

WHO WE ARE

Powertech's technical specialists are world class, ensuring that your inspection, test, commissioning and start-up requirements are thoroughly met and satisfied. Powertech specialists are highly trained, reliable and responsible. So when you require autonomous individuals with experience in all industry sectors you can count on us.

PEOPLE

To be the best at what we do, we strive to exceed our client's expectations.

Our services are of high value due to:

- **People:** Continuity, depth and quality of expertise provided by our field personnel.
- **Process:** Documenting and reporting via our highly evolved quality control systems.
- **Platform:** National network of teams and locations for rapid response and support.
- **Plant:** Extensive selection from the best brands of inspection and test equipment.



PROTECTION SCHEME TESTING

Protection scheme field testing can be divided into two stages: commissioning tests, and periodic maintenance tests.

Commissioning tests are critical to ensure a particular protection scheme has been installed correctly prior to setting to work. The aims of commissioning tests are:

- To ensure that the equipment is neither faulty nor damaged during transit or installation
- To ensure that all installation work has been carried out correctly
- To prove the correct functioning of the protection system as a whole

Periodic maintenance tests are essential to ensure that a protection scheme continues to provide satisfactory performance for many years after installation. All equipment is subject to gradual degradation over time, and regular testing identifies problems so remedial action can be taken before scheme malfunction occurs.

Experienced and capable people are crucial to carrying out protection scheme testing, preventing faults being introduced as a direct result of the remedial work. This is why Powertech Services should be your first port of call.

Powertech Services has been specialising in protection commissioning and testing as a core service since their inception over 21 years ago. Our engineers and technicians are experienced in power engineering and maintain their capability through regular training from both protection relay manufacturers and leading protection test equipment manufacturers.

We utilise industry leaders in protection relay equipment sets such as Omicron®, T&R Test Equipment® and Megger® and have the latest relay interrogation and setting software for all mainstream relay types. We use our comprehensive library of inspection and test reports (ITRs) and testing procedures, we are happy also to use our client's proformas or adapt to our client's procedural framework.



SERVICES WE OFFER:



- In depth protection relay analysis via secondary injection to prove functionality and accuracy of various protection elements using state of the art test equipment.
- Circuit continuity and loop impedance checks.
- As-built schematic, single line diagrams and protection drawing markups.
- Detailed inspection of protection and ancillary equipment.
- Insulation resistance measurements to relevant standards.
- Perform relay self-test procedures and external communications checks on digital/numerical relays.
- Detailed analysis of protection and metering current transformers and voltage transformer testing.
- Complete detailed protection grading study with sophisticated design software.
- Creation of comprehensive protection relay setting files and programmable scheme logic files.
- Trip and alarm circuit functional checks to prove correct operation.
- Primary injection tests on each relay to prove stability for external faults and to determine effective current setting for internal faults.
- Holistic functional checks to ensure precise system operation.
- Interrogation of fault event and disturbance records after relay operation.
- All inclusive transparent asset management capability.

