

CLIENT

Northern Powergrid (NPg)

PROJECT

Asset replacement

LOCATION

Franklin Crescent, Doncaster

SERVICES PROVIDED

- Substation survey
- Outage planning
- Safe systems of work
- Civil excavation
- Switchgear removal
- New switchgear installation
- Transformer cable box change
- 11kV cable jointing
- Testing and commissioning
- Hand back documentation

OVERVIEW

IUS has a framework in place with NPg, which includes asset replacement activity. IUS has been commissioned to deliver six 11kV switchgear replacements in 2022, where aged oil insulated equipment will be replaced with new High Voltage (HV) apparatus, which will enhance the NPg network. This is the type of work IUS also deliver for customers with privately owned HV apparatus.

DESCRIPTION

IUS conducted detailed surveys of these secondary 11kV substations on NPg's behalf to ascertain the requirements for the delivery of the works. The survey encompasses asbestos removal, street work notices, if generation is applicable, network transfer at low voltage, any civil adaptations, as well as liaison with the local community via letter drops for planned outages. This all takes place to ensure a problem free switchgear replacement.

Following the implementation of Safe Systems of Work by the IUS Senior Authorised Person (SAP), oil filled Yorkshire Switchgear and Circuit Breakers are removed by our electrical fitters in conjunction with the IUS HIAB driver. A new Schneider Electric RN2C Ring Main Unit (RMU) is then installed in its place. The original switchgear is returned to NPg for recycling. The IUS electrical fitters secure the new RMU in place and make the necessary connections to the existing earthing system within the substation. The transformer 11kV compound filled box is replaced with a new 'dry box' unit, allowing for the installation and termination of 300mm triplex cable. This cable is installed from the jointing position, outside the substation, where it is straight jointed to the existing NPg 11kV network by the IUS cable jointers.

The IUS SAP completes the work via continuity, insulation resistance and pressure testing prior to the substation equipment being energised. All subsequent test results and hand back documentation is collated and returned to NPg for their records.