

Commercial Case Study  
**Conestoga College**  
Kitchener, Ontario

Conestoga College in Kitchener, Ontario is gaining attention not just for successful educational programs but for taking action to become more energy efficient. In April 2007 Conestoga was rated Ontario's best college for the ninth straight year; in June, Conestoga's Doon Campus completed a major lighting retrofit of its Recreation Centre, Woodworking Centre and Machine Shop, replacing 832 fixtures with energy-efficient GE lamps. The retrofit will result in increased energy efficiency, better light quality and drastically lowered energy costs – so much so that the entire project will pay for itself in just 18 months.

**The Project:**

The lighting in Conestoga College's Recreation Centre, Doon Campus Gymnasium, Hockey Arena and Woodworking Centre was fifteen to twenty years old and its age was beginning to show. Already familiar with Graybar's expertise in lighting solutions, Conestoga called upon Graybar to help design a lighting solution for these facilities. After extensive consultation with Conestoga and GE, Graybar put forward a complete lighting retrofit solution proposal, including lighting layouts, product and installation and a detailed financial analysis for the entire project. GE products were selected for the retrofit; by replacing old inefficient lighting with energy efficient GE Ecolux™ T8 and T5 lamps and ballasts, Conestoga decreased energy demand, reduced operating costs, lowered maintenance expenses and improved the light quality in all these facilities – all while meeting stringent environmental regulations for safe disposal of fluorescent lighting and ballasts.

**The GE Solution:**

The double-size gymnasium accommodates a wide variety of activities, including basketball, volleyball, indoor soccer, badminton, ball hockey, lectures, demonstrations, concerts and trade shows. Graybar chose 24 new fixtures with energy efficient T5 Ecolux™ lamps to light the 13,600 square foot gymnasium with a projected energy cost savings of approximately \$8,000 annually. The new lighting system will improve colour rendering (the ability to see true colours), making an immediate and visible improvement to the effectiveness of the lighting in this well-used space.

Explained Tim Schill, long-time Manager of Plant Operations and Construction for Conestoga College, "We decided to switch out the HID lighting in our campus recreation centre, not realizing the cost saving potential; once we had the lighting audit done and saw the payback time the project was a 'no brainer'."



Doon Campus @ Conestoga College, Kitchener, ON

GE Delivers High Efficiency Lighting to Dramatically Improve Work and Play.

The GE energy-efficient lighting solutions installed at Conestoga College in Kitchener Ontario will reduce energy consumption by over 53% annually and deliver payback in just 18 months.

"Conestoga wanted a turn key solution that was environmentally responsible, provided energy and cost savings and improved safety. Utilizing new fixtures with safe disconnecting ballasts as well as retrofitting existing fixtures with ballasts and GE Ecolux™ lamps helped meet their objectives. In addition, we improved the overall efficiency and performance of their lighting systems."

- Robert Foss,  
Lighting Manager,  
Graybar



## Graybar Delivers a Winning Project:

The GE energy-efficient lighting solutions installed at Conestoga College in Kitchener Ontario will reduce energy consumption by over 53% annually and deliver payback in just 18 months.

An additional benefit of the GE T5 lamps is their longer life; the lamps in the arena and gymnasium are expected to last up to 2.2 years longer than the previous solution, reducing the amount of stock required and cost of maintaining them. The new 4' GE Ecolux™ T5 lamps are also environmentally friendly, having passed TCLP tests, satisfying the college's environmental and safety committees and reducing disposal costs.

As commented by GE's John Pellerin, "Overall, we were able to reduce the number of lamp sources in the recreation centre, hockey arena, gymnasium and the Woodworking Centre from six down to two, which made Conestoga's Purchasing group happy. It's much easier to procure and stock only two SKUs rather than the six that they had to manage in the past."

The hockey arena seats 400 with standing room for an additional 400. It contains an Olympic size ice surface, concession and adjacent sports lounge, making it an attractive venue for a variety of uses. The need for recreational and show quality light levels meant replacing outdated and inefficient HID lighting with new fixtures and GE Ecolux™ T5 fluorescent lamps. This lighting solution delivers higher lumens per watt, reducing the wattage required and delivering better maintained light levels over a longer period of time.

In the 50,000 square foot Woodworking Centre, where clear and even light levels are critical to the safe and precise operation of the over 100 woodworking machines, Graybar recommended replacing 86 H.I.D. fixtures in the Wood Shop and 40 H.I.D. fixtures in the Machine Shop with high efficiency 4' GE Ecolux™ T8 XL high lumen long life lamps. These changes resulted in higher lumens per watt, truer colour, reduced wattage and better maintained light levels.

Added Robert Foss, Lighting Manager, Graybar, "Conestoga wanted a turn key solution that was environmentally responsible, provided energy and cost savings and improved safety. Utilizing new fixtures with safe disconnecting ballasts as well as retrofitting existing fixtures with ballasts and GE Ecolux™ lamps helped meet their objectives. In addition, we improved the overall efficiency and performance of their lighting systems."

As concluded by Tim Schill, Manager of Plant Operations and Construction for Conestoga College, "Lighting levels are clearly more even; now that school is back in session we expect positive feedback from both students and administration who are already receiving lower utility bills."

## Conestoga College Project Highlights:

- The GE Lighting project was completed in under 6 weeks.
- 832 fixtures replaced & retrofitted.
- 53% annual energy savings per year.
- Project Payback expected in just 18 months.
- Improved colour rendering, resulting in immediate visibility improvements.
- Increased lamp life.
- NEW GE Lamps meet TCLP criteria for safe disposal.
- Reduced disposal costs and reduced environmental impact.

## GE products used for the Conestoga College campus retrofit project:

- GE Ecolux™ T5 Fluorescent Lamps
- GE Ecolux™ T8 Fluorescent

"The uniformity of the lighting was visibly improved with this retrofit.

I have always been a fan of GE products. I like working with them, they're easy to source and install.

GE makes a quality product with very few warranty issues; I am happy to recommend GE on a job as I know GE will stand behind both me and their products.

- Rob Cooper  
Operations Manager  
Unicco Lighting

