



Accelerating your journey to Net Zero

Blake Clough Consulting is a specialist energy consultancy with a focus on the electricity networks. We cover a range of areas relating to power systems analysis, feasibility studies, project engineering, innovation, regulation and technical strategy, with a strong emphasis on our customer relationships.

We are passionate about the decarbonisation of the energy system and the transition to "Net Zero" and aim to support our clients to accelerate this change as effectively as possible, whether that be local authorities, large network companies, or private developers.

Our work is underpinned by solid analysis and modelling, including techno-economic assessment, cost benefit analysis, power systems analysis and network modelling.

Our design capability includes areas such as footprint and elevation drawings and optioneering studies to understand the most appropriate connection options for new energy and battery projects.

We have successfully delivered a number of projects to a range of clients, particularly focussing on planning applications, pre-FEED and FEED level work.

Typical design work includes:

- Optioneering studies to inform design strategy.
- Preliminary power system studies to identify and appropriately size plant equipment.
- Developing Single Line and Key Line Diagrams.
- Substation, BESS and Solar PV layouts and elevations.
- Cable routing and sizing.
- Cost-benefit analysis of design strategies.

Customer Focussed

Our team is extremely customer focused, flexible and efficient. We are able to respond quickly and ultimately to deliver work in compressed timescales, to a high quality.

Our clients range from electricity network operators, regulators and public sector organisations through to private developers, both onshore and offshore, looking to develop projects connecting into the electricity networks.

We understand the specific challenges around the supply chain, in particular rising costs and long lead times for major plant items such as transformers, which have extended significantly in recent months. Our analysis and designs therefore take into account these macro issues.



Blake Clough Consulting were engaged in substation design, calculations, and drawings for the planning application and feasibility of a new 240MW Hydrogen Plant.

This project included the stepping down from 275kV to 132kV at a far end area and then stepping down from 132kV to 33kV near to the Hydrogen field.

The following deliverables were included:

- 275kV GIS Substation drawings.
- 132kV GIS Substation drawings.
- Design Optioneering Report.
- System SLDs for all sets of design options.
- Commercial analysis for all sets of design options.

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Blake Clough Consulting were appointed to conduct FEED studies for a new hydrogen plant which is to be connected to the distribution network.

The following aspects were completed:

- 132kV AIS Switchyard Layout.
- Elevation drawings of Switchyard.
- 33kV Cable and HDD route planning.
- Cable pull calculations.
- Cable sizing calculations and installation.
- Development of single line and key line diagrams.

Blake Clough Consulting have completed numerous substation design and optioneering works for BESS and PV connection projects.

These activities typically include:

- Design Optioneering Report to compare different configurations.
- Commercial analysis.
- Initial power systems studies (e.g. load flow, fault level, harmonic studies and P28) to size key equipment.
- Substation Layout Drawings.
- Substation Elevation Drawings.
- Layouts of the BESS and PV plant.