

SMITH brothers

Case Study

Turnkey battery storage facility:

Lockleaze Fast Frequency Response (FFR)

Western Power Distribution

Construction Dates: August 2017 – March 2018

Objectives and purpose

Acting as the Independent Connections Provider (ICP) for the 15MW Lockleaze Fast Frequency Response (FFR) facility in Bristol, Smith Brothers was enlisted by contractor Metka-EGN to carry out the high voltage electrical connections and substation construction on the UK's largest standalone battery storage site.

Turnkey works

Commissioned by clean energy giant Hazel Capital in partnership with Noriker Power, the prestigious project was developed by renewables experts Aura Power and is expected to set a new precedent for battery generation export capacity in the UK energy sector.

As part of the contract, Smith Brothers was tasked with the design, project management and delivery of the 33kV infrastructural connection to the battery storage facility. The point of connection (POC) was close to the site at the existing Western Power Distribution (WPD) Lockleaze BSP 132/33kV substation, and the firm carried out 80m of trenching works to install three single core 33kV 185mm² CU EPR cables.

The 12-strong team was also responsible for the civil design and construction of the 33kV Glass Reinforced Plastic (GRP) substation for WPD, along with the design, supply, install and commission of the HV internal equipment – including a 2-panel NXPlus Siemens switchboard.

Further to undertaking the contestable works as the ICP, the electrical engineering firm also provided a containerised solution on the private side of the project. This involved fitting a nine-panel switchboard as well as installing and commissioning the interconnecting cables between the private and DNO sides.



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Early project completion

Smith Brothers had to overcome significant challenges posed by strict timescales, but by quickly sourcing alternative solutions, they managed to complete the work in advance of the deadline.

Commenting on the assignment success, project manager Iliana Malatra said: "Thanks to the ongoing effort, dedication and solution-focused attitude of our team – as well as the excellent cooperation from all other parties involved in the project – we didn't just hit our target, but actually delivered the ICP works two weeks early."



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