



**London**  
CANADA

## Ameresco Makes a Splash at City of London's Aquatic Centre

A project planned, implemented and guaranteed by Ameresco Canada

# Canada Games Aquatic Centre

The City of London embraces energizing plans for sustainable facility renewal

The Canada Games Aquatic Centre (CGAC) recently reopened to the public after the completion of a redevelopment and energy renewal project which went swimmingly. Municipal managers across Canada would be wise to take note of this remarkable accomplishment.

“We have a life cycle maintenance plan for all our facilities and we knew based on past performance that the mechanical systems at the Aquatics Centre were coming to their end of life,” recalls Lynn Loubert, City of London’s Division Manager for Aquatics, Arenas and Attractions.

Ameresco Canada and the City of London have partnered together successfully in the past, and this time was no different. “Ameresco looks at life cycle renewal but also energy conservation and I think that’s the primary benefit they bring,” Loubert states.

Completed on time and on budget, the comprehensive CGAC project has produced several long-term benefits for facility operations and the residents of London.

## BACK STROKES

Built in 1989, the CGAC was the first indoor pool facility in London. In 1999, the city installed an addition to provide a practice space for the 2000 Summer Olympic Games. Since it opened, the facility has hosted more than eight million swimmers.

The CGAC has a 50-metre eight-lane pool, a moveable floor, diving boards, a whirlpool and accessible features including elevators, an electric pool lift, and family change rooms. Programs include recreational and leisure swimming, fitness and lane swimming, aquafit, swimming lessons, and leadership training.

## FRONT STROKES

With the recent upgrades to heating ventilation and air conditioning (HVAC), mechanical and filtration systems, energy efficiency has increased dramatically, with a 42 per cent reduction in energy usage of electricity and natural gas.

In addition, the updated entry, change rooms, flooring, brighter lights and other renovations have helped enhance the safety and aesthetic appeal for the facilities users. “We’re now better able to serve all of our users, whether they’re small children, seniors, or people with disabilities,” Loubert says.

## AUDIT AND ASSESSMENT

Much like a swimmer caught in the current there are variables that can sink a project timeline or budget. Perhaps the anticipated funding or grants fall through or maybe city council is slow to issue the necessary approvals and permits. However, with Ameresco’s experienced project team that have proven capabilities in carefully executing plans, obstacles can be navigated with the precision of a professional diver.

“The technologies we’ve implemented are high efficiency. One of the most interesting examples is the combined heat and power system, which is able to generate electricity to heat the air and pool water. That measure alone will net the city operational cost savings of \$25,000 per year.”

A detailed audit and assessment of the building's architectural, mechanical and electrical systems helped inform a comprehensive plan for the energy end-use profile and the technical and economical feasibility of goals for energy conservation, greenhouse gas (GHG) reduction, operational cost reduction and other facility renewal measures.

Information was obtained through drawings and specifications, site visits and discussions with management, maintenance, operations staff and occupants. Ameresco collaborated closely with City of London staff throughout the duration of the project.

### PROJECT PLAN

Equipped with the audit and assessment information, the following measures were taken into consideration:

**Local Generation Measures** that provide the facility with some of its own energy requirements through local energy generation systems, larger amounts of backup power, electricity cost reduction tactics, and the offset of ongoing operational costs.

**Facility Renewal Measures** that provide energy cost, GHG and operational savings potential, and keep the facility in good operational condition for users.

Every measure was applied in terms of maximizing points toward LEED building renewal status. The internationally recognized LEED green building rating system promotes design and construction practices that increase profitability while reducing negative environmental impacts of buildings and improving occupant health and well-being.



Ameresco performed the necessary strokes in record time. To optimize cross-servicing opportunities with the trades and the overall construction process, services were performed concurrently. With a planning start date of June 2013, and a facility shutdown and construction start date of April 2014, the facility was reopened and resumed community services by November 2014.

### COST AND COMMITMENT

The City of London invested \$6.3 million into the project, including a \$785,000 contribution from the federal government through the Canadian Gas Tax Fund. Taking into account the effects of utility cost escalation, the project has a payback of under 20 years.

“We have a commitment to Londoners to maintain our facilities in a modern, safe and sustainable way,” Loubert says. This project provided another opportunity for the City of London and its energy partner Ameresco to demonstrate an ongoing commitment to responsible and sustainable facility renewal.



The CGAC project provides a net reduction in GHG emissions of **42 per cent**, which represents the planting of more than **34,000 trees**.



### PROJECT GOALS ACCOMPLISHED

- Replacement of the end-of-life mechanical and electrical equipment serving the pool and spectator area;
- Implementation of HVAC system upgrades to allow for proper ventilation and to improve indoor air quality;
- Installation of a combined heat and power system with incentives offered through Ontario Power Authority’s Process & Systems Improvement program; and
- Reduction of GHG emissions in light of the city’s mandate under the Green Energy Act’s Bill 397-11.



For further information, visit [ameresco.com](http://ameresco.com)



To watch a video about this project, visit [bit.ly/londonaquatic](http://bit.ly/londonaquatic)

