

Plain Guide to Recycling and Renewables

The recycling and renewables sector is also described as ‘green jobs’, ‘low carbon industries’, and ‘the Circular Economy’. It is difficult to define this sector exactly, because many companies that carry out low carbon and environmental activities are based in the energy, construction, manufacturing and financial, professional and business services sectors, and low carbon/environmental activities are only part of what they do. However, because of EU and UK Government policies to:

- tackle climate change, and
- reduce greenhouse gas emissions and ensure secure and sustainable energy supplies, the importance of low carbon and environmental industries is growing fast. It is expected to continue to grow, and the jobs to grow with it.



Decarbonising

nuclear energy ✨ renewable energy ✨ energy efficiency services
energy infrastructure ✨ energy from waste ✨ low carbon buildings
carbon finance ✨ new technologies



Improving resource efficiency

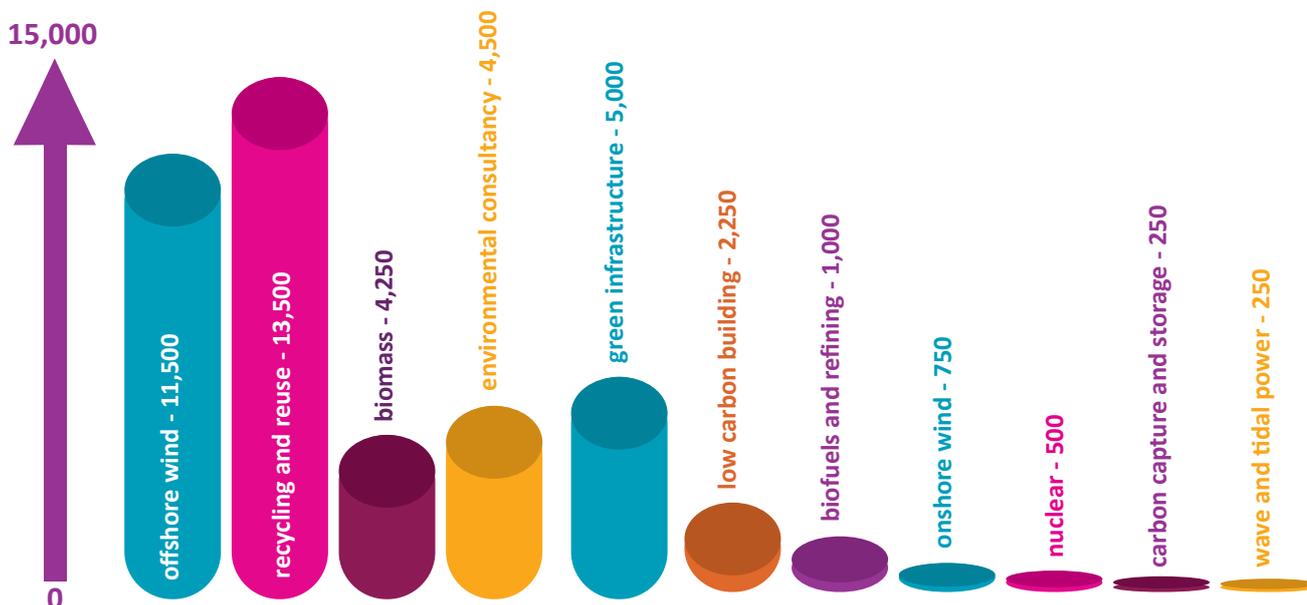
waste minimisation 🌟 waste recycling and reuse 🌟 water recycling and reuse
sustainable materials and products 🌟 eco-design and processes



Preserving and enhancing the environment

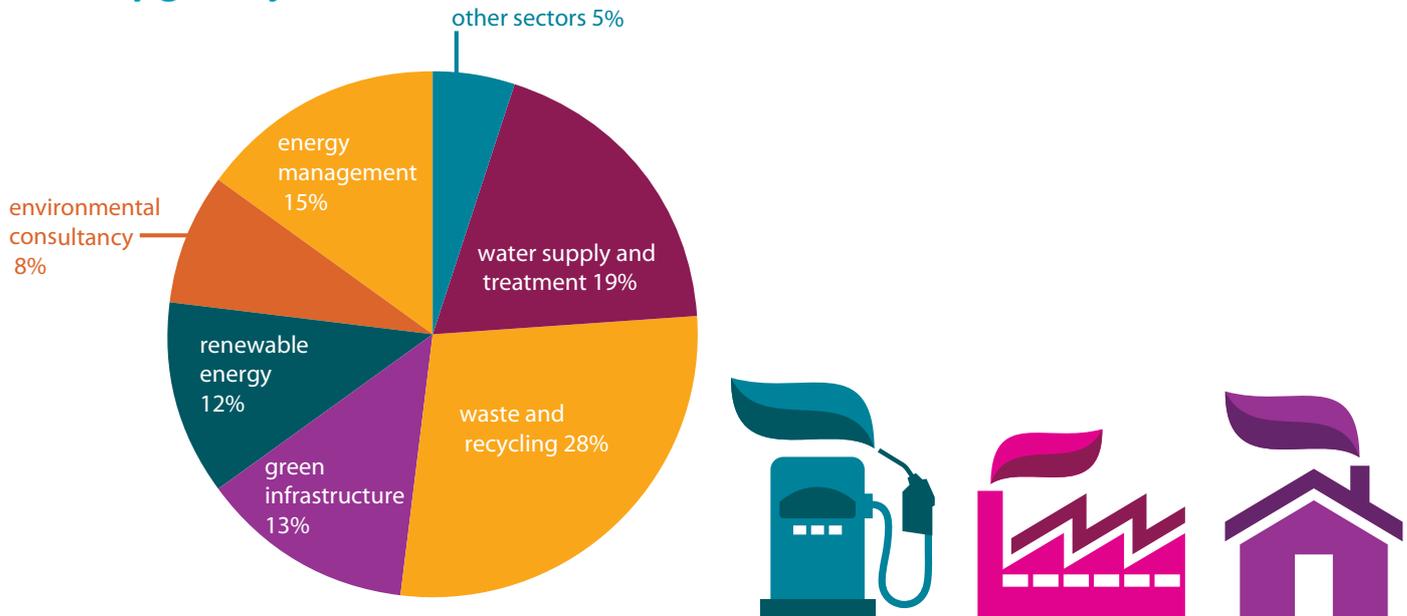
green infrastructure 🌿 sustainable agriculture 🌿 eco-systems and biodiversity
marine environment 🌿 climate change adaption 🌿 water supply and wastewater

Jobs in Yorkshire and the Humber to 2020 - the most likely scenario estimates 24,000 new jobs

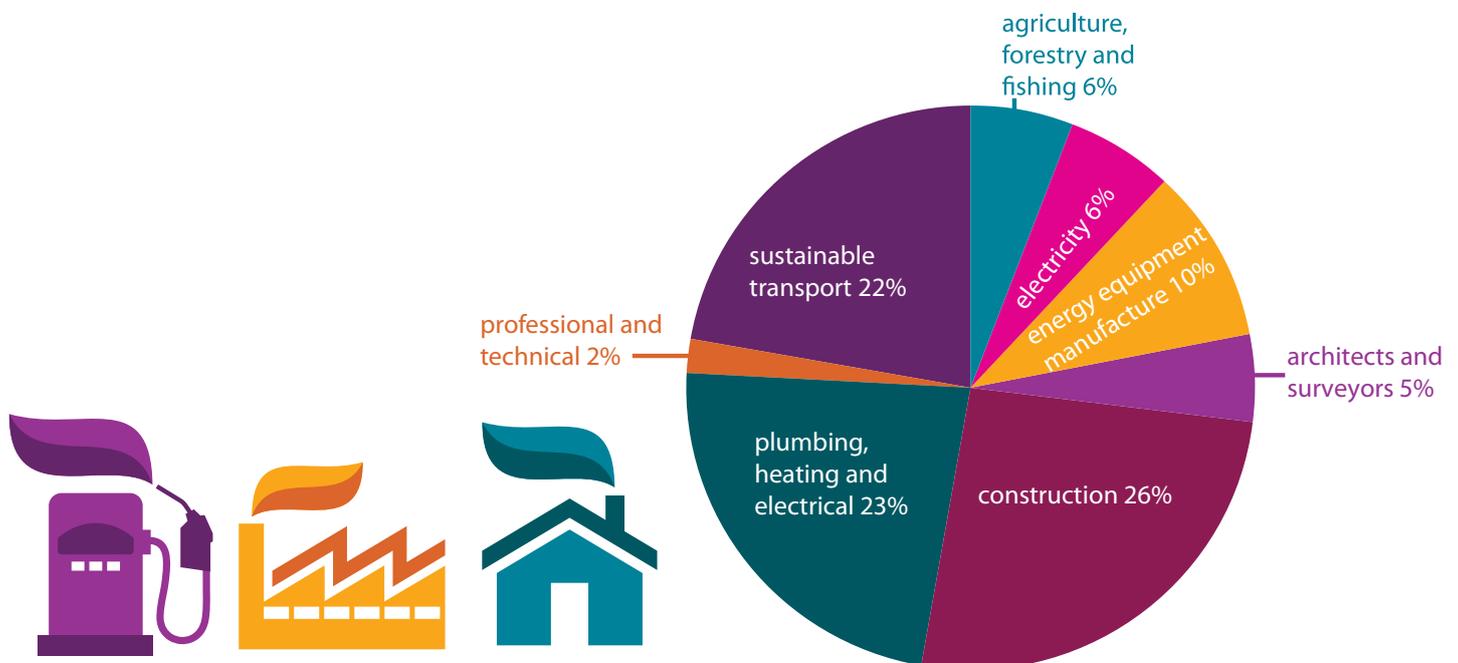


Source: the Prospect for Green Jobs to 2020, Quantum Strategy and Technology Ltd/University of Hull 2011

Primary green jobs in Yorkshire and the Humber - 36,000 in 2009



Secondary green jobs in Yorkshire and the Humber - 135,000 in 2009



Source: the Prospect for Green Jobs to 2020, Quantum Strategy and Technology Ltd/University of Hull 2011

The Selby area is a major producer of electricity in the UK, employing more than 1,000 between Drax and Eggborough power stations. New developments include:

- the Whitmoor Bio-power Plant, generating power using recycled cooking oil
- an anaerobic digestion and horticultural glasshouse facility has been given the go-ahead, and will generate up to 2.75 MW of electricity using materials such as leftover food. The construction phase will create over 250 jobs, and fifty full-time and another fifty seasonal jobs at the glasshouse.
- Southmoor Energy Centre will divert around 280,000 tonnes of commercial and industrial waste a year from landfill to produce power for around 63,000 homes. There will be 375 construction jobs, then 38 full-time jobs when the centre is operational.
- The White Rose Carbon Capture and Storage project, based at Drax, is expected to support 2,000 jobs, creating up to 4,000 in the wider carbon capture and storage industry.
- The Allerton Waste Recover Plant will create 400 building jobs and another 70 operations jobs. It is expected to process 320,000 tonnes of household and other waste, and generate electricity to power 40,000 households.

Examples of recycling and renewables employers

Allerton Waste Recovery Park, North Yorkshire - recycling project

Bio-D, Hull, manufacturer of biodegradable household products

David Brown Gears, Huddersfield – gearbox manufacturer with a focus on wind power

Drax Power Station, near Selby – now using biomass to generate power with three of its six units

Duncan Renewables, Tockwith – biomass installer

EESY (Energy Efficient Solutions Yorkshire), Sheffield – heat recovery and rainwater harvesting

Fairburns Group, Hull – electrical engineers specialising in energy saving technologies for buildings and industry

The Green Building Store, Huddersfield

InterfaceFLOR, Halifax – manufacturer of environmentally sensitive modular flooring

Kelda Group (Yorkshire Water) – the largest water service company in the UK

REG Bio-Power, Selby – renewable energy generation from waste oil

Siemens, Green Port Hull and Able Marine Energy Park, Humber South Bank – major facilities for the manufacture of offshore wind turbines

South Yorkshire Renewable Energy, Sheffield – consultation and installation

Wastewise, Hull – recycling of organic and green waste

WSP, Leeds (global) – built and natural environment consultants specialising in sustainability

Yorkshire Energy Systems, Harrogate – renewable energy systems.



Education and training

Jobs in recycling and renewables are many and varied, so it is beyond the scope of this leaflet to cover all courses and qualifications. Please refer to Job Profiles for particular occupations:

<https://nationalcareersservice.direct.gov.uk>

Apprenticeships are an important route into many jobs in the sector, for example in engineering and construction.

Bradford College has National Skills Academy status in environmental technologies.

Selby College has a Foundation Degree in Engineering for the Power industry.

There are relevant degree and post-graduate courses at the universities of Bradford, Huddersfield, Hull, Leeds, Sheffield and Sheffield Hallam, and a distance learning course via the Open University.

Skill shortages

- Project managers
- Upskilling plumbers, heating engineers and electricians
- Technical skills in waste recycling, offshore wind, biomass and biofuels
- Manufacturing roles from engineers to machine operators (to replace an aging workforce)
- Offshore wind industry will need mechanical and electrical technicians, welders, electrical engineers and more
- Waste reduction specialists for manufacturing
- Low carbon consultants/advisers
- Biomass installers
- Anaerobic digestion operators
- Electrical installers and roofers for solar energy installations
- Retrofitting specialists for 'green buildings' refurbishment

STEM* SKILLS ARE REQUIRED FOR MANY OF THESE ROLES

* STEM: Science, technology, engineering and maths

Examples of pay

Recycling operative
Offshore wind electrical and mechanical maintenance technicians
Waste treatment technician
Biomass and renewable maintenance engineer
Sustainability consultant
Solar PV design engineer

£6.72 per hour
£16-24 per hour
£19,000-25,000 p.a.
£26,000-30,000 p.a.
£35,000/car
£50,000

Source: current job advertisements

Future trends - growth sectors in the region

SECTOR	SUBSECTOR
Large scale renewable and low carbon energy	Offshore and onshore wind, biomass, district heating and nuclear
Low/zero carbon buildings	Retrofit - energy efficiency and microgeneration; construction and refurbishment
Green infrastructure	Urban planning/landscape architecture, landscape services, green spaces and nature reserves
Resource efficiency	Waste and water recycling and reuse, process energy efficiency
Low carbon transport	Alternative fuels, electric vehicles, refuelling and recharging infrastructure, and passenger transport
Emerging technologies	Carbon capture and storage, wave and tidal power, smart grids, hydrogen and fuel cells
Cross-cutting services	Energy/environmental consultancy, contracting, energy services, carbon finance/accounting, legal services

Job vacancies – where to look

Many employers advertise vacancies on their own websites.

There are various specialist recruitment websites, including www.greenjobs.co.uk; www.greenjobsonline.co.uk; www.environmentjob.co.uk; www.renewablecareers.com; www.renewableenergyjobs.com

Also see www.gov.uk/jobsearch and www.apprenticeships.gov.uk

More information...

See National Careers Service 'Job Profiles' for information on different jobs in this sector:

<https://nationalcareersservice.direct.gov.uk>

Green Energy Jobs Careers Guide: <http://www.greenenergyjobs.com/career-guide/>

Green Alliance: www.green-alliance.org.uk

Renewable UK: www.renewableuk.com

www.euskills.co.uk

www.semta.org.uk

www.lantra.co.uk

www.citb.co.uk

Further help...

National Careers Service advisers are available in your local area to provide information, advice and guidance on learning and work. See the website or call 0800 100 900.

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This guide was prepared for use in Yorkshire and the Humber. The information was correct at the time of writing, please be aware that the information may change.