New Connections

design and advisory solutions to the power sector

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New Connections

Our highly qualified Electrical Design Engineers provide design services for the electricity infrastructure of all types of New Connections. Our expertise is energy. Our focus is power. Our reach is worldwide.

british power international™ act as a link between the client and the Network Operators. To achieve this our comprehensive design services range from feasibility studies and budget quotations through to detailed design solutions for the most efficient and reliable new networks. This includes new substations and services at HV, switching stations, and associated electrical infrastructure. Our innovative approach to new technology combined with our extensive experience puts us in a unique position to design the electrical networks of the future.

Our expert capabilities stretch across the following types of New Connections

- Retail
- Industrial, Commercial and Agricultural
- Major Projects
- Wind and Solar Farms
- Health, Leisure & Tourism
- Education
- Urban Living
- Infrastructure

We offer a full range of design skills and capabilities

- Three Phase Power
- System Layout -HV/LV
- Calculation of Demand/Load Factor/ADMD
- Underground Cables
- Transformers
- Protection
- Volt Drop Calculations
- Fault calculation
- Motor starts P28
- Power Factor
- Principles of Voltage Quality and Harmonics
- Earthing /Loop Impedance
- Overhead Lines
- Metering & its applications on design
- Protection Principles
- Substation Layout and Civil Engineering Design
- Embedded Generation
- Risk Assessments
- Design Standards
- Regulation; OFGEM, ESQCR, CDM Regs 2007, Licence Conditions and Guaranteed Standards
- Preparation of technical drawings
- Technical Report for Network Operator submission

Case Studies

GAIA Power Ltd. Tees Valley Connection

GAIA Power Ltd. appointed BPI to quantify and evaluate a proposed 51MVA export/7MVA import connection for a biomass generation plant at Billingham Reach Industrial Estate, Middlesbrough. Our skilled team reviewed the circuit configuration at the North Tees 132/66kV grid substation in relation to the GAIA Power Tees generating plant some 350 metres from the point of connection. We then provided a cost analysis for the construction of a new 66kV substation compound with associated infrastructure. This included both contestable and non-contestable elements of the connection. This included new switchgear, protection and control panels at GAIA Power Tees Valley substation, as well as the disposal of redundant switchgear and modification of North Tees 132kV/66kV Grid substation to accept a new circuit breaker.