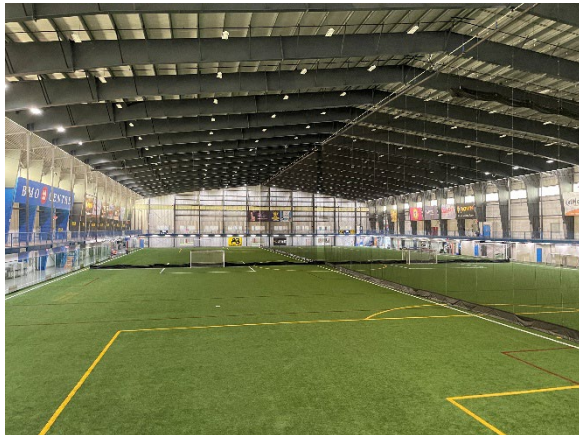
Services: Energy Audit

Year: 2024

Project Overview

BELi was requested to conduct an energy audit for BMO Centre London, an indoor sports complex. BMO Centre London was experiencing water infiltration through its windows, which prompted the window replacement as well as an evaluation of additional measures to reduce energy consumption throughout the facility. To offset costs, they applied for the Green and Inclusive Community Buildings (GICB) program using findings from this project. GICB requirements include

- The project not leading to an increase in the building's operational greenhouse gas (GHG) emissions
- At least 25% in energy efficiency improvements compared to the building's baseline energy consumption



Methodology

Determine energy conservation measures (ECMs) through site condition assessment. Use RETScreen Expert to assess these ECMs and ensure they meet the GICB requirements.

Main Observations

- Windows were found to have water leakage
- The building HVAC units were boiler systems with non-optimal heating efficiency

Measures

Given the observations revealed through site condition assessment, the following measures were calculated using RETScreen Expert:

- Replacement of existing windows with higher performance units that have a reduced overall U-value
- Reduce the air leakage of the building by 25%
- Replacement of boiler HVAC units with hybrid (dual-fuel) HVAC units

Results

RETScreen Expert estimated that the combined implementation of all three ECMs would reduce total energy consumption by 39% and GHG emissions by 52%.

