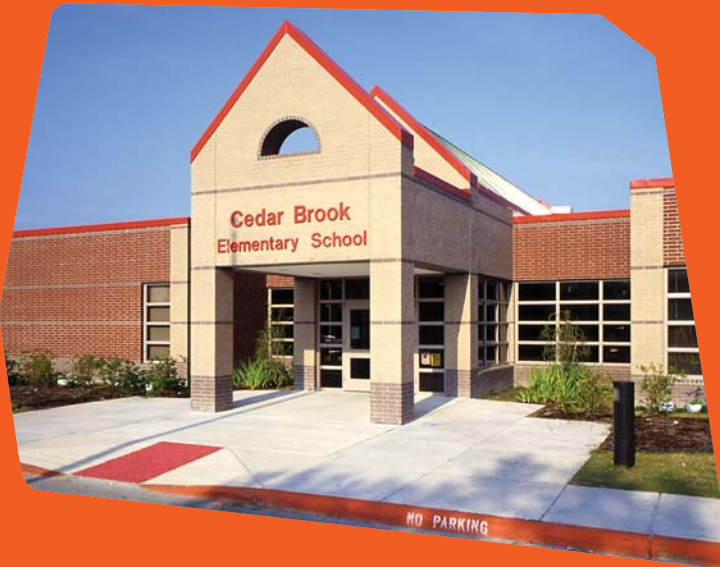


Case study

Spring Branch Independent School District

Houston, Texas



Energy savings program guarantees \$7.3 million for students

The 4.8-million-square-foot campus consists of 42 buildings including: 24 elementary (PreK-5) schools, seven middle schools, four high schools, eight support facilities and a 6-12 education center.

Challenges

- Decrease growing utility bills while expanding school facilities.
- Eliminate discomfort caused by peak enrollment and intensive heating and cooling switch-overs due to extreme weather fluctuations.
- Improve the maintenance staff's response time and combat the growing backlog of service requests simultaneously.

Solutions

- Retrofit 22,000 energy-inefficient lighting fixtures and install solar film on 7,000 windows to eliminate overheating and dramatically cut utility bills.
- Install a Metasys® Facility Management System (FMS) to centrally and efficiently control and operate the facilities.
- Implement a preventive maintenance program to reduce occupant complaints and increase equipment life expectancy.



Wayne Schaper, district executive director of administration, Dr. Hal Guthrie, district superintendent and Dr. Patricia Huntington, district director of environmental and safety services, discuss how they can use the money they saved since partnering with Johnson Controls for educational programs.

“Performance contracting enables us to manage our utility costs to keep the tax rate down and apply a larger portion of the budget to education. Our number one priority is the teaching and learning business. Johnson Controls didn’t forget that.”

DR. HAL GUTHRIE, SUPERINTENDENT



Linda Bernal, energy management operator, adjusts the temperature of a classroom in another building from a centralized computer.

Results

- Realized \$3.1 million in energy savings during the first two phases, enabling the district to increase the number of buildings included in the three-phase project.
- Reduced the number of daily comfort complaints and improved response time significantly.
- Improved classroom comfort by reducing schools’ heating and cooling switch-over period.

Performance contracting pays for itself

Spring Branch Independent School District, faced with rising utility costs and a declining budget, wanted to implement a comprehensive energy conservation program that would both improve operating efficiency and save money.

“Like most school districts today, the educational dollar is under intense competition because there are so many challenges to prepare children for the future,” says Dr. Hal Guthrie, superintendent of Spring Branch Independent School District.

After reviewing several potential contractors’ recommendations, the district decided to partner with Johnson Controls, Inc. and begin a long-term, three-phase SchoolMate® program. The district’s decision was influenced by Johnson Controls technical expertise and willingness to work with the district to meet its needs.

Partnership equals comfort plus savings

“Five years ago, our buildings were in pitiful shape in terms of energy conservation,” says Wayne Schaper,

district executive director of administration. Most schools would take two to three days to switch over from heating to cooling and vice versa.

The Houston climate varies greatly: in January, one day will be 80 degrees, followed by near freezing temperatures the next day. Classrooms are often very uncomfortable. Plus, the district’s utility bills were skyrocketing, with some buildings costing more than \$1.20 per square foot. Now the utility costs are down to \$0.75 per square foot and daily hot and cold complaints have almost disappeared. We have not had a single complaint in three years.”

“One of our greatest pleasures is that our maintenance staff is now operating our schools with the latest technology,” says Dr. Patricia Huntington, district director of environmental and safety services. “This frees up time to do important preventive maintenance to increase the life expectancy of building physical plant equipment.”

Superintendent Guthrie feels the most notable aspect of the program is that the work was conveniently scheduled around the educational activities, causing only minimal disruption to the academic program.

Based on the \$788,152 savings achieved in four buildings during phase one, the district school board and administration expanded their partnership to include 14 additional buildings. The \$2.4 million phase-two savings prompted yet a third phase, with \$4.2 million utility savings expected for the remaining 24 facilities. Ultimately, savings will total \$7.3 million.

“Besides realizing the savings of energy conservation, we are aiming to make our buildings more comfortable for the students and teachers,” adds Schaper. “This program is great!”