

Case study

Aberdeen School District

Aberdeen, Mississippi



Mississippi school district uses energy savings to fund major building upgrades

The Aberdeen School District, located in northeastern Mississippi, has an enrollment of more than 1,500 students. Seven schools and a central office building encompass 385,000 square feet.

Aberdeen High School had been experiencing frequent service issues with its primary chiller, an aging unit that leaked refrigerant and was beyond repair. In addition, the school's air handling units were not effectively distributing hot and cold air throughout the building. Johnson Controls, the district's long-time service contractor, conducted an energy audit and also discovered that a smaller chiller serving a classroom pod was failing and causing noise problems in adjacent classrooms. Furthermore, lighting systems in all seven schools and the central office building were recognized as substandard.

Challenges

- Reduce expenses related to major building equipment in Aberdeen High School that had reached the end of its life cycle.
- Improve comfort levels for students and teachers. The high school had a non-working time clock system to control the mechanical equipment, which meant the equipment ran continuously and therefore caused higher-than-necessary utility costs and equipment wear.
- Bring lighting levels up to code and replace many fixtures that needed repair.



Improved lighting, temperature control, and energy efficiency in the high school gymnasium were just a few of the benefits of the district-wide performance contract.

"I have to admit, I was reluctant when I was first introduced to the program; however, I truly believe that Johnson Controls is not only a true friend to Aberdeen School District, but to the educational system."

DAVID PHILLIPS
RETIRED CHIEF FINANCIAL OFFICER



Blue Sky participants pose with one of their creations.

"Good people doing good things for Mother Earth."

DR. WENDY MCCULLOUGH
PRINCIPAL, ABERDEEN HS

Johnson Controls Solutions

- Replace two chillers in the high school, add a new cooling tower, and repair and recommission the air handling units.
- Install a Johnson Controls Metasys building management system to control and monitor mechanical equipment throughout the high school.
- Implement a district-wide lighting upgrade, including replacement of many fixtures and installation of higher-efficiency lighting technology.

Results

- Guaranteed annual energy savings of \$94,463 for 12 years via the performance contracting finance method, which allows upgrades to be funded through the project's savings. Due largely to the new Metasys building management system, the high school's energy bill has dropped 36 percent.
- Significantly reduced the number of temperature and airflow complaints, along with emergency service visits, as a result of the new chillers and recommissioned air handling units.
- Improved consistency of lighting levels throughout the schools and central office building. Annual lighting savings of over \$54,000 represent more than half of the total energy savings for this project.

The partnership with Johnson Controls extended to a plant beautification project. The company donated \$1,000 to purchase annuals for Aberdeen High School. Students, faculty and Johnson Controls staff planted colorful flowers at the entrance and other highly visible areas around the school. This project was part of the Blue Sky Involve program – a Johnson Controls employee-driven initiative to work with local organizations in support of environmental stewardship and leadership development.

