

2121 Building



Tommy Evans, Jefferson County's chief of building maintenance, stands beside the new hybrid boiler system located in the 2121 Building.

Setting the Standard in Energy-Efficient Solutions

Hybrid Boiler System Offers Quicker Payback

The task of ensuring a comfortable workplace falls squarely on the shoulders of a building's maintenance supervisor. They are ultimately responsible for the day-to-day operation of the building's heating equipment. So what happens when a conventional boiler becomes less efficient, more costly to operate and outdated? In the case of Birmingham's 2121 Building, the County turned to Alagasco to partner on a cost-saving, modern solution.

2121 Building's Challenge

The 30-year-old conventional boiler that heated the 2121 Building had become less efficient than new gas boiler technologies available today. For Tommy Evans, Jefferson County's chief of building maintenance, it was evident that a new system was necessary to heat the 221,089 square foot building. Tommy was careful to research and consider all of his options before making a purchase. Efficiency and first cost needed to be scrutinized. By partnering with Alagasco's Warren McCullars, senior major account representative, they found a solution.

Alagasco's Solution

When Warren proposed that the building's conventional boiler be replaced with a hybrid boiler system there were many questions from Tommy. While proven in the Northern United States and Europe, the hybrid system had not yet caught on in the South due to the area's mild winters. As Tommy asked questions, he quickly began to see the benefits.

How the hybrid system works

- Two or more smaller boiler units work together - one unit is a con-

densing boiler, the other a high-efficiency traditional boiler.

- An automatic controller decides which boilers will be used depending on the outdoor temperature.
- Because of their advanced heat recovery design, the condensing boilers are up to 96 percent efficient.

Cost Savings

For Tommy, a major consideration was first-cost. "When I was comparing first-cost, the critical thing I realized was the huge saving



The easy-to-access, easy to operate main control panel is pre-set for one or all of the boilers to fire based on the outside temperature and the building's needs. These controls can also be operated manually.

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- Tommy Evans
Jefferson County's chief of building maintenance

we would have for installation of this equipment,” said Evans. “The three units could come up the elevator and through the door. They could be moved and set in place by two people. This would have never been possible with a conventional boiler. When I considered installation of this system I was able to eliminate the need for a crane; I didn't have to knock out

walls to get it in here; and I didn't have to retrofit my boiler room. Those are significant expenses that I was able to take out of my first-cost.”

Efficiency

In November 2006, the State's first hybrid boiler system was installed at the 2121 Building, consisting of two condensing boilers and one non-condensing boiler. Results are still being measured; however, the December thru March heating season with the hybrid system experienced a gas reduction of approximately 25 % (after normalizing for weather) when compared to the original boiler. There was never a need for all three boilers to operate at the same time, which contributed to optimal efficiency. Maintenance has not been an issue, and prior to the purchase Tommy made sure parts and service could be handled locally.

The Payback

For the 2121 Building, the payback has been estimated (and is on track) at 18 months as opposed to the typical three years. Tommy Evans points back to the installation as a big reason why the payback-time was decreased in this case. “Lower installation costs meant lower first-costs, I can't tell you how important that was to us,” said Evans.

The new equipment reduced carbon emissions at the 2121 Building by 35.6 percent.

Alagasco is committed to helping customers use gas efficiently to effectively reduce the environmental impact. New technology like the hybrid boiler system along with our personal approach to solving problems shows Alagasco's dedication to wise energy use. Working together toward a more sustainable future - it's something we can all take comfort in.



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