



CASE STUDY

**Greater Toronto
 Airports Authority**
 Energy Efficiency



\$2,741,309
 Avoided

50 million
 Passengers in 2020

29,427,233
 kWh Saved



“Located on 1,867 hectares near the heart of the Pearson Eco-Business Zone, The GTAA is a visionary leader in airport sustainability and a founding partner of Partners in Project Green.”

“To help Toronto Pearson achieve its “20/2020” goal, Pearson became the only airport in Canada to hire full time Energy Management personnel onsite whose sole goal is to reduce energy consumption at the airport.”

ENERGY EFFICIENCY

In 1996 the Greater Toronto Airports Authority (GTAA) took over the management, operation and development of Canada’s busiest airport, the Toronto Pearson International Airport, from the federal government. Since then, the GTAA has become the first airport in North America to achieve ISO 14001 certification for its Environmental Management System (EMS), and has made environmental stewardship a cornerstone of its mission statement. In 2012, Toronto Pearson handled almost 35 million passengers and expects to serve 50 million passengers annually by 2020. With this in mind the GTAA remains committed to developing airports that are economically, environmentally and socially sustainable. Located on 1,867 hectares near the heart of the Pearson



CASE STUDY **GTAA** Energy Efficiency

Eco-Business Zone, the GTAA is a visionary leader in airport sustainability and a founding partner of Partners in Project Green.

To meet its goals for energy consumption the GTAA has invested in multiple capital projects over the years. The Cogeneration Facility which opened in 2005 at Toronto Pearson, allows the airport to meet its energy needs independently. This facility contains a 117MW Combined Cycle Power Plant which supplies power, heating and cooling to the airport while selling clean surplus electricity back into Ontario's power grid. By using the steam from the Cogeneration Facility instead of the Central Utility Plant, the GTAA saved over 10,800 MWh of electrical energy in 2006. A year after this, the Fire and Emergency Services Training Institute (FESTI) building on the airport campus achieved LEED Silver-certification. This facility utilizes distinctive sustainability features such as solar wall panels, a green roof, and TermoDeck in-slab air distribution system. Altogether these features resulted in an estimated \$16,222 annual savings in energy cost.

The GTAA remains committed to meeting the widely adopted "20/2020" target, as part of their long term Energy Management Program. This target entails a 20% reduction in greenhouse gas emission by 2020, relative to their 2006 baseline. To reach this target, several new projects were launched in 2011, including conversion to LED lighting. Approximately 2,000 metal halide and high pressure sodium

lighting fixtures were replaced with LED fixtures in the Terminal 3 parking garage, the lighting management system was also improved. This resulted in a more than 75% reduction in energy consumption and cost savings of about \$200,000 annually. To help Toronto Pearson achieve its "20/2020" goal, Pearson became the only airport in Canada to hire full time Energy Management personnel onsite whose sole goal is to reduce energy consumption at the airport.

The American Council for an Energy Efficient Economy (ACEEE) is a nonprofit organization that acts as a catalyst to advance energy efficiency efforts. In 2012, the GTAA was nominated for the ACEEE's Champion of Energy Efficiency in buildings Award to recognize the GTAA's efforts towards achieving their "20/2020" goal. The GTAA is a founding member of Partners in Project Green and has brought together businesses to green their bottom line by coordinating an eco-business zone around Toronto Pearson. As a member of the Energy Leaders Consortium the GTAA is collaborating with other businesses to improve their energy management strategies and become more cost competitive.

The GTAA continues to work towards its "20/2020" goal and help business achieve their own. The GTAA was able to realize an excess of 29,427,233 kWh per year in savings from 2006 through various initiatives, and over \$2,741,309 per year is avoided in energy spending.