



Edwards County Hospital

Energy-Efficiency Improvements

Kinsley, Kansas

Summary

The purpose of Edwards County Hospital & Healthcare Center is to provide quality healthcare and services to the residents of Edwards County and the surrounding area by the most economic and efficient means attainable. The hospital consists of 3 buildings (the Old Hospital, the New Hospital, and the Clinic) which contain 54,635 square feet of space. The Old Hospital dates back to the mid-seventies while the New Hospital was built in 1997.

Edwards County Hospital first engaged ESP to perform an energy audit of the hospital in order to identify opportunities to reduce operating costs. After a detailed energy audit of the hospital, energy savings opportunities were analyzed along with current and future maintenance issues with the building and its systems. The results of the facility audit showed that the aging steam system was costing the hospital wasted energy dollars and it would likely incur increased maintenance costs in the near future. ESP was successful in assisting the hospital to apply for a State energy grant that would offset some of the replacement costs.

Recommended energy conservation measures included a comprehensive lighting retrofit, enhancements to the energy management control system, and a complete replacement of the boiler plant.

Lighting Retrofits

New T8 lamps and electronic ballasts were installed in all three buildings, compact fluorescent lamps, LED exit signs, and some occupancy sensors.

Energy Management System Enhancements

The existing energy management system was expanded to include additional control points that will allow for greater energy efficiency. Additional zones can now be monitored and controlled with the energy management system so that HVAC issues can be identified and the units can be setback during unoccupied periods. The new boiler plant will also be connected to the Energy Management System.

Boiler Plant Upgrades

The boiler plant received a major overhaul; the existing steam system was completely removed and replaced with a high-efficiency hot water system. This included 2 new high efficiency natural gas condensing domestic hot water heaters, a new stand-alone boiler for the sterilizer, and 3 new condensing hot water heating boilers providing redundant capacity. All of the new equipment was placed on new mezzanines to keep the equipment above the floodplain elevation. The previous steam boilers were located in a mechanical room pit which was susceptible to flooding.



↑ New Condensing Hot Water Boilers

Quick Facts

Completion: 2011

Total Square Feet: 54,635

Number of Buildings: 3

Total Project Cost: \$506,000

Annual Savings: \$38,192

Energy Conservation Measures

- Lighting retrofits
- Energy management system expansions
- Boiler plant upgrades
 - Hot water heaters
 - Electric boiler
 - Condensing hot water heating boilers