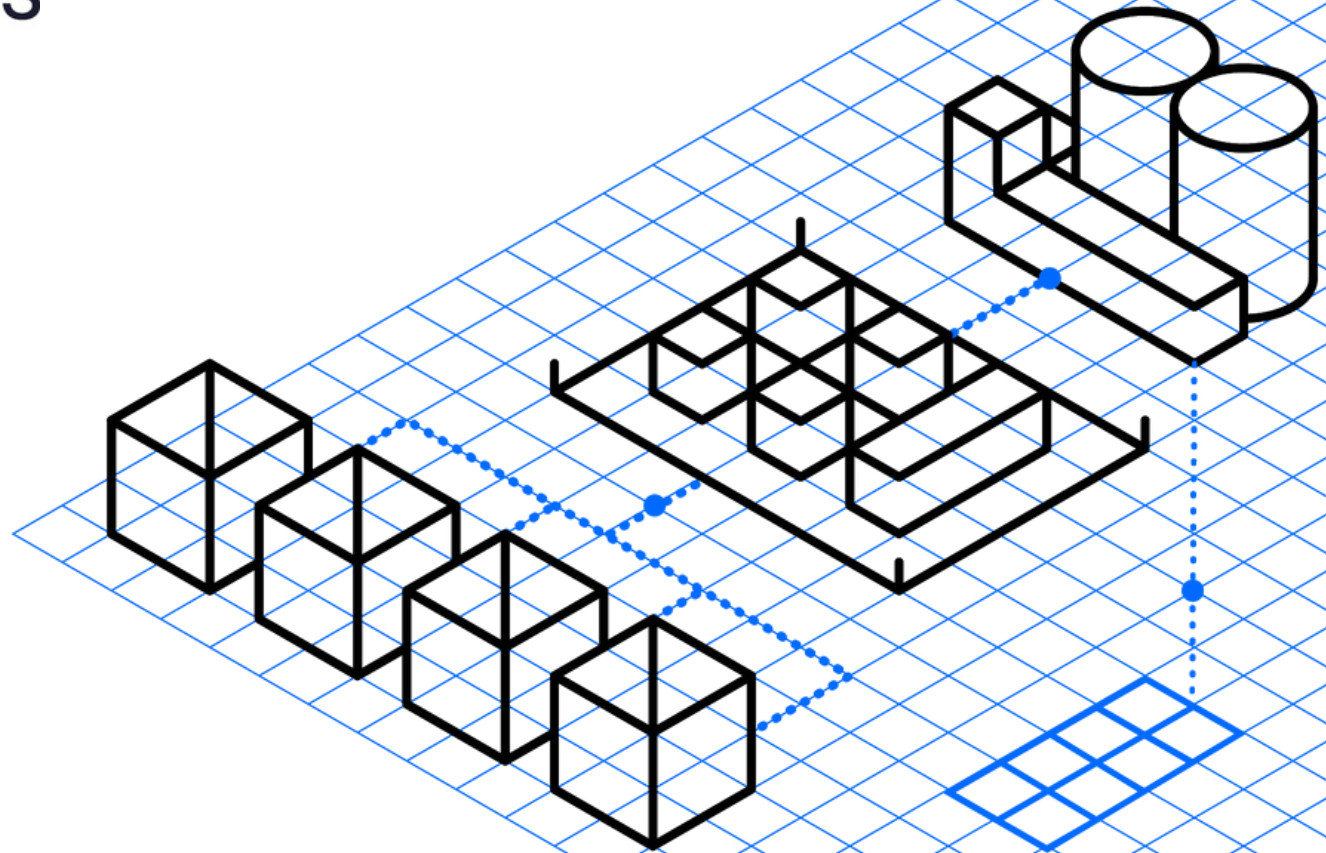




Fundamentals

# Total Voltage Control



## What is Total Voltage Control?

An ecosystem of solutions to deliver end-to-end voltage compliance for a low carbon grid:

### Automatic Voltage Control (AVC)

Control and monitoring of on-load tapchangers, incorporating functions for transformer paralleling, load drop compensation, runaway prevention, DER connections, network balancing services, Var control to name a few. Available to implement as hardware (relays) or software form.

### Control Scheme Services

Engineering excellence to guarantee operational integrity of your tapchanger control scheme, including application engineering, scheme design and drawings, panel and cubicle build, modernisation of tapchanger motor-drive mechanisms, installation and commissioning.

### Tapchanger Services

Expertise and support for >70% of the installed base of legacy transformer on-load tapchanger in the UK, including OEM spares, kits, repairs, troubleshooting and refurbishment to ensure operational availability. Also includes pole-mounted in-line regulation devices.

### LV Network Control

A new and exciting suite of technology solutions for the LV network to offer voltage regulation, phase balancing and energy storage to help deal with the constraints of a modern dynamic network.

## What problems can it address?

Through our 30 years' experience in the industry we understand some of the issues relating to voltage compliance:

### Increasing Numbers of Customer Complaints

The increasing amount of Low Carbon Technologies (LCTs) being connected to the LV network is resulting in wider fluctuations in power flows and voltage profiles. With very little active regulation capability installed at this part of the network, customer voltages can be compromised and can result in equipment ageing and/or malfunction, energy waste and higher energy bills.

### LCT Connections

Network planners are extremely busy with connection requests across the grid and could potentially accelerate activity at lower cost with access to advanced and coordinated voltage control methodologies.

### Cost of Network Reinforcement

The grid of today is ageing and was not designed to cope with the dynamics of a low carbon grid. Network demand is set to grow significantly as we see the electrification of heat and transport. The grid inevitably requires reinforcement with associated high costs and long lead times, but with the implementation of whole system voltage control, these could be alleviated or even obviated in some cases.

