



Success Story: Metering, Monitoring, & Alarming

CLIENT BACKGROUND

GlaxoSmithKline, King of Prussia, Pennsylvania.

In an effort to reduce energy costs, GlaxoSmithKline initiated a project to upgrade facilitywide processes using adjustable-speed drives. Because of the harmonics generated by the drives, the customer soon realized that the drives would require filters to eliminate potential detrimental effects. Enerwise Global Technologies was asked to provide portable metering to identify the harmonics and specify appropriate filters. Because of the expense of portable metering and the fact that it would be only a short-term solution, Enerwise instead recommended implementing systemwide, permanently mounted meters.

SCOPE OF WORK

Enerwise initially installed a system of intelligent electronic devices (IEDs) in 30 separate buildings to monitor everything from incoming 34.5-kV lines to 208-volt transformers and strategically applied power meters to record interval data, respond to predetermined set points, and capture voltage waveforms. Each building is grouped in one of seven telephone modem pools where data is transmitted to the Pegasys® (a registered trademark of Power Measurement Limited) software suite for compilation in a central database and real-time monitoring. The monitoring system identifies power quality events such as transients, enabling the customer to determine their origin and select the appropriate system protection mechanisms. Alarms are generated in response to critical system events.

Soon after the installation was complete, the engineering team observed excessive harmonic activity on the system and determined that it was caused by variable-frequency drives used for key processes. As a result of Enerwise's analysis, the customer developed a program to retrofit each offending drive with a harmonic filter.

APPROACH

Because of its understanding of the customer's power system and access to SCADA information, Enerwise is now the customer's predominant supplier of power-distribution-related services at two major research and development sites in Pennsylvania. These services include power quality monitoring, electrical testing and maintenance, electrical system design and design review, emergency generation dispatch, and emergency engineering response to SCADA system alarms.

CLIENT BENEFITS

- Reliable operations
- Protection of sensitive laboratory equipment
- Reduced maintenance and energy costs
- Reduced downtime
- Customized engineering reports and records
- Fewer equipment replacements
- Improved facility planning
- System adaptability

