

Wayne McLellan Award of Excellence in Healthcare Facilities Management

Sunnybrook Health Sciences Centre

By Matthew Bradford

Sunnybrook Health Sciences Centre has become the toast of Ontario's healthcare system after capping a landmark project that has positioned the facility as a leader in energy conservation and green initiatives.

Dubbed the Energy & Facility Renewal Program, the project was designed and implemented by Honeywell who, along with Sunnybrook staff and management, worked in tandem over five years to implement energy efficiency upgrades under the Energy Services Company (ESCO) model. Their success paved the way for millions of dollars in annual savings and accolades from CHES, which recently awarded Sunnybrook with its 2013 Wayne McLellan Award for Excellence in Healthcare Facilities Management during its 2013 National Conference in Niagara Falls, Ontario.

“Sunnybrook Health Sciences Centre is honoured to be recognized by CHES for our achievements in healthcare facilities management,” says Michael McRitchie, Director of Plant Operations, Maintenance & Security at Sunnybrook. “The \$30 million Energy & Facility Renewal program has allowed us to reduce operating costs, upgrade our building systems, and improve the hospital’s environmental conditions. It is an excellent example of how facilities management and engineering are contributing to a better health care experience and it is great to be able to celebrate our successes with this award.”

Sunnybrook's project was driven by the desire to make the facility a role model for environmental stewardship while improving the hospital's energy efficiency, reducing its environmental footprint, and embarking on needed infrastructure renewals. In so doing, Sunnybrook enlisted Honeywell to help it assess, identify, and implement upgrades that have since generated significant savings for the facility in terms of energy, resources, and expenses.

Luis Rodrigues, Vice President, Energy and Environmental Solutions with Honeywell, was a member of the team who worked with Sunnybrook. Reflecting on the many improvements made under the umbrella of the Energy & Facility Renewal Program, he says Honeywell is proud to have been a part of such a large-scale project. “[Sunnybrook] really wanted to demonstrate environmental leadership within the community, and this has been an excellent demonstration of that.”

Facility-wide wins

Launched in 2008, the project included a number of energy efficiency and facility renewal projects. Highlights include:

- Replacement of chillers and cooling towers with energy-efficient models utilizing more environmentally friendly refrigerants

- Upgrading and optimization of equipment
 - Weather sealing and repairs to the building's envelope
 - Implementation of a Hydroclave waste system for the disposal of biomedical waste
 - Installation of valves and pumps with removable thermal jackets to reduce thermal heat loss while enabling future maintenance on equipment
 - Installation of heat reflectors on heaters to reduce heat loss through exterior walls
 - Installation of 1,100 low-flow toilets and urinals
- Replacement of over 2300 lighting fixtures to high efficiency alternatives utilizing state-of-the-art control strategies
- Upgrading BAS to optimize energy management via new control strategies.

These highlights notwithstanding, one of the most visible “wins” for the project included the installation of a 100 kW solar photovoltaic system array on the facade of the parking garage—the first of its kind for a healthcare facility at the time, and the largest healthcare installation in Canada.

“The wall mounted portion of the system stands as a highly visible example of Sunnybrook’s leadership and stewardship in energy conservation. It was named the 'Harry Taylor Solar Energy Wall' in honour of Mr. Taylor who was instrumental in blazing the trail for environmental stewardship at Sunnybrook and throughout Ontario,” says Sunnybrook.

This, in combination with other conservation measures, has resulted in an annual energy savings of 7,000,000 kWh, 4,700 kW electricity, 2,900,000 m³ NG, and 185,000 m³ water— savings McRitchie attributes to the dedication of both Sunnybrook's staff and Honeywell's team. “Throughout this energy relationship, we have relied on Honeywell’s technical expertise in providing energy solutions. They have been integral to the project’s success, helping to identify and implement a wide range of energy and water conservation measures and verifying the savings associated with each measure,” he says.

Important to the success of the project was the commitment shown by Sunnybrook's executive team. From the start, Rodrigues says senior leadership members were fully supportive of the longterm initiative. “One of the key success factors was having the senior leadership team involved and part of the steering committee. Not all organizations have their senior leadership involved until the 11th hour, so having them involved on the way was key factor in that success.”

Equally important was the support shown by Sunnybrook's staff and volunteers. “The success of a project like this depends on how you engage staff to embrace the initiatives that have been implemented. At the end of the day, it doesn't matter what you implement in terms of technology. If your staff is not educated on the changes and not embracing them, then the results will not be the same,” adds Rodrigues.

This enthusiasm and support from all levels of the organization has aided Sunnybrook in developing its environmental sustainability even further through numerous initiatives such as its Environmental Sustainability website, annual Earth Matters summit, and Smart Energy Action Programs.

“Environmental initiatives at Sunnybrook have taken root within the structure and culture of the organization. We are continuing to develop and implement new measures such as our emergency generator demand response measure, which will result in further operational savings for Sunnybrook,” says McRitchie. “Senior management continues to make energy management and sustainability a priority. Employees are now more cognizant of how they impact the environment both in the home and at the hospital and feel a greater sense of pride knowing that senior leadership aims to create a sustainable organization. Sunnybrook’s Manager of Energy and Sustainability Laura Berndt is responsible for implementing, sustaining and expanding the environmental sustainability program designed to achieve savings and promote sustainable practices and behaviours.”

With guaranteed energy savings for years to come, and a body of staff, volunteers, and executives committed to seeing their environmental initiatives through, Sunnybrook's Energy & Facility Renewal Program represents a health care victory for the facility and Canadian healthcare industry as a whole.

Speaking to all partners who contributed to this win, McRitchie says, “As with all successful projects, one of the critical success factors is that a multidisciplinary project team be established with strong leadership and a wide range of stakeholders, including representatives from the energy performance contractor, hospital, professional engineers, sub-contractors, utility and incentive providers, and others. The success of the Energy & Facility Renewal Program is very much the result of excellent teamwork and collaboration between all parties involved.”

On behalf of its partner, Rodrigues adds, “For Honeywell to have had an opportunity to work and contribute to an organization that has been selected as one of Canada's greenest employers for years in a row, is a fantastic opportunity. They are a world class organization.”