

Considering a
Career in

BE MORE

Green Energy

Protecting the future



Green Energy

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What is Green Energy?

The green sector offers careers focusing on reversing climate change, protecting the natural environment, and reducing emissions of harmful greenhouse gases such as carbon dioxide.



The Liverpool City Region is one of many areas worldwide that has committed to a carbon net zero target. All industries, not just those specifically focused on carbon reduction, must play a role in achieving this.

From advising big businesses on reducing their carbon footprint to re-fitting houses with energy-efficient insulation to prevent wasteful heat loss, the green sector aims to reach carbon neutrality in the Liverpool City Region by 2040.

With the global climate crisis becoming more urgent every year, most industries will need the help of green experts to reduce their impact on the planet and make their practices more sustainable. This means you could work in manufacturing, automation, energy, waste management, transport, or any other industry that produces significant harmful carbon emissions.

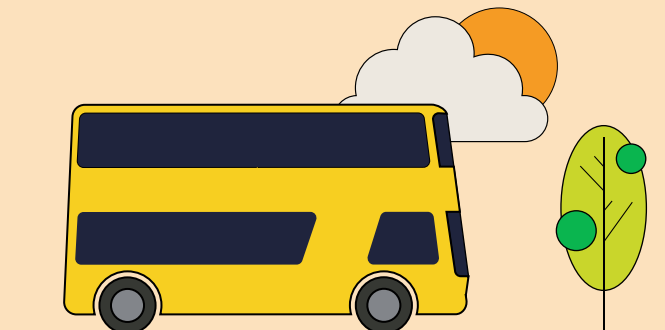
Whether you're devising new sustainable energy technologies using renewable materials as a power engineer or working on a local level to inspire and educate your community on reducing waste as a recycling engagement officer, a career in the green sector means protecting the planet's future.

Stats & Facts

Did you know?

Green Energy in Liverpool City Region: Stats & Facts

- **£4.3bn** invested in offshore wind here in the last decade.
- Growth in the green sector is **4 times** higher than other industries.
- An estimated **£45bn** in investment is needed in the next **20 years** for carbon reduction.
- Liverpool City Region has cut **840,000 tonnes** of harmful carbon dioxide emissions since 2005.



Green Energy in action in the Liverpool City Region

- The Department for Transport has funded a 3-year project called ADEPT Live Labs 2, with £30m investment for the decarbonisation of road networks.
- The Liverpool City Region's natural geographic advantage as a coastal area has helped progress towards clean, sustainable marine energy, with international giant Ørsted and Wirral-based company Cammell Laird investing an estimated £5bn in wind farms.
- Funded by Great British Energy and Liverpool City Region Combined Authority, the Mersey Tidal project will be the world's largest tidal barrage, providing clean energy to the region through green innovation and revolutionary engineering.
- ULEMCo, a Liverpool-based company, is leading the way to greener transport by converting commercial vehicles from using traditional fuel to a green, hydrogen-fuel alternative.
- Founded in St Helens in 1836, Pilkington leads worldwide in the glass production industry, contributing to a green future by innovating leading solar technology.
- Glass Futures is a research and technology organisation based in St Helens that is developing new ways to use glass and other materials to generate renewable energy.

There are approximately

3,500

low-carbon businesses
in Liverpool City Region.



Green Energy: Good to know

What is the difference between a green career, and a career in the green sector?

A green career could be a job in any industry that has no negative environmental impact. In contrast, a career in the green sector aims to resolve the climate crisis and protect the environment more broadly.

What is carbon net zero and what does it mean for the green sector?

Net zero is when the amount of carbon emissions released into the air is balanced out by the same amount of carbon being removed, slowing the rate of climate change. The region's plans to reach net zero by 2040 mean the green sector will continue to grow and offer new opportunities for trained experts.



Green /adjective/

A product or service designed, produced, or operating in a way that minimises harm to the natural environment. **(Oxford English Dictionary)**



What are the Career Pathways & Job Roles?

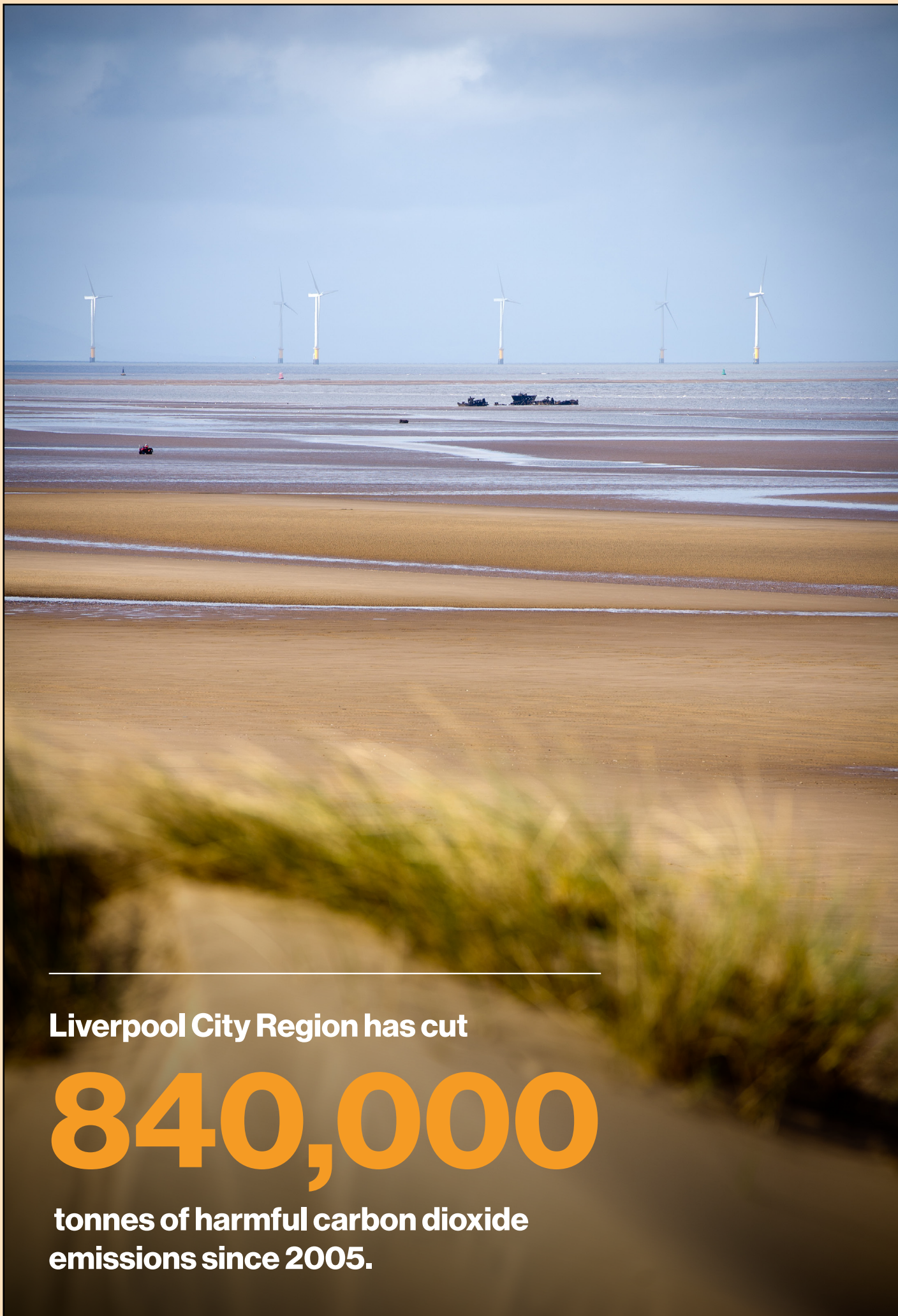


Green Energy career pathways

In an entry-level job such as waste resource operative or countryside worker, you'll protect the natural environment by taking a hands-on approach, learning valuable practical skills and knowledge of the natural world.

A mid-level role could see you advising others on sustainable practices in roles such as waste resource operative or community energy specialist. Over time, you could progress through further study or by developing leadership skills, leading to roles such as sustainability engagement officer or arboriculturist.

To progress into higher-level roles, you could gain more advanced theoretical knowledge, coming up with solutions to the environmental crisis as a power engineer or environmental practitioner.



Liverpool City Region has cut

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Green Energy Job Roles

There are hundreds of different job roles in green energy.
Here's just a sample:

Position	Role & tasks	Salary
Community energy specialist	Works in various organisations to support the wider community with reducing energy usage and spending, by introducing strategies and technologies for buildings and sites. Works with a range of budgets including low-income households to make green-positive adjustments.	Up to £24,000
Low carbon heating technician	Carries out all associated duties with the installation of zero carbon heating and water systems, including planning, selecting, servicing and maintaining equipment. Involves manual handling and safety awareness.	Up to £28,000
Countryside worker	Protects the natural environment by carrying out surveys of the land, completing conservation tasks, and ensuring the land is properly maintained. Takes care of protected landscapes such as national parks.	Up to £32,000
Waste resource operative	Manages the collection and disposal of recycling waste from businesses and households. Follows safety and sector regulations when processing waste.	Up to £32,000
Recycling engagement officer	Runs and oversees local recycling schemes to reduce harmful waste and encourage environment awareness. Promotes recycling and related green activities among local area by giving advice and recruiting volunteers.	Up to £35,000
Commercial energy assessor	Measures energy efficiency for businesses, precisely interpreting data to produce report certificates. Advises clients on how to reduce energy emissions and cost by giving specific recommendations. Uses maths skills to record measurements of building features and perform inspections.	Up to £40,000



Earn up to
£54,000
per year

Position	Role & tasks	Salary
Ecological scientist	Researches the natural environment and how to maintain the balance of this environment. Works with a large range of organisations to carry out fieldwork, experiments, or analysis of data. Writes detailed and accurate reports using relevant surrounding academic knowledge.	Up to £42,000
Hydrologist	Studies water and its sources, including rain, rivers, and groundwater. Develops sustainable methods to manage water by advising policy makers on how to use water in an eco-friendly way. Uses scientific techniques to analyse water samples in a lab and record or present findings.	Up to £45,000
Sustainability business specialist	Helps a range of businesses, non-profits, charities, and public sector organisations to implement new approaches, making their business practice more sustainable. Talks to colleagues and clients to learn about specific organisations and present recommendations to senior members of these groups, using advanced knowledge of sustainable practices.	Up to £49,000
Corporate responsibility & sustainability practitioner	Advises businesses on how to combine profit and growth with improving environmental protection and reducing harmful impact. Acts as a social conscience for the organisation, presenting facts-based ideas for how to reach sustainability goals within a given company.	Up to £54,000



Getting into Green Energy

Subjects to study at school & beyond

- Agriculture/Horticulture
- Business
- Design & technology
- Engineering
- Law
- Maths
- Science

Core skills and knowledge to build

- Analytical thinking
- Business expertise
- Communication
- Problem-solving
- Project management
- Sustainability knowledge
- Thinking outside the box

At entry-level

You can train for an entry-level position with a T-level for a specialist role such as arborist or land surveying technician. If you want to progress while on the job, you could complete a level 2 or 3 apprenticeship, leading to roles such as green improvement technician or countryside worker.

At mid-level

For mid-level positions, you could take a higher technical qualification (HTQ) or degree apprenticeship, becoming a corporate responsibility and sustainability practitioner or environmental practitioner. Other options include a foundation degree in climate and environment sciences, or a similar subject, where you can develop knowledge of climate change and learn about the approaches for resolving the climate crisis.

At senior level

For more complex roles, such as ecological scientist or hydrologist, you will typically need a university degree in a related field of study, where you will gain in-depth theoretical knowledge and learn research techniques. You could also choose from a range of degree apprenticeships, which could lead you to roles such as geoscientist or sustainability business specialist.

Test Your Knowledge

(Answers on back page)



Q1. What is the green sector?

- A.** A method for preserving parks.
- B.** The sector focusing reversing climate change and protecting the natural environment.
- C.** Solely the work done by countryside workers.
- D.** Only jobs that have no negative impact on the environment.

Q2. Which of the following are typically jobs in the green sector? (Choose as many as you wish)

- Hydrologist
- Waste Resource Operative
- Interior designer
- Web Content Editor

Q3. There are approximately 3,500 low-carbon companies based in Liverpool City Region.

True or false?

Q4. What does a non-profit based in St. Helens use to produce renewable energy?

Q5. Which of these investors has made a huge contribution to offshore wind farms?

- A.** ULEMCo
- B.** Glass Futures
- C.** Pilkington
- D.** Ørsted

Q6. Which of the following industries could a career in the green sector typically find you in? (Tick as many as you wish)

- Automation
- Engineering
- Manufacturing
- Marketing

Q7. Give an example of an apprenticeship or training course that could prepare someone for a role in the green sector

Q8. What are the skills necessary for a career in the green sector? Name three.

Q9. What is carbon net zero?

- A.** When the amount of carbon dioxide released is balanced by the amount removed
- B.** Just the amount of carbon released into the atmosphere
- C.** A method solely for removing carbon
- D.** The correct term to describe global warming

Q10. Fill in the blank: £_____ tonnes of harmful carbon dioxide emissions have been cut from the Liverpool City Region since 2005.

Quiz Answers

Q1. B

Q2. Hydrologist, water resource operative

Q3. True

Q4. Glass

Q5. D

Q6. Automation, Engineering, Manufacturing

Q7. Level 2 or 3 apprenticeship, such as arborist or land surveying technician, or a foundation degree in a related subject like climate and environment sciences.

Q8. Problem-solving, sustainability knowledge, business expertise (or any other from the brochure content).

Q9. A

Q10. 840,000