

# Environmental technologies

**National  
Careers  
Service**

Helping you take  
the next step

The future of the planet may depend on our success in creating ways to reduce carbon emissions and protect the environment. The low carbon sector – sometimes called the 'green economy' – is growing rapidly and new technologies are helping in areas such as energy efficiency, waste management and recycling, low emission vehicles and renewable or clean energy.

**Skilled people in high demand especially qualification level 4 and above and those with STEM\* skills**

\*Science, technology, engineering and maths

**221,000 new recruits needed by 2027 in energy and utilities as 20% of the workforce is due to retire**

## Future trends

Finding ways to tackle climate change is a priority for the whole world and we can expect to see opportunities grow in areas such as:

renewable energy (wind, wave, hydro power) | waste management and recycling | electric vehicles | sustainable construction | carbon capture | bio energy | smart energy (including smart meters)

Clean technologies, or 'clean tech' are being used across these sub-sectors to find innovative ways to reduce energy waste.

It's not just about engineers and technicians in this sector, many STEM specialists will be needed, including those with IT skills such as cyber security and 'big data' professionals, and scientists (physicists, biologists and chemists) who can work especially in water and waste.

## Skills and qualities

Some employers report that they struggle to find candidates with the right people or personal skills. Employers in this sector are particularly looking for:

### Advanced ICT and digital skills

Communication

Problem solving

Analytical skills

Team working

Leadership

Attention to detail

Maths

Science

Design

Innovation

Business knowledge

## What could you earn?



These are the average salaries you might expect to earn in the low carbon industries\*. Salaries are likely to be lower for new starters and higher for experienced workers.

**Wind turbine technician £28,050**

**Science technician £30,050**

**Energy plant operative £31,150**

**Environmental professional £33,400**

**Design engineer £40,100**

**Mechanical engineer £42,250**

**Electronics engineer £43,850**

**Research and development manager £46,600**

\* Annual Survey of Hours and Earnings 2017. Average full-time (median) salary rounded to the nearest £50.



## The local picture

Birmingham is a leader in renewable energies and aims to become one of the world's leading green cities.

The UK Central area around Solihull is rapidly becoming a hub for clean and renewable technology.

Most companies who work with environmental technologies are small to medium businesses, but the universities of Birmingham and Aston are leaders in UK energy research and more than 500 academics work in energy-related research in the region. There is a real strength in the West Midlands for the development of low carbon vehicles and companies such as Jaguar Land Rover and Changan are always seeking talent.

Energy Capital  
Office for National Statistics

## How many people are employed in this sector?

Across the UK there are around 234,000 full-time equivalent jobs in the low carbon and renewable energy sector.

## Local companies include:

npower | Veolia | Grayson Thermal Systems | Europackaging | Changan | Jaguar Landrover | Climate-KIC | Admec | Earth Source Energy | EBRL

## Getting in



There's a wide range of careers to be had in low carbon and renewable technologies but employers are struggling to recruit for some job roles. There's a skills shortage of engineers including design, mechanical and environmental, and a demand for scientists such as ecologists and nuclear. Some of these roles require a degree but the apprenticeship route can also be a way into a career in this sector.

## Types of apprenticeships include:



smart meter installation, sustainable resource management, design engineer, engineering construction erector, electrical installation engineer, junior energy manager, thermal insulation operative, mechanical engineer, nuclear health physics monitor

## Finding out more



[www.thinkpowersector.co.uk](http://www.thinkpowersector.co.uk)

[www.myoilandgascareer.com](http://www.myoilandgascareer.com)

[www.futuremorph.org](http://www.futuremorph.org)

[www.bconstructive.co.uk](http://www.bconstructive.co.uk)

[www.semta.org.uk/careers](http://www.semta.org.uk/careers)