

# Energy Audits for Proactive Building Owners

Helping Building Owners Save Energy

## ARE YOUR UTILITY BILLS HIGHER THAN NECESSARY?



You know that your utility costs could be reduced, but how do you best go about reducing them? Does it

make most sense to: What are the costs and savings associated with these energy savings opportunities? Are there others that you haven't thought of?

make most sense to:

1. upgrade your lighting or lighting controls?
2. install high efficiency boilers?
3. install/upgrade your building automation system?
4. replace weatherstripping/caulking on doors/windows?
5. install solar panels and wind turbines?

You need an independent energy specialist to analyze your utility bills and building equipment, and come up with financially sound energy saving opportunities.

An independent energy auditing firm will give you unbiased advice on the most cost effective way of reducing your utility costs,

## MECHANICAL AND ELECTRICAL ENGINEERS SPECIALIZING IN BUILDING RETROFIT, ENERGY MANAGEMENT AND LEED FACILITATION

Efficiency Engineering Inc. (EE) began performing energy audits on buildings in 1990. Since then, we have been continuously improving our auditing process. As a result, we are able to deliver a premium audit at a price that will fit within your budget.

We have audited over 130 million ft<sup>2</sup> of building area, uncovering over \$75M in annual energy savings. Our highly skilled team utilizes the latest tools to assess your lighting systems, HVAC systems, controls, building envelope and water use to uncover all economically feasible opportunities.

Our auditing process and reporting system is uniquely designed to benefit owners with multiple buildings. The process ensures consistency between buildings as well as the ability to select energy saving opportunities across your building portfolio.



“ THE EFFICIENCY ENGINEERING AUDITING IS AN EXCELLENT SERVICE IT PROVIDES OUR ENGINEERS WITH THE TECHNICAL DETAIL THAT WE NEED TO BE CONFIDENT IN OUR PROJECTIONS, AND IT PRESENTS THE RESULTS IN AN ATTRACTIVE WAY THAT APPEALS TO OUR CLIENTS. I'M CONFIDENT THAT LANDIS & STAEFA WILL BE DOING MORE WORK WITH EFFICIENCY ENGINEERING IN THE COMING MONTHS AND YEARS.”

Brian Flannigan, P.Eng.

### UTILITY BILL ANALYSIS

- Use of ASHRAE 14 compliant software to normalize the utility data for weather, reading periods and up to three independent variables.
- Look for anomalies in utility bills that could point to energy saving opportunities.
- Create budget consumptions and costs for a typical year.

### BENCHMARKING YOUR BUILDINGS

- Breakout of electric and fuel consumptions into end-use components (space heating, fan energy, lighting consumption, etc).
- Comparison of the building's consumptions to other buildings of a typical size, use and geographic location.

### WALK-THRU AUDIT

- Walk-thru audit to assess the energy saving potential of the facility.
- List of preliminary energy and utility saving opportunities.
- Rule of thumb savings and costing for the building.

### INVESTMENT GRADE AUDIT

- Detailed audit of the lighting to uncover all lighting and lighting control opportunities.
- Detailed audit of heating plants to uncover fuel and pumping energy savings.
- Detailed audit of air conditioning plants to uncover compressor, pump and fan energy savings.
- Detailed audit of fan and ventilation systems to uncover fuel and fan energy savings.
- Survey of all washroom fixtures to uncover water and sewage savings.
- Review of schedules and control strategies.
- Investigation of renewable energy sources (Solar PV, Solar Thermal, Wind).
- Investment grade savings and cost estimate calculations for each opportunity.
- Detailed audit report, delivered electronically. Report includes financial analysis (ROI, net present value, etc) of each opportunity, greenhouse gas emission reductions, utility bill analysis, benchmarking, etc.

### GOVERNMENT AND UTILITY INCENTIVES

- Support in applying for incentive money from provincial and federal governments, and local utilities.