

Case Study

A Luxury High-Rise Gets Premium System without High Installation and Operating Costs

Customer	High Rise Apartment Building
Location	New York City
Industry	Multifamily Housing
Sales Representative	G.A. Fleet Associates
AERCO Product Installed	Innovation 1060, Benchmark 3000*



What the Client Needed

This new, 12-story luxury rental residential building overlooks midtown Manhattan. The distinctive rental offers 199 units along with amenities that include a state-of-the-art fitness center, gaming lounge, clubroom and more. The building was designed for high efficiency, incorporating a water source heat pump loop for space heating—so low inlet water temperatures and condensing equipment was a given. But the current plans for the building called for three 2500 MBH water-tube boilers to provide supplemental heating for the loop, along with two 120-gallon tanks for domestic water heating. This meant a more expensive installation, high horsepower pumps and larger piping, valves, and fittings, along with a pricey induced draft fan.

AERCO's Solution

Forward Mechanical and G.A. Fleet Associates were tasked with finding a better alternative for this luxury high rise. The teams knew that AERCO fire-tube condensing water heaters and boilers didn't have the limitations of the current specified water-tube system. Having worked on New York City high-rise apartments for over 20 years, they recommended three Innovation 1060s for the job, along with three Benchmarks for the heating plant. The tankless, 96% efficient Innovation 1060s and Benchmark 3000s were exactly what this luxury high-rise called for:

- Two Innovation units handle the facility's peak load with ease; the third unit provides redundancy. This reduced the size of the domestic water heating plant and eliminated the need for storage tanks.
- Once installed, the units' onboard Water Heater Management (WHM) system ensured continual, peak efficiency round the clock. It only runs units as they are needed... the rest are isolated via fully packaged motorized isolation valves.
- The three Benchmark boilers installed in the heating plant offered a flow that is ONE-FIFTH of the original specified design. The units' pressure drop is less than one PSI—which requires less expensive, lower horsepower pumps.
- All AERCO units were common vented through a 20" flue—no need for additional penetrations or a costly induced draft fan.

*This case study references a previously available version of the Benchmark boiler.

Return on Investment

This luxury high rise got a much more energy and space efficient system, with substantially lower installation costs and electrical operating requirements.



Heating and Hot Water Solutions

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