



The Signature System enabled TVA to provide outstanding customer service throughout their distribution system

Application

Electric Utility Distribution

Situation

The growing demand for high-quality electric power has presented electric utility transmission companies with a unique opportunity to distinguish themselves from their competitors. With deregulation offering power customers access to new power providers, the challenge is how to deliver the highest quality power at a competitive price.



One of the best-known and most successful power companies in the US, the Tennessee Valley Authority (TVA) has developed an active program to ensure the quality of the power it delivers to its customers.

Signature System Benefits

At the heart of TVA's customer service program is the installation of power quality monitoring equipment at each of the connection points to distribution companies and key customers served directly from the transmission system. More than 50 power quality monitoring systems have been installed or are in the process of being installed.

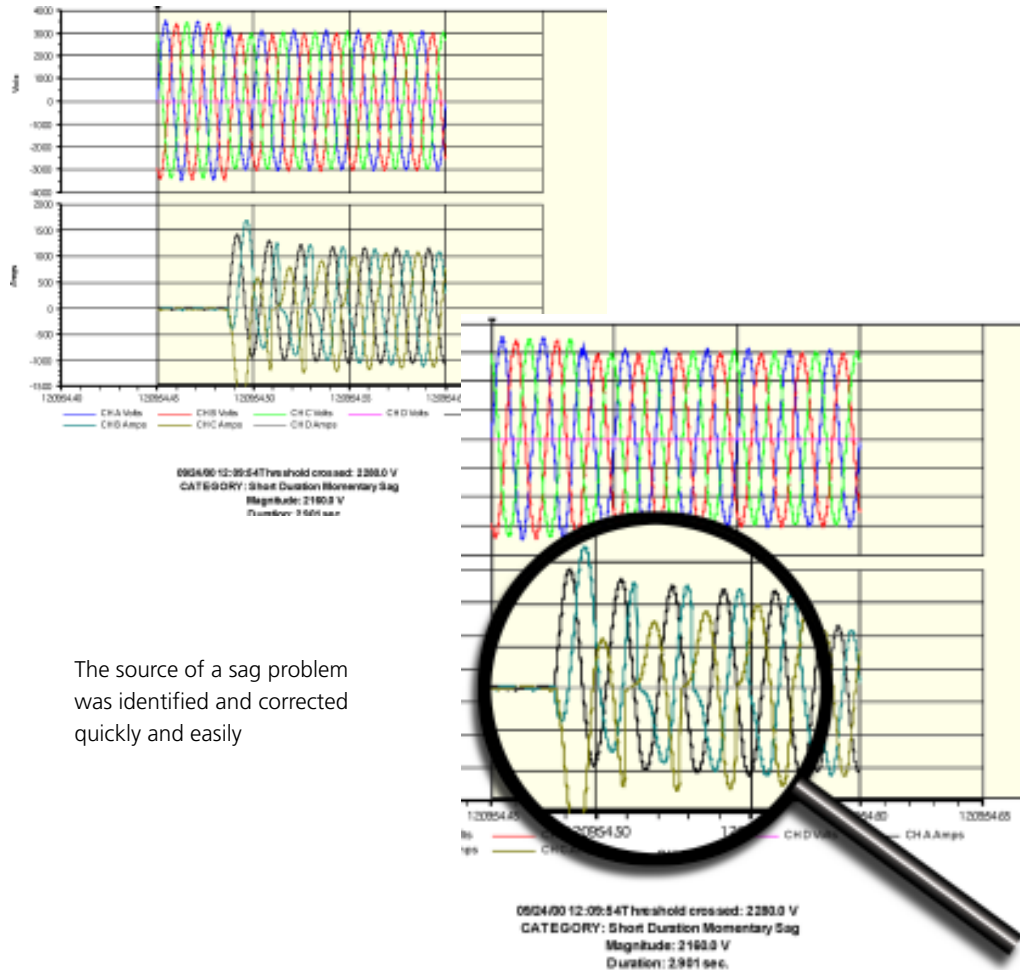
CapSwitch™, Radial Fault Locator, and Sag Directivity AnswerModules™ are used throughout the system to pinpoint the cause, location, and severity of power quality events.

TVA selected the Signature System for its comprehensive power quality monitoring system which delivered numerous benefits including:

- Improved key-account management through the provision of value-added services to customers
- Ability to benchmark TVA's power quality against other utilities using the Signature System to incorporate data we gathered during the nationwide power quality study (EPRI DPQ Project)
- Rapid identification of the source and cause of power problems
- Correlation of system-wide effects and disturbances, including lightning, using the advanced technology of GPS receivers and NTP time synchronization
- Enterprise-wide service, enabling TVA to monitor multiple locations within its own distribution network and to serve customers at the same time and with the same system

Results

TVA's use of the Signature System has delivered results, both to TVA and to its customers. TVA will use the system to identify the source, location, and cause of problems prior to dispatching linemen—a significant cost savings. Plus, it arms TVA with the information to demonstrate power quality performance to its customers. For example, at an automotive plant, where feeders and power at the boiler house and paint shop are monitored, the source of a sag problem was identified and corrected. Originally thought to be a problem on the utility side, the sag source was shown to be inside the automotive facility, caused by the periodic start-up of a large horsepower motor.



The source of a sag problem was identified and corrected quickly and easily