

Princeton Baptist Medical Center



Wesley Stephens (left) and Bob McDougal (right) stand in front of Princeton's boiler as it operates at peak efficiency.

Retrofitting of Hospital's Existing Boiler Maximizes Efficiency

Boiler Economizer Provides Cost-Effective Solution for Efficiency Update

Hospital administrators are in a unique situation. They must keep their building completely operational even in a power outage. Patients' lives depend on this, so natural gas boilers providing heat and steam are critical pieces of equipment. Yet, when considering equipment upgrades, hospitals are hard-pressed to justify the cost of a new boiler when competing for dollars that could also fund a digital mammography machine, or a heart catheterization lab. Fortunately, for Princeton Baptist Medical Center, Alagasco presented a solution to this dilemma.

PRINCETON BMC'S CHALLENGE

Princeton's current boilers have worked to provide consistent steam to the hospital since 1988. The cost of a new, more energy-efficient, technologically advanced model was a hard sell for Bob McDougal, Princeton BMC's facilities director. While the existing systems were in good working order, Bob knew the efficiency would improve with new technology. "Hospitals are looking to add new equipment that will generate revenue. From my perspective, we can't keep the hospital open without a boiler, so in effect, it does generate revenue. But in this case I knew we had to come up with an alternative to purchasing a brand new boiler."

THE SOLUTION

After an initial meeting between Alagasco's Renee' Davis and Bob McDougal, and a study of Princeton's current boiler plant, an efficiency upgrade plan was developed. The plan consisted of advanced, PLC based boiler & combustion controls, and a stack mounted economizer. The computerized control technology was installed on Princeton's main boiler to optimize fuel to steam efficiency and better match boiler capacity to steam load. The economizer extracts waste heat from the boiler stack then returns it directly to the water feeding the boiler, further reducing fuel costs. "In today's competitive market, hospitals have to do everything in their power to reduce costs. Part of my job is to actively seek out opportunities

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A PLC-based boiler and combustion controls (left) have been retrofitted to the existing boiler. A stack mounted economizer (right) represents technology that works to reduce energy usage and environmental impact.

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Bob McDougal, Director of Facilities Management, Princeton BMC

such as this one and partner with companies like Alagasco to help me do the best job possible by lowering operating cost,” Bob said.

The technological advances of the efficiency plan provide Princeton and Bob with the following benefits:

- Increased fuel to steam efficiency - saving energy dollars
- Reduced fuel usage resulting in a positive impact on the environment
- Full integration with the building’s automation system allowing Bob’s staff to view the boiler’s operation remotely

THE RESULTS

By the summer of 2008, Bob will have a comparative assessment of how his costs with the efficiency upgrades stack up to costs in years past. There

is no doubt, savings will be realized. And in Alabama where on any given day in January outside temperatures can rise to a spring-like 80 degrees, the efficiency of the new system has been put to the test time and time again. “For the unpredictable Alabama winters, this system is ideal,” says Bob, recounting one such day where outside temps reached 79 degrees. “With the new system, the computer monitors how much capacity is needed. On that day, the boiler only needed to run at 28 percent capacity, where with the old system we would have probably been running at about 50 percent because there was no computer modulation to regulate the needed capacity.”

So now Bob McDougal and staff can take comfort in knowing that Princeton’s boiler will be working hard when they need it, but even more important, operating at a level of efficiency like never before. For Princeton BMC and all of our customers, Alagasco is committed to new technology and a personal approach to solving energy challenges.

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