



33kV SOLAR FARM CONNECTION

DEVELOPMENT IN BRAINTREE, ESSEX



Power

Value	Multi-million
Voltage	33kV
Market Segment	Renewable
Duration	12 months



Project summary

This project involved the design, installation, and commissioning of a 35MVA 33kV DNO switchroom and cable route. Works included detailed design and approvals, installation of a 3.6km 33kV cable route, and post-construction commissioning and energisation.

Pre-construction

JSM completed the detailed design which included single line diagrams, protection and interface design – Power System and G99 Studies - Cable route design and cable calculations, ducting, cable install and jointing - earthing design, report, soil resistivity test, earth mat installation and fall of potential test.

Construction

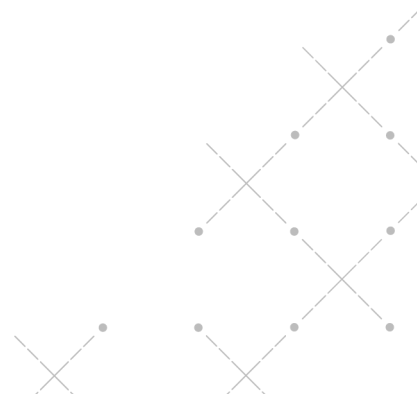
Supplied and installed a 33kV DNO switchroom including battery chargers and a metering room, along with 3.6km of 33kV cable duct installation, cable pulling, and jointing.

Post-construction

Works included cold and hot commissioning, energisation and providing As-Built records.

- Principal designer
- Principal contractor
- Compound construction
- DNO switchroom & substation
- 3.6km cable route

- Civils
- 33kV Cables & Duct installation
- LVAC supplies
- Jointing & Terminations
- Hot and cold commissioning with Energisation



PROJECT CHALLENGES

CHALLENGE



Adjacent third party project

Adjacent 3rd party project required excavation of the same route, high probability of disruption to local residents.

DNO Design approval

UK Power Networks Design Approval.

SOLUTION



JSM assisted in arranging a collaborative shared trench arrangement with the host DNO to facilitate a joint 132kV and 33kV duct installation.

Worked closely with the client (and their contractors) and UK Power Networks to achieve an acceptable design for approval.

