

Project Overview - Drakelow Farm

“Connecting you to the grid”



PROJECT STATISTICS...

Project: Drakelow Farm

Location: Staffordshire

DNO: Western Power Distribution (WPD)



Voltage: 33kV

Works Awarded: Contestable, Client-side.

Completion Date: March 2016

SCOPE OF WORKS - CONTESTABLE

g2 Energy were responsible for the Civil & Electrical Design & Build for the Contestable Works, all approved to WPD’s standards, which included:

- Full Electrical Design for the DNO substation to WPD’s specification
- Supply & Install the WPD approved switchboard, including Protection Panel & 33kV metering circuit breaker
- Supply and install a LV battery and charger, plus installation of all multicore cabling
- Design, supply and install a suitable GRP substation building including all auxiliary wiring, heating, lighting and power plus a suitable foundation and landing pad
- Supply and install 925 metre route length of WPD approved 33kV cable, to include trenchwork and reinstatement
- Design, Supply and Install of a standard Earthing solution

SCOPE OF WORKS – CLIENT SIDE WORKS

- Electrical & Civil Design for the Client-side substation
- Supply and install a 33kV switchboard including incoming disconnector from the DNO, busbar connected VT and the Protection panel
- Supply and install a suitable battery and charger, plus install all multicore cabling
- Design, supply and install the GRP Containerised substation housing including foundation and auxiliary wiring
- Supply and install a suitable auxiliary transformer
- Supply and install 33kV cable

MAP / LOCATION



CHALLENGES FACED:

The original designs were submitted utilising the flood risk assessment report which was provided to g2 Energy by the client. Due to project timelines, the build commenced at the client’s risk and WPD rejected the design as it was only 50mm above ground level. Therefore, g2 Energy completed a new design to dowel the existing foundation with a 250mm increase in height, which was approved by WPD. These additional works were completed over the weekend so as not to affect the delivery of the GRP substation later that week.

Additionally, the Single Line Diagram (SLD) was rejected by WPD due to a new policy which was introduced whilst the design was being reviewed. Time constraints on the project did not allow for g2 Energy to challenge this, and so a new SLD design including protection was completed and submitted to WPD for approval.

During this time, g2 Energy allocated resources to remove and rewire all the multicore cabling in the substation that had been delivered to site in the meantime. WPD approved the new design but then reverted back to the design originally submitted by g2 Energy when they could not mobilise resources to rectify their installed works.



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