

Coffee County Schools

Manchester, Tennessee

November 2017

With a goal to become one of the top performing academic systems in the nation, Coffee County Schools has high expectations for the more than 4,000 students and their nine schools. The school district turned to Trane and a guaranteed savings program to improve air quality, comfort and the classroom learning environment; enabling system control and energy management of their facilities—all with guaranteed energy savings. Trane guarantees more than \$335,000 to the school district annually.

Challenge

With aging HVAC systems operating around the clock, and minimal controls in place to manage operations, Coffee County Schools was experiencing high energy and maintenance costs, as well as comfort issues. The district sought assistance in upgrading its infrastructure and enhancing its energy management capabilities, while adhering to a limited budget. “A lot of our HVAC equipment was old, some more than thirty-five years old. It was outdated, inefficient, and needed to be replaced,” said Joe Pedigo, Deputy Director of Schools, Coffee County Schools.

“Energy conservation was a key objective for us,” added Dr. LaDonna McFall, Director of Schools, Coffee County Schools. “But improving the education environment for our students and teachers was really what was most important.”

Solution

Confident in Trane’s capabilities and comfortable with their past working relationship, Coffee County Schools administrators contacted the company for assistance. After reviewing the district’s needs, Trane suggested a performance contracting solution from the Trane® Building Advantage® portfolio of services, a self-funding energy program with guaranteed savings to help the customer directly address their needs. The performance contracting solution would enable the district to move forward with needed improvements without requesting additional funding from the County Commission.



Teachers and staff at Coffee County Schools are aligned under a mission to prepare graduates to be college- and career-ready, self-confident, and responsible life-long learners.

Trane completed a series of audits of the district buildings and equipment, and proposed the implementation of a variety of energy conservation measures (ECMs). The team worked together to prioritize the list based on energy savings potential and the district’s comfort goals.

Improving energy efficiency and comfort

To reduce energy use and improve comfort, approximately 40 percent of the district’s HVAC equipment and boilers were upgraded with more energy efficient equipment. Upgrades also included replacing fluorescent fixtures with LED lighting systems. Building weatherization was implemented district-wide and new plumbing fixtures were installed.

Optimizing operations

A Trane® Tracer® SC building automation system (BAS) was installed in the nine district buildings to control systems and reduce energy costs. With Tracer SC, facility managers have access to systems remotely via a mobile device, such as a tablet or smartphone, to establish scheduling, change set points, and manage energy use. Ongoing training on use and maintenance of the Trane systems and controls is being provided for the district's maintenance crew. "With the building automation system, our maintenance crew can look at each individual zone to set temperatures and establish scheduling to keep our students and staff comfortable," said Pedigo. "During summer, we can set the schedules to turn equipment off in areas not in use."

Results

Using a Trane performance guarantee contract, Coffee County Schools implemented energy saving improvements throughout the district without seeking additional funding from the County Commission. The equipment and controls upgrades have had an immediate impact on improving indoor air quality, comfort and the classroom environment, with the new technologies helping the district gain control of their buildings, curb operational expenses and reduce energy costs. The program produced nearly \$150,000 in utility savings during construction and is on target to produce first year guaranteed savings of \$336,104.

"So many companies come, do the work and leave," said Dr. McFall. "When Trane was done, they weren't gone. At first, when we weren't seeing as much savings as we were



As part of the program, Trane provides on-going behavior training awareness for increased energy savings. A Trane sponsored Light Switch Sticker Contest was held for students to encourage occupants to "turn off the lights" when leaving a room. The winning designs are being used on light switches throughout the district.

expecting, Trane sent a team, reviewed everything, found the problem, and helped fix the issues."

"We hold working sessions with Trane, and are making adjustments in areas that might be too hot or too cold. We are working with 50 year old buildings, some old equipment, some new equipment and new controls. It's a challenge," said Pedigo. "Overall things are going well and we are pleased with the project."

"I've been in education operations for twenty years, and have worked with hundreds of vendors," added McFall. "Trane is one of the best – very responsive, very professional. We couldn't ask for anything more."

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