

What we can offer

Atkins plans all aspects of our clients' projects, conducting feasibility studies and impact analysis covering technical, logistical, legal, environmental and financial considerations.

The Transmission & Distribution team is part of Nuclear & Power which focuses on key clients in the fast growing nuclear and energy sectors.

We operate through strong Key Account Management and draw upon a wide range of in-house skills and capabilities to offer our clients a diverse service. We have strong skills in nuclear engineering, environmental, waste, safety, structural assessments, electrical transmission and distribution, renewable energy and sustainability, energy consultancy, and conventional and nuclear power generation.

We manage programmes for the Carbon Trust, providing energy efficiency advice and managing loans for companies seeking to improve their energy efficiency. Our capability in renewable energy and sustainability has been grown to provide support for our own projects and clients.

We have a number of successful alliances and joint ventures through which we bring our skills to market, reflecting the supply models currently preferred by our clients. Our key clients include AWE, British Energy, British Nuclear Group, Carbon Trust and Nuclear Decommissioning Authority.

Nuclear & Power is growing rapidly through organic growth, and we'll be strengthening our technical and project management capabilities to further our strategy of larger contracts supplemented with strong 'traditional consultancy' in niche areas. Our main geographic centres in the UK are Bristol, Leeds, Oxford, Warrington, Whitehaven, Glasgow, Epsom and Aldermaston.

Key contacts

If you are interested in discussing assistance for your potential projects in any of the skills / specialist areas detailed within this leaflet, please contact one of our staff below

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Office locations

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ATKINS

Electrical Design
& Connections



Plan Design Enable

Introduction

Transmission and Distribution

Atkins provides value-added engineering services and build solutions across the entire spectrum of electricity networks, from high voltage power transmission grids, to low voltage industrial power distribution and controls. Our clients include National Grid, Central Networks and EDF Energy.

Owners and operators of the power transmission and distribution networks in the UK are facing a period of unprecedented change. Under the Power Partnership strategy, pioneered through our long term contract with Central Networks (ex Midlands Electricity), we maintain close consultation with our utility clients, assisting them to plan and implement cost effective responses to industry drivers, such as:

- Ofgem introduction of BETTA
- Ofgem distribution price review
- Life expired infrastructure
- Distributed (embedded) generation connection
- Active control of "passive" distribution networks
- New grid connections

Operating throughout the UK, the team retains professionally qualified staff specialising in heavy electrical engineering, drawn from across the electricity, manufacturing and construction industries. Alongside their Power Partnership projects, our engineers serve the traditional electrical engineering consultancy business, supporting clients worldwide. Our expertise in the power sector include:

- Network planning and development including industry restructuring and privatisation;
- Power system modelling, protection studies and fault calculations;
- New connection applications and scheme design;
- High voltage substation design and build;
- Automated controls for substation and process industries (PLC/DCS/SCADA);
- Power distribution and protection equipment (transformers, switchgear, cables, protection relays; and metering);
- Construction management and commissioning;
- Due diligence; and
- New grid connections applications.

Why Atkins?

Windfarm Connections to the Transmission Network

Atkins was requested by Continental Wind Partners to make a presentation to the Romanian TSO Transelectrica and the Regulator ANRE on the benefit and issues associated with windfarm connections to the UK national grid.

The presentation looked at Licensed and Unlicensed work associated with grid connections and the general technical benefits and issues associated with windfarm connections.

Windfarm Grid Connections

Atkins has experience in advising windfarm developers on how to approach grid connections, either to a Transmission System Operator (TSO) or to a Distribution Network Operator (DNO) grid network. We have also got a large amount of experience in assisting the TSO in developing grid connections for windfarm developers within the UK and in Europe.

Atkins has advised on best international practice from a regulator, TSO and windfarm developer's perspective on the following subjects: grid connection issues and benefits, best methods of connection, cost benefits, planning issues and market opportunities.

Project experience

Proposed New Grid Connections for New Nuclear Build

Atkins prepared a report for a large generation company interested in building new nuclear power stations in the UK. The report highlighted issues in relation to new transmission grid connections in certain areas of the UK. The issues that were investigated were as follows:

- Project development of transmission network and UK wide generation;
- Transmission network planning criteria;
- Environmental and consents requirements and issues;
- Social and economic impact;
- Assessing various locations within the UK for suitability; and
- Risk and opportunities.

The report highlighted the issues in relation to probable reinforcement and new build on the existing transmission network, including shallow and deep connection requirements for particular locations within the UK.

Market Overview for DBERR

Atkins was requested to do a top level overview for the following areas on behalf of the Department for Business Enterprise and Regulatory Reform (DBERR) for the UK and International market place:

- Overview of technology trends;
- Investment opportunities in the UK and internationally;
- T&D Projects in the UK and internationally;
- Investment in the UK and International T&D Infrastructure;
- Capability of UK based T&D business to meet demand; and
- Resources and Research and Development in the UK.

The overview found that the UK based R&D and resource base, human and manufacturing has decreased since the privatisation of the electricity supply industry. There is a great need for investment within the T&D industry in both manufacturing and human resource due to the need for the replacement of the aging asset base.

