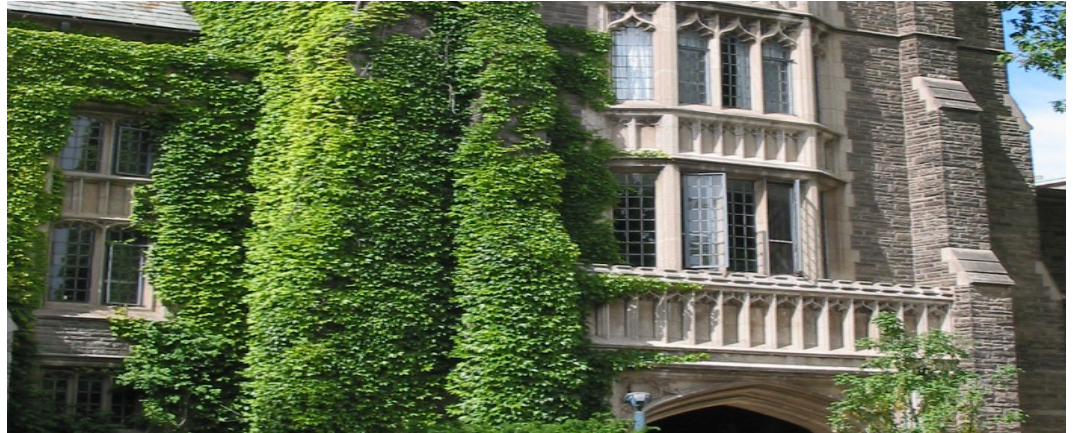


Launched in the fall of 2003, the Energy Reduction and Facility Renewal Program, jointly developed by McMaster University and Ameresco, provided an extensive opportunity for the University to address energy-reduction needs and implement facility-renewal projects in 25 buildings across campus.



McMaster University

### Energy Reduction and Facility Renewal Program

As a result of this comprehensive energy-reduction and building-renewal program, McMaster University has realized significant utility cost savings, reduced its deferred maintenance backlog, and demonstrated environmental stewardship through the reduction of greenhouse gas emissions.

Completed in the winter of 2006, this integrated program has provided creative ways to relieve funding challenges, improve the value of McMaster's physical assets, and enhance the learning environment.

#### Project Benefits

- Improved system reliability
- Renewal of aging equipment
- Improved air quality and increased comfort
- Reduced energy consumption and costs
- Enhanced comfort for students, faculty and staff

#### Project Highlights

- Contract Value: \$25.5 million
- Total Square Footage: 3.3 million
- Project Payback: 20 years

- 23% reduction in energy consumption
- 25% reduction in greenhouse gases

#### Project Measures

- Comprehensive lighting retrofits
- Steam trap renewal program
- Conversion of air handling system to variable volume to reduce heating and cooling costs
- Refurbishment of air-handling units
- Energy-efficient window replacements
- Water-efficiency measures, including water efficient toilets and flush valves
- Weather-stripping of exterior doors
- Building Automation System enhancements
- Staff training program

#### Annual Project Savings

- Project Savings: \$1.6 million
- Energy Savings: 99,000GJs
- Greenhouse Gas Reduction: 8,500 tonnes (the equivalent of taking approximately 1,400 cars off the road)

For more information about Ameresco and Better Campuses™ please contact Craig Piercey at 1-888-483-7267.

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