

Case Study

Securing an Award-winning Solution for a Major Law Enforcement Complex

Customer	Louisiana Parish
Location	Louisiana
Industry	Government
Sales Representative	Hydronic Technology, Inc.
AERCO Product Installed	BMK 3000, INN 1060, KC 1000



What the Client Needed

The parish was undertaking a major upgrade and reconstruction of its facilities. The massive project—encompassing over 630,000 square feet across multiple buildings—would be completed in two phases:

Phase I - Parish sheriff's office, kitchen, warehouse and central plant
 Phase II - Inmate housing, processing center and administration tower

In addition to law enforcement and administrative staff, the complex would house more than 1,400 inmates, and contain an institutional kitchen facility that would serve 25,000 meals a day. The facilities were operational 24 hours a day, year round. Given the scale of the project, reliability and efficiency were key to the system's ultimate success.



AERCO's Solution

The project's success would be based on many criteria: energy efficiency, indoor air quality, innovation, operation and maintenance and cost effectiveness. What's more, whatever system was put in place would have to be "scalable" for future expansions of the complex and be easy enough to install so as not to interrupt operations in this busy and secure facility. The Innovation 1060s, Benchmark 3000s and KC 1000s were the ideal combination a project of this scope called for:

Small enough to fit through a standard doorway, all AERCO units installed without expensive rigging and cranes—allowing for a hassle-free installation that didn't sacrifice the facility's operation or security. High efficiency and low NOx, all AERCO units utilize clean burning natural gas that reduce CO2 emissions and other atmospheric contaminants.

All AERCO units have high turn-down ratios: 20:1 for the Benchmark, 11:1 for the KC1000, and 24:1 for the Innovation, allowing for reliable and close control of set point temperatures.

The Benchmarks unique condensing design and minimum water flow (35 GPM) support variable flow, primary pumping, low temperature system design (130°F supply to 90°F return) for maximum energy savings. Once installed, the Innovation onboard Water Heater Management system ensured continual, peak efficiency round the clock. It only runs units as they are needed... the rest are isolated via fully packaged motorized sequencing valves.

Since the Innovations don't require water storage, there's no need to burn energy maintaining a setpoint of 140°F—yet the system continually met the facility's high demand, year round.

Return on Investment

Both PHASE I and PHASE II of this project were awarded ASHRAE Technology Awards in the category of New Institutional Construction for 2009-2010 and 2010-2011, respectively. The projects were judged on enhancements to efficiency, indoor air quality, innovation, operation and maintenance, cost effectiveness, and environmental impact. AERCO's innovative product line were key in securing this win for its client.