

energypeople

**Design solutions
for the power sector**





Power engineering solutions and beyond.

We provide solutions that are trusted
cost-effective, reliable and resilient

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energypeople

About us

What we do

We're engineers, designers and consultants with practical experience of the feasibility, specification and design of electrical infrastructure projects. Our team of power systems engineers has extensive experience of planning and designing utility and private electrical projects from LV up to 132kV.

Our design team works alongside and gains synergies from our advisory team, specialising in delivering power engineering solutions both in the UK and internationally.

Who we are

At energypeople, we are an employee-owned and independent energy sector consultancy based in the United Kingdom. We have been operating in the energy industry since 1979.

The strength of our company lies in our people; their training, qualifications and extensive experience worldwide.

The energypeople team was founded by electricity supply industry professionals and now boasts over 500 years of experience of the safe and efficient planning, designing, building, operating and maintaining electricity plant, transmission and distribution networks.

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Our electrical design experience

Our specialist engineers have diverse experience of designing and delivering power engineering solutions from concept through to detailed design.

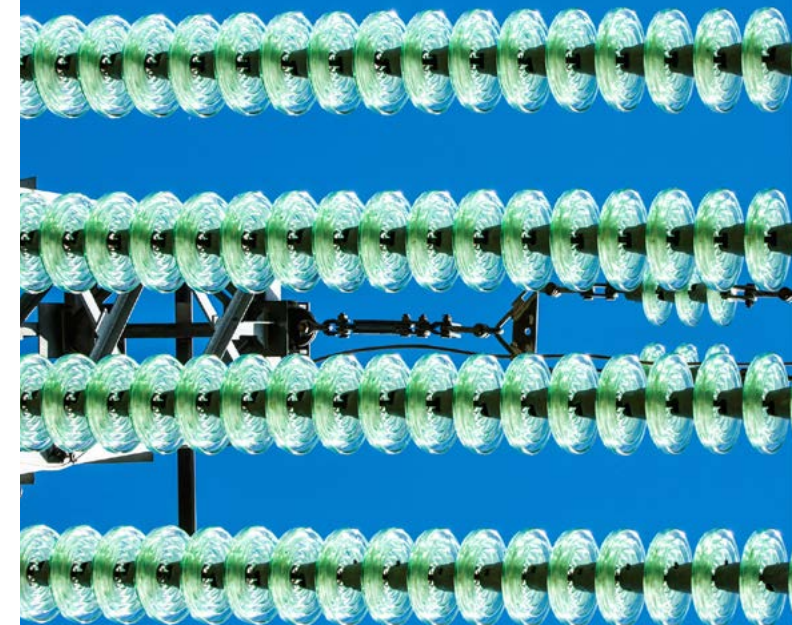
Our team of designers has worked on a broad range of design assignments, mainly in the UK, on networks up to and including 132kV; on battery storage, wind, EfW, solar, STOR, traditional thermal (coal, gas or nuclear) and demand projects. We have also worked on primary and FEED designs of projects up to and including 400kV.

We hold full accreditation under the National Electricity Registration Scheme (NERS) for the design of electrical networks.

We have a strong track record of working directly for many of the DNOs and IDNOs across the UK. Many of our senior consultants are from a DNO background, so we have the capabilities and hands-on experience to support you in an owner's engineer role as well as in asset management and network design.

We have advised clients in becoming an IDNO, undertaken operations training, completed competency assessments, and reviewed their operational and design standards.

We're an independent, employee-owned company whose strength lies in our people



Our accreditations

We hold full Lloyds NERS accreditation for the electrical design of distribution networks covering the design of:

- HV cable networks from 11kV to 132kV
- Substations from 11kV to 132kV
- Design of LV cable networks to domestic, commercial and industrial properties

We are building information modelling (BIM) verified by BSI for design and construction capital delivery.

The energypeople team is fully registered as a supplier on Achilles UVDB.

Our Quality Management System is accredited to the requirements of ISO9001:2015.

Our power system studies experience

The energypeople in-house team of designers can support your generation, transmission and distribution projects by carrying out a comprehensive range of power system studies such as:

- Load flow, voltage regulation and power factor Cable optimisation and power losses
- Fault level and switchgear sizing
- P28 and P29 voltage flicker
- G5/4 harmonics analysis
- Reactive power capability
- Protection coordination
- Earthing design, soil resistivity measurement and analysis, and post construction fall of potential measurements

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Our work

Both in the UK and internationally, we support a variety of sectors and stakeholders spanning the conventional and renewable energy industry including:

- Distribution network and system operators (DNOs/DSOs) and independent distribution network operators (IDNOs)
- Onshore and offshore renewable energy developers
- Renewable energy (battery storage, solar and wind) developers
- Traditional thermal (coal, gas and nuclear) generators
- Short-term operating reserve (STOR)
- Vehicle to grid
- EV charging
- Rail, data centres and universities
- Independent connection providers (ICPs)
- High voltage engineering, procurement and construction companies (EPCs)
- Large industrial and manufacturing companies such as ports, petrochemical plants, and oil and gas refineries
- Industry regulators

Our services

Overview

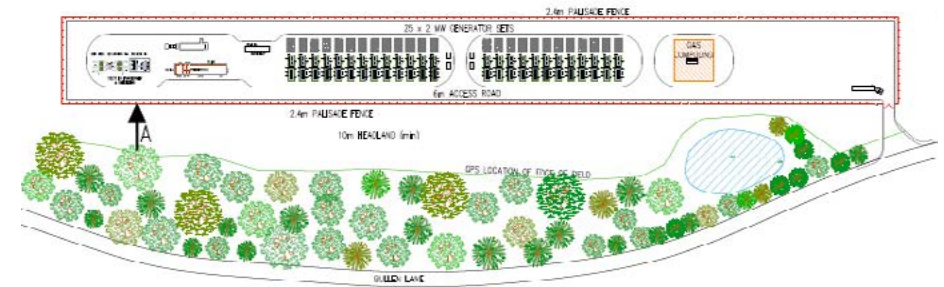
From simple grid compliance studies through to complete substation design and owner's engineer assistance, energypeople can support your project either as a standalone solution or a complete design package.

The scope of services includes initial feasibility studies, specifications, and the design and negotiation of grid connections, as well as secondary and primary substation design.

Our aim is constantly to provide excellent service at the best possible cost. We do this by recruiting and training first-class engineers, keeping our overheads low and maintaining an absolute focus on each unique client's needs.

When providing multidisciplinary services, a dedicated project manager manages the delivery team and the full scope of work thereby providing you with a single point of contact and ensuring that quality is always at the forefront of our work.

Our power system experts supply you with professional, cost-effective and practical support from initial concept right through to eventual project delivery.

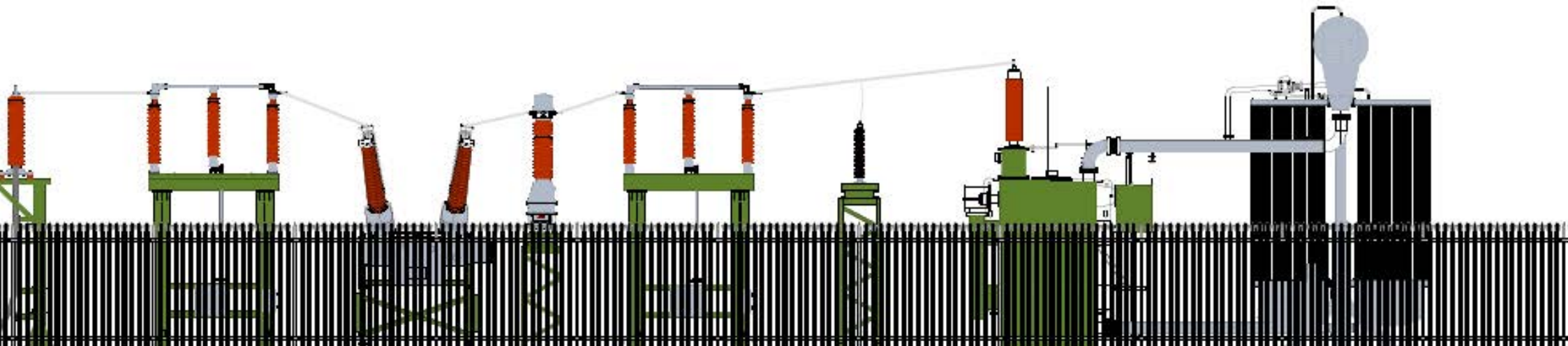


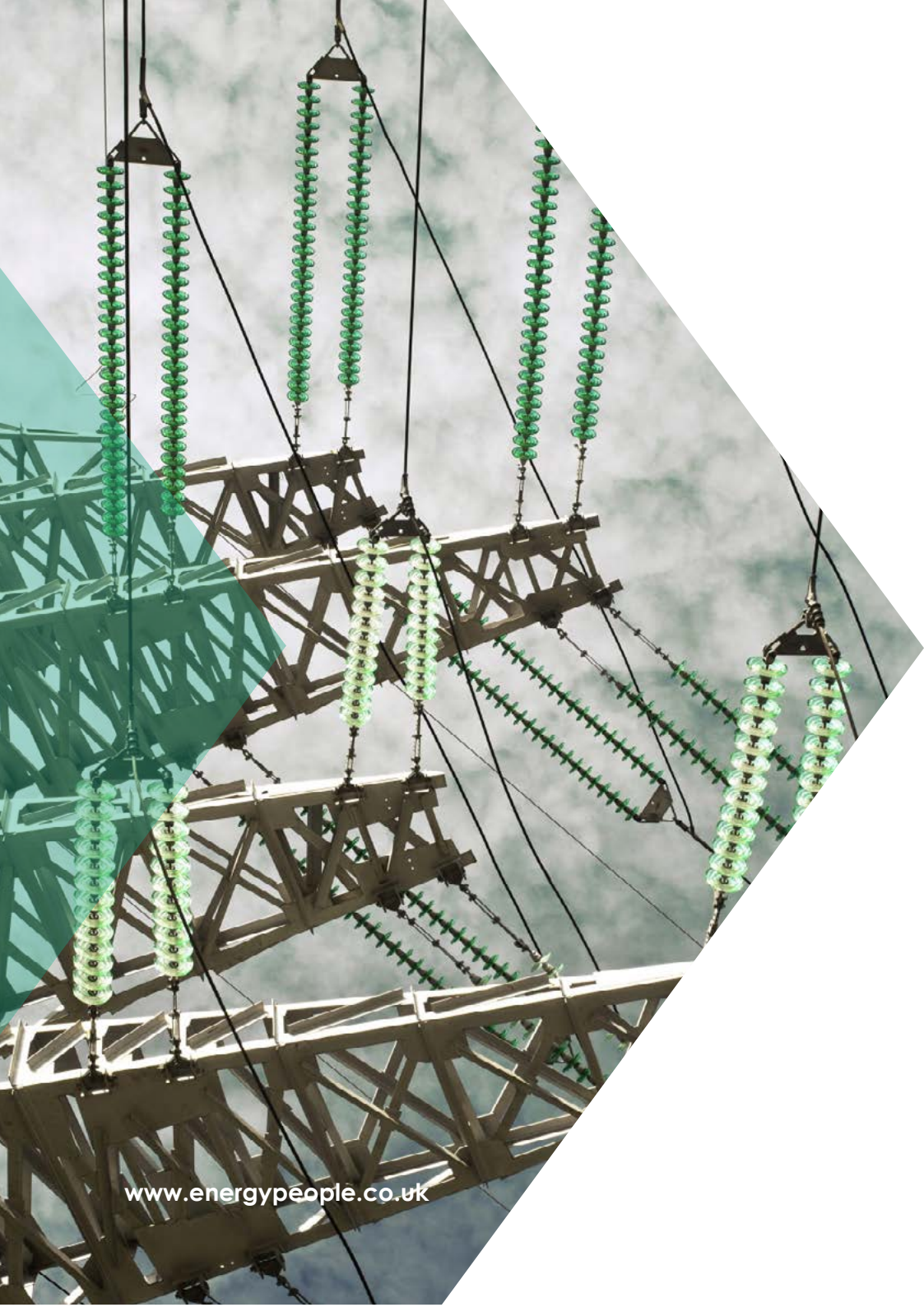
Grid connections feasibility and design

Our portfolio encompasses the design of intake substations for wind and solar farms, anaerobic digesters, and distributed conventional thermal generation, including customers' private networks from LV up to and including 132kV.

We provide technical support to DNOs and generation developers for their connections business or function.

On behalf of DNOs and generation developers, we identify and evaluate sites, and handle the connection application process together with the associated electrical design and documentation.





Substation and electrical networks design

Our in-house team of CAD and electrical design engineers has an extensive track record of working on distribution networks on all voltages up to 132kV providing design services which include:

- Substation electrical layout designs for DNOs, DSOs, private networks and generation connections
- Design of electrical protection control and generator interface schemes
- Production of general arrangements drawings, schematic diagrams, and wiring diagrams for protection and control relay panels
- Full CAD services using AutoCAD software SCADA and communications designs Circuit designs for electrical connections
- Earthing system designs, soil resistivity and post construction fall of potential surveys and analysis
- Design verification of drawings, reports and documents
- Preparation of technical reports, calculations and functional specifications

Employer's engineer

We act as an electrical consultant in the preparation of employer's requirements, scope of electrical works and invitation to tender documents.

These tasks comprise proposal and contractor review and selection, design verification, meetings, witness testing, site inspections and commissioning on behalf of clients.

Power system studies

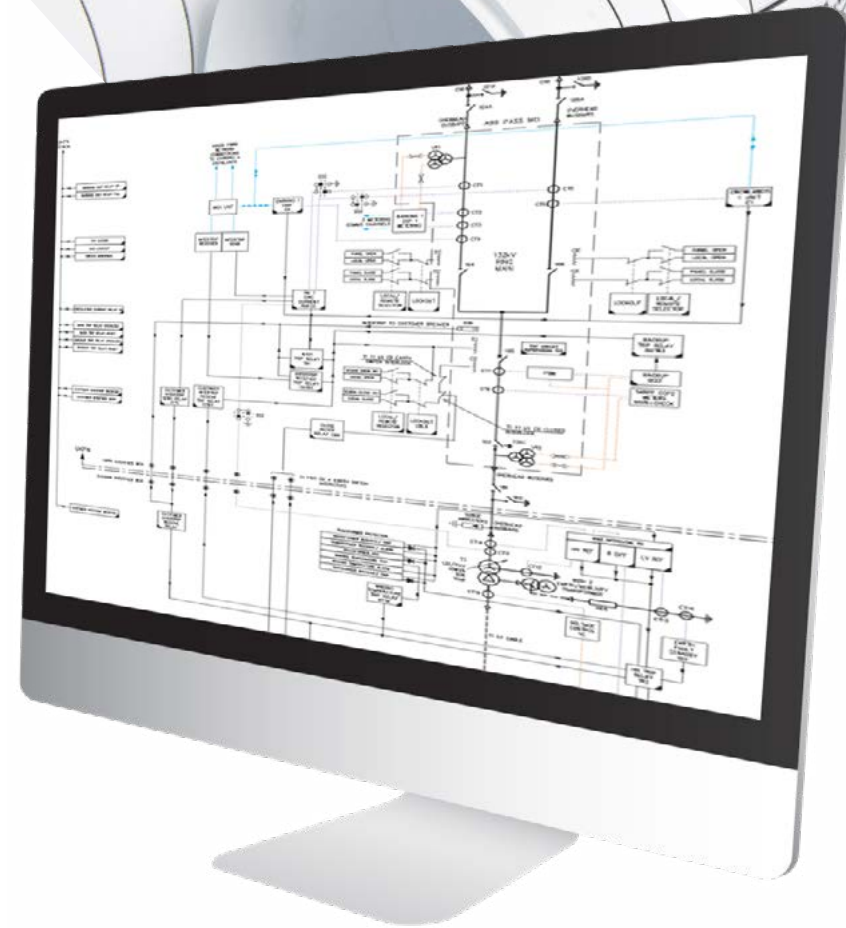
Using the latest software, we can underpin your project with grid connection impact studies, grid code compliance studies, load flow, fault level, voltage fluctuation, harmonic assessments, protection coordination and earthing design.

We have a track record for the design of substation installations and specification of equipment such as grid and primary transformers, GIS switchgear and auxiliary equipment.

Project feasibility studies

We conduct technical and economic feasibility studies on the viability of projects to ensure they're technically and legally sound, and justifiable economically.

We bring together expert knowledge of the UK electricity industry with an understanding of global developments affecting the sector



Our experience

Connection feasibility and design

New connections review and technical support for a UK DNO

The project comprised these distinct phases:

Acting as an expert reviewer – auditing of technical, operational, and financial processes and outcomes of a sample of previous new connections to the network at voltages up to and including 132kV.

- **New connections** – providing long term technical and commercial support to the commercial team dealing with requests for connections to the network (e.g. new generation sources and/or customers requesting new supplies) in two licensed areas.
- **Condition-based risk management (CBRM)** – applying CBRM based on the DNO common network asset indices methodology (CNAIM), the common framework of definitions, principles and calculation methodologies adopted across all GB distribution network operators for the assessment, forecasting and regulatory reporting of asset risk. Using this methodology, energypeople provided an analysis of material changes, data cleansing and deterioration assessments of assets.
- **Project closures** – analysing 'open' projects and developing/implementing actions which will enable financial closure.

Project feasibility analysis

Technical support for a generation developer

The client company has been established and listed with the purpose of identifying, evaluating and developing sites for peaking generation and associated services to the national grid.

At energypeople, we provided the full range of design services associated with site identification and evaluation including specification of plant, design and delivery of connections to the network, acting as owner's engineer and technical support.



Employer's engineer support

Acting in owner's engineer capacity for 132kV onshore wind farm

The energypeople design and advisory teams supported Ecotricity acting in the role of employer's engineer for Alveston wind farm connected to WPD's 132kV network.

We carried out the front-end engineering design and acted as owner's engineer during the design, specification, construction and commissioning of the project. Other responsibilities included:

- Production of employer's requirements document for the balance of plant works at the wind farm
- Conducting power system studies
- Identifying risks for balance of plant works documentation Responding to technical questions from the contractor
- Witnessing and signing off the testing and commissioning of the balance of plant works

Primary design services

Connection of 50MW battery storage to a DNO's 132kV network

This project involved the design of the non-contestable elements of the 132kV grid connection of the battery energy storage system and specification of new switchgear comprising circuit breaker, disconnector, CTs, design of protection panel and modifications to existing protection. Concurrently, design assurance of the contestable part of the network was provided by an independent connections provider (ICP).

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Power system studies

Multiple power system assessments and protection coordination activity

The Port of Felixstowe site has an electrical distribution network supplied by UK Power Networks (UKPN) at 11kV.

The client required that studies – load flow, fault level and protection coordination – were carried out to cover the complete 11kV and HV network from the two UKPN/Port

of Felixstowe 33/11kV primary substations, LV incomer and the highest rated feeder, transformers and cables. There are more than 50 distribution substations on site.

The energypeople design team was commissioned with undertaking the detailed power system studies element of the project.



We have the design skills and experience to plan, model and specify electricity networks for the integration of conventional and renewable energy

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Our people



Socky Maila

Managing Director

Socky is an Executive and Chartered Engineer with a strong background in power system design and distribution network planning. He has a proven track record of delivering high-profile projects in the renewable business and the power sector at large. His experience comes from the utilities sector working for various energy regulatory authorities, distribution network operators, independent distribution network operators, independent connections providers, private network operators, donor organisations and governments, both in the UK and overseas.

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Eric Chia

Technical Director

Eric is energypeople's Technical Director. A very well qualified and experienced Chartered Engineer, Eric has extensive electrical design experience and a good understanding of developments in the sector. With a first class honours degree in Electrical and Electronics Engineering and Masters in Electrical Engineering, Eric has broad experience on major projects working as a contractor, consultant and owner's engineer. He leads our technical work at a time when the company is expanding its offering to DNOs, IDNOs, ICPs and service providers. As part of our diversification programme, Eric has been leading our 400 kV projects – FEED and concept design and preparing layouts for National Grid substations upgrade to facilitate new generation connections.

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Josh McAvoy

Lead Design Engineer

Josh leads energypeople's work in support of one of our DNO customers, focussed on demand led and generation connections, from LV up to and including 132 kV. He has an MSc (with distinction) in electrical power engineering from the University of Newcastle; he is a member of the IET and has gained experience with energypeople working in the Middle East. Josh is also involved in providing protection design services for a number of our customers, for networks from LV up to and including 132 kV. As part of our commitment to building a sustainable business, Josh is leading a team of other younger professional engineers who are being developed to secure the future of our company.

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Marco da Fonseca

Lead Design Engineer

Marco joined energypeople in 2016 as an Electrical Design Engineer from UK Power Networks (UKPN) where he worked as a Network Development Engineer from 2012-2014. He has an MSc from The Faculdade de Ciências e Tecnologia Nova University, Lisbon, and has since then Marco has gained experience in undertaking reviews of strategic network design standards, power systems and fault level studies and overhead line capacity enhancements; in Oman he has conducted a technical audit of regulatory reporting in a distribution and supply company. An experienced designer, Marco is leading a team of Electrical Design Engineers providing technical support to Design and Commercial teams for one of our DNO customers, dealing with requests for generation and demand connections to the network, as well as diversions, service alterations, etc., from LV up to and including 132 kV.

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Ged Barrett

Business Development Manager

Ged is an engineer, manager and consultant in the energy sector covering project delivery, operations and business development in the UK and internationally. After an early career in aerospace as an engineer and then training specialist, Ged joined British Power International as a Project Delivery Manager, progressing through a number of roles to become Regional Operations Manager. He was Business Development Manager at TNEI from 2012 to 2018. In addition to his expertise in business development, Ged also has international project experience having worked on power sector projects in India, Nepal and the Middle East.

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Robert Kemp

Power Engineering and HS&E Specialist

Robert has extensive experience in creating and managing high-performing teams engaged in planning, building and maintaining complex electricity networks. He has unrivalled skills successfully creating value through good engineering design and effective asset management. Robert's knowledge comes from working as Head of System Development at UKPN (formerly EDF Energy Networks), as Head of Customer Operations, East of England South and a range of earlier engineering management roles. Robert is also an accredited safety manager and acts in this capacity for energypeople, both internally and as an adviser to others.

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Our design team

Our in-house team of CAD and specialist power system engineers has diverse expertise in designing and delivering power engineering solutions from concept formulation to detailed design.

From simple grid compliance studies through to complete substation design and owner's engineer support, our design team can support your project either as a standalone solution or a complete design package.

Our aim is always to provide excellent service at the best possible cost which we achieve by recruiting and training first-class engineers who are recognised in the industry, keeping our overheads low in order to pass on these cost savings to you, and focusing on the requirements of each individual client in recognising that one person's needs is different from another's.

For protection, earthing design, power system studies or detailed grid and primary substation electrical design services, please get in touch and a member of our team will be on hand to assist you.

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Innovative design and advisory solutions for the power sector

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