ROUTING for you

Mapping pathways to help YOU choose the right route to your future career.

What is Energy Technology?

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The Energy technology industry concerns itself with the use of renewable and natural sources of energy, such as:

- Wind
- Sunlight
- Geothermal heat
- Tides

This industry is absolutely crucial whilst the world we live in changes daily. You could quite literally be saving the earth whilst working in a job that improves the lives of others. Sound good to you?

Careers in this sector are vast, essential and fulfilling with more and more people recognising its value every single day.

Do you see yourself working at the forefront of technologies, playing a central role in helping to combat the impacts of climate change? Then this industry could be for you.

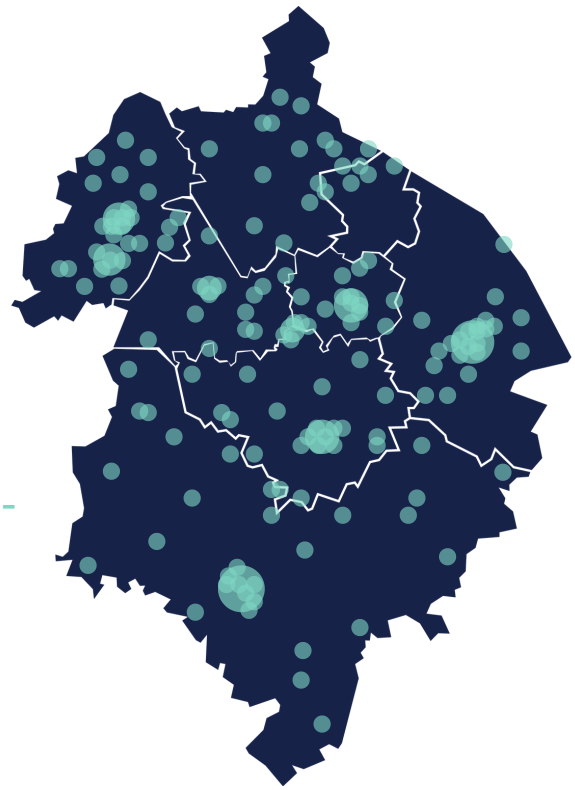
Within renewable energy, you could work in a range of environments, indoor or outdoor, from a lab to an adventurous location. This sector is growing in strength locally, playing a part in the protection of the local environment.

1,000,000,000,000

This global industry is predicted to be worth a staggering 1.1 TRILLION pounds by 2025!

Example job roles

- Project Managers
- Environmental Researchers
- Nuclear Power Reactor Operators
- Digital Energy Specialists
- Solar Fabricators and Installers
- Wind Turbine Farmers



The heat map to the right indicates the number of jobs posted by employers during 2019, helping you to quickly recognise areas of high and low job density around you.

Why Energy Technology?

A career in this industry offers fantastic opportunities and possibilities that we aren't even aware of yet. This industry is a rapidly growing, widely recognised and a highly valued area in which you can develop a fantastic career.

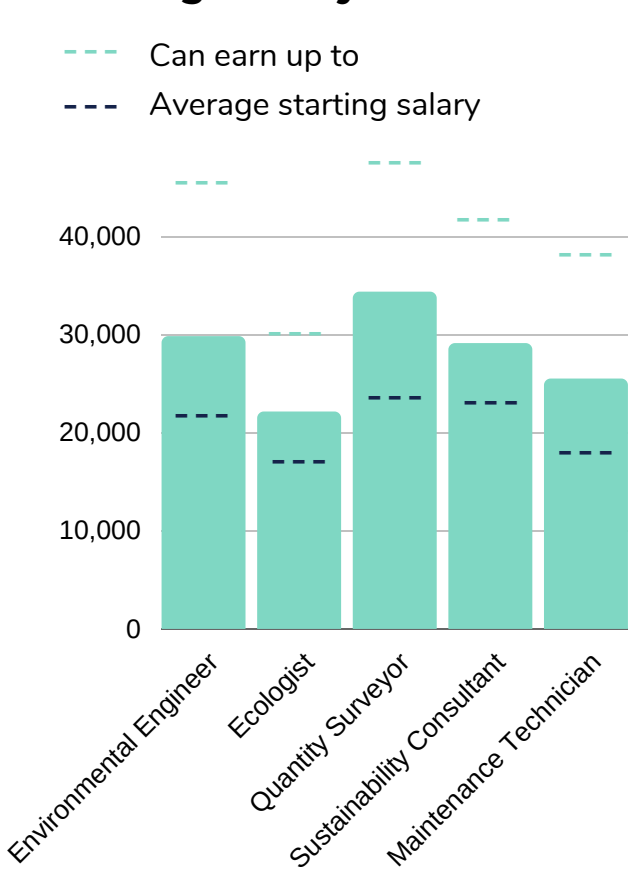
Otherwise known as clean energy or green energy, the renewable energy sector and its emerging technologies are booming.

As energy technologies continue to develop and thrive, so will the number of jobs. Recently, from one event alone, 11 projects confirmed to be worth a massive £176 million, per year, could create thousands of jobs across the UK, including the West Midlands.

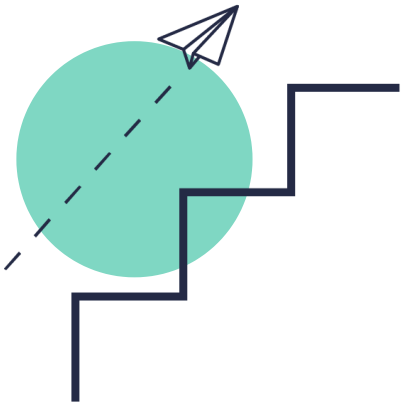
Universities of Aston, Birmingham, and Warwick are three of the six partners in the energy research accelerator announced by HM treasury. The purpose is to help develop the next generation of energy leaders, giving young people like you, the power to shape the future of the UK's energy landscape.

You can choose from a range of options, such as apprenticeships and internships, when pursuing a career in the Energy Technology sector. However, a Bachelor's degree in science is highly desirable. If you do choose a degree chemistry, biology or sustainability are great considerations.

Average Salary in UK



A recently listed position for a company based in Birmingham as a Field Sales Representative within this sector was offering up to £80,000 per year.



900% increase in the number of jobs within the sub-sector Trade of Electricity and 500% increase in Collection of Hazardous Waste between 2015-2018.

Environmental Engineers were the most popular job role in this sector in 2019.

£42,000

With experience a Wind Turbine Technician can earn up to £42,000.

Did you know?

With further training, you could work as an Operations and Maintenance Manager, Control Systems Engineer or Energy Engineer.

Did you know?

Demand for Wind Turbine Technicians is predicted to grow over the next 10 years, with older wind farms being replaced or refurbished, as they come to the end of their working lives.

Wind Turbine Technician

A Wind Turbine Technician will usually start on around £23,000.

Apprenticeships

There are many apprenticeships on offer for example, Engineering Technician or Maintenance and Operations Engineering Technician, as well as advanced and higher apprenticeships for example, Manufacturing Engineering: Wind Generation apprenticeships.

The largest wind turbine in the world is in Hawaii, USA. It stands 20 stories tall and has blades the length of a football field!

University

University Degree options include renewable energy engineering, electrical or mechanical engineering and electrical power engineering.

You can do a Foundation Degree and top up in Mechanical Engineering at Solihull College.

Other Courses

Level 3 Certificate in Mechanical or Electrical Engineering
Level 3 Diploma in Maintenance Engineering Technology

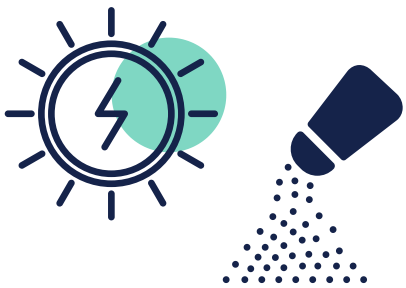
A Levels

1 or 2 A Levels (including at least one STEM subject) are needed for a foundation degree or higher national diploma
2 to 3 A Levels (including at least one STEM subject) are needed for a degree.

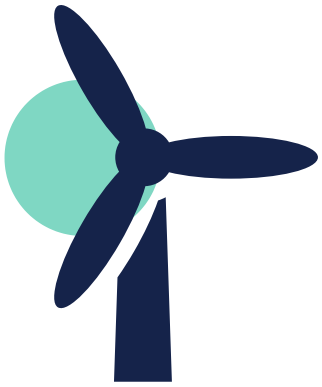
School

5 GCSEs at grades 9 to 4 (A* to C), or equivalent, including English, maths and science.

Did you know?



The sunlight that hits the earth in just 1 hour can supply the world's power demands for an entire year. All of which can all be stored in salt.



A single wind turbine can power thousands of homes.

561 new jobs

Job postings in this sector grew by 27% between 2016 and 2019 in Birmingham but fell by -21% in Coventry. Overall, however, within the wider region, jobs increased by 9%. That's an extra 561 jobs in just three years.

In 1921 Albert Einstein was awarded the Nobel Prize in Physics for his discovery of the photoelectric effect – which led to the invention of solar panels.

The Energy Technology sector is one of the most rapidly growing industries in the world.

66,425

There were a whopping 66,425 Energy and Green sector jobs in the West Midlands in 2018, and it's increasing every year.

Tomorrow's Working World

Worldwide changes	What's happening and how does this impact you and your career?	Which jobs will be a priority?
Environmental concerns and changes to the global climate. 	People are looking for greener energies and developing technologies which are more efficient and sustainable. The importance of looking after the planet has never been more recognised. Moving towards a greener world will affect all sectors. Industries are switching over to ecological technologies and changing how we work with an increase in remote working and digital technology.	Engineering Automotive Design, Chemical Processing, Recycling and Waste Solutions, Agriculture Energy and Utilities Innovation
Ever-increasing need for speed, turnarounds and direct routes to a result. 	Convenience and fast delivery of projects is a priority. With an economy vastly effected by global changes and the pandemic, businesses are finding ways to save money and speed up processes to help them survive. Businesses are becoming more accessible via digital platforms and using technology to reduce overheads, providing opportunities in roles within the technology, manufacturing and digital sectors.	Advanced Manufacturing, Business Developers, Creative App Development, Coding, Digital Marketing, Professional Services, Lawyer, Sales Representative, Underwriter, Auctioneer, Judge, Coroner, Valuer
Technology is advancing every day with new technologies emerging at an ever-growing rate. 	The world is changing as a result of emerging technology. Some jobs and market requirements have become redundant because of new ways of working. Technologies will keep changing, and therefore different skills will be desired in areas such as IT, design, mechanics and STEM subjects.	Engineering, Advanced Manufacturing, Creative Media roles, ICT Data Analysts, Aerospace, Aeronautical, Electronics, Energy Technology
Life expectancy is longer than ever before with the average person living to 81 years old. 	Due to medical advances and the development of life sciences, people are living for longer than ever before. You will be working longer due to the ever-increasing retirement age. Although this may not be something you are thinking about now, it will be important to you when you get older. You want to find a career that makes you happy and fulfils you.	All sectors

What next?

The information in this brochure only scratches the surface when it comes to choosing your career pathway. Now it is time to start looking at your options and choices, carry out research and discover what is out there for you. Follow your passions and make a career out of what you love. Opportunities are endless. You just need to start looking for them.

ROUTING for you

Sources & Useful Links

Useful links:
- https://nationalcareers.service.gov.uk/explore-careers
- www.statista.com
- http://www.lmiforall.org.uk/explore_lmi/
- https://www.ucas.com/

Advanced Manufacturing:
- https://nationalcareers.service.gov.uk/job-profiles/mechanical-engineer

Business, Professional and Financial:
- https://gbslep.co.uk/what-we-do/business/business-professional-financial-services

Creative:
- https://www.gov.uk/government/news/uks-creative-industries-contributes-almost-13-million-to-the-uk-economy-every-hour
- https://www.wmca.org.uk/news/creative-industries-in-west-midlands-to-get-12m-boost-from-government/
- https://www.thecreativeindustries.co.uk/media/529975/cic_3yr_export_strategy_v3_singles.pdf
- https://www.creativeindustriesfederation.com/statistics

Energy Technology:
- http://www.nef.org.uk/knowledge-hub/other-renewable-energy/renewable-energy-technologies
- https://www.prospects.ac.uk/jobs-and-work-experience/job-sectors/energy-and-utilities/renewable-energy-careers
- https://www.bmrsolutions.co.uk/a-beginners-guide-to-careers-in-renewable-energy/
- https://www.careeronestop.org/GreenCareers/ExploreGreenCareers/renewable-energy.aspx
- https://www.statista.com/statistics/1094309/renewable-energy-market-size-global/
- https://www.quanta-cs.com/blogs/2017-10/why-work-in-renewable-energies

Life Science:
- https://www.healthcareers.nhs.uk/explore-roles
- https://career-advice.jobs.ac.uk/resources/what-jobs-could-i-do-in-life-sciences/
- https://gbslep.co.uk/what-we-do/business/life-sciences-healthcare
- https://www.lateet.com/8-cool-facts-to-know-about-a-career-in-life-sciences/

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