CASE STUDY

SUMMARY OF FINANCIALS

Total Project Implementation Costs	**$843,747**
Heat Recovery Integration Costs	$255,545
Actual Annual Savings	**$104,191**
Payback Period	**8.1 years**
Internal Rate of Return (Overall)	**9%**
Heat Recovery Integration IRR	30%
Environmental Impact:	
Annual Greenhouse Gas Savings	465 (tonnes of CO_2)
Equivalent Cars off of the Road (Annual)	98
Equivalent Seedlings Planted (Annual)	11,913

COLE HARBOUR PLACE. COLE HARBOUR, NOVA SCOTIA

COLE HARBOUR PLACE HAS SAVED ALMOST $600,000 TO DATE

NEW REFRIGERATION SYSTEM WITH HEAT RECOVERY IMPROVES FACILITY CONTROL AND SAVES ENERGY COSTS

GENERAL MANAGER, CATHY BURGESS REPORTS:

SAVINGS HAVE RESULTED IN ADDITIONAL BENEFITS TO USERS WITHOUT THE BURDEN OF INCREASED USER COSTS

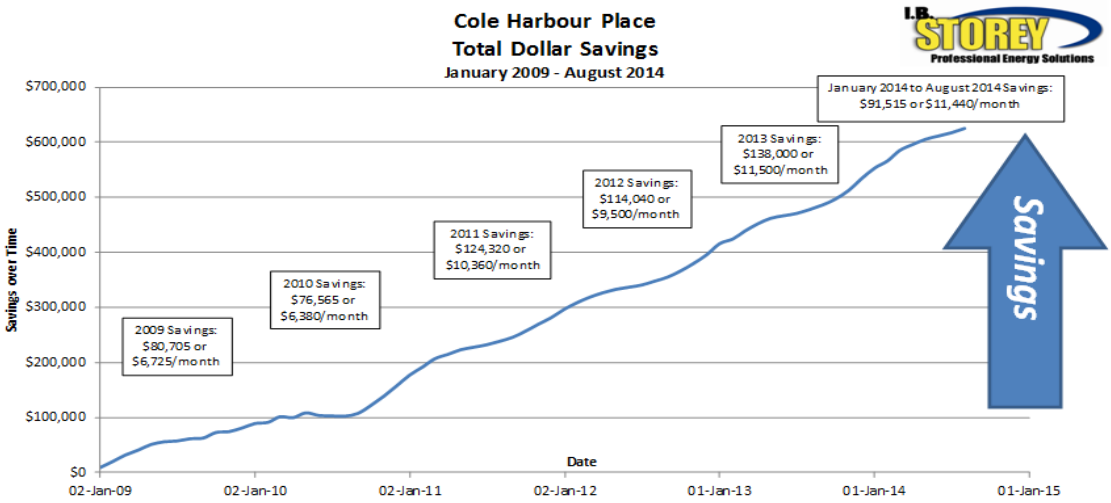
THE FACILITY

Cole Harbour Place is the famous home rink of NHL superstars Sidney Crosby and Nathan MacKinnon. Situated in Cole Harbour, Nova Scotia, Canada, the facility has become a star in its own right. Well known as a high-class facility, it offers numerous valuable services to its community including: two ice sheets, a pool complex, fitness center, offices, a library, and a health center.

IMPROVEMENTS

When Cole Harbour Place realized improvements were needed to their refrigeration system, they engaged premier specialty engineering firm, I.B. Storey Inc. to address their energy needs. In 2008 I.B. Storey Inc. not only provided lifecycle renewal to the existing refrigeration system, but also enhanced the design by engineering and overseeing the implementation of a fully integrated heat recovery system to serve the facility. This fully integrated system provides significant reductions in energy costs and has improved the facility's overall sustainability. In addition, I.B Storey Inc. provided training to the Cole Harbour Place staff in technical, organizational and behavioural aspects of energy management to maximize energy savings throughout the facility.

CASE STUDY



THE RESULTS

With the use of MegaWattcher© utility monitoring system, Cole Harbour Place is able to examine utility consumption at any time and compare it to predicted usage. Consideration had to be given for construction within an existing operational facility as well, so implementation of the energy efficiency measures were phased in during 2008 with the system fully commissioned in 2009. From January 2009 to June 2014, Cole Harbour Place has saved **25% of their total annual energy usage** (electrical and thermal) and has achieved **total cost savings of $587,468** in this span. Years after implementing energy efficiency measures, the facility continues to experience significant annual energy savings with average monthly savings of $8,600, as illustrated in the above diagram.

OVERALL BENEFITS

Upgrades to Cole Harbour Place have resulted in lifecycle renewal of the refrigeration system, significant operating cost reductions, and a top quality facility for the community. General Manager, Cathy Burgess reports savings have provided additional operating funds, allowing a number of equipment lifecycle changes. This has resulted in additional benefits to users without the burden of in-creased user costs.

I.B Storey Inc.'s in-depth knowledge of rink engineering and independent recommendations provided Cole Harbour Place the means to implement energy efficiency measures that best suited their needs. Cole Harbour Place will continue to be a landmark of Nova Scotia as a state-of-the-art facility for quality services and programs to the citizens of Cole Harbour.