



Case Study

Transitioning to a Low-Carbon Future

Western Power Distribution, UK

Western Power Distribution is one of six electricity Distribution Network Operators in the United Kingdom responsible for the Midlands, South Wales, and the South West, delivering electricity to more than 7.7 million customers over a 55,300 square kilometer service area.



THE LOW-CARBON NETWORK FUND

The company is leading a number of innovative, low carbon projects as part of the Low Carbon Network Fund, introduced by UK energy regulator, the Office of the Gas and Electricity Markets (Ofgem), to prepare for the electricity network of tomorrow – assisting the uptake of low carbon technologies, helping provide affordable and reliable solutions for energy users.

“Our distribution network is the backbone of how we deliver electricity to homes and businesses.”

BEN GODFREY
Innovation and Low Carbon Networks Engineer at WPD



IMPROVING RELIABILITY AND OPTIMIZE NETWORK PLANNING

With this deployment, the Aclara grid monitoring platform is providing WPD with real-time visibility into its distribution grid, allowing the network operator to improve reliability and optimize network planning as it eases its transition to a low-carbon future.

Distribution Network Operators such as WPD are expecting changes in the way electricity flows around the network as consumers adopt low-carbon technologies including electric vehicles and heat pumps.

PROJECT FALCON

One initiative addressing this concern before it becomes reality is the Flexible Approaches to Low Carbon Optimised Networks (FALCON) project, a U.K. regulator-funded program that aims to improve the industry's understanding of infrastructure needs in a low-carbon environment. WPD is working with innovative smart grid leaders such as Aclara to find the best ways to manage network problems expected to arise from low-carbon technologies and generation.

"We selected Aclara's grid monitoring platform because it provides us with better information for network planning, which will help us improve grid reliability and enable the transition to a low-carbon future."

BEN GODFREY

Innovation and Low Carbon Networks Engineer at WPD

Aclara partnered with Powerline Technologies Limited, a leading U.K. supplier of smart grid equipment, to deliver the Aclara platform to WPD as a part of Project FALCON.

REAL-TIME VISIBILITY WITH ACLARA'S SMART GRID SENSORS

Aclara leads the industry in providing inductively powered, low-current Smart Grid Sensors that give utilities real-time visibility into the distribution grid down to three amps. They are lightweight, easy to install and provide immediate real-time data about grid conditions.

Unlike first-generation fault indicators, Aclara line sensors are combined with predictive analytics software to provide the ideal combination of real-time load and power quality monitoring with outage and fault detection. Within the software, customizable rules alert utilities to inefficient operating conditions that indicate future outages, load imbalances, or technical loss. These events are linked to map-view displays that make it easy for utilities to pinpoint the locations of problems for quick response and solution.

The Aclara platform easily integrates with Data Historians, SCADA, OMS, and DMS systems or can run as its own stand-alone solution hosted by Aclara or within a utility's own datacenter.