



Carleton University

Residence Renewal and Energy Efficiency Program

Glengarry House was opened in 1969 and is Carleton University's largest residence with 633 residents. The University Commons is an adjacent building with a variety of residence services. Both buildings were in need of building system renewal and there was also an opportunity to reduce operating costs by implementing energy efficiency measures.

A program was developed by Ameresco Canada working with the Facilities Management and Planning staff that began implementation during the summer of 2005. Careful planning was required so as to minimize disruption for residents and operations; especially during the summer months as summer rentals are important for the university.

The program was finalized in 2006 and has made significant improvements to the operation and performance of the building for the students, staff and the Facilities Management Department.

Carleton University has moved from this project to look at improving the building systems of Russell House and Grenville House in 2007.

Project Measures

- Chiller replacement (upgraded to 325 tons)
- Heat recovery system installed
- Induction and riser piping system replaced
- Water conservation measures
- Main HVAC system optimization
- Lighting retrofit and upgrade
- Envelope sealing
- Upgraded power distribution
- Epoxy washroom flooring
- Painting and carpeting throughout

Project Highlights

- Project Value: \$5.1 million
- Total Building Area: 244,000 square feet
- Estimated Project Savings: \$294,000 per year
- Estimated Energy Savings: 21,500 GJ per year
- Greenhouse gas reduction of 840 tonnes in CO2 equivalents (the equivalent of taking 140 cars off the road)

Annual Project Savings

- Improved building performance for residents
- Better comfort levels for students and staff
- Reduced energy consumption by 37%
- Reduced operating cost by 29%

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