

# Activity 2 The job market today

Read the career area information below then answer the questions.

## Engineering

Do you want to work in an industry that makes a very real impact on the world around us? Would you like to design aircraft, ships or cars, or find new ways of generating renewable energy to make sure that thousands of homes have heating and lighting?

Engineers use science and technology to come up with the answers to practical problems. They design, develop, build, fix and put all types of things together.

If you have an enquiring mind, enjoy problem solving and making things work, and like using technology to design new products, structures or systems, then engineering could be the career for you.

In 2022, there were 139,300 people working in the engineering sector in Scotland and 100,600 people working in the energy sector.

### What kind of companies can I work for?

Possible employers include:

- energy and utility companies
- aircraft and aerospace engineering firms
- pharmaceutical, plastics, paper, textiles manufacturers
- food and drink manufacturers
- oil and gas companies
- general manufacturing firms
- telecommunications and IT companies
- defence
- marine
- Civil Service or National Health Service (NHS)
- transport.

### What's the job market like?

In their first quarterly review of 2023, the industry organisation Scottish Engineering confirmed that there had been order and output growth for eight consecutive quarters, indicating a positive outlook for the engineering sector.

The workforce is predicted to grow by 1.8% (2,500 people) between 2022 and 2025.

The renewables industry is expected to continue to expand, with net-zero targets and implementing energy transition. It is estimated that the Offshore Energy sector will employ 130,000 people by 2035. Forecasts also suggest that the UK Offshore Energy sector could support up to 350,000 jobs by 2050, an increase of around 196,400 on 2022.

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There are also indications that a strong hydrogen sector in Scotland could support up to 300,000 new or secured jobs across all skill levels by 2045.

The renewables industry is expected to continue to expand over the next five years. 50% of Scotland's total energy demand (electricity, heat and transport) is to be supplied by renewable sources by 2030.

According to UKTN (UK Tech News), the UK has one of the worst rates of attracting and retaining women, with just 11% of the engineering workforce being female. At university level, just over 15% of engineering students are female. The industry recognises that this needs to change.

The UKTN website states that the 10 best engineering jobs to keep an eye on in the future are: Green energy engineer, Civil engineer, Environmental engineer, Electrical engineer, Marine engineer, Biomedical engineer, Chemical engineer, Mechatronic engineer, Defence engineer, and, Aerospace engineer.

## Facts and figures

- From the academic year 2019/20, 68.5% electrical and electronic engineers were in full time employment 15 months after graduating, with 47.9% pursuing careers within engineering, and 24.9% going into IT.
- From that same period, 66.1% of mechanical engineering graduates were in full time employment 15 months after graduating. Of those, 55.5% were working as engineering and building professionals.
- Top employing regions for the energy sector in 2022: Aberdeen City and Shire region (35,800); Lanarkshire (6,400); and, Edinburgh, East and Midlothian (6,000).
- Top employing regions for the engineering sector in 2022: Aberdeen City and Shire (34,100); Glasgow College Region (22,600); and, Edinburgh, East and Midlothian (17,400).

## Sources

- Market Report: Hydrogen, Business Gateway ([www.bgateway.com](http://www.bgateway.com)) (December 2022)
- Quarterly Review - Q1 2023, Scottish Engineering ([www.scottishengineering.org.uk](http://www.scottishengineering.org.uk)) (March 2023)
- Sectoral Skills Assessment: Engineering, Skills Development Scotland ([www.skillsdevelopmentscotland.co.uk](http://www.skillsdevelopmentscotland.co.uk)) (November 2022)
- Sectoral Skills Assessment: Energy, Skills Development Scotland ([www.skillsdevelopmentscotland.co.uk](http://www.skillsdevelopmentscotland.co.uk)) (November 2022)
- UKTN website - The ten best engineering jobs for the future, ([www.uktech.news](http://www.uktech.news)) 27 June 2022
- What do graduates do? Prospects in association with AGCAS (2023)

**Now answer the questions on the next page.**

## QUESTIONS

By how much (percentage and number) is the workforce predicted to grow by between 2022 and 2025?

Where were the top employing regions in Scotland for the energy sector in 2022?

Why do you think there could be a need for up to 300,000 new jobs across Scotland in the Hydrogen sector?

Where would you find out more information about working in the renewable energy sector?

What engineering jobs does UKTN think will be worth looking into in the future?

Once you have completed this activity and saved it to your device, remember to upload it to your [Planit Portfolio](#) in the JSS Evidence section.