



**Switchgear and Generators**

**Project Owner and Location**

St. Elizabeth Medical Center  
1 Medical Village Drive  
Edgewood, Kentucky 41017

**Firm's Responsibility**

Electrical Study  
MEP Engineering  
Engineer-Led Turnkey Design  
Construction Management

**Total Project Cost**

\$2,500,000

**Completion Date**

2005



The St. Elizabeth Medical Center commissioned ThermalTech to perform a life cycle cost analysis to find the most efficient way to upgrade the electrical systems for the South Unit of the hospital while keeping hospital disruptions to a minimum. During the analysis, ThermalTech met with the hospital to discuss current and future needs, and performed site audits to examine the existing systems. Then, after consulting with the local electrical utility company, ThermalTech presented several options for the hospital to consider for its electrical upgrade needs.

Following the report, ThermalTech was hired to provide *Engineer-Led Turnkey™* installation of the selected alternative, which included two new generators and all associated switchgear, substations, and utilities. In addition, one new 10,000 gallon fuel oil tank was installed, and one was renovated. ThermalTech designed the mechanical, electrical, and plumbing components of the system and provided construction management for the project.

The electrical equipment included:

- Two 2.4 MW generators at 12,470V
- 1,000 kVA substation 12,470V / 480V
- Generators run paralleled with utilities
- Capability to parallel transfer, peak shave, and provide emergency backup power to hospital wing

With the *Engineer-Led Turnkey™* approach, ThermalTech was not only responsible for design, but also for purchasing all equipment, as well as hiring and managing the contractors during installation. Using this approach, the \$2.5 million project was completed quickly and efficiently, and the hospital remained fully operable during the upgrade.



**Fuel Oil Storage Tank**



**2.4 MW Generator**