

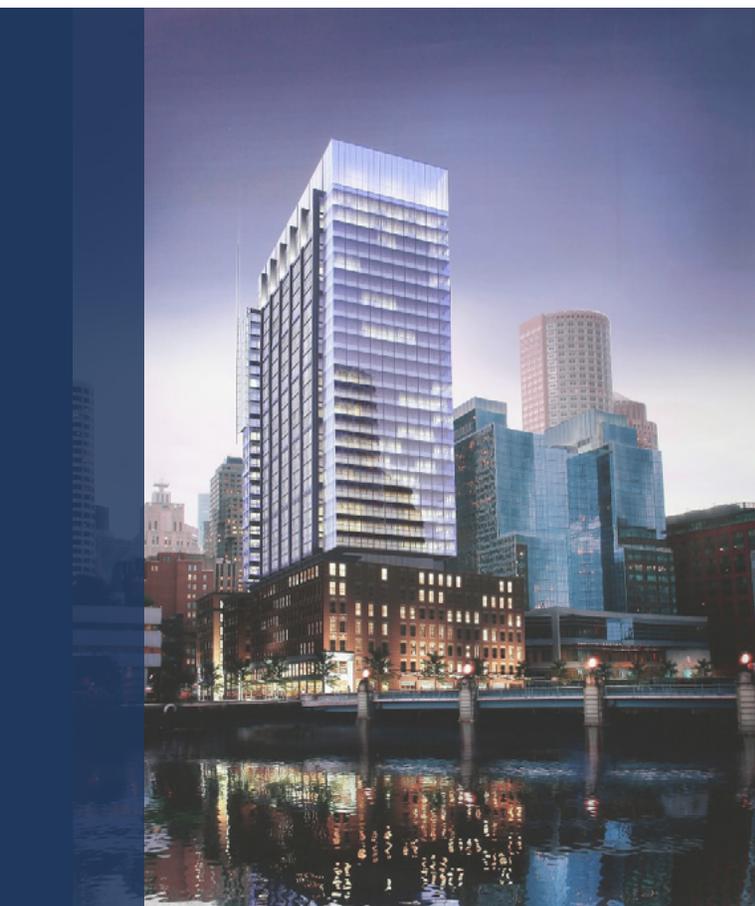


# Buderus SB Commercial Condensing Boilers Installation Case Study



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## Boston's Atlantic Wharf Saves Energy With Buderus SB Commercial Condensing Boilers - Case Study



### Background

The owners of the proposed Russia Wharf project in Boston knew they wanted to create a world-class high-rise with state-of-the-art sustainable technologies and advanced building techniques. Today, the renamed Atlantic Wharf project is an iconic 32-story mixed-use complex overlooking the Fort Point Channel on Boston Harbor, with approximately 900,000 square feet of class-A mixed use commercial office space and the adjacent Russia Residential Building with 65 residential units and a LEED Platinum Certification.

Platinum is the highest rating given by the U.S. Green Building Council's LEED program, which provides independent, third-party verification that a building, home or community was designed and built using strategies aimed at achieving high performance. The certification focused on the key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

### Project Goals:

- ▶ LEED Certification
- ▶ Energy Savings
- ▶ Reliable Service Life

**Buderus**

## Installation Summary

As part of its efforts to qualify for LEED certification, Boston Properties, developer and owner of Atlantic Wharf, used a combination of six Buderus SB735/1200 Condensing Boilers at 121.8 BHP each and two Buderus G-615-10 Cast Iron Boilers at 67 BHP each to provide hot water heating.

“We have conducted several tours for trade groups this past year and almost everyone comments that they can see we designed our building with sustainability in mind and identify the Buderus boilers as proof,” said Dean Larson, Director of Engineering for Boston Properties.

## Benefits and Conclusion

The hybrid combination allowed Boston Properties to use the 95 percent-efficient condensing boilers to serve most of the load, leaving the conventional cast iron boilers, with 80 percent efficiency, to supplement the hot water loop at 15 °F and lower outside temperature (approximately 10% of the heating season).

According to Jim Magarian, P.E., Partner and Vice President at TMP Consulting Engineers, Inc. Boston office, a hybrid combination heating plant allowed Boston Properties to achieve most of the benefits of higher efficiency boilers while achieving upfront cost savings by installing supplemental lower-cost cast iron boilers. Larson of Boston Properties estimates that the high-efficiency boilers save them approximately \$16,200 in the first year.

In addition to helping achieve LEED Platinum Certification, the savings from the use of the high-efficiency condensing boilers will continue throughout the life of Atlantic Wharf.

### Specifications:

- ▶ 900,000 square ft Class-A mixed-use commercial office space
- ▶ Six SB735/1200 stainless steel condensing boilers
- ▶ 2 G615 cast iron “Thermostream” boilers

“The name Buderus is synonymous with high efficiency, and property management and facilities professionals recognize that,” said Larson. “I certainly would recommend these boilers for any commercial building hot water application.”



- ▶ **Project Name:**  
Atlantic Wharf Mixed-Use Complex, Boston, MA
- ▶ **Building Owner:**  
Boston Properties
- ▶ **Architect:**  
Childs Bertman Tseckares, Inc.
- ▶ **General Contractor:**  
John Moriarty Associates
- ▶ **Design Engineer:**  
TMP Consulting Engineers
- ▶ **Mechanical Contractor:**  
Hamel & McAlister
- ▶ **Manufacturer’s Representative:**  
Green Technology Associates, Inc.
- ▶ **Project Completion:**  
February 2011
- ▶ **Environmental Benefit:**  
81.7 Metric tons of CO<sub>2</sub>/year or 66 acres of forest sequestered annually