



Combined circuit breaker installation at Stanah Grid Substation

Electricity North West

Overview of Works

As the Distribution Network Operator of the North West of England, Electricity North West is responsible for the maintenance and development of a large regional electricity network spanning across 13,000km of overhead lines, 43,000km of underground cable, and 38,000 transformers. Ipsum has operated as an extension of Electricity North West for many years to deliver specialist HV & EHV infrastructure support services, helping to maintain uninterrupted power to thousands of homes and businesses across the region.

Electricity North West is in the process of upgrading two 132kV circuits in connection to their Stanah Substation. This forms part of a wider network resiliency programme designed to optimise power capacity and usage across the local area.

Capitalising on our extensive partner experience and specialist domain knowledge, Ipsum was appointed to deliver the installation of the first two combined circuit breaker / disconnecter gas insulated devices. This was an exciting opportunity for us where we could deploy our local engineers, driving SHEQ compliance via a tried and tested team.

The project was complex, with the initial works involving the installation of high-level structures and post insulators, as well as all wiring and multicores connecting from relay panels in the substation control room, to the marshalling kiosks which power the new HV plant, with all new equipment connected to the substation earthing system. The subsequent phase of the Stanah Substation upgrade project entails the installation of additional busbars, followed by improvements to the technical wiring and protection upgrades, thereby enabling several protection schemes for the Stanah 132kV circuits.

Planning and Co-ordination

Collaborative working was key to the successful delivery of the circuit breaker installation works, with multiple contractors operating as an integrated team to ensure each activity was carefully planned and safely delivered, with network up-time of critical importance to Electricity North West and their customers.

Ipsum was able to install earthing and multi-core cables without interruption due to co-ordinated efforts with civil contractors, paving the way for ABB to install the new HV equipment. ENW's engineers were on-hand throughout to oversee successful delivery and supporting during any interface issues.

Key Challenges

The key challenges of the circuit breaker installation works stemmed from inaccurate specification data, where the absence of key information on the technical drawings hampered the installation of critical HV equipment and components. At this point, the technical competence and network knowledge of Ipsum's engineers came to the fore, and our teams provided updated technical / design data to Electricity North West, which was latterly rectified by their design engineers.

Our engineers also reported a problem where stagnant water was found at an access point within the cable trench whilst installing cables to the substation control room. This was reported immediately to Electricity North West who halted work and contacted a waste management company to remove the water, with work put on hold until the water was removed. Without our quick innervation and transparency, this could have caused safety and monetary issues.

Our solution

Even though construction is still on-going on this project, it is expected to be completed later this year. Throughout the duration of the circuit breaker installation work, employee and quality feedback has been consistently positive; a testament to the proactive and collaborative relationship between Ipsum and Electricity North West.





“Reliability, flexibility and quality of works are essential elements for undertaking construction works of this type. We have always found the helpful attitude of the site workers and management team to be exemplary and would not have been able to complete this project without them. The ENW project team are very happy with the services offered by Ipsum and further project works have been awarded on the basis of this. I would like to thank all involved in the Stanah project and have no hesitation in recommending the Ipsum team for further works.”

Steve Banner, Operations

Electricity North West

