

CALEDON GREEN 33kV

22.5MW GAS GENERATION SITE

GEW2 were appointed by Forsa Energy to undertake the contestable work for a SPEN approved 33kV Substation including two 33kV Ormazabal circuit breakers and install approximately 2.8km of 400mm² Al 33kV cable from the point of connection to the SPEN 33kV Substation. A fibre optic pilot cable was laid alongside the 33kV power cable. The site comprises of a 22.5MW Gas Engine Power Generating Plant comprising of five 4.5MW natural gas fuelled electricity generation sets generating at a terminal voltage of 11kV. Each generator is connected to an 11kV metal clad switchboard by means of a synchronizing circuit breaker.

SCOPE

- Supply and install a SPEN approved metering substation to Scottish Power Specification.
- Supply and install 1 x 110V Battery and Charger to SPEN specifications, 1 x 48V Battery and Charger to SPEN specification.
- Supply and install 2.8km approx. of 400mm² Al 33kV cable from the generation site to the edge of the SPEN 33kV compound (POC).
- Supply and Install 1 x 2.8km route length of pilot cable including joints and terminations.
- Supply and install of 2 x HV cable terminations.
- Supply and install two 33kV Ormazabal CPG-0-V circuit breakers.
- Supply and Install 1 x 2.8km route length of pilot cable including joints and terminations.



SPEN Primary Sub Switch Room



PROJECT DETAILS

CUSTOMER: Forsa Energy

DNO: SP Energy Networks

LOCATION: Caledon Green Generation Ltd, Plot 10, Earls Gate Park, Grangemouth, FK3 8TR

CHALLENGES

GEW2 faced challenges throughout the project including working under the M9 bridge and along the M9 road up to the Ears Gate roundabout to install the 33kV Circuit. Resulting from having to work on the M9, GEW2 had to complete work under a permit from the Transport for Scotland. GEW2 allowed for offsite excavation of cable trench, including the install of ducts/tiles and tables/cables and reinstatement, as well as a concrete foundation and steel substation building to SPEN specification. Full reinstatement of all public roads, fields, footpaths and verges was completed to the satisfaction of the local road's authority.



33kV Cable Laying



Substation Compound