YAZAKI

- Four gas-fired absorption chiller/heaters
- 120 total refrigeration tons
- 48,000 sq. ft. college campus
- Boston, Massachusetts

Wheelock College enjoyed the initial switch from oil furnaces to natural gas chiller/ heaters so much that they invested in additional units.

This 107-year-old institution of higher education is located in Boston's Back Bay. Wheelock College is a teacher preparation college, specializing in early childhood and special education. Until the early 1990s, there was no air conditioning in two buildings. Heat was provided by six oil-fired furnaces in one building and an oil-converted coal burner in the other.

"It was a nightmare," says Wheelock's William Evans, director of maintenance and physical plant, who has been with the college for more than 40 years. "Maintenance was a 24-hour-a-day problem, not to mention the noise, the dirt and the inefficiency."

In 1990, the college decided to centrally air condition the eight-story library. Officials sought one system to cool in the summertime and keep the buildings warm during Boston's cold winters. With the help of Fred Shaw at Associated Heating, they decided to go with gas cooling instead of electric equipment, and found what they were after with two 30-ton Yazaki direct-fired double-effect absorption chiller/ heaters.They were so pleased with the results that the next year they replaced the old oil-conversion furnace in the three-story classroom building with two more 30-ton Yazaki absorption chiller/ heaters.

The college was able to update an inefficient heating system and add air conditioning for only a slight premium over the estimated cost to retrofit with a conventional heating and cooling plant.

Boston Gas Company
1 Beacon Street
Boston, MA 02108

Yazaki Energy Systems Inc.
13740 Omega Road
Dallas, TX 75244

"We're getting excellent performance," says Evans. "And, the best thing, they're maintenance-free — there's absolutely no problem with these machines, and they run every day, all year long."

According to Bob Steele at Boston Gas Co., engineers from both the utility and Wheelock did preliminary studies that illustrated what the energy savings would be in choosing gas over electric. These projections showed that gas A/C would be about one-third the operating cost of electric A/C to cool the same space. Boston Gas helped make the purchase decision even easier by paying the college a $100 per ton rebate toward the installation of the direct-fired absorbers.

Wheelock College reduced the required space and complexity of their HVAC plant when they chose one piece of equipment to fulfill both their heating and cooling needs, and they expanded services while keeping their annual energy costs in check. "We went to gas because of greater efficiency overall, and we haven't been disappointed," adds Evans.

In summary, says Jim White of Boston Gas, "The natural gas route was clearly the proper choice for this facility, as it could be for many more in our service territory. The gas A/C installation was accomplished without an expensive electric service upgrade. And it allowed the removal of older underground oil storage tanks which could have become an enormous liability."

AMERICAN GAS COOLING CENTER

400 N. Capitol Street, NW, Washington, DC 20001
(202) 824-7141
www.agcc.org