

TESLA BESS - 49.5MW/99MWH BATTERY ENERGY STORAGE SYSTEM



LOCATION

Little Raith, Fife, Scotland

OVERVIEW

Harmony Energy is at the forefront of a greener and more sustainable future. Harmony Energy selected Tesla as their main contractor, who in turn procured the services of IUS for the **electrical installation works**. The Little Raith Battery Energy Storage System can store enough energy to power c. 450,000 homes for two hours in the aggregate.

SERVICES PROVIDED

- Design and Engineering
 - Detailed Civil Design Works of structural bases for all site-based equipment
 - Detailed Electrical Contestable Design Works, including:
 - Earthing System Design
 - SLD
 - Cable Layout and Schedules
 - SCADA Schedule
 - Camera & Lighting Design
 - Detailed SCADA and Control System Engineering
- Civil Works for all structural bases, perimeter fencing, landscaping, and site restoration
- Logistics - Offload, installation, and anchoring of all plant and equipment, including:
 - 27 Tesla Megapacks
 - 15 Wilson Transformers (including Aux. TX)
 - 33kV CRT Metering Switchroom
- All HV, LV, and Communication Installation, Testing, and Termination
- Ground Grid - Earthing Installation
- Installation and Termination of the Electrical Metering, Communication, and SCADA systems, including all hardware to meet the DNO Network Communication Requirements
- Pre-commissioning, Testing and Commissioning of the Transformers, 33kV Switchroom and associated 6 Panel Switchboard, 14 x 33/0.48/0.48kV Transformers, 4 x FNE and all associated Protection and Interfaces
- Electrical Testing and Commissioning / G99 Grid Compliance Testing (DNO)
- Site Lighting, Fire Detection, and Security Systems
- Electrical Handover Documentation / Closeout Submittals / O&M Manuals

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THE PROJECT

Turnkey design and build installation of a 50MW/100MWh Battery Energy Storage System (BESS) at Little Raith Farm near Cardenden, close to Lochgelly in Fife, Scotland.

The complete installation was constructed in a 1 x 50MW phase with IUS the Principal Contractor under CDM for the whole scheme. All main items of the plant inclusive of the containerised MV Switch room, Transformers, and the Tesla Megapack 2 XL battery units were supplied free issue by Tesla to the site, offloaded, and installed by IUS.

IUS completed all equipment electrical works and contestable elements of the supply connection to the local DNO (SPEN - Scottish Power Energy Networks) distribution network.

"The IUS team has consistently delivered outstanding work at the Little Raith site. Their team operates with professionalism and strong attention to detail. Together, Tesla and IUS developed a partnership with a common goal of completing the battery energy storage project on time and with the highest quality possible."

*Michał Kuciński
Sr Technical Project Manager, Tesla*

