



# GREENSmart Handbook



*Achieving Sustainability through Environmental Practices*

## Overview

In 2004, Exhibition Place adopted an official Environmental Plan, which later became the Exhibition Place **GREENSmart** program. The program lays the groundwork for Exhibition Place to serve as a model for other organizations to operate successfully while being environmentally friendly.

Exhibition Place, located on Toronto's waterfront, hosts over 5.5 million visitors each year and through its 140-year history has been the showcase for innovation and leading edge green technologies and practices.

Exhibition Place facilities include:

- 🌱 Enercare Centre
- 🌱 Beanfield Centre
- 🌱 Better Living Centre
- 🌱 Queen Elizabeth Exhibit Hall
- 🌱 Bandshell Park
- 🌱 Various tenants

Exhibition Place is an award winning entertainment venue and has produced two of the industry's most environmentally responsible buildings. Beanfield Centre is LEED Silver certified and sits just south of Enercare Centre which is now LEED Platinum EB:O&M. These facilities showcase multiple Initiatives such as, lighting retrofits, co-generation plant, a compostable food packaging program and a 4-stream waste diversion program. SCA Tissue, Green Seal, GreenGuard and EcoLogo products are also used throughout the facilities.

## Corporate Responsibility

Exhibition Place is committed to educating employees, clients and the general public:

- 🌱 City Council and Senior Management level buy in for the approved Environmental Plan.
- 🌱 The GREENSmart Team is an employee based committee comprising of members from every department across Exhibition Place.
- 🌱 Proud participants in Earth Hour and Earth Day global Initiatives.
- 🌱 SMART Movement program encourages employees to cycle, use transit, walk or carpool to work
- 🌱 Use of FSC (Forestry Stewardship Council) paper products.
- 🌱 Exhibition Place earmarked \$7M of Venue Naming Rights fees for the 10-year sponsorship of Enercare Centre for environmental initiatives.

### LEED Certified Facilities

Leadership in Energy and Environmental Design, or LEED® is a green building rating system that has become a nationally-accepted benchmark for the design, construction and operation of high performance green buildings. Green buildings refer to high-performance, environmentally responsible buildings that also promote the health and well-being of the occupants.

**Beanfield Centre** is one of Canada's first LEED SilverConference Centres. Beanfield Centre secured a 100% green power purchase agreement through Enercare Business and became the first building at Exhibition Place to be fully powered by renewable energy. In addition Beanfield Centre has improved air quality through CO2 sensors; rainwater harvesting to reduce water consumption; Low VOC paints, carpets and adhesives and organic recycling programs.

**Enercare Centre** is one of the first convention centres in Canada to achieve LEED® EB:O&M Platinum certification by the CaGBC. The initial LEED® EB:O&M certification goal was to achieve Platinum (50 points). However, through the enthusiastic efforts of the Enercare Centre team, a total of 80 points were documented and awarded by the Canada Green Building Council (CaGBC).



## Energy Conservation

Exhibition Place offers initiatives on all levels to encourage environmental responsibility through the conservation of energy.

- Exhibition Place offers designated parking spots for hybrid cars, electric vehicle charging stations, and carpool groups across the grounds.
- Exhibition Place created an **urban forestry program**, which preserves and renews the urban forest. The 2,770 trees across the site, the Sakura Tree Project and the naturalized garden are watered using lake-water irrigation piped from nearby Lake Ontario.
- In Enercare Centre and Beanfield Centre classroom set-ups feature **linen-free table sets** as a standard set, helping to eliminate toxic dry-cleaning solvents from entering our ecosystem.
- Beanfield Centre has its own **Cistern**, which allows rainwater harvesting from the roof to flush all of the water closets in the conference centre. Enercare Centre has low flush water closets. Washrooms feature, 100% PCW hand towels, and touchless taps and soap dispensers. These water saving plumbing fixtures reduce water & conserve natural resources in order for the site to become better stewards of land, air & water.

### GREENSmart Fact

*Beanfield Centre is powered with 100% Green Power. Energy savings are equivalent to removing 168 cars off the road and this green energy initiative will offset the same amount of carbon dioxide as 422 acres of planted trees annually.*

### Building Temperature

From mid-October to mid-May heated spaces are kept as close to 68°F/20°C as possible during normal operating hours. From May to October air conditioned spaces are kept as close to 25°C. To help **save energy**, the building temperatures may be changed from normal operating set points during expected unoccupied hours and may also change during smog days. Automatic roll up doors are installed for Enercare Centre to prevent conditioned air leaving the building.

### Lighting

Lighting constitutes one of the major energy consumption factors and therefore building lighting systems levels are optimized. Indoor lighting will be reduced wherever is possible, to provide for the minimum but adequate lighting levels consistent with the efficient and effective use of the space. Exhibition Place's Integrated Lighting Control System ensures conservation across the grounds.

- Enercare Centre **retrofit fixtures** and lamps in the main exhibit halls with energy efficient, 159 watt, high light output energy efficient LED lights. The luminous intensity of

these LED lights can be adjusted using Encelium lighting control system. This retrofit reduced energy consumption by 530 megawatt-hour annually and is estimated to provide an annual savings of 60.25% in the overall lighting costs at Enercare Centre exhibit halls. Enercare Centre installed new tower LED lights that have different color schemes and are programmable.

- An **Energy Control System (ECS)** by Encilium Technologies Inc. was installed to help offset the energy costs of the 600 fixtures in the Enercare Centre underground parking lot. Over 130 motion sensors controlling the lighting zones power required zones only when necessary and detected through motion.
- Beanfield Centre uses **natural light** and lighting levels are independently controlled in each room. Dimmable energy efficient lighting with motion sensors are used throughout.
- Better Living Centre along with Enercare Centre has received **lighting upgrades** by installing energy efficient ballasts and lamps in main Exhibit Halls and public spaces. This will result in an annual reduction of over 2.3 million kilowatt hours of energy use.
- **LED-technology** was utilized in exterior building naming signage for Enercare Centre and Beanfield Centre offering superior energy efficiency. Princes' Gates Arch chandelier was replaced with energy efficient LED lights that can be programmed to periodically change colors.

## Energy Creation

Through the GREENSmart program Exhibition Place positions itself as a leader in green technology and innovative thinking. Exhibition Place is targeting energy self-sufficiency and proudly presents various methods of energy creation.

### Power

- The first permanent **wind turbine** in the City of Toronto. The turbine is capable of generating 1 million kilowatt hours of power per year. The turbine also helps to displace some of the harmful chemicals that are responsible for smog and acid rain, moving up to 1,800 tonnes of carbon dioxide annually.
- The "**Keeping it Green**" program was launched at Exhibition Place to assist our clients in organizing more environmentally friendly shows and events. Clients can purchase Renewable Energy Attributes from Enercare Business to offset their energy use. The power is sourced from EcoLogo certified generation facilities. The clean, renewable energy sources include wind, solar, low impact hydro, biomass, biodiesel or geothermal power.

- The Enercare Centre uses a major **Co-generation project** that will use a natural gas fired generator to satisfy approximately 30% of the Complex's electricity, heating and cooling needs. An energy reduction of 1,600 tonnes of equivalent CO<sub>2</sub> emissions occurs through this project annually.
- The Horse Palace located on the north end of Exhibition Place uses its 130,000-square-foot flat roof to collect solar energy through a **photovoltaic plant**. When first installed, this 100 kilowatt plant was the largest urban PV array in Canada. Followed by this pilot project, Horse Palace West Side, East Annex, and Better Living Centre installed solar panels with 100 kW, 150 kW and 250 kW capacity respectively. Together, these solar PV plants reduce CO<sub>2</sub> emissions annually by 200 tonnes.
- The Press Building is powered using a **Geothermal Plant** and is expected to save 110,000 kilowatts-hours per year of electricity and over 15,000 cubic meters of natural gas. The Geothermal Plant will reduce the annual carbon dioxide (CO<sub>2</sub>) emissions of the Press Building by approximately 125 tonnes per year and is expected to be 100% efficient.
- The Back Pressure Steam Turbine located in Mid Arch is capable of generating 275 kW of electricity using waste steam from boilers.

**GREENSmart Fact**

*Enercare Centre is the first convention centre in North America to offer Compostable Disposable Dishware.*

## Waste Management Program

Exhibition Place is a part of the City of Toronto Waste Diversion Task Force and has set aggressive waste diversion targets. Exhibition Place is committed to initiatives that focus on diversion, recycling and reduction of waste and has met its goal to be 80% waste free by 2010. In 2014 Exhibition Place was awarded 3R Certified Platinum from the Recycling Council of Ontario. The 3R Platinum level certification was the first time it was ever awarded to a company in Ontario. Exhibition Place increased its waste diversion percentage from 84% in 2010 to a high of 88% in 2015.

### Initiatives:

- 🌱 **4-stream recycling** to separate and recycle waste materials (including glass, paper, wood, plastic and organic compost) at Enercare Centre, Beanfield Centre and Better Living Centre.
- 🌱 **3-stream recycling** to separate and recycle waste materials (glass, plastic, paper, waste) on the exterior grounds of Exhibition Place
- 🌱 Enercare Centre and Beanfield Centre uses and recycles **100% PCW hand towels** for all public washrooms. Used hand towels are composted. 🌱 Enercare Centre uses recycling and **safe disposal programs** for special items such as batteries, fluorescent lamps, paint and toner cartridges. To date, the facility is already diverting over 77% of its overall waste.
- 🌱 Our Food & Beverage department works with local farmers to donate food waste.
- 🌱 Exhibition Place created signage to match City of Toronto's waste program. This informs the public through pictorial signage on all waste diversion receptacles to mix all plastic food related utensils in with the co-mingled waste stream. This stream of co-mingled is separated and plastic containers and utensils are sent together for recycling by the City contractor.
- 🌱 Cerise Fine Catering operates with **china service** in Beanfield Centre. If disposable dishware is requested the compostable packaging recycling program is provided.

## New Green Technologies

Exhibition Place is positioned to be a world leader in emerging technologies through the introduction of green energy projects.

- Exterior streetlamps, flanking Beanfield Centre, and exterior building signage to energy efficient LED lighting. Along the south side of the Exhibition Place campus, pedestrian pathway LED fixtures are equipped with occupancy sensors to dynamically adjust the light levels based on user needs.
- Creating Canada's first 100 kilowatt Photovoltaic Power Generation plant, and a smaller combination solar PV/thermal plant
- Installation of a geothermal HVAC system within the century-old Press Building
- Introduction of an intelligent lighting program for our underground parking facility.
- Installation of high efficiency chiller for Queen Elizabeth building.
- Implementation of a Green Roof pilot project atop the Horse Palace building.
- Construction of the first urban Wind Turbine in Canada
- Creation of an urban reforestation project including a naturalized garden, and lake-water irrigation
- Implementation of rainwater harvesting program through the construction of a Cistern at Beanfield Centre.
- Application of the District Energy System which is a thermal energy distribution system for multiple buildings and consists of a heating and cooling central plant within Enercare Centre.

## Exhibition Place Awards

Energare Centre and Exhibition Place have been honoured with industry and environmental awards for our contribution to energy conservation and sustainability.

Name of Award	Presenting Organization	Year Awarded
Smart Commute Silver Workplace	Smart Commute	2016
Environmental Achievement Award	Ontario Strategic Energy Management Co-Hort Program	2016
Energare Centre LEED Platinum Certification Existing Buildings: Operations & Maintenance	Canada Green Building Council	2019
3R Certified Platinum	Recycling Council of Ontario	2014
Beanfield Centre LEED Silver New Construction	Canada Green Building Council	2012
2011 BOMA Certificate of Building & Management Excellence	The Building Owners and Managers Association (BOMA)	2011
2011 Office Building of the Year (TOBY) Award, Public Assembly Facility category		
Platinum Facility Management	Recycling Council of Ontario	2010
UFI Operations Award	UFI The Global Association of the Exhibition Industry	2010
Pollution Prevention Award Greenhouse Gas category	Canadian Council of Ministers of the Environment	2009

## Questions?

If you have questions about GREENSmart or want to learn how you can make your meeting or event environmentally friendly, please email us at [greensmart@explace.on.ca](mailto:greensmart@explace.on.ca)