

Centre for Health and Safety Innovation Energy Efficiency

CASE STUDY

ABOUT CHSI

The Centre for Health & Safety Innovation (CHSI) is a not-for-profit organization and focal point for innovation and applied learning in the prevention and elimination of workplace injuries and illnesses. It is a key resource for employers, employees, and others seeking expertise and direction on how to make workplaces injury and illness-free. CHSI is home to two of Ontario's health and safety associations – the Infrastructure Health and Safety Association (IHSA) and the Workplace Safety & Prevention Services (WSPS). The CHSI facility also houses High Point Wellness Centre, a multi-disciplinary health clinic offering services including chiropractic, physiotherapy, acupuncture, massage therapy, and corporate wellness programming.

The facility includes 36,000 square feet of space allocated to training rooms, executive offices, meeting rooms, an executive boardroom and presentation centre, available for rent by local and corporate businesses. Next door, CHSI also houses warehousing, printing, and distribution operations that support the training that takes place in the main facility.



The CHSI Creekbank facility, located at 5110 Creekbank Road in Mississauga

LOCATION

ADDRESS: 5110 Creekbank Road, Mississauga, Ontario

PHONE: 905-219-0044

WEBSITE: www.tchsi.ca

ENERGY EFFICIENCY - LIGHTING

Being so strongly committed to health, safety, and wellness, CHSI naturally sought opportunities to enhance its achievements related to environmental sustainability. The journey began in 2005/06 during the design, construction and move-in phases, when CHSI maximized natural day light in office suites through large areas of glazing and placement of workstations by windows, installed a building automation system (BAS) for heating, ventilation and air conditioning (HVAC) systems,

undertook HVAC air balancing, and tenants agreed to share back-office functions and amenities including a common reception, cafeteria, mailroom, resource centre, fitness centre and meeting/training rooms.

CONTINUAL ENERGY EFFICIENCY IMPROVEMENTS

CHSI has continued to add new environmental projects every year. In 2007, CHSI installed mixing valves for hot water cooling in tenant kitchenettes. In 2008, the organization installed an air curtain at a frequently used staff entrance and increased the cooling set point in the HVAC BAS to increase energy efficiency. With the aid of their lighting contractor, CHSI also



The CHSI Common Area maximizes use of natural light, and includes programmable light fixtures to increase efficiency

initiated the first phase of night lighting with programmable timer switches in common areas in both buildings. The night lighting project involved selecting and rewiring a significant portion of lights so they could be connected to dedicated, programmable timer switches.

This initiative was continued in 2009, with Phase Two seeing the expansion of night lighting to tenant suites. CHSI also began looking at waste management in 2009, with the expansion of recycling streams to include paper towels from the washrooms and select cafeteria containers, and an upgrade of the recycling signage to increase diversion rates. Currently underway is Phase Three of the night lighting program, involving washroom lighting.

In total, seven light switches were installed so that each tenant and the Centre could customize when their lights would be turned off, with a small portion remaining on for safety reasons.

ENERGY EFFICIENCY BY THE NUMBERS

Conducting detailed financial analysis is an important component of any environmental project. CHSI worked with April Cleaves, a fourth-year student enrolled in Conestoga College's Architecture – Project and Facility Management program to conduct a detailed review of CHSI's utility costs and projected project outcomes to determine the payback period of the night lighting initiative.

The short payback timeline for the project was very attractive, and tenants were pleased to help reduce the building's environmental footprint. With the business case established, night lighting was installed in the CHSI common areas in 2008 for \$12,815, in the tenant suites in 2009 for

\$5,526, and in the washrooms in 2010 for \$355. The pay-back periods have been less than 8 months, 5 months and 6 months, respectively.

The improvements to average daily kWh consumption were equally impressive, specifically 10.4 per cent in the 5110 Creekbank Road building and 21 per cent in the 1705 Tech Avenue building.

The project has been a huge success with the tenants who support the vision of sustainability, and find the programmable nature of the switches convenient. Savings are also directly translated to reductions in operating costs.



Cafeteria facilities are shared by tenants, maximizing efficiency of space and energy

MOVING FORWARD

CHSI will continue to move forward in its journey towards sustainability. As Jane Rowbotham, CHSI Facilities Director says, “Meeting its corporate social responsibility goals will continue to be key for CHSI in 2010. CHSI will continue to look at how we can achieve environmental sustainability and take steps to improve the quality of life for employees and their families, as well as for the local community and society at large. We have already made significant strides with respect to health, safety, wellness, energy conservation, and waste diversion. Working together, we know we can accomplish much more“.