

Energy Engineering

CAREER PROFILE¹

What is energy engineering?



Energy engineers focus on finding efficient, clean, and sustainable ways to supply us with energy. They design systems that produce energy by using resources like oil and gas, biofuels, wind, solar, and hydro power.

Energy engineering is one of the more recent engineering disciplines and combines knowledge from physics, mathematics, and chemistry with **environmental engineering**.

Some types of energy engineers include:

- **Power engineers** design systems to transmit and distribute power from where it is generated to where it is used.
- **Renewable energy engineers** develop technologies needed to harvest energy sources such as wind and solar power.

What do energy engineers do?

Energy engineers work in a variety of roles including designing and testing machinery, researching ways to generate energy from new resources, and developing ways to improve existing processes. They may work in an office, a laboratory, or in the field.

How do you become an energy engineer?

Courses in mathematics, physics, earth sciences, and environmental engineering are essential for energy engineering. Higher education programs may include more specialized courses in sustainable energy and climate science.

Here are some general tips for choosing a university or college program:

- Make sure the program is **fully accredited** locally and/or internationally.
- Look for programs in energy engineering or related fields such as **environmental engineering**.
- Consider accredited engineering programs offered by **technical or community colleges**.

WHAT IS ENERGY ENGINEERING?



TYPICAL EMPLOYERS

Typical employers include fuel production companies, local and national governments, and manufacturing companies:

- BP
- Department of Energy
- Exxon Mobil
- General Electric
- Saudi Aramco

¹ Prospects, Jisc, *Job profile Energy engineer*, at <https://www.prospects.ac.uk/job-profiles/energy-engineer> (visited May 27, 2022).

What are the career prospects for an energy engineer?

Energy engineers will be highly sought after as countries work to meet rising energy demands while managing costs and pollution. There is greater public awareness regarding the need for clean, affordable, and sustainable energy sources, and employers are seeking skilled and knowledgeable engineers in these areas. Energy engineers, in most parts of the world, are **highly valued and very well paid**.

Meet some energy engineers

Watch the following videos to meet some inspiring energy engineers.

LARA

Lara comes from a long line of engineers. Working as an energy engineer allows her to help keep the planet healthy.



ROSEMARY BARNES

Rosemary uses physics to change the world and works on wind turbines. She thinks one of the best parts of her job is to work with other engineers from around the world.



SHEENA ONG

Sheena works on renewable energy projects. She's also a documentary maker and is passionate about engineering solutions for humanitarian development.

