

Case Study

Top Research Facility Reduces Fuel Bills by 40% with AERCO Solutions

Customer	MA General Hospital
Location	Massachusetts
Industry	Healthcare
AERCO Product Installed	Innovation 600, 800, Benchmark 3000



What the Client Needed

Prestigious U.S. hospital, Massachusetts General, had a lot of reasons to be proud of its recently renovated, state-of-the-art biomedical research facility. Like many large healthcare facilities, the 95,000 square-foot location used a central steam plant to supply indirect heat exchangers for space heating and domestic hot water. The steam boilers also supplied primary energy for the facility's sterilization equipment. The building's single centralized steam system was meeting all the facility's needs, but it was far from efficient at 50 to 60%. They needed to increase the facility's efficiency, without sacrificing any of its heating, hot water and sterilization requirements. To make matters more complicated, the final solution had to be small enough to make a six-flight elevator journey to a small mechanical room at the top of facility.

AERCO's Solution

The engineering firm hired to help the hospital upgrade the building, found that the plant had to operate continuously to meet the facility's domestic hot water and sterilization needs... no matter what the season. The combination of piping losses and inefficient operation at low load times compounded the problem. Decentralizing the domestic hot water system and converting to hydronic space heating was the best answer. AERCO's 96% efficient Innovation 600 and Innovation 800, and 94% efficient Benchmark 3000 were the ideal combination to meet the hospital's needs:

- All units were small enough to fit through a standard doorway. The Innovations and Benchmarks easily rode the elevator up to the 6th floor and through a narrow corridor to final installation in a small mechanical room. No cranes, disassembly or costly rigging were required.
- The tankless Innovations easily replaced the previous four indirect water heaters in the mechanical room – with plenty of room to spare.
- The Innovation 600s and 800s were installed with zero-side clearance in zones to provide domestic hot water; the Benchmarks were installed to heat the building; and an additional small steam boiler helped meet the requirements of the facility's sterilization equipment. All units were individually sidewall vented.

Return on Investment

AERCO's high-efficiency Innovations and Benchmarks are easily meeting all the facility's domestic hot water, heating and sterilization needs, and are reducing fuel operating costs from 30 to 40%.