The Canadian Coalition for Green Health Care
Coalition canadienne pour un système de santé ecologique

Energy Best Practice Case Study #1

Health Care Energy Leadership Program
Programme d'AIDE aux initiatives écoénergétiques dans les services de santé

ENERGY STAR® part of Canada's green health care landscape

Health care's impact

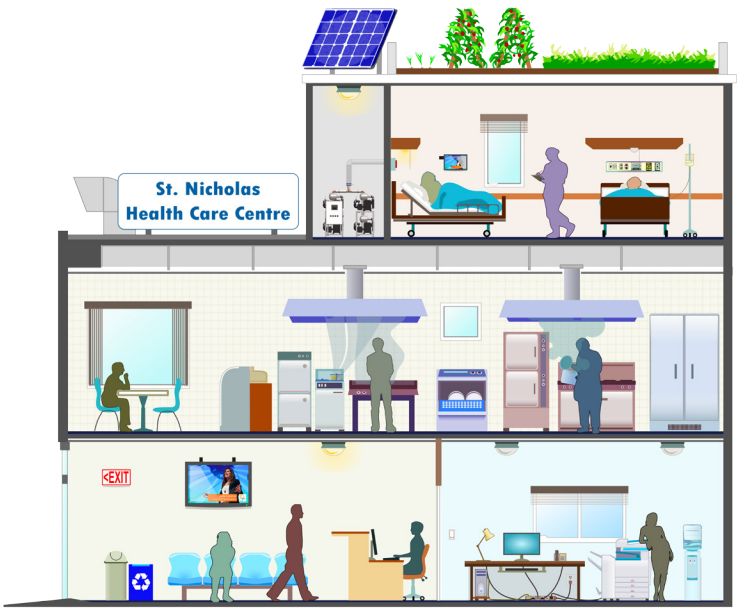
There are over 3,500 health care facilities in Canada, operating 24 hours a day, seven days a week, resulting in a national health care energy bill that has been estimated to exceed $1 Billion annually.

When proactive health care organisations embrace environmental responsibility through policies and actions, they enhance quality of life for employees, clients, patients, and those in the surrounding communities they serve. Energy and operating costs decrease, workplace and healing environments become more comfortable and people-friendly, employee morale improves, local economies are stimulated, employees become more aware of how their actions can reduce their overall impact on the health of our environment, and aging facility infrastructure gets revitalised.

Providing national leadership in this regard is ENERGY STAR, administered by Natural Resources Canada as a collaborative effort between public and private sectors intended to promote products and equipment that use less energy, while providing the same or better performance, than those with conventional design.

ENERGY STAR is the international symbol of energy efficiency and has been adopted by governments throughout the world. The ENERGY STAR symbol appears on approximately 50 types of products including ceiling fans, compact fluorescent lights, televisions and entertainment equipment, computers and monitors, fax machines, refrigerators and freezers, printers, scanners, air conditioners, dishwashers and dryers. Many of you may be familiar with these products for your home; however, there are tremendous opportunities for our health care facilities to embrace ENERGY STAR as part of an overall cost reduction and energy savings priority.

Registration as an ENERGY STAR Participant and access to resources on the dedicated Participant website is as simple as sharing some basic corporate contact information with NRCan's Office of Energy Efficiency, and providing a brief profile of your organisation's specific ENERGY STAR interests. The ENERGY STAR HELP team will assist those wishing to register and develop an ENERGY STAR Participant plan, as well as promote accomplishments on the ENERGY STAR HELP web portal, and through the ENERGY STAR Market Transformation Awards.



Health care facilities are filled with opportunities to save energy through the use of ENERGY STAR qualified products. See page 5 for a helpful Checklist of ENERGY STAR Opportunities in Health Care.

ENERGY STAR and Canada's health care sector

The Ottawa Hospital

The Ottawa Hospital (TOH) recently became Canada's first health care ENERGY STAR Participant, agreeing to use its formal alliance with NRCan and ENERGY STAR to promote energy efficiency as a simple and desirable option for organisations and consumers who wish to reduce greenhouse gas (GHG) emissions, protect the environment and help Canadians save on their energy bills.

As an ENERGY STAR Participant, they are working to increase public awareness of the growing list of opportunities for ENERGY STAR qualified products to reduce GHG emissions that contribute to climate change and the need for all Canadians to reduce our ecological footprints. They are also implementing internal purchasing policies and educating staff and third-party firms with which they deal on the necessity to consider ENERGY STAR qualified products whenever product replacement or new purchases are discussed.

Together with their IT Team, TOH has made tremendous progress in upgrading the majority of their computers and peripherals to ENERGY STAR qualified products, and they continue to educate and incite careful consideration of energy efficiency in all redevelopment and purchasing initiatives throughout their three campuses.

Driven by energy savings

Faris Rashid, TOH's Energy Engineer, joined the initiative because he knew purchasing more energy efficient equipment would lead to significant energy savings for TOH and it made good sense to help promote energy savings opportunities to their thousands of staff which could translate into energy savings both at work and at home.

"Becoming a participant demonstrated our organisational commitment to developing environmentally-preferable purchasing practices while providing support as we make changes to the equipment we buy. An ENERGY STAR Participant relationship goes beyond a recommendation by our TOH Green Team to ensure that ENERGY STAR qualified equipment is purchased whenever possible and staff is made aware of energy efficiency options open to them. In practical terms, we are working to increase the awareness of ENERGY STAR savings opportunities among members of our purchasing teams and our engineering consultants as we plan for new purchases and upgrade projects."

No Canadian academic health sciences centre sees more patients than The Ottawa Hospital. From their approximately 4.3 million square foot facilities, including the Civic, (pictured above), General and Riverside campuses, 13,000 health professionals and support staff serve 1.2 million people across Eastern Ontario, striving to provide each patient with the world-class care, exceptional service and compassion that staff would want for their own loved ones.

TOH's first venture with ENERGY STAR actually began in 2006 when they realized the energy savings to be achieved from ENERGY STAR qualified computers. They replaced 755 computers yielding a combined energy savings of approximately 120,000 kWh/year; allowing nearly $12,000 to be diverted from utilities back into direct patient care.

According to Jessica Heiss, Coordinator, Sustainability & Building Integration in the Ottawa Hospital's Engineering & Operations Group, *"Almost all TOH printers are now ENERGY STAR qualified. We still have a few old ones remaining but when they are replaced, they will all be ENERGY STAR. We also have over 300 servers and the majority of them are ENERGY STAR."*

And it isn't just the IT Department where TOH has looked to reduce utility costs. Food Service has also come under scrutiny with some amazing results.

Until recently, transportation of patient meals at TOH consisted of 36 fifteen-year old rethermalisation carts, which were well beyond their useful life. That model involved preparing trays in the kitchen and transporting them in stainless steel carts to each of the seventeen satellite pantries where they were maintained on individual compressors until the heating cycle began.

Old carts have been replaced with new ones that rethermalise in a central location. The new carts provide energy savings of 157,089 kWh per year (equal to electricity required for 18 single-family houses for one year) or a 71.73 kW energy demand reduction when compared to the old equipment. Thanks in part to an incentive of $57,384 from Hydro Ottawa to support the project, this initiative saves energy, relieves space in patient galleys and provides a more efficient system that benefits patients, staff and the environment.

Are you an ENERGY STAR Participant?

ENERGY STAR and Canada's health care sector

Jessica Heiss, Coordinator, Sustainability & Building Integration in the Ottawa Hospital's Engineering & Operations Group, proudly shows off a working draft of the organisation's new Standard for Sustainable Construction Practices in which TOH is outlining and evaluating the feasibility and applicability of a wide range of potential energy and environmental savings including everything from the design process to minimum energy performance, sustainably-sourced products and low VOC-emitting materials. Based upon LEED thinking and standards developed for the Green Guide for Healthcare, the review process is also placing a preference on ENERGY STAR qualified equipment. When completed, the document will serve as the basis for a corporate initiative across the TOH's three campuses.

In addition to making prints that resist fading for over 200 years, this ENERGY STAR qualified Hewlett-Packard Designjet plotter, used by the TOH Engineering & Operations Group, produces less heat, consumes only 200 watts of energy when active; 27 watts in powersave mode, and 43 watts on standby. This is one of two highly energy-efficient plotters in use at TOH.

Recently installed energy efficient rethermalisation food carts (above) provide energy savings of 157,089 kWh per year; a 71.73 kW energy demand reduction when compared to the old equipment.

ENERGY STAR qualified commercial refrigerators also hold great potential for reducing energy demand. Many such units are being used on TOH campuses.

Contact Information

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Other ENERGY STAR health care success stories

Interior Health Authority
Kelowna, BC
ENERGY STAR is an important part of how the Interior Health Authority manages energy in dozens of its health care facilities across the region.

Two years ago they took steps to migrate away from large desktop computers to those with a much smaller footprint. By the end of 2011, they had installed over 3,000 ultra slim desktop (USDT) computers, bringing the total number of ENERGY STAR qualified computers to over 6,000. The USDT models employ lower wattage power supplies, thereby using significantly less energy while producing fewer GHG emissions. Over the next few years as computers are replaced, they will all be ENERGY STAR qualified.

Existing refrigerators will be replaced at the end of their life cycle with ENERGY STAR qualified replacement units as will dishwashing machines. Policy states all new appliances purchased in the Authority must wear the ENERGY STAR logo if available.

Fraser Health Authority
Surrey, BC
The IT Department of Fraser Health in BC has a policy to replace their computers with ENERGY STAR models during regular computer upgrades. As of 2012, 100% of their computers were ENERGY STAR qualified.

It is also policy to source any new or replacement refrigerators with ENERGY STAR models. Currently about 55% of all fridges meet the ENERGY STAR requirement. In 2010, all their residential-sized refrigerators purchased were ENERGY STAR qualified.

Grove Nursing Home
Arnprior, ON
Arnprior's Grove Nursing Home serves fresh, nutritious, wholesome meals made 'from scratch' to its residents and adult day program participants. They have also begun an upgrade initiative to replace many of their older energy-inefficient kitchen appliances. When all existing non-ENERGY STAR qualified appliances are replaced with new ENERGY STAR qualified alternatives, the Grove could save $30,848 from their utility budget and reduce GHG emissions by 108,751 kg over the life of these appliances.

Do you have an ENERGY STAR success story to share?

Hospitals and long-term care homes across Canada are embracing energy efficiency and environmental stewardship initiatives to lessen their ecological footprint and show their support for a healthier planet.

Perhaps you have made ENERGY STAR a core component in your purchasing strategy or installed new ENERGY STAR qualified appliances in your food service or laundry. Upgraded your lighting or computers and monitors?

Please share your ENERGY STAR success stories with us at: ***feedback@greenhealthcare.ca***

Checklist of ENERGY STAR Opportunities in Health Care

The ENERGY STAR label appears on approximately 50 types of energy-using equipment commonly found in hospitals and long-term care facilities, including:

	Equipment	Approximate Energy Savings over non-ENERGY STAR qualified models
Refrigeration	Commercial Refrigerators & Freezers*	35%
	Commercial Ice machines	15%
Sanitation	Commercial Dishwashers*	25%
	Commercial Clotheswashers*	59%
	Water Heaters[1]	5%
Food Preparation	Commercial Fryers	30 - 35%
	Commercial Griddles	10%
	Commercial Hot Food Holding Cabinets	65%
	Commercial Ovens	20%
	Commercial Steamers	50%
Office Equipment	Computers	30 - 65%
	Computer monitors	20%
	Computer Servers	30%
	Water Coolers	45%
Imaging Equipment	Printers, scanners, copiers, fax machines, multi-function devices, mail machines	40%
Electronics	Televisions	30%
	Telephony	Varies
HVAC	Kitchen Ventilation[1]	60 – 75%
	Heating and Cooling[1]	6 - 15%
Lighting	Lighting[2]	Up to 75%
Fenestration	Windows, Doors, Skylights[1]	7 - 12%

*ENERGY STAR qualified, residential-sized products also available

[1] These ENERGY STAR qualified products are sized for residential or light-commercial uses; may be suitable for smaller health care facilities, clinics and LTC sites.

[2] Lighting includes: Fixtures, Compact Fluorescent Lamps (CFLs); Decorative Light Strings (DLSs); LED Luminaires; LED Bulbs.

ENERGY STAR Resources

ENERGY STAR HELP by the Canadian Coalition for Green Health Care
www.energystar.greenhealthcare.ca

Health Care Food Services Resource Guide - Going Green in the Kitchen with ENERGY STAR®
www.greenhealthcare.ca/projects//energy/project1

Official ENERGY STAR Canada website
www.energystar.gc.ca

Official ENERGY STAR USA website
www.energystar.gov

When a dishwasher uses less water, energy is also saved through a reduced need for water heating. ENERGY STAR qualified commercial dishwashers use approximately 25% less energy and water than standard models.

ENERGY STAR qualified hot food holding cabinets are 65% more energy-efficient than standard models, meaning they use less energy to maintain food at the same temperature. They may reduce heat loss by incorporating better insulation and additional energy saving devices such as magnetic door gaskets, auto door closures, or dutch doors.

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Introducing ENERGY STAR® HELP

Sound energy management practices have been proven to greatly decrease operating costs, freeing up much needed funds for infrastructure redevelopment and, more importantly, for direct patient care.

Demonstrate your commitment to energy reduction and environmental leadership by joining the **ENERGY STAR Health Care Energy Leadership Program (HELP).**

Learn how our team can help your team take the next step towards realizing your energy efficiency goals.

Take advantage of

- **Educational webinars**
- **Onsite ENERGY STAR training**
- **'Spot the ENERGY STAR Opportunities' walkthrough at green health care training host sites**
- **Sample ENERGY STAR RFP procurement language**
- **Training on ENERGY STAR® Simple Savings Calculator**
- **Help to build your ENERGY STAR upgrade business case**
- **Access to national peer-to-peer ENERGY STAR network**
- **Assistance with ENERGY STAR® Participant application**

Become an ENERGY STAR Participant and be recognised nationally for your commitment as a leader in helping save money while contributing to Canada's climate change objectives through increased energy efficiency*.

www.energystar.greenhealthcare.ca

** A 2005 Natural Resources Canada report reveals energy intensity in the health services sector is second highest of all the commercial and institutional facilities listed. Hospitals and long-term care sites require high levels of energy for ongoing patient care, diagnostic and emergency medical equipment, and other vital health services.*

ENERGY STAR HELP is delivered through a collaborative partnership between the following ENERGY STAR Participants:

My Sustainable Canada
Avenir durable Canada

My Sustainable Canada bridges the gap between research and action for a more sustainable future. Through our research, expertise and collaborations, we encourage change through the purchasing power of consumers, institutions, business and government.

As an ENERGY STAR program advocate, My Sustainable Canada is a national non-profit organisation that has substantial expertise in the areas of green purchasing, behaviour change strategies related to energy use reduction and program promotion using community based social marketing techniques.

The Canadian Coalition for Green Health Care
Coalition canadienne pour un système de santé ecologique

The Canadian Coalition for Green Health Care (CCGHC www.greenhealthcare.ca) is an alliance of committed Canadian health service organisations, associations and environmentally-focused business associates that promote the adoption of environmentally-friendly and sustainable health care service delivery to complement the compassionate delivery of health care.

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