EA Training Apprenticeship Programmes

About your EA Training apprenticeship journey

www.eatechnology.com

Training

Introducing EA Technology

EA Technology's mission is to promote the development of resilient, accessible, low-cost energy networks globally, accelerating the transition to energy decarbonisation.

EA Technology is a specialist in asset management solutions for owners and operators of electrical assets. Headquartered in the UK, our operations and customers are global with four regional offices around the world. We originated in 1966 as a ground-breaking research and development organisation serving the electricity industry.

We are committed to providing our customers with innovative products and services, consultancy and training which deliver tangible benefits for their businesses enabling them to create safer, stronger, and smarter networks for today and the future.

Our Vision

To encourage and nurture personal development for apprentices and trainees, who are skilled, professional, enterprising, and very well prepared for the next stage of their employment/development.

Why Choose EA Training for your apprenticeship journey

EA Training is extremely proud to be a part of EA Technology's unique technical heritage within the power industry stretching back over five decades from its beginnings as the Electricity Association Research Centre.

Our specialist expertise has gained a reputation for providing an environment where apprentices and trainees can harness the latest technology through real world lessons and cutting-edge information, which is designed to complement the long-term development of apprentices in their chosen profession and specialism. Here at EA Training, we strive to equip professionals with the necessary tools and competencies to excel in their respective fields, fostering innovation, sustainability, and growth within the industry.

We are here to upskill you and help you succeed.

What are the aspects of an apprenticeship

The three essential components of an apprenticeship are:

1

Programme of Study

This involves structured learning related to your chosen field, complementing practical job experience.

2

Full-Time Paid Job

Apprentices work in a relevant role while earning a wage, gaining invaluable real-world experience.

3

End Point Assessment (EPA)

At the end of the apprenticeship, an EPA ensures you have the necessary competencies to apply effectively.

Apprenticeships bridge theory and practice, helping you grow both professionally and personally.

Who Should Apply?

If you meet the entry requirements, this programme is designed for you – whether you're starting your career or looking to advance your skills. EA Training offers structured pathways to support your professional growth.

Apprenticeship Requirements

1

Check Eligibility

Age
Must be at least 16 years old, with no upper age limit.

Location
Must reside in England and not be in full-time education.

Employment
Be employed in a relevant role related to the apprenticeship programme.

2

Verify Qualifications

Academic Requirements
You must have GCSEs in Maths and English with a grade of 4 (C) or above, or equivalent qualifications. You will need to supply certificates upon application.

Additional Qualifications
Meet the standard academic entry requirements of the programme, which may include GCSEs, A Levels, BTECs, or other relevant qualifications.

3

Ask Questions

If you are interested or have any questions regarding the programmes, please speak to your company learning and development team or contact us on the preferred method below.

Email
eatraining@eatechnology.com
Phone
+44 (0) 151 347 2420
Address
EA Technology
Capenhurst Technology Park,
Capenhurst, Chester CH1 6ES

Apprentices need to balance their time between work and study, so being motivated and hardworking is key. As apprentices spend a significant amount of time learning on the job, you will also need to be professional and able to train and undertake work responsibilities equally.

Apprenticeship Levels on Offer

- Power Network Craftsperson – Level 3, to be superseded by;
  - Power Industry Substation Fitter – Level 3
  - Power Industry Distribution Cable Jointer – Level 3
  - Power Industry Overhead Linesperson – Level 3
- Electrical Power Networks Engineer (EPNE) – Level 4

Power Industry Substation Fitter – Level 3

Substation fitters work in the power industry for power network owners, operators, or contractors.

They work in and around substations. A substation is a part of an electrical generation, transmission, and distribution system. Substations transform voltage from high to low, or the reverse, and other important functions. Between the generating station and consumer, electric power may flow through several substations at different voltage levels.

Substation fitters specialise in distribution or transmission maintenance. Distribution maintenance covers systems operating typically between 1,000 – 132,000 volts, whereas transmission maintenance covers systems operating typically between 132,000 – 400,000 volts, with differences in equipment and working procedures.

This is a core and options apprenticeship. An apprentice must be trained and assessed on the core and one option relevant to their role. The options are:

- Option 1. Substation fitter – distribution maintenance
- Option 2. Substation fitter – transmission maintenance

Substation maintenance fitters (distribution and transmission) inspect, test and maintain substation equipment, earthing and batteries, and carry out repairs. They receive safety documents and organise and supervise a working party (group of workers). They monitor working conditions and react to maintain safety. Completing work and safety records is also part of their role. Substation distribution maintenance fitters also conduct electrical switching operations. Substation transmission maintenance fitters also conduct functional tests of transmission protection systems and devices.

They work at sites across a company's or client's power network. This means they may have to drive vehicles requiring driving licenses. They work in all weather conditions. They may have to be on standby duty and work shifts outside normal working hours. The role requires a good level of physical ability and working at height and in confined spaces.

They help maintain the safe supply of electricity and the development of flexible networks that are vital to achieving environmentally sustainable networks. Work must comply with the electricity safety, quality, and continuity regulations (ESQCR). Safety is a top priority for the industry. They must comply with health, safety, environmental, and sustainability regulations and procedures. Failure to do so could have serious consequences for self, others, and the environment. They must complete tasks in line with the network's procedures and specifications, to the required timescales and unit costs. They must present a professional image of the company and themselves.

Qualification Level
Equivalent to two A-level passes

Typical Duration
Approximately 30-months

Apprenticeship Category
Engineering and Manufacturing

Application Requirements
Ideally Apprentices will have achieved grade 4 (GCSE C) English and Mathematics prior to entry

Power Industry Cable Jointer – Level 3

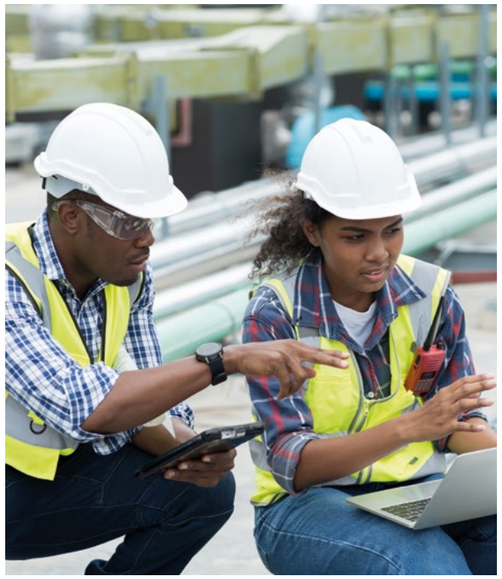
Cable jointers work in the power industry for power network owners, operators, or contractors.

They work on the electricity distribution network that supplies electricity to homes and businesses. They work on low voltage (LV) and high-voltage networks up to 11,000 volts, including LV live working.

Cable jointers connect new supplies, divert, and make alterations to existing supplies, and locate and repair faults. They receive safety documents and organise and supervise a working party (group of workers). They monitor working conditions and react to maintain safety. Completing work and safety records is also part of their role.

They work at sites across a company's or client's power network. They may have to drive vehicles requiring driving licenses. They work in all weather conditions. They may have to be on standby duty and work shifts outside normal working hours. The role requires a good level of physical ability and involves working at height and in confined spaces.

Cable jointers are responsible for helping to maintain the safe supply of electricity and the development of flexible networks that are vital to achieving environmentally sustainable networks. Work must comply with the electricity safety, quality, and continuity regulations (ESQCR). Safety is a top priority for the industry. They must comply with health, safety, environmental, and sustainability regulations and procedures. Failure to do so could have serious consequences for self, others, and the environment. They must complete tasks in line with the network's procedures and specifications, to the required timescales and unit costs. They must present a professional image of the company and themselves. They must be competent to hold an authorisation to fulfil their duties under their company's safety rules. They may need to hold CSCS (construction skills certification scheme card) cards.



- **Qualification Level**
  Equivalent to two A-level passes
- **Typical Duration**
  Approximately 30-months
- **Apprenticeship Category**
  Engineering and Manufacturing
- **Application Requirements**
  Ideally Apprentices will have achieved grade 4 (GCSE C) English and Mathematics prior to entry

Power Industry Overhead Linesperson – Level 3

Overhead linespersons work in the power industry for power utility owners, operators, or contractors.

They work on overhead line power distribution and transmission networks. Distribution lines carry electricity from a substation to consumers – residential and commercial. Transmission lines move electricity from a power plant or power station to the various substations. There are differences in equipment and working procedures between the two networks.

This is a core and options apprenticeship. An apprentice must be trained and assessed on the core and one option. The options are:

- **Option 1**
  Power industry overhead linesperson – distribution
  Distribution overhead linespersons work on small scale structures, typically capable of carrying up to 132,000 volts, and their support mechanisms.
- **Option 2**
  Power industry overhead linesperson – transmission
  Transmission overhead linespersons work on large support structures, for example steel towers, typically capable of carrying 132,000 volts and above, and their support mechanisms.

- **Qualification Level**
  Equivalent to two A-level passes
- **Typical Duration**
  Approximately 30-months
- **Apprenticeship Category**
  Engineering and Manufacturing
- **Application Requirements**
  Ideally Apprentices will have achieved grade 4 (GCSE C) English and Mathematics prior to entry

Both transmission and distribution overhead linespersons conduct planned and reactive work to maintain and repair plant and equipment. They work on and near live apparatus. They receive safety documents and organise and supervise a working party (group of workers). They monitor working conditions and react to maintain safety. Completing work and safety records is also part of their role.

They work at sites across a company's or client's power network. This means they may have to drive vehicles requiring driving licenses. They work in all weather conditions. They may have to be on standby duty and work shifts outside normal working hours. The role requires a good level of physical ability and working at height.

Distribution overhead linespersons also construct distribution overhead line plant and apparatus for example, wooden poles. And their work may involve working on customers' premises or property.

They help to maintain the safe supply of electricity and the development of flexible networks that are vital to achieving environmentally sustainable networks. Work must comply with the Electricity Safety, Quality, and Continuity Regulations (ESQCR). Safety is a top priority for the industry. They must comply with health, safety and environmental, and sustainability regulations and procedures. Failure to do so could have serious consequences for self, others, and the environment. They must complete tasks in line with the network's procedures and specifications, to set timescales and unit costs. They must present a professional image of the company and themselves. They must be competent to hold an authorisation to fulfil their duties under their company's safety rules.

Electrical Power Networks Engineer (EPNE) – Level 4

Electrical Power Network Engineers work within the power sector with other Engineers, sometimes specialist Engineers, to provide engineering solutions to solve complex electricity network scenarios in order to safely manage electricity supplies in normal and abnormal conditions.

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Using company/client network strategies, engineers undertake engineering activities to plan, manage, control, construct, replace, maintain and repair assets on the electricity network. They will work in engineering teams that may include Power Network Craftsperson, senior Engineers and other business specialists, for example procurement, finance, and telecommunications engineers.

The EPNE apprenticeship covers 6 roles: Asset Management Engineer, Planning Engineer, Design Engineer, Control Engineer, Electrical Project Engineer, and Operational Delivery Engineer.

They are responsible for the quality of their own work, possibly others' and ensuring the work is completed safely, meets stakeholder quality, time, productivity, and budget requirements, whilst maintaining the integrity and efficient running of the network.

Qualification Level
Equivalent to a Higher National Certificate (HNC)

Typical Duration
Approximately 30-36 months

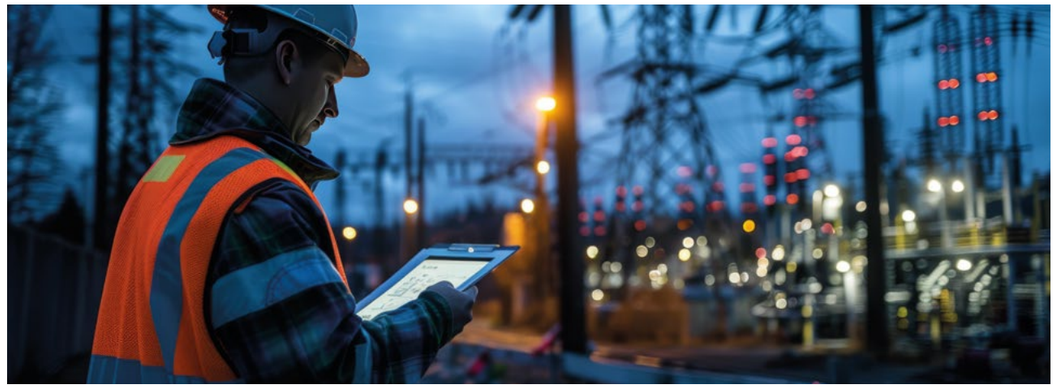
Apprenticeship Category
Engineering and Manufacturing

Application Requirements
Apprentices will have achieved Level 3 in Mathematics (A Level or equivalent) prior to entry.

Core Knowledge:

An Electrical Power Network Engineer understands:

- Electrical power principles:
- Three-phase systems with consideration being given to harmonics and their effects and the methods of power distribution.
- Electricity network design.
- The operation of the electricity network in normal and fault conditions.
- Safe systems of work and risk management; the application of Electricity Supply Standards, Regulations including environmental requirements.
- Project management tools, techniques, and processes.
- Company engineering policies appropriate to their role.
- How to solve engineering .
- Company business planning and resource control measures.
- The key interfaces of the electricity network and the impact of those interfaces.



Core Skills:

An Electrical Power Network Engineer will apply their knowledge of the electricity network to safely perform their activities. This requires them to:

- Comply with company and Industry health, safety and environmental standards, regulations, company operating procedures and working practices.
- Ensure that all safety considerations are incorporated and evident in all working practices.
- Apply asset management methodology.
- Communicate effectively with stakeholders.
- Read, understand, and interpret technical information relative to their role.
- Produce clear and precise reports in relation to their activities.
- Develop and agree project plans to undertake their activities.
- Use company IT systems to provide accurate and reliable data to support business decisions.
- Demonstrate that their work activities support the business to achieve its regulatory incentive mechanisms provide information to support business planning processes in relation to their role activities.
- Uses company risk tools and techniques to evaluate and predict the reliability of engineering systems and equipment.

Core Behaviours:

- **Health, safety and environment** – follows health, safety and environmental policies and procedures and is prepared to challenge unsafe behaviour using appropriate techniques to ensure the protection of people and property when working alone and/or with teams. Demonstrates high concentration and the desire to reduce risks through regular monitoring and checking information
- **Stakeholder management** – is proactive in identifying their stakeholders and managing their expectations, presenting appropriate information to them clearly and concisely.
- **Interpersonal skills** – works well with people from different disciplines, backgrounds, and expertise. Takes others' needs and concerns into account and supports them to accomplish an activity safely and on time.
- **Analysing and solving problems** – takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business.
- **Risk awareness** – has the embedded desire to reduce risks through systematic monitoring and checking of information identifying mitigation actions on an on-going basis to achieve safe systems of work
- **Planning and organising** – takes a forward-looking perspective when considering the delivery of decisions, activities and projects and ensure plans are in place to manage anticipated issues, considers contingency planning.

What does an apprenticeship programme look like?

The programme of delivery will consist of a variety of learning and development delivery methods. These include face-to-face delivery in cohort groups through attendance at EA Technology's Training Centre, or, remote learning via EA Training's online learning platform and online tutorials.

Apprentices will be assigned a Company Mentor by their employer, and an EA Training Apprenticeship Manager; these staff are assigned to support and mentor the apprentice through their programme.

Apprentices are issued learning material as well as access to a personal ePortfolio for gathering and documenting evidence.

On completion of the study phase of the programme apprentices will pass through the End Point Assessment gateway, this will be the final assessment phase where apprentices will have to complete the following assessments over a period of around 6 months:

- Knowledge assessment
- Observations of working practices by Externally appointed assessors
- Technical interview

On successful completion of the EPA apprentices will have completed their apprenticeship.

Example: Electrical Power Networks Engineer (EPNE) Apprentice Programme

Duration
30-36 months

Programme of study
Month 1 to 30

End Point Assessment
Month 31 to 36

Study Method
This involves theoretical and practical training delivery by EA Training and your company. The programme delivery could include the following learning sessions:

- Foundation in Electrical Power Engineering
- People Management – ILM Level 3 Award in Leadership and Management
- Substations – Transformers and Switchgear Technology
- Cables for Power Systems
- Overhead Lines
- Earthing Systems
- Protection Systems
- Project, Asset and Contract Management
- Condition Monitoring – SF6, Partial Discharge and Oil Analysis
- HVDC theory and systems
- Power Quality
- Commissioning and Testing

Global Footprint

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EA Technology is an engineering and technology business that provides intelligent energy solutions for designers, installers, operators, and owners of power network assets.

Founded in 1966 we have over 50 years' experience in the industry and 6 regional offices around the world to support our global customer base.

We work with a lot of our clients on a long-term basis to help them safeguard their power networks.

We advise our clients on strategy and implementation of a range of technology solutions to manage power assets, delivering maximum life and minimise cost.

ea technology

Safer, Stronger, Smarter Networks

EA Technology Limited
Capenhurst Technology Park
Capenhurst, Chester CH1 6ES

t +44 (0) 151 339 4181
e sales@eatechnology.com
www.eatechnology.com