HIGH VOLTAGE SWITCHGEAR CONDITION MONITORING SYSTEM

Our client, a global company, is one of the world leaders in condition monitoring systems for use in substation applications. The system has been designed to ensure the continual smooth operation of substations thereby minimising breaks in supply and avoiding the expensive penalties faced by the operators. The client's system design has been recognised as being one of the leading edge solutions available in the marketplace and has positioned them very clearly ahead of any competition.

REQUIREMENTS AND THE SOLUTION

The system required for the design and supply of a data acquisition system that was able to withstand the harsh environment plus be able to offer the 24/7 continual operation needed in a critical industrial application.

Each substation would have a number of data acquisition systems networked to a central control room for continuous monitoring. Each of these systems would perform a number of measurements to monitor the performance and detect possible faults so that preventive maintenance could be carried out before any potential failure.

The Amplicon application engineering team were involved at all stages of the design; PXI was chosen as the best solution because of its ability to withstand the environmental conditions, deliver local processing of captured data; with front loading cards and modules any repair/maintenance issues are minimised, offering a low mean time to repair (MTTR) solution. By processing data locally the amount of data being transferred over the network to the control room was significantly reduced. As well as the data acquisition system, Amplicon supplied the managed industrial Ethernet switches plus an Integrated 19" cabinets with PC’s, networking switches and keyboard/display fitted; this presented to the end-user a compact easily maintained system able to capture and network information from the PXI systems to the control room.
The sub station monitoring system designed by the client is now recognised as a market-leading solution and it has been adopted by many governments and power providers across the world.

WHY AMPLICON?

By working with the Amplicon engineering team, plus the experience of the PXI specialists the client could rely on a supplier who provided a complete solution that capitalised on their world leading design without compromising quality, space or maintenance requirements.