

## Electrician

### What does this career involve?

From bringing power to homes to taking part in major engineering projects . working in the electrotechnical industry means you'll be making sure the UK is switched on

Whether it's transporting data along fibre optic cables, or programming computer-controlled intelligent buildings and factories, a career as an electrician means you'll enjoy a diverse and exciting variety of work.

It's not just about traditional sources of energy - with the increase in renewable technology, you could also be working on wind turbines or photovoltaic systems that turn the sun's energy into electricity. As the UK tries to produce electricity using less and less fossil fuel, by working in this industry you'll be playing a key part in helping to reduce the country's carbon footprint and tackle climate change.



Electrotechnical careers are divided into different areas:

- As an **installation electrician** you'll be installing power systems, lighting, fire protection, security and structured cabling in all different types of buildings
- A **maintenance electrician** then checks these systems regularly to ensure they keep on working effectively and efficiently
- **Electrotechnical panel builders** are responsible for control panels that operate the electrical systems inside buildings
- A **machine repair and rewind electrician** repairs and maintains electrical motors and other machinery to make sure they work correctly
- As an **instrumentation electrician** you'll be working with the control systems that make buildings work, to ensure they function properly and do what they're meant to.
- In **highway systems** you'll be installing and maintaining street lighting and traffic management systems that tell the public what they need to know when they're on the roads and motorways.

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### What sort of person do I need to be?

If you join this industry you'll be inspecting and testing equipment and ultimately making the electrotechnical systems work, spotting any faults along the way and fixing them

You'll need to provide information about the systems and describe what work you've been doing

Being able to strike up a good relationship with customers and colleagues is also important, and you may also look after other people in the team to monitor their work.



Whether you're male or female, the electrotechnical industry is looking for people that:

- have good practical and hand skills
- can follow technical drawings, building plans, wiring diagrams and other instructions
- can work carefully, methodically and safely
- can measure accurately
- have a head for heights and be prepared to work in all sorts of weather
- are willing to work in confined spaces
- are presentable with a pleasant manner
- have good written and verbal communication skills
- are good team players but are also able to work on their own initiative
- can adapt to change
- have good problem-solving skills
- have good analytical and evaluation skills
- can plan and organise the work of others
- can motivate others

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### What hours will I do and what's the working environment like?

You might be needed at any time to help customers, so there may be times when you're asked to work outside of the usual working week of 37.5 hours, Monday to Friday.

You could be working in all types of buildings - homes, offices, shops or even sports stadiums

Depending on what type of work you specialise in, you may also work on a construction site, which can be noisy, dusty and cold.

You might have to get into cramped and uncomfortable conditions in order to access the electrical cabling and equipment. Sometimes you'll be working at height using a variety of equipment such as scaffolding.

Working in this industry usually means you're based locally, travelling from one project to the next. But some companies work across the whole country for their customers, so if you work for one of these firms you might be asked to stay overnight for short or long periods if a project is far from home.

When you're on a construction site you'll have to wear hard hats, high-visibility jackets, safety shoes and other similar equipment to make sure you stay safe.

### What salary and other benefits can I expect?

Your salary will vary depending on your employer and where you live in the UK, but as a guide you might expect:

- First-year apprentices may start on around £8,000 a year.
- Newly-qualified workers may earn over £17,000 a year.
- Experienced workers may earn over £30,000 a year.



Some employers pay more, and you might get bonuses and overtime pay. There are national set rates that will cover your travelling time, travel expenses and accommodation costs.

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### What other interests would fit well with this career?

The work you'll do in the electrotechnical industry is underpinned by maths, electronics and science. So if you're interested in these subjects, have an interest in environmental matters, and enjoy using your practical skills, this career could be a good fit for you.

### What does the industry profile look like?

There are about 20,000 electrical contracting companies that employ in total around 365,000 people and support 8,000 apprentices in their training. The companies range from local employers with only a few employees to national firms with several branches employing thousands. Many operate worldwide.

### How do I get into this industry?

You'll need a National Vocational Qualification (NVQ) or Scottish Vocational Qualification (SVQ) at Level 3 if you're going to work as a qualified electrician. There's also other training on top of the NVQ/SVQ that you'll have to complete in order to become fully qualified.

Most people start as an apprentice straight from school or college and train on the job. Apprenticeships give you the underpinning knowledge and skills you need to work effectively and professionally.

You'll do both off-the-job training, where you learn at a college or training centre, and on-the-job training, where you apply

your skills and knowledge while working on-site for your employer. Generally training will take between two and four years to complete, depending on the apprenticeship scheme.

We have produced guidance booklets, based on where you live, that provide more information on the different types of apprenticeship, entry requirements and the specific training you'll do:

- [England](#)
- [Northern Ireland](#)
- [Scotland](#)
- [Wales](#)



If you're not able to do an apprenticeship straight away, there are programmes around the UK that can help you to progress to an apprenticeship, further learning or a job.

Speak to your local careers adviser to find out more.

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### What if I'm an adult that wants to join this industry?

Some apprenticeship schemes across the UK are open to people over 25, although the number of places might be limited. Local colleges may have their own training schemes aimed at adults.

If you're over 25 you can still undertake the NVQ/SVQ without doing an apprenticeship. To gain an NVQ/SVQ, you must be in employment or have the ability to be assessed on site, carrying out real work. Similar to an apprenticeship scheme, you should be prepared to gain the qualification over a number of years, not weeks or months. There is no quick fix to gaining the right qualifications and it will take around four years to complete.

Vacancies for qualified workers are usually advertised in local newspapers, job centres, and on websites such as [Monster](#) or [Workthing](#).



### How can I progress further in this career?

Most large employers have a formal progression structure. If you work for one of these companies you may have the chance to take on more important projects and managerial responsibilities as you progress and gain experience.

Once you're qualified to NVQ/SVQ Level 3, you could progress to higher qualifications like NVQ/SVQ Level 4 or even a degree, which will lead to job opportunities at [technician](#) or management level where you will design systems which will have an even greater environmental impact. If you want to do a degree course, many universities or similar institutions will accept a relevant qualification, or take your work experience into account instead of traditional academic qualifications.

You could also have the chance to move into design consultancy, teaching, or there's even the opportunity to run your own business.

