

Power system networks are increasingly becoming more complex in their design due to new and evolving technologies and the integration of renewable energy sources, many of which are embedded in distribution networks where traditionally power flows that were unidirectional are now becoming more bi-directional.

Power system protection and SCADA systems are essential for maintaining a safe and reliable network. Just as the network evolves so must the SCADA and protection systems employed to operate and detect and isolate faults in those systems.

It is essential that protection systems isolate the faulted network such that the energy dissipated at the fault location is minimised and that the lines and apparatus in which the fault current flows do not become damaged due to thermal or mechanical stress.

At Amplitude, our protection and SCADA engineers offer extensive expertise and experience in SCADA-related projects, protection studies, design, relay settings, preparation of commissioning and test plans, supervision of commissioning activities and fault analysis.



#### Amplitude delivers

- Protection relay line and logic diagrams
- Protection relay and CT specification
- System modelling and protection grading studies
- Fault investigation and analysis
- Technical specifications and tender assessment
- Calculation of protection relay settings
- Protection design and philosophy reports
- Protection relay test and commissioning plans
- SCADA project support
- Commissioning supervision
- Technical analysis and investigation
- Network operation advice

The experience of Amplitude's engineers includes distribution, transmission, generation and industrial networks, as well as generation connections including both synchronous and asynchronous plant.

Amplitude's engineers can also advise on system operations, in particular during system contingencies where protection systems coordination and reach etc may be compromised.

Amplitude's team of engineering specialists have the skills and experience to undertake transmission, distribution and generator protection engineering studies, including protection design, coordination and fault investigation.

In addition, the same specialists can support our clients throughout the testing and commissioning phases of the project as well as SCADA integration and aspects.

Please contact [bd@amplitudepower.com](mailto:bd@amplitudepower.com) for more information.