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# Energy And Utilities

## Overview

We all need power and water to live, and increasingly we need access to digital communications too. We also need our waste to be handled appropriately, to make the best use of precious resources and maintain a healthy and pleasant environment. Utilities are the organisations that ensure that we have access to these life-giving services. Energy companies are the organisations that are involved in the generation, processing, transportation and/or reselling of the various types of energy.

The energy industry is being massively impacted by climate change. Moving from fossil fuel to renewable energy and nuclear power is leading to the need for a substantial overhaul of energy infrastructure.

A desire to move away from gas as a key source for heating buildings will change the need from gas pipelines across the country, to heat pumps serving individual properties or neighbourhoods.

Moving from petrol and diesel to electricity to power vehicles means we need fewer refineries and storage solutions, but more generation and delivery points for electricity.

Changes in weather patterns are leading to new demands on both water storage, and water and waste treatment plants.

The way that fast, reliable internet access is required across the country is leading to huge investments in upgrading communications pipelines.

Older fossil fuel organisations are trying to change to new markets (or cling on to old ones), utilities companies are lobbying for investment in their infrastructure, much of which is old and needs upgrading, and new organisations are forming or managing growing pains as their markets become more established.

Organisations and households are all wanting advice on how to save energy and water, and skilled professionals to help them put that advice into practice.

Public bodies, such as regulators and local and national governments are adjusting to the changing circumstances and trying to direct organisations and consumers towards sustainable ways of operating and living.

So, it’s an exciting time to enter these industries, and there are lots of career paths you can follow.

### Types of employers

* Utility companies e.g. Thames Water, National Grid, OpenReach
* Government and Regulators e.g. Department for Energy Security & Net Zero, Ofwat, Ofgen, Ofcom, Environment Agency
* Renewable energy manufacturers e.g. Siemens, GE, Vestas, Canadian Solar
* Telecomms e.g. BT, Virgin Mobile, EE
* Energy e.g. EDF, RWE, OVO, E.On
* Water e.g. Thames Water, United Utilities, Seven Trent
* Waste management e.g. Veolia, Biffa, Enviro Waste

## Roles

There are specialist roles in Energy and Utility organisations, and the types of career paths that exist across all industries:

### Specialists, for example:

* Scientists are needed to develop, test, deploy and regulate activities, be they [environmental](https://targetjobs.co.uk/careers-advice/job-descriptions/environmental-scientist-job-description), [geological](https://www.prospects.ac.uk/job-profiles/geoscientist#:~:text=As%20a%20geoscientist%2C%20you'll,protection%2C%20land%20reclamation%20or%20oceanography.), [archaeological](https://www.prospects.ac.uk/job-profiles/archaeologist), [computing](https://www.prospects.ac.uk/job-profiles/data-scientist), [physics](https://uk.indeed.com/career-advice/finding-a-job/what-does-a-physicist-do), [chemistry](https://www.prospects.ac.uk/job-profiles/geochemist) or [biology](https://uk.indeed.com/career-advice/finding-a-job/how-to-become-a-biologist);
* Engineers are needed in all these organisations, of many types, such as [energy](https://www.prospects.ac.uk/job-profiles/energy-engineer), [electrical](https://www.prospects.ac.uk/job-profiles/electrical-engineer), electronic, [civil](https://nationalcareers.service.gov.uk/job-profiles/civil-engineer), [chemical](https://www.prospects.ac.uk/job-profiles/chemical-engineer), [mining](https://www.prospects.ac.uk/job-profiles/mining-engineer);
* Trades of many kinds are needed to build and maintain the infrastructure e.g. [electricians](https://nationalcareers.service.gov.uk/job-profiles/electrician), [technicians](https://stem.getintoenergy.com/module7-2/pipeline-technician/) to lay and repair pipelines, building retrofitters;
* [Energy and commodity traders](https://targetjobs.co.uk/careers-advice/job-descriptions/commodity-broker-job-description) work on the global markets, distributing resources and helping users of the resources plan for their needs.

### Generalists:

* [Operations managers](https://uk.indeed.com/career-advice/finding-a-job/operation-manager-responsibilities), to ensure that the business delivers its products and services;
* [Project managers](https://www.prospects.ac.uk/job-profiles/project-manager), to ensure that projects are delivered to time, cost and quality agreed;
* Planners, to ensure that development and maintenance is carried out efficiently;
* Sustainability experts, such as [sustainability consultants](https://www.prospects.ac.uk/job-profiles/sustainability-consultant) to ensure that the organisations are developing in way that make ever lower demands on the planet and can report on their progress;
* [Commercial](https://uk.indeed.com/hire/job-description/commercial-manager) and [financial managers](https://www.prospects.ac.uk/job-profiles/financial-manager), to ensure that growth plans and operations are profitable or within budget;
* Marketing, HR, procurement, IT, legal, customer service, sales, health and safety etc. are all needed in the same way they are in any industry.

You can view additional job roles by using the [Prospects](https://www.prospects.ac.uk/jobs-and-work-experience/job-sectors/energy-and-utilities) and [Indeed](https://uk.indeed.com/career-advice/finding-a-job/utilities-sector) websites.

## Finding opportunities

Check [My Jobs Online](https://reading.targetconnect.net/student/login.html?remote=true) for vacancies and visit campus career fairs and employer presentations to find out more about which employers are advertising vacancies and coming onto campus.

Becoming a student member of one of the professional bodies, such as the [Chartered Institution of Water and Environmental Management](https://www.ciwem.org/membership/student-member), can offer member benefits, talks, events and volunteering and campus ambassador opportunities, with the chance to meet industry professionals.

### Industry Jobs

[Green Jobs](https://www.greenjobs.co.uk/) | [Energy Jobline](https://www.energyjobline.com/)

### Further Study/Research

[University of Reading](https://www.reading.ac.uk/ready-to-study/study/postgraduate-study.aspx) | [Find a Masters](https://www.findamasters.com/) | [Find a PhD](https://www.findaphd.com/)

### Graduate Jobs

[prospects](https://www.prospects.ac.uk/).ac.uk | [targetjobs](https://targetjobs.co.uk/).co.uk | [milkround](https://www.milkround.com/).com | [ratemyplacement](https://www.ratemyplacement.co.uk/).co.uk | [gradcracker](https://www.gradcracker.com/search/civil-building/environment-and-sustainability-jobs).com

## Exploring further

[Prospect’s Overview of the UK's energy and utilities sector](https://www.prospects.ac.uk/jobs-and-work-experience/job-sectors/energy-and-utilities/overview-of-the-uks-energy-and-utilities-sector#future-trends-for-the-uk-energy-industry)

[Energy and Utilities Skills](https://www.euskills.co.uk/)

[Department for Energy Security & Net Zero](https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero)

[Utility Week](https://utilityweek.co.uk/)

[edi.net](https://www.edie.net/)

[Energy Savings Trust](https://energysavingtrust.org.uk/)

[Retrofit Manager](https://retrofitmanager.com/)

[Comms Business](https://www.commsbusiness.co.uk/)

[Water Magazine](https://www.watermagazine.co.uk/)

The skills and knowledge you’ve developed in your degree will be valuable in a wide range of roles and sectors. If you’re thinking of looking further afield but aren’t sure where to start, why not [book an appointment](https://www.reading.ac.uk/essentials/Careers/Advice-and-development/MyJobsOnline) with one of our Careers Consultants? Remember, graduates can use the Careers Centre for up to two years after they graduate.

Explore our [Careers Blog](https://blogs.reading.ac.uk/careers/) for more industry guidance and useful careers advice!