

Boiler Plant Renewal for Proactive Building Owners

Helping Building Owners Save Energy

IS YOUR BOILER PLANT ROBBING YOUR BOTTOM LINE?



Is the inefficiency of your boiler plant throwing good money out the window...or in this case, up the stack?

Upgrading your heating plant can increase the value of your property by:

1. reducing utility costs and exposure to fluctuating fuel rates.
2. reducing maintenance costs.
3. deferring future costs with a capital upgrade.
4. improving occupant comfort.

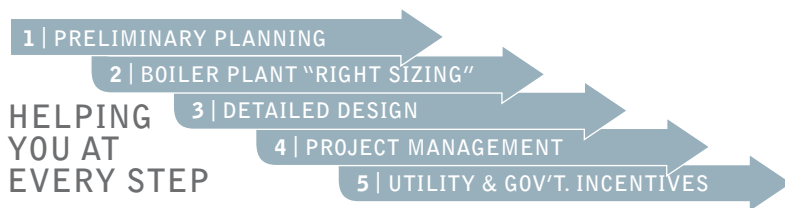
In order to ensure a successful project, you need a specialist on your side to help guide you in the decision making process.

You need a specialist that looks out for your interests, and only your interests, when making important technical decisions about boiler plant sizing, equipment manufacturers, boiler type, venting design, piping and pump arrangement, boiler plant controls, contractor selection, etc. You need a specialist to manage the installation to ensure that you get what you pay for.



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

Are you looking for the lowest cost or the best value when investing in your boiler plant? If you are looking for best value, we can help. At Efficiency Engineering Inc. (EEI), we have a strong history of retrofit boiler plant design work. Having worked almost exclusively in the retrofit market since 1990, we use the latest tools to ensure that the redesigned boiler plant meets a balance between the often conflicting design requirements.



" I AM DELIGHTED TO RECOMMEND THE SERVICES OF EFFICIENCY ENGINEERING INC. THEY PROVIDE MECHANICAL AUDIT, DESIGN, ENGINEERING, AND COMMISSIONING SERVICES TO MINTO. IN THESE AREAS I HAVE NEVER DEALT WITH ANYONE BETTER."

Andrew Pride, P.Eng.
VP Energy Management
Minto Apartments Ltd.

PRELIMINARY PLANNING

- Analysis of existing boiler plant, including combustion tests to gauge efficiency. Factors that affect the new plant design include available room, system pressures, existing flue gas venting, existing code compliance, required heating loop temperature, etc.
- Audit of all natural gas fired equipment, including gas fired air handling units, domestic water heaters, kitchen equipment, steam humidifiers, etc.
- Presentation of up to three different boiler plant options to the owner / manager, including advantages / disadvantages, energy saving estimates, budget costing, payback and life-cycle costing.

BOILER PLANT "RIGHT SIZING"

- Utility bill analysis, normalizing natural gas consumption for weather.
- Comparison of existing heating plant capacity to the actual heating plant requirements.
- Calculating the optimal heating plant size based on the heating plant requirements and redundancy requirements. We refer to this step as "Right Sizing" the boiler plant.
- Most original heating plants are oversized by a factor of 200% or more. With today's modular plants and with prior knowledge of existing operations, this is not required. By "Right Sizing" the plant, the capital cost is much lower.

DETAILED DESIGN

- Selection of most cost-effective boiler type.
- Redesign of piping arrangement to greatly reduce standby losses.
- Design of venting to reduce stack losses and meet needs of all boilers.
- Computerized hydraulic modeling to ensure adequate flows through all components under all operating conditions.
- Design of controls sequences to achieve occupancy comfort while operating as efficiently as possible.
- Production of drawings and specifications to create a fair and competitive environment for bidding contractors.

PROJECT MANAGEMENT

- Assistance in selecting the right contractor for the project.
- Site inspections throughout the construction period from the first kick-off meeting to final inspection. This ensures that the design intent is met.
- Standard CCDC Contract Administration.

UTILITY AND GOVERNMENT INCENTIVES

- Assistance in obtaining any available incentive money.