



Liberty Public Schools

Energy-Efficiency Improvements

Liberty, Missouri

Summary

The Liberty School District project encompassed 17 buildings; including one high school, two junior high schools, two middle schools, nine elementary schools, a preschool/administration building, an alternative learning academy, and an educational resource center. The district serves 10,700 students and is recognized both locally and nationally as a leader in using technology in education.

ESP conducted an investment grade energy audit that identified numerous energy-saving opportunities, especially a large number of heating and cooling systems that needed replacement. With limited funds for maintenance, the district tasked ESP to develop solutions that could be paid for from energy savings.

The resulting project was a comprehensive district-wide energy-saving performance contract. Numerous improvements were made throughout the district, including: new lighting, water saving measures, expansion of the energy management systems, vending machine controls, occupancy based controls to turn off lights in unoccupied spaces, several boiler replacements, chiller and condensing unit replacements, rooftop unit replacements, conversion of constant volume multi-zone systems to variable air volume systems, retrocommissioning to identify systems not operating per original design intent, and new windows.

The project was designed and implemented in a tight nine month time frame. Because of the effectiveness of the implementation, the district was able to secure \$240,000 in additional work within the original project budget.

“The only way a project of this magnitude [\$5.9M] and scope could be effectively completed in the tight time-frame desired is by having an exceptional management...which Energy Solutions Professionals has. Their management team demonstrated a commitment to excellence and integrity, which kept the project on-track and actually under budget, which made it possible to obtain additional scope that positively impacted our district; and more importantly, our students.”

Mike Brewer, Superintendent

Energy Conservation Measures

- lighting system upgrades
- water conservation
- energy management system expansion
- vending machine controls
- occupancy based controls
- boiler replacements
- chiller and condensing unit replacements
- rooftop unit replacements
- rooftop unit conversion at Liberty Junior High
- constant volume multi-zone to variable air volume conversion
- retro-commissioning
- window replacements



↑ Warren Hills Elementary



Quick Facts

Completion: 2007

Total Square Feet: 1,400,000

Number of Buildings: 17

Total Project Cost: \$5.9 million

Annual Savings: \$542,000