



SPE ELECTRICAL – TRANSMISSION & DISTRIBUTION



SPE Electrical Limited (SPE) a UK based, small, independent Electrical Engineering consultancy, well-positioned to offer strong and continuing support for the transmission and distribution sector, from concept development to design and commissioning. The industrial sector is one of the busiest areas in the UK with many competing ICPs and iDNOs and a large number of projects that must be executed quickly and, in a cost-effective manner.

The transmission and distribution sector faces many challenges in electrical design, typically needing to develop robust designs for demanding clients on tight schedules, who often have limited information and limited knowledge of DNO constraints. SPE can assist is in helping to navigate through the various DNO requirements, liaise with the scheme developers and try and find practical and cost-effective solutions to the design and install problems faced by developers. In addition, SPE can carry out full concept and detail design work to help support project execution. Typical services include:

- HV earthing studies and advice
- Protection coordination studies
- Power system design
- Supporting connections for new Renewables and Energy Storage
- Cable sizing calculations

Members of this team, working together, have successfully worked on several notable projects, which are summarized below:

Woking Town Centre – Thamesway

SPE were selected by Thamesway to carry out a detailed short circuit study and protection coordination study for the Woking town centre electrical HV distribution network, using the ETAP modelling package. SPE developed an overall electrical model of the site in ETAP, from the main DNO incomers down to the largest outgoing LV circuit, and then ran a series of short circuit studies to validate that all the switchgear is within the correct fault rating duty. Once completed, we then carried out a detailed protection coordination study to assess each of the main 11kV substations on the network for correct discrimination to ensure that the correct protection elements trip in order.

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Various Projects – Aptus Utilities

SPE have been working with Aptus utilities for several years and are their preferred contractor for carrying out all earthing design and CDEGS modelling. SPE have so far carried out over a dozen studies for Aptus so far and have helped them navigate a number of difficult design conditions faced by the deployment of small substations in rural areas, or site with poor earthing conditions.

Various Projects – Dewhurst

SPE have been working with Dewhurst for several years and are their preferred contractor for carrying out all specialist HV design and power system studies and activities. SPE have worked on a number of complex jobs for Dewhurst including Barrow Hospital protection coordination study, BAE Smalesbury protection study, and a number of HV earthing studies.

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