

Case Study: Advanced Building Automation

Forest Manor Rd, Toronto

Project Overview

Multi-residential building with 128 units
Completed May 2012

Advanced building automation system & sensors:

- Installed web-accessible automation system
- Intelligent boiler control algorithms
- Temperature sensors in garage
- Additional monitoring of solar thermal system

Targeted improvements in building envelope:

- Four inches of insulation on the garage ceiling
- Increased ground level floor temperatures
- Reduced overall building heating requirement

Interval Data Optimization and Performance Surveillance:

- Tracking energy use every day, every hour
- Using performance feedback to optimize energy output
- Eliminating energy waste and maximizing results

Project Results

Natural Gas Savings: **67,000 m³ per year (28%)**

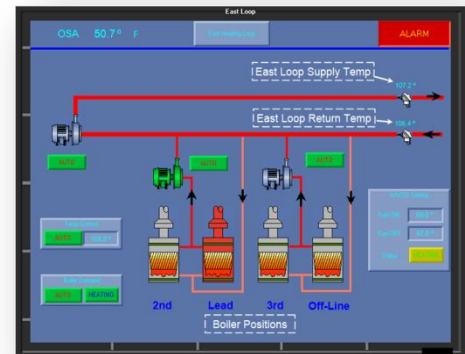
Reduction in Utility Costs: **\$20,000 per year**

Project Cost: **\$16,000**

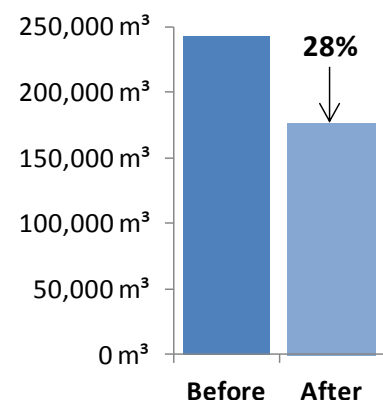
Return on Investment: **10 month payback period**

Additional Benefits:

- Improved resident comfort and reduced overheating
- Reduced staff maintenance and workload
- Ongoing *Performance Surveillance* to protect savings



Annual Space Heating



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