



Commercial Engineering Services

High Voltage Engineering Specialists
A unique combination of experience and expertise



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Our Academy

01 National Grid connects people to the energy they need. We take pride in training our people to the highest possible standard, ensuring we have a workforce capable of delivering and maintaining assets that safeguard the reliability and integrity of our electricity transmission system.

Given this wealth of experience in the delivery of high quality training in all aspects of high voltage power systems, we believe we are uniquely placed to deliver a training service to meet the needs of the electricity industry.

Having several strategically located, purpose built facilities throughout the country, Our Academy can offer a diverse range of training covering electrical safety as well as the operation and maintenance of electricity transmission, protection and control equipment. Facilities are also available for private use under lease arrangements.

Our Academy offers courses and programmes that encompass all aspects of the electricity industry from fundamentals to asset based training. We offer training in two key ways:

STRUCTURED TRAINING: We offer structured modules that can be provided at one of our centres or at your site. We have a variety of courses suitable for different levels of knowledge (operators, managers, engineers) and development requirements.

CUSTOMISED TRAINING: If we don't offer the module you are looking for, we aim to offer customised training to suit your requirements. Through working closely with our customers we are able to create bespoke programmes that can form part of an apprenticeship, or contribute to Continued Professional Development (CPD).

Why Choose National Grid?

02

National Grid, as the UK's major owner and operator of the electricity transmission system, is uniquely placed to deliver cutting edge training relating to electricity transmission, distribution and power systems. In choosing Our Academy, delegates will benefit from our:

Specialist Trainer Knowledge

Our highly qualified trainers have a unique blend of knowledge and experience. This has been gained working out in the field, and through formal teacher training. This sets us apart from other trainers as we are able to provide real life practical examples to ensure maximum benefits are gained by delegates.



Specialist Training Facilities

Our training facilities are not only equipped with superior standard classrooms, tools and workshops, but also with exact replicas of the assets and environments in which delegates will be working. For example, our state of the art training facility in Eakring, North Nottinghamshire, includes a full scale substation and two overhead line spans.



Cutting Edge Perspectives

Innovation is at the core of everything we do at National Grid. We work at the cutting edge of the power industry and are therefore able to offer delegates the opportunity to understand new technology.

Flexible Approach

We work with customers to adapt our training based on delegates' requirements. We can modify our training to suit development needs by entering into the correct level of detail required. This is reflected in the depth and range of courses and customisable programmes that we offer.

Customised Training Programmes

03 Employers within the power sector are currently facing the challenge of a growing skills shortage, combined with the need to rapidly invest in new technology.

National Grid aims to address this challenge by providing cost-effective solutions that tackle the unique training needs that your organisation requires.

We work closely with our clients to design bespoke training programmes that combine classroom based learning with practical, hands-on training. We can customise training to form part of:

- Continued Professional Development (CPD) programmes
- Graduate schemes
- Apprenticeships
- Asset management programmes
- Maintenance skills programmes
- Workforce renewal schemes
- Specialist knowledge development





Safety is at the heart of everything we do at National Grid.

Safety and Authorisations

04 Safety is at the heart of everything we do at National Grid. We always ensure that our safety and authorisations training is delivered to guarantee legislative compliance and, above all, the safety of employees and the public.

All of our safety training delivery team have served on the front line, at operational level, in various electricity transmission environments. Because of this, we are ideally placed to deliver market leading safety training for the industry.

We have our own dedicated facilities where we deliver our safety training and we are able to mimic common situations where safety may be of concern. For example, using our bespoke substation and overhead line training equipment to show the context in which incidents may occur.

We can design bespoke courses for small groups, or design complete programmes to suit the needs of your safety and operational teams. Alternatively, if there is a specific requirement that you feel must be delivered by a trainer within your company, our facilities are also available for lease.

Authorisation Training: Person, Competent Person and Authorised Person

Our Authorisation training operates to satisfy the requirements of National Safety Instruction (NSI) 30 "Appointment of Persons". This procedure describes the process for the appointment of persons of both company and non-company personnel under the National Grid safety rules.

Our safety and authorisations courses include:

- **Person (overhead line and substations)**
- **Competent/Authorised Person (overhead line and substations)**
- **BESC:AME**
- **IOSH Working Safely**
- **SF₆ Gas Handling**

Transmission System Training

05

There is an ever increasing need for professionals with the appropriate knowledge to maintain and enhance the UK electricity transmission and distribution systems.

As the owner and operator of the transmission system in England and Wales and the operator in Scotland, we have developed a unique working knowledge of the transmission system. Therefore valuable insights into transmission systems can be gained through attending one of our training programmes.

Our teaching staff have all gained a broad knowledge of the transmission system through working in a variety of roles within National Grid. We pride ourselves on our open approach to training and development and our trainers are always pleased to share their experiences.

Our courses are flexible so we can accommodate delegates with all levels of knowledge. Whether you are new to the industry or have many years of experience, we can design a programme accordingly.

Our transmission system training courses include:

- **Transmission Technical Overview**
- **Power System Operation**
- **Substation and Overhead Lines Overviews**
- **Engineering Overview**



Substations

06 Skill and knowledge development is key to driving increased asset availability and innovation within transmission and distribution substations.

At National Grid we take pride in investing in state-of-the-art technology and systems within our substation environments. We are dedicated to investing in an innovative approach to asset management and are therefore able to share this experience through our substation training.

Our highly qualified trainers all have practical engineering backgrounds, each with many years of experience working in various substation roles – from technicians to commissioning engineers.

At our training facility in Eakring, North Nottinghamshire, we have a unique and dedicated training substation where many

of our practical training sessions take place. This allows us to provide ‘real life’ scenarios in a safe environment. This facility is also available for lease.

We offer a range of courses that can be enrolled on individually or packaged together to form part of an ongoing training programme. Some examples of the substation appreciation courses that we offer are listed below:

- **Transformers**
- **SF₆ Switchgear**
- **Air Blast Switchgear**
- **Practical Earthing**
- **Low Voltage Equipment**



Overhead Lines and Cables

07

Our overhead lines and cables training team have vast experience in delivering services ranging from condition monitoring via foot patrols to thermal imaging assessments via helicopter. Based on this experience, we are able to deliver training courses with unique benefits.

At our main training centre in Eakring, North Nottinghamshire, we have a dedicated overhead line training facility. The set up includes 400kV and 132kV overhead line spans, temporary towers and associated maintenance equipment. This allows us to provide practical field experience for delegates. As with the training substation, this facility is available for lease to competent parties.

We also offer expert training in relation to high voltage cable technology. Our trainers

are highly experienced in managing cable projects and are always willing to share their experiences with delegates.

We offer overhead line and cable courses to suit all abilities. Some examples of the courses we offer are:

- **Basic Climbing**
- **Jointing**
- **Maintaining Steelwork**
- **Rigging and Slings**
- **Overhead Line Emergency Scenarios**



Other Services

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We also offer a range of other services to support our customers' operations. These include:



High Voltage Maintenance Services

- 24-hour Emergency Call-Out
- Site Routine Inspections
- Outage Maintenance
- Safety Switching
- Safety Management



Oil Services

- Testing and Analysis
- Replacement
- Reconditioning
- Reclamation



High Voltage Spares and Cable

- Access to National Grid's high voltage (HV) strategic spares inventory
- Membership of the 132kV and 33kV oil-filled cable clubs



Overhead Line Services

- Cable route and overhead line inspection and condition monitoring (helicopter and/or foot-patrols)
- Access to sky cradles and temporary towers

As the owner and operator of the high voltage (HV) electricity transmission network in England and Wales, National Grid has substantial experience and technical expertise in the provision of safe, reliable, high quality engineering services.



Engineering Documentation

- Access to the 'Technical Standards' document suite
- Access to our exclusive transmission tower drawing library and associated expertise



Specialist Consultancy Services

- Including:**
- Electro Magnetic Frequency (EMF) assessments
 - Rise of Earth assessments
 - DC Power Transfer and Conversion
 - Our specialist Network Engineering team carry out a range of assessment work on a variety of plant and equipment, on behalf of our customers, and report on these results.

For more information on these services please download our Commercial Engineering Services brochure from our website:
www.nationalgrid.com/ces

Our Quality Commitment

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We are committed to continuously improve the quality of our services. We therefore operate a rigorous quality management system to ensure all our training courses surpass customer expectations, providing real insights into the transmission and distribution industries.

All our courses are tried, tested, then improved upon based on delegate feedback. So, we encourage all delegates to complete feedback forms after attending training courses.

Our current accreditations and memberships include:



Where are we?

10



Hollinwood, Lancashire

- 9 training rooms
- Computer based training suite



Hitchin, Hertfordshire

- 10 training rooms
- Computer based training suite



Eakring, North Nottinghamshire

- 32 training rooms
- 11 syndicate rooms
- 400kV training substation
- 400kV and 132kV training overhead line spans
- Fully equipped workshops
- Protection and control room
- Operational GIS Switchgear



If you would like to discuss your training requirements with us please contact CES on **0800 783 9228** or e-mail **ces@nationalgrid.com**

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