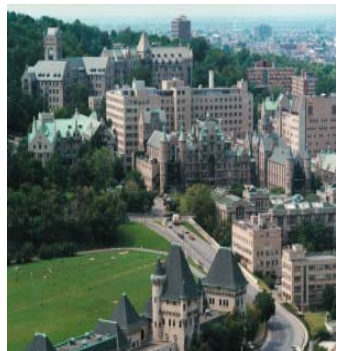
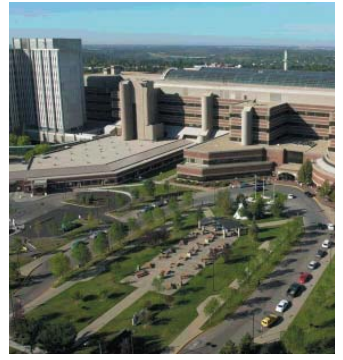


ENERGY RETROFIT SUCCESS STORIES



Canadian College of
Health Service Executives
Collège canadien des
directeurs de services de santé

The Energy Innovators Initiative is brought to you by Natural Resources Canada in partnership with CCHSE



“Partnering with EII meant we were able to implement several successful energy retrofit projects, including an energy awareness campaign that is going into its second year.”

Greg Clayton
Facilities/Engineering Dept.
University of Prince Edward Island

Canada’s health care sector is embracing energy efficiency and demonstrating a commitment to a healthier environment like never before. Over 450 Canadian health care facilities, regions and corporations have pledged their support by becoming members of Canada’s Energy Innovators Initiative (EII) and have committed to reducing their greenhouse gas (GHG) emissions to help slow climate change. Each member is doing its part to help us meet our Kyoto obligations.

EII, introduced in 1999 by Natural Resources Canada’s Office of Energy Efficiency (NRCan-OEE), is a voluntary, federal government initiative designed to help commercial businesses and public institutions explore energy efficiency options and strategies through access to an array of tools and services, as well as financial incentives of up to \$250K.

Since 1999, over 120 health care members have received more than \$11.7M in Energy Retrofit Assistance (ERA) funding as members of EII. This investment on the part of Canada’s federal government has precipitated an estimated \$47M in energy retrofit projects within the health care sector, which in turn have resulted in over \$25M being diverted from utility and operating budgets into patient care and clinical programs to enhance health care service delivery across Canada.

Under ERA(P), successful applicants can receive up to \$25K for the planning of their energy retrofit project(s). Funds help cover such items as energy audits, feasibility studies, energy management plan development and other project development and facilitation measures that can lead to energy savings projects.

Within ERA(3), members are eligible for up to \$7.50 per gigajoule (1 GJ = 277.8 equivalent kilowatt hours [ekWh]) of annual energy savings or up to 25% of eligible costs, to a maximum of \$250K, to assist with energy retrofit project materials and labour, staff training and awareness efforts, and monitoring and tracking initiatives. EII officers work with each funding applicant to help facilitate project completion and to ensure the maximum benefit is received for each retrofit dollar invested. Officers are also available to explain each step in the process and are knowledgeable in the many other services available from NRCan-OEE.

One of Canada’s first recipients of ERA funding was South Westman Regional Health Authority in rural Manitoba. Their incentive of \$66,663 permitted them to perform energy upgrades on

“Social conscience and due diligence dictated the importance of participating in the Energy Innovators Retrofit Assistance Incentive Program.”

Bev Preuss
Administrator
Saint Luke’s Place

“From the standpoint of environmental stewardship, there is no program that surpasses the Energy Innovators in taking the lead on energy issues.”

J .J. Knott
Facilities Maintenance
Norfolk General Hospital

16 of the 18 buildings in their portfolio and included replacing existing lighting systems with a combination of T8s, electronic ballasts, compact fluorescents, and light-emitting diode and high-pressure sodium lighting. To help minimize unnecessary lighting, lighting controls were installed. Caulking and weatherstripping also formed part of the project, as did the installation of a distributed load control system and the replacement of old electric laundry appliances with efficient gas-fired units. Yearly energy savings are in excess of 9,928 GJ (2.76 million kWh), or \$117,482 on a total project cost of \$907,910, and the ongoing benefits to the environment include annual GHG emissions savings of approximately 129 tons of CO₂.



Saint Luke's Place, a non-profit charitable organization serving seniors in Cambridge (ON), recently accessed funding to complete an energy efficient lighting project as part of a major refurbishment of their long-term care residence that included improved air cooling, new floors and a new nurse call system. "Our entire complex," says Pieter Vos, Director of Maintenance, "has now been retrofitted with new energy efficient lighting. We spend far less time now maintaining fixtures, and the money we save is being put back into services for our residents. Even small changes to a building's energy efficiency standards can have a profound impact on lowering harmful GHG emissions and reducing energy consumption."

In numerous facilities across Canada, existing mechanical systems are obsolete, and finding replacement parts can be difficult. Infrastructure renewal projects such as those at Saint Luke's Place often present a tremendous opportunity to easily integrate new energy efficient equipment and initiatives into facilities where the separate cost of the upgrades may otherwise prove prohibitive.

The University of Alberta Hospital (UofA) (AB) and Annapolis Valley Regional Hospital (NS) have both been successful in augmenting their retrofit projects with equipment they might otherwise not have been able to afford thanks to ERA funding. UofA's approval for over \$218K provided welcome funds for a feasibility study and helped defray the costs of modern heat wheel technology that is expected to help save in excess of \$200K per year in utility costs. As Senior Facilities Operations Manager Doug Dunn states, "Accessing ERA funding is a viable way to assist in turning utility dollars into health care program dollars."

Gary Slauenwhite, Director of Facility Services for Annapolis Valley District Health Authority (AVDHA), is also a supporter of EII and its ERA-funding component. AVDHA accessed nearly \$183K to perform a feasibility study and to replace two oil-fired boilers and an aging smoke stack with new energy efficient boilers and a heat recovery system. Due to provincial government funding timelines, the window of opportunity to proceed with the project was small, but the EII officer worked with AVDHA to expedite the application process. "Without their commitment to us," claims Slauenwhite, "we would not have been able to complete the paperwork and meet submission requirements in time. Their assistance was key to the success of our application." He is also quick to point out that the EII funding allowed AVDHA to expand their original plans, enabling a larger annual cost savings, estimated now at \$220K with a concomitant energy savings of 21,900 GJ.

Last year, Kings Health Region (PE) took advantage of ERA funds to hire an energy consulting firm to audit Souris Hospital, Kings County Memorial Hospital, Riverview Manor, Colville Manor and over 40 other properties. Preliminary results show that in excess of \$173K could be saved each year by moving forward with the recommendations. An EII officer is poised to help King's Health move into the implementation phase once all approvals are received.

Vice-president Gloria Zive, of Toronto's Rouge Valley Health System (RVHS), says their membership in EII and their ability to access ERA funding has been a win-win situation: "Thanks to Innovators, RVHS was able to effect more substantial energy upgrades within our \$8.6M infrastructure renewal project. We are having an even greater impact on improving the environment, are saving more utility dollars, and we are improving patient care." ERA funding, coupled with finan-

"All of us in health care need to take a leadership role within our community. The Energy Innovators allows us to share our successes and challenges, and to work together on a national scale. Further, receiving critical recognition for achievements in energy efficiency has proven to be a terrific motivator to continue along the path of increasing awareness and energy efficiency."

Mark Nesar
President and CEO
Seven Oaks General Hospital

cial incentives from RVHS's local utility company, Enbridge, meant an additional \$404K was injected into the project. It is important to discuss your energy project with your local utility supplier as many of them offer their own cash incentives and equipment rebates that can be combined with ERA funds to extend the scope of your potential energy savings or enhance payback.

ERA funding at St. Michael's Hospital in Toronto's (ON) inner city brought with it an excellent opportunity to not only improve energy efficiency on a number of fronts, but also rid the site of energy inefficient chillers containing outdated refrigerants now restricted under local environmental policy. The new state-of-the-art energy efficient chillers, containing environmentally friendlier refrigerant, will help the hospital save in excess of \$1.3M yearly. This translates into energy savings of approximately 155K GJ and 7,494 tons of CO2. In total, 33% in energy savings are expected as a result of changes to the hot water heating process and numerous other initiatives, such as recovering excess heat from kitchen compressors, improved ventilation system scheduling and changing the steam humidification system to reverse osmosis.

Upgrades to more efficient lighting, the installation of zone dampers, variable frequency drives on fans, and steam heat exchangers for domestic hot water, improved building envelope and an improved building automation system with direct digital control are typical in many retrofit and renewal projects. These and many more components formed part of London's (ON) Victoria Hospital project, which had over \$240K in ERA funding to kickstart the project. It is estimated that yearly savings are in excess of \$740K. Energy use has been reduced by 60,000 GJ and CO2 emissions decreased by 6,400 tons.

ERA funds have also been invested in a number of other massive health care infrastructure renewal



The Canadian College of Health Service Executives, together with their partner, Natural Resources Canada's Office of Energy Efficiency, is pleased to bring the Energy Innovators Initiative to the Canadian health care sector.

Turning Energy Dollars into Health Care Dollars ... for a Healthier Planet

projects, including those underway at The Ottawa Hospital (ON). Maximum funding allowable under program guidelines was received to assist with chiller and boiler replacements, the installation of variable frequency drives and DDC technology, plus upgrades to lamps and fluorescent ballasts and the deployment of an integrated building automation system. Energy savings are estimated to be \$2.7M per year and a reduction of 11,833 tons of CO2.

The University of Prince Edward Island, including its medical facility, is looking forward to saving over 13K GJ of energy, translating into \$190K, per year following their retrofit. The site now boasts a new boiler, upgraded mechanical controls, energy efficient motors and variable frequency drives, all thanks to ERA funding.

Retrofit measures at both the Vancouver General Hospital (VGH) and the Vancouver Island Health Authority - South were similarly supported under ERA. These two active EII members shared in excess of \$264K to support their commitment to reducing harmful GHG emissions and becoming better stewards of our planet. VGH spokesperson Brian Sikorski, P.Eng., acknowledged that without ERA funding the project would not have proceeded, stating, "The energy retrofit projects would not have received the attention of the senior management had it not been for ERA funding, which made the projects economically hard to turn down. The incentive funding also allowed more flexibility in the project design."

Regardless of whether the requirement is seed funding to secure energy audits and feasibility studies for basic lighting and heating upgrades in older facilities or will form part of a much larger integrated infrastructure renewal on giant inner city medical campuses, ERA has been there to assist.

Health care facilities from coast to coast continue to take the lead in providing critical role models of environmental stewardship for other sectors in Canada to emulate. They demonstrate a strong sense of commitment to protecting our fragile global environment while improving their own patient-care environment and lowering their bottom-line energy costs. Tens of millions of dollars are being saved every year and this is just the beginning. Are you doing your part? For more information on EII and how you can access up to \$250K in ERA funding, visit www.cchse.org/oe or phone CCHSE's Energy Efficiency Coordinator at 1-800-363-9056 ext. 36.

"We were glad to have partnered with NRCAN on this initiative. Our EII experience went very smoothly."

Terry Campbell
Director of Maintenance
Kings Health Region
PEI

Energy Innovators Initiative

Eligibility

Own, manage or lease a building in Canada

Commercial business or public institution

Challenge

Turn your energy dollars into health care dollars... for a healthier planet.

Benefits

Financial incentives (ERA) up to \$250K

Access to energy management training

EII Officer assigned to work with you as you pursue energy savings

Personalized membership certificate

Opportunities to win awards and to promote your energy reduction achievements

Information

CCHSE Energy Partnership
292 Somerset West
Ottawa, ON K2P 0J6
1-800-363-9056 ext. 36
kwaddington@cchse.org
www.cchse.org/oe

