



St. Andrew's Episcopal Church

Steam to Hot Water Heating Conversion Kansas City, Missouri

Summary

St. Andrew's Episcopal Church is a parish in the Episcopal Diocese of West Missouri of the Episcopal Church of the United States. The church is located on the southwest corner of Meyer Boulevard and Wornall Road in Kansas City, Missouri. The church has approximately 1,500 members and welcomes all people to worship.

St. Andrew's leaders engaged Energy Solutions Professionals in 2011 to evaluate the energy consumption and maintenance needs of their church. They knew that they had several old and outdated systems that were in need of replacement, and wanted to be sure they considered the long-term impact on their energy bills and their ongoing maintenance before selecting new systems.

The existing systems were analyzed to understand their current energy consumption and their current and future maintenance requirements. Systems analyzed included: building envelope, lighting systems, domestic water systems, heating, air-conditioning, and building control systems. On-site audits of existing systems were performed and historical energy utility bills were analyzed.

Once the existing conditions of the building systems were understood and their energy consumption analyzed, recommendations for energy efficient and maintenance improvements were developed. Throughout the process, ESP worked with St. Andrew's representatives to optimize the best solutions for the facility.

Recommendations included new high-efficiency heating and cooling systems, lighting improvements, building weatherization improvements, and water conservation. After evaluating all of the options, St. Andrew's elected to have ESP install a new highly efficient hot water heating system that replaced an old steam heating system.

Energy Conservation Measures

Replaced steam heating system with hot water heating system

- hot water condensing boiler
- primary and secondary pumps
- variable speed pumping
- air-handling unit for Narthex
- hot water piping and piping insulation
- duct mounted hot water coils
- hot water baseboard convectors
- new DDC controls



Quick Facts

Completion: November 2012

Total Square Feet: 34,000

Total Project Cost: \$368,000

Utility Savings: 10%

