

South Pemiscot County R-V School District



CUSTOMER BENEFITS

- Improved building and classroom aesthetics
- Enhanced energy efficiency
- Reduced energy costs
- Centralized and remote monitoring, control and support
- Increased building safety and security

PROJECT AT A GLANCE

Project Type:
Energy Performance Contract

Location:
Steele, Missouri, USA

Number of Buildings:
4 (119,225 sq.ft.)

Projected Annual Savings:
\$140,000*

Energy Conservation Measures:

- Energy management system
- HVAC and ductwork improvements
- Acoustical drop ceilings
- Window and door replacements
- Lighting retrofit
- Fire alarm system expansion

** Stipulated savings are agreed upon but not necessarily tracked*



This small school district in Missouri took advantage of a performance contract from Schneider Electric to fund much-needed improvements to its aging facilities and building systems.

The Challenge

South Pemiscot County is situated in the southernmost corner of Missouri, just across the state line from Arkansas and Tennessee. Many students in the county attend South Pemiscot School District located in the town of Steele, which has a population of 2,263.

In 2005, the district reported an enrollment of almost 800 students in grades K-12 at two elementary schools and a high school. An administration/multipurpose building houses school district offices, a library, a band room and a gym. It also serves as a public venue for community functions.

That same year, officials took stock of the school district's aging facilities and building systems.

“We are excited about starting the new year with new windows and no leaks. The changes are having a positive impact on our instructional climate and student learning.”

Karen Farley
Elementary Principal

Although the administration building was just over five years old, other facilities had been around for more than 60 years. Most of the building equipment was outdated and no longer energy-efficient. And there was no centralized control for the HVAC equipment.

Poorly installed, single-pane windows and broken seals or panes leaked air – both hot and cold. And even those schools with double-pane windows experienced fogging.

Staff and students at the high school had to contend with insufficient illumination from incandescent lighting. And poor visibility in the district’s two gyms impacted fan enjoyment of competitive events.

School security was another issue the district wanted to address. With a fire detection system in place at the administration building, officials wanted to replace rudimentary capabilities at each school. Additionally, they wanted to replace interior wood doors and damaged metal exterior doors that compromised school security.

School district officials knew they had to find a way to fund and prioritize the necessary improvements. So they asked several energy conservation companies (ESCOs) to bid on providing a performance contract. (A performance contract enables a school district to fund improvements from general obligation bonds, maintenance revenue funds, and financing secured against guaranteed energy savings.)

South Pemiscot County R-V School District awarded the project to Schneider Electric for a number of reasons: its straightforward approach, a willingness to educate district officials about all aspects of performance contracting, and a successful track record in helping other school systems tackle similar challenges.

The Solution

Schneider Electric installed a TAC Vista™ energy management system (EMS) to provide South Pemiscot with districtwide control that automatically accommodates diverse needs. Leveraging an enable/disable capability, the facilities staff now uses the Vista EMS to precisely monitor, control and schedule the HVAC system.

In addition to replacing older, broken and improperly installed windows, Schneider Electric covered the upper portion of all exterior walls and installed fewer double-pane windows where appropriate. The new, low-e glass windows also provided tighter seals and better insulation, yielding a positive impact on energy consumption and costs.

Retrofitting the lights in the high school has elicited appreciative comments from staff and students alike. Schneider Electric replaced T12 fluorescent lights and metallic ballasts with more energy-efficient T8 bulbs and electronic ballasts in both gyms, improving visibility while providing a more energy-efficient, “instant strike” capability.

By installing drop ceilings and enclosures around existing HVAC equipment, Schneider Electric enhanced classroom aesthetics and freed up closets to give teachers more storage space. In addition, Schneider Electric replaced damaged metal exterior doors and wooden interior doors to improve security at each school.

Schneider Electric also installed a new fire detection and monitoring system at each school. Each new system comprises addressable panels, remote enunciators, smoke detectors, pull stations, heat detectors, sirens and strobes, quickly alerting staff and students if there is a problem.

The Bottom Line

Backed by experience implementing similar projects, Schneider Electric completed the renovations on schedule while minimizing any disruption to summer school sessions.

The new, energy-efficient windows not only make classrooms more comfortable, but also reflect more heat and ultraviolet light. Motion sensors installed in the gyms conserve energy, control costs, and eliminate the need for someone to manually shut off lights. And in the absence of any activity within a 15-minute period, the lights automatically turn off.

One principal reported that the new doors had made a significant improvement to the noise level in classrooms and hallways. Moreover, interior doors with glass insets allow a passerby to look into a room without disturbing classroom activities.

