

Halifax Regional School Board 'Lights Off. Green On!' EPC

Address ([Map](#)): 33 Spectacle Lake Dr, Dartmouth, Nova Scotia B3B 1X7 Canada
 Sector: Educational Delivery Type: Energy Performance Contract
 MCW Office: Halifax Status: Project Assurance
 Sub Categories: Elementary School, Secondary School



Project Initiated In:
2013

Project Investment:
\$34.3M

Scope of Project:
90 Buildings - 4.7 Million Square Feet

Annual Energy Cost Savings:
\$2.66 M

Annual GHG Emissions Reductions:
7,425 Tonnes eCO2

Project Description

An energy conservation and retrofit project's true success can be gauged when the impact it has on the world doesn't begin and end with the immediate impact of the retrofits in the facilities, but extends to our collective cultural values and habits. That's why MCW is particularly proud of our Energy Performance Contract with the Halifax Regional School Board. Not only does the project include implementing energy conservation measures and guaranteeing energy savings in 90 P-12 schools, it also features one of our most well-developed energy awareness & engagement solutions: 'Lights Off. Green On!' This awareness & engagement program is particularly special because of who leads the participation factor; not the school board's administrators, or its teachers – it's the P-12 students themselves – the next generation who will lead us towards a greener future.

Project Highlights:

- **Lower-carbon Heating** including **Fuel Oil to Natural Gas boiler replacements** in older schools where aging oil-based systems, and select replacements to **renewable biomass-fired boilers** with even lower carbon intensity than natural gas.
- **Long-lasting LED Lighting** including both exterior retrofits and extensive interior LED lighting redesigns.
- **BACNet BAS Expansion** – including an overarching solution of network, addressing, protocol, web-servers, and new field interface spanning all 90 schools. The interface includes all BACNet-compatible systems, including meters, boilers [Lochinvar and Cleaverbrooks], and VFDs.
- **Domestic water conservation** through water fixture retrofits and replacements in virtually every bathroom in the 90 schools.
- **District-wide Smart Metering** featuring ION smart meter installations in 90 schools to power Schneider Power Monitoring Expert for O&M staff.
- **Real-time energy consumption dashboard displays** in all 90 schools – custom-designed by MCW –to show staff and students energy usage and GHG emissions metrics, energy conservation tips. The system also serves as a benchmarking tool for occasional inter-school energy conservation challenges.
- **A comprehensive, student-targeted energy awareness program** that included branding by a 4th grade HRCE student, in-school energy conservation competitions, and GreenSchools NS energy lesson plans.