

# LED STREETLIGHTS SHINE LIGHT ON SAVINGS

With the simple press of a button just after the sun set this evening, Ontario's Chief Energy Conservation Officer Peter Love, Toronto Mayor David Miller and Joe Pantalone, Deputy Mayor and Chair of the Board of Governors of

## LIGHT EMITTING DIODES (LEDs):

A Light Emitting Diode (LED) utilizes a concept called electroluminescence. Electrons are sent through a semiconductor to create light. Unlike incandescent lighting, LEDs do not contain a filament or wire and, as such, energy is directed to light rather than heat. Significant energy is wasted in the production of heat in incandescent lighting. LED is also referred to as Solid State Lighting (SSL).

Exhibition Place, along with representatives of TABIA, greenTbiz, Exhibition Place and electromega, turned on Canada's largest installation of Light Emitting Diode (LED) streetlights. The pilot project at Toronto's Exhibition Place shows how LED can dramatically reduce city lighting costs and cut greenhouse gas emissions.

Many people are familiar with the low-heat, energy efficient holiday lights, or even the little red lights on electronic equipment. The new LED streetlights at Exhibition Place incorporate the same technology. Each streetlight comprises 117 LEDs

to produce the same intensity as a conventional streetlight. LEDs, however, use 50% less electricity and last 5 times longer.

"LED street lighting is one of the options we are enthusiastically examining in order to bring Toronto another step closer to becoming the greenest city in North America," said Mayor David Miller. "This one step will reduce costs, increase safety and improve our environment."

Alain Lamoureux, President of electromega, said, "I'm very pleased to demonstrate the effectiveness of this technology and show how it can improve cities."

The LED fixtures are installed along the south side of Princes' Boulevard, while the older, conventional streetlights are along the north side. The light qualities are similar, yet the LEDs consume half the electricity.



Joe Pantalone, City of Toronto Deputy Mayor and Exhibition Place Board of Governors Chair, said, "This project gives everyone an opportunity to see the LED streetlights as they walk or drive through Princes' Gates. It also gives the Exhibition Place an opportunity to see how much money can be saved from electricity and maintenance costs."

## LED STREETLIGHTS IN THE CITY OF TORONTO:

- The City of Toronto has approximately 160,000 streetlights.
- If all of the streetlights in the City of Toronto were LED, the city could save \$6 million a year in electricity costs and reduce greenhouse gas emissions by 18,000 tonnes, the equivalent of removing 3,608 cars from the streets.

The pilot will continue through 2007 to test public acceptance, durability, light performance and weather resistance. Additional pilot tests of LED technology are planned for a number of the Business Improvement Areas (BIAs) in Toronto. "The BIAs are delighted to showcase the new technology in these lights," said John Kiru, Executive Director of the Toronto Association of

**Continued on Page 8**

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## LED Streetlights

Continued from Page 6

Business Improvement Areas (TABIA). “TABIA is also very pleased to assist in the facilitation of these exciting projects.”

For the City of Toronto, switching to LED could mean millions of dollars in savings. Converting the city’s 160,000 streetlights to LED could save the city \$6 million a year in electricity costs, in addition to reducing greenhouse gas emissions by over 18,000 tonnes. This is equivalent to removing 3,608 cars from the streets.

The initial investment needed to purchase and install the new LED streetlights would be recouped from both the electricity savings and lower replacement and maintenance requirements.

“This is a very exciting project,” said Peter Love, Ontario’s Chief Conservation Officer. “greenTbiz, TABIA and their partners have illuminated new ways for cities to help the environment, while saving electricity and money. This is a great example of how leadership in technological advancement and innovation can benefit all Ontarians.”

### ABOUT GREENTBIZ & TABIA:

greenTbiz is a program delivery unit, operated under the auspices of the Toronto Association of Business Improvement Areas (TABIA), providing programs and services to the Toronto BIAs, for the benefit of its members and the environment.

The aim of this delivery organization is to develop and deliver comprehensive energy conservation and environmental programs that will have significant benefits, improving the bottom line of the BIA businesses.

greenTbiz programs are available to all of Toronto’s 60 Business Improvement Areas (BIAs) representing 25,000 small business and property owners. greenTbiz programs are developed to benefit the individual business and properties as well as the BIA communities through energy and environmental conservation of decorative lighting, pedestrian lighting, and street lighting.

### ADVANTAGES OF USING LEDS:

- They produce more light per watt of electricity than incandescent or fluorescent bulbs.
- Energy is not lost as much to heat production.
- They have an extremely long life span, upwards of 100,000 hours, twice as long as the best fluorescent bulbs and 20 times longer than the best incandescent bulbs.
- With a longer life, maintenance is reduced.
- The environmental footprint is reduced due to the longer life and the reduction in disposal waste.

### LED Streetlights in the Exhibition Place Pilot:

- Manufactured by Leotek Electronics, they use 50% less energy compared to the older High Intensity Discharge (HID) lighting, such as High Pressure Sodium (HPS) and the older ballast technology.
- They last 5 times longer than conventional streetlights, with a lifespan of 10 to 15 years, and require less maintenance.
- Leotek LED streetlights cost approximately \$1,200 each, and can be fitted to existing lampposts.
- 12 LED streetlights are installed at the Exhibition Place on unique, bow-style street light poles surrounding the perimeter of the Automotive Building.
- An additional 4 LED streetlights are installed in the parking lot south of the Direct Energy Centre.
- greenTbiz, in partnership with Exhibition Place and electromega, has installed the LED fixtures to analyze the potential of LED street light technology in other areas of Toronto.
- The LED street lighting will be evaluated by Exhibition Place, the City of Toronto, Toronto Hydro and the Business Improvement Areas, as well as by Toronto Police with respect to Crime Prevention Through Environmental Design (CPTED) and overall safety.