



OHL

design and advisory solutions to the power sector

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Part of the Freedom Group, british power international provides a national design service for the Electricity Supply Industry with experience of operating at voltages from 11 - 400kV.

**Our expertise is energy. Our focus is power. Our reach is worldwide.**

british power international™ are highly experienced in Overhead Line projects on both wood poles and steel towers from concept stage through to their final construction and commissioning, based on a Safety by Design methodology. To deliver these services effectively and efficiently, we invest heavily in staff development utilising the latest technology.

#### **Our design services**

Our overhead line design departments are based at Colchester and Deeside with a total of 8 Design engineers. As we fully understand that the UK transmission system is an ageing asset, we offer a complete inspection service which ensures that complex analytical analysis is based on accurate "from the field" condition information. As part of this, we have an exclusive partnership with world class specialists in the field of aerial survey, tower foundation upgrading, geotechnical analysis and materials testing.

#### **Our Principle Design Services**

The design and refurbishment of any overhead line demands specialist skills and services. The following are available and under continuous development:

- Overhead Line routing, profiling and engineering documents
- Condition assessment for wood and steel towers
- Wayleave and consents negotiations and reports
- Overhead Line Survey both traditional and aerial
- Geo-technical investigation and reports
- Foundation Design drawing and calculations
- Wood pole and Steel Tower design including drawings
- Corrosion and materials analysis with reports

#### **Our Aerial Surveys for new and existing OHL**

british power international has an exclusive arrangement with Fugro, a world class aerial survey company based in Europe and the UK. Together we have developed an Overhead Line aerial survey specification and post processing system at all voltages, specifically for the UK. This provides a survey data set of approx. 90 points per square metre across a 180m survey swathe, supported with 16meg pixel high resolution digital images and HD videos at a rate of survey of about 120km/day. On completion of the aerial survey, we offer a complete OHL design service from structure spotting through to thermal uprating and clearance studies based on a range of conductors.

#### **Our load checking on existing structures**

Our asset inspection service provides the base information required before any conductor uprating or refurbishment study is undertaken. On completion of the asset inspection, we'll work closely with you to develop a design methodology which clearly defines the most cost effective solution for upgrading or refurbishing the overhead line. If required, this can be by a full structural and foundation analysis, using specialist software.

#### **Our new foundation and upgrading study**

At british power international, we have an exclusive arrangement with Spie Foundations for the refurbishment of existing foundations. We will undertake the tower loading study and work closely with you to develop a new foundation or a refurbishment solution. Working in partnership with Spie Foundations, we have a proven solution for the replacement of existing foundations which requires minimal excavation while rendering the existing foundation redundant.

#### **Our clear design process for new and refurbishment projects**

All our OHL design work is based on a Quality System for absolute transparency at every stage. This includes a clearly defined work-scope and design project program, with a cost build up managed through a document management system dedicated to each design project.

#### **Our expertise, your design requirements**

We believe in working closely with you at every stage of a project. Our design engineers using their many years' experience on numerous projects both in the UK and internationally to ensure that your expectations are not just met, but surpassed. A number of the design team have worked with major power transmission companies and are familiar not only with design requirements, but also the wayleave and operational issues that must be engaged before any design can be undertaken.

#### **Our contacts**

**Bob Ford, Manager** – Overhead Lines and Cables