THE CAREERS & ENTERPRISE COMPANY

TEES VALLEY

LABOUR MARKET INFORMATION

ENERGY & LOW CARBON

TEES VALLEY

WHAT IS THE ENERGY & LOW CARBON SECTOR?

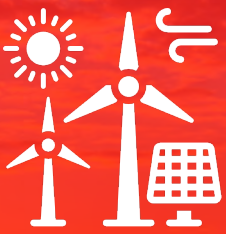
The energy and low carbon sector is at the forefront of creating a sustainable future. It includes roles in renewable energy, energy efficiency, and reducing carbon footprints, all crucial for fighting climate change.

This sector offers varied careers, from technical roles to strategic planning, and is essential for advancing green technologies and policies. If you're driven by innovation and a commitment to protecting the environment, this field provides a meaningful and evolving career path.

ENERGY & LOW CARBON (NET ZERO)

DID YOU KNOW...

There is a strong demand for skilled workers in the sector, particularly those with expertise in **renewable energy technologies, engineering, and environmental sciences?**



Teesworks is the **UK's largest industrial zone** and heart of the Teeside Freeport. The **4,500-acre site** is becoming home to **major clean energy projects by household names like BP.**

Approx...

20,000

people are directly employed in the **energy and low carbon** jobs across the Tees Valley.

Expected...

15,000

more people **needed by 2030** for jobs in **renewable energy projects, new technologies and regional development initiatives**.

Tees Valley has attracted substantial investment in low-carbon infrastructure, including **offshore wind farms, carbon capture and storage (CCS) projects, and hydrogen** production

TEES VALLEY

Office for National Statistics

ENERGY & LOW CARBON (NET ZERO)

WHAT JOBS COULD YOU DO?

RENEWABLE ENERGY ENGINEER

COMMERCIAL ENERGY ASSESSOR

THERMAL INSULATION ENGINEER

HYDROLOGIST

GEO-TECHNICIAN

BUILDING SURVEYOR

ECOLOGIST

CLIMATE SCIENTIST

CHEMICAL ENGINEERING SPECIALIST

WHERE ARE THE JOBS MOST NEEDED?

LOCAL EMPLOYERS INCLUDE...

TEESWORKS

sembcorp

SeAH

Materials Processing Institute

wood.

sse

RWE

bp

px

EDF

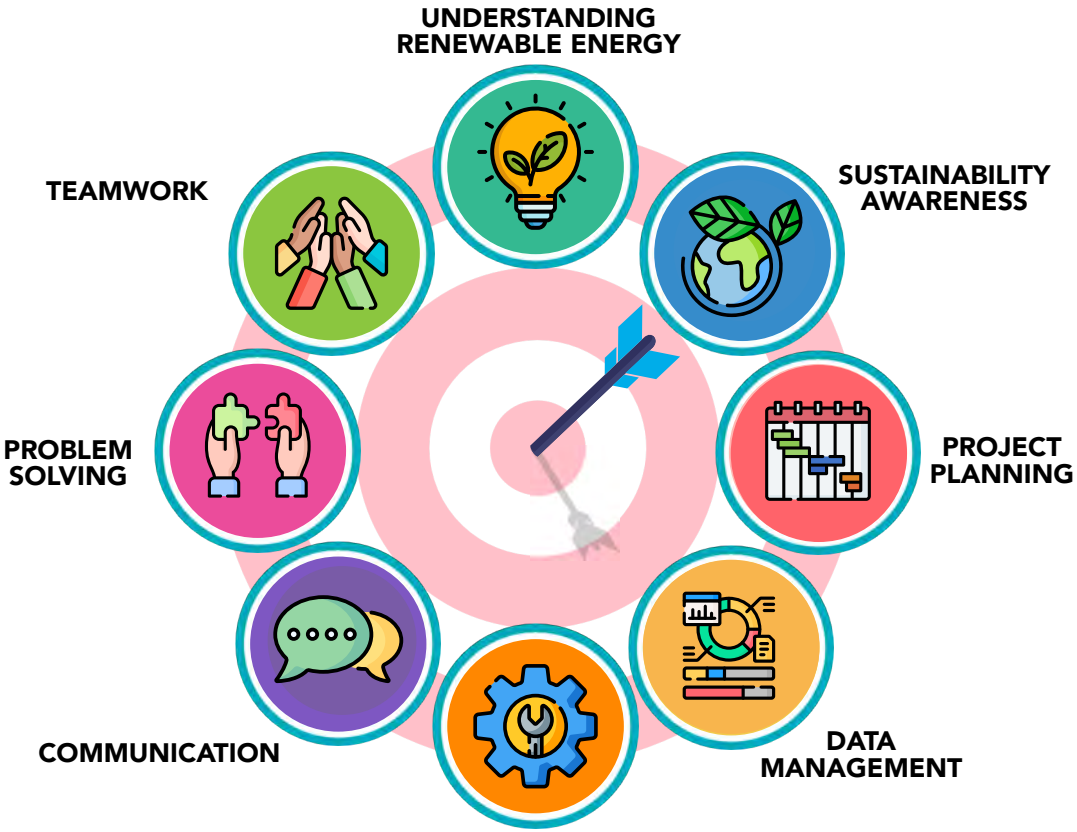
Net Zero Teesside

TEES VALLEY

ENERGY & LOW CARBON (NET ZERO)

WHAT SKILLS CAN HELP YOU?

Energy and low carbon roles focus on sustainability, with success depending on adapting to evolving clean technologies and environmental practices.



TEES VALLEY

ENERGY & LOW CARBON (NET ZERO)

SKILLS IN ACTION

UNDERSTANDING RENEWABLE ENERGY

Knowing how solar panels and wind turbines work.

SUSTAINABILITY AWARENESS

Finding ways to reduce waste and use less energy.

PROJECT PLANNING

Organising how a solar farm is built, staying on schedule.

DATA MANAGEMENT

Analysing energy use to make things more efficient.

TECHNICAL SKILLS

Setting up solar panels or energy-saving devices.

COMMUNICATION

Explaining how to save energy to others in simple terms.

PROBLEM SOLVING

Fixing issues with wind turbines or improving battery storage.

TEAMWORK

Working with engineers and designers to create eco-friendly solutions.

ENERGY & LOW CARBON (NET ZERO)

TEES VALLEY

WHAT QUALIFICATIONS CAN HELP YOUR CAREER?

GCSE SECONDARY SCHOOL

Mathematics: Essential for engineering, data analysis and energy modelling.

Physics: Key for understanding energy systems, renewable technologies and electricity.

Geography: Provides insight into climate change, sustainability and environmental impact.

Chemistry: Useful for studying energy materials, fuels and storage technologies.

IT/Computer Science: Important for working with data, automation and digital energy systems.

Design & Technology: Develops creativity and problem-solving skills for designing sustainable solutions.

FURTHER EDUCATION

A-LEVELS

Mathematics: Crucial for energy system design, optimisation and environmental modelling.

Physics: Builds understanding of electricity, energy transfer and renewable energy systems.

Geography: Explores climate change, environmental policies and sustainable development.

Chemistry: Focuses on renewable fuels, energy storage and material science.

SCAN OR CLICK THE QR CODE TO EXPLORE THE DIFFERENT PATHWAYS

VOCATIONAL COURSES

Engineering: Hands-on skills in mechanical, electrical, and energy systems including renewable technologies.

Environmental Sustainability: Focus on managing environmental impacts, renewable energy and sustainable practices.

Energy and Utilities: Covers practical skills for working in the energy sector from power generation to energy efficiency.

T-LEVELS

Design & Development for Engineering & Manufacturing: Specialises in mechanical, electrical, and energy engineering with a focus on green technologies and sustainability.

Building Services Engineering for Construction: Focuses on designing and maintaining energy-efficient buildings and systems.

Maintenance, Installation, and Repair for Engineering & Manufacturing: Trains students in maintaining energy systems, including wind, solar and battery technologies.

APPRENTICESHIPS

Renewable Energy Technician:
Work on installing and maintaining wind, solar and other renewable energy systems.

Energy Efficiency Specialist:
Gain experience in optimising energy use in buildings and industries.

Electrical Engineer Apprentice:
Learn to work on power systems and renewable energy grids.

Civil Engineer Apprentice:
Focus on sustainable construction and infrastructure projects.

Environmental Technician: Hands-on work in environmental monitoring and green technology.

Click or **Scan the QR code** to visit the IfATE Occupational Maps to explore the different Apprenticeships available.

HIGHER EDUCATION

UNDERGRADUATE DEGREE

Renewable Energy Engineering (BEng/ BSc): Focuses on designing, building, and optimising renewable energy systems like solar, wind and hydroelectric.

Sustainable Energy (BSc): Studies sustainable practices, energy efficiency and green technology innovation.

Environmental Science (BSc): Concentrates on the study of climate change, conservation and sustainability.

Energy and Environmental Engineering (BEng): Blends engineering with environmental science to design energy-efficient systems.

Civil Engineering (BEng): Involves designing infrastructure with a focus on sustainability and energy-efficient construction.

Electrical Engineering (BEng): Focuses on developing electric power systems, smart grids and renewable technologies.

POSTGRADUATE DEGREE

Masters in Renewable Energy (MSc): Advanced study in green energy systems and sustainable technologies.

Masters in Environmental Management (MSc): Focuses on policies and strategies for managing environmental resources.

Masters in Sustainable Engineering (MSc): Explores innovative engineering solutions for sustainability challenges.

Masters in Energy Policy (MSc): Analyses energy policies and their impact on sustainability and the global energy transition.

TEES VALLEY

MORE INFORMATION

Scan or click on the QR codes to become more informed about the different jobs and education and training options available to you.

TEES VALLEY JOBS

Explore graduate roles, apprenticeships, or volunteering opportunities.

SCAN ME

NATIONAL CAREERS SERVICE

Explore over 750 different careers. Find out what a job involves and if it's right for you.

SCAN ME

GREEN CAREERS HUB

Explore how you can play a part in a green future for you and your career.

SCAN ME

TEES VALLEY KEY SECTORS

Explore what's happening across other sectors in the Tees Valley region.

SCAN ME

WHAT NEXT?

TEES VALLEY

Name:

Date:

I would like to be:

The reasons I chose this are:

Qualifications and training required:

Skills I have:

Skills I need to develop:

My next steps are:

Reviewing my progress: