



3.3KV  
TRANSFORMER 1

## CLIENT

**Northern PowerGrid (NPg)**

## PROJECT

**Urban Automation**

## LOCATION

**Hull**

## OVERVIEW

IUS secured a contract to deliver NPg Automation, which improves their customer service via network control remote switching capability. This reduces electrical downtime for customers should a fault occur on the network. An RTU can be utilised to carry out remote High Voltage switching to quickly restore supplies. IUS are providing installation, commissioning, and technical support services to improve network restoration times via remote switching capabilities for 11kV ground-mounted switchgear. This is achieved via a central control centre over a secure radio network

## DESCRIPTION

The work involved carrying out a survey at the substation location to ascertain if the site is suitable for automation. The survey considered the existing 11kV switchgear installed on site; the network design required by NPg and signal strength tests for connectivity onto the secure communication network. The survey identifies the automation equipment to be installed and if any civils work is required.

Civil works were completed on this site, which allowed cable connections to be installed to the existing switchgear and new RTU tele-control equipment. The new RTU was installed on a frame with umbilical cables, connecting the new actuators, which are fitted to the 11kV switches. The design incorporates fault path indicators, which are automated and wired into the RTU. These indicate back to control if a fault occurs. A power supply for the RTU is connected to the Low Voltage feeder pillar within the substation compound, which is monitored by the RTU and control centre.

Commissioning of the site is carried out by the IUS Senior Authorised Person (SAP). Final connections were made on-site, with all local operational tests carried out. Once satisfied that the installation was operationally ready the SAP contacted the control desk engineer and carried out any network reconfigurations required under a system outage, to allow remote operation. Remote testing was accomplished by the control desk engineer and the automation equipment was transferred into operational use on the NPg network.