South West NET ZERO HUB

CLEAN ENERGY WORKFORCE MAPPING STUDY

Final Report

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EXECUTIVE SUMMARY

The South West Net Zero Hub (SWNZH), working with the Office for Clean Energy Jobs (OCEJ), commissioned Stantec to map the existing evidence on clean energy workforce demand across the South West, to improve understanding of the local and regional evidence available and to help inform delivery of the Clean Energy Jobs Plan (CEJP). The study reviewed over 160 documents, identified through a desk-based search and a call for evidence issued to regional stakeholders, alongside targeted stakeholder engagement, and assessed how far the evidence answers five Key Research Questions (KRQs) on the region's clean energy sectors, occupations, data, and workforce forecasts.

Table EX1 – Types of Documents Reviewed

Theme	Number of Documents
Skills/Workforce/Training Strategies and Plans	38
Project/Sector/Bespoke Studies	31
Climate/Energy/Renewable Strategies and Plans	27
Economic/Growth Strategies and Plans	20
LSIPs and Supporting Docs	17
Corporate/Business/Local/Transport Plans	6
Investment Plans	3

The evidence reviewed indicates that the South West is well placed to benefit from the net zero transition. Drawing on the CEJP, clean energy employment in the region could reach around 35,000 jobs by 2030, up about 15,000 on current levels, driven by nationally significant projects including Hinkley Point C, Celtic Sea floating offshore wind, the Dorset Clean Energy Super Cluster, and the Agratas battery gigafactory, alongside major retrofit and low-carbon heat activity.

The evidence is far stronger on where growth will happen than on the workforce needed to deliver it. There is good coverage of priority sectors, major projects, and the datasets stakeholders use, but weaker evidence on future occupational demand and on reconciling national and regional forecasts. This reflects a gap in the available evidence rather than a lack of underlying activity or a shortcoming in regional economic and workforce planning: it stems from the absence of a shared definition of clean energy employment, differences in the geographies and metrics used, and limited tracking of workforce and training outcomes.

Findings against the five KRQs:

- **Sectors and projects:** strong evidence on priority sectors and anchor projects, but fragmented and varying employment estimates in terms of data definitions, timescales, and geographical coverage.
- **Priority occupations:** broad occupational priorities identified, but no common methodology, timeframe, or definition across geographies.
- **Data held and used:** stakeholders make wide use of Lightcast, ONS, NOMIS, LSIPs, project studies, and provider intelligence, though held across many sources rather than one system.
- **Discrepancies and gaps:** national and regional figures differ by geography, definition, metric, time horizon, and coverage, but these differences can be explained.

- **Causes of discrepancies and gaps:** a consistent set of causes, led by differing definitions of clean energy employment.

Overall, the evidence is strongest for KRQs 1 and 3 and weakest for occupational forecasting (KRQ2), with the questions on discrepancies and their causes (KRQs 4 and 5) sitting in between.

Recommendations:

To strengthen the evidence base, we recommend three priority actions:

- improve the comparability and transparency of workforce evidence, by clearly describing the definitions, assumptions and methods used and aligning with the OCEJ approach where this supports comparison;

- strengthen occupational forecasting in priority sectors using consistent time horizons and SOC codes;

- and improve data sharing between local authorities, skills providers, industry, and regional partners.

These should be supported by better workforce monitoring, regular review of project pipelines and assumptions, and improved understanding of workforce mobility and local labour capture. Without action, these gaps are likely to persist, with training investment poorly targeted and funding cases weaker than they need to be.

ACRONYMS / ABBREVIATIONS

Acronym / Abbreviation	Full Name
SWNZH	South West Net Zero Hub
DESNZ	Department for Energy Security and Net Zero
WECA	West of England Combined Authority
OCEJ	Office for Clean Energy Jobs
CEJP	Clean Energy Jobs Plan
LA	Local Authority
KRQ	Key Research Question
CCUS	Carbon Capture, Usage and Storage
ONS	Office for National Statistics
LCREE	Low Carbon and Renewable Energy Economy
SIC	Standard Industrial Classification
SOC	Standard Occupational Classification
FLOW	Floating Offshore Wind
SMR	Small Modular Reactor
FTE	Full-Time Equivalent
LSIP	Local Skills Improvement Plan
DCESC	Dorset Clean Energy Super Cluster
ITL1	International Territorial Level 1
GVA	Gross Value Added
BCP	Bournemouth, Christchurch and Poole
EV	Electric Vehicle
PV	Photovoltaic (solar)
NESO	National Energy System Operator
CWDS	Construction Workforce Development Strategy
WDS	Workforce Development Strategy
ESOG	Employment Skills and Operations Group
EAU	Employment Affairs Unit
OWIC	Offshore Wind Industry Council
GSW	Great South West
STEM	Science, Technology, Engineering and Mathematics

GLOSSARY

Term	Definition
Clean energy	Technologies, activities, and supply chains that reduce greenhouse gas emissions and enable delivery of a net zero energy system, spanning clean power, networks and flexibility, low-carbon heat, hydrogen, greenhouse gas removal, and energy efficiency. Understood as a system-wide set of activities rather than a single sector.
Clean energy job	A role that directly supports the delivery of clean energy, from design and manufacturing through to construction, installation, operation, maintenance, and decommissioning. Many such roles sit within traditional occupations (for example electricians, plumbers, or engineers) that split their time between clean energy and conventional work.
Net zero	A state in which greenhouse gas emissions are balanced by removals, so that no additional emissions are added to the atmosphere. The UK has a legal target to reach net zero by 2050.

Term	Definition
Retrofit	Upgrading existing buildings to improve energy efficiency and reduce carbon emissions, for example through insulation, low-carbon heating and glazing.
Green occupations	Roles linked to the environment, net zero, the circular economy or the wider green economy, many of which are transferable across green sub-sectors including clean energy.
Green economy	The broader set of economic activity associated with environmental and sustainability goals, wider than clean energy alone. Some regional evidence reports "green jobs" totals that are broader than the clean energy definition used in this study.
Direct employment	Jobs created directly by a clean energy activity or project, for example workers on a construction site or operating a facility. The CEJP measures direct employment only.
Indirect employment	Jobs supported in the supply chain as a result of a clean energy activity, for example among suppliers and contractors.
Induced employment	Jobs supported in the wider economy through the spending of those in direct and indirect roles.
Full-time equivalent (FTE)	A standardised measure of employment expressing part-time and full-time roles as an equivalent number of full-time positions, allowing consistent comparison.
Job-years	A measure of employment over time, where one job-year equals one full-time job for one year. Used for time-limited activity such as construction.
Replacement demand	The need to recruit workers to replace those leaving the workforce, for example through retirement, rather than to fill newly created roles.
Employment stock	The total number of people employed in a sector or activity at a given point in time, as distinct from future workforce requirements or forecasts.
Workforce requirement	The number of workers estimated to be needed to deliver a given level of activity, often modelled under scenarios rather than observed.
SOC (Standard Occupational Classification) code	The official system for classifying jobs by occupation, used to compare workforce data consistently across sources.
SIC (Standard Industrial Classification) code	The official system for classifying businesses by their main economic activity, used in the CEJP baseline alongside SOC codes.
Baseline	The current or starting position against which future change is measured, in this study typically the most recent available employment data.
Anchor project	A large-scale investment or development that generates substantial and sustained workforce demand across construction and operation, shaping the wider labour market around it (for example Hinkley Point C).
Workforce mobility	The tendency for workers, particularly on major projects, to move between locations for work, meaning headline job figures do not always translate into local employment.
Local labour capture	The share of jobs created by a project that is filled by residents of the local area rather than by mobile or non-local workers.

1 INTRODUCTION

The South West Net Zero Hub (SWNZH) provides strategic and technical support to public sector partners and communities across the South West to develop, finance and deliver net zero and low-carbon energy projects. Funded by the Department for Energy Security and Net Zero (DESNZ) and hosted by the West of England Combined Authority (WECA), the Hub works in partnership with Local and Combined Authorities across Cornwall and the Isles of Scilly, Devon, Plymouth, Torbay, Somerset, Dorset, Gloucestershire, Swindon and Wiltshire, the West of England and the Solent[1].

Figure 1: SWNZH Area

[1] The Solent sits within the SWNZH operational area and is included in this study where evidence informs South West workforce dynamics, particularly through port infrastructure, offshore renewables and supply chain links to Celtic Sea and Channel projects

1.1 AIM OF THE RESEARCH

The CEJP provides an initial national picture based on modelling and available evidence. This study was commissioned to review and synthesise existing regional evidence, understand how it compares with that national analysis, identify evidence gaps and methodological differences, and help inform future regional and national workforce planning.

SWNZH is working with the Office for Clean Energy Jobs (OCEJ) within DESNZ to build a regional picture of clean energy skills and employment needs across the South West. This evidence will support workforce planning and delivery of the Government's Clean Energy Jobs Plan (CEJP). Stantec was commissioned to undertake a desk-based assessment to review, collate, and interpret existing studies, reports, and assessments relating to clean energy workforce demand and skills requirements across the South West, focusing on the availability, consistency, and usefulness of existing evidence at regional and Local Authority (LA) level.

The study addresses five Key Research Questions (KRQs):

- **What clean energy workforce data do WECA, skills leads, and key LAs hold and use?**
- **What are the key clean energy sectors and projects driving job creation in the South West?**
- **What priority occupations in clean energy sectors are expected to be in demand for baseline, 2030, and 2050 at regional and LA level?**
- **What discrepancies and/or gaps exist between national and regional data on clean energy workforce forecasts?**
- **What are the causes of these discrepancies?**

It also identifies key evidence gaps and areas where further data collection or analytical work would strengthen future delivery.

1.2 RESEARCH METHODOLOGY

The research activities undertaken to answer the five KRQs comprised a structured, desk-based review and synthesis of existing evidence, supported by targeted input from regional partners where appropriate. The approach was designed to make effective use of available data and analysis while identifying key gaps limiting future delivery. The research activities included:

- Review of the CEJP and its technical annexes to understand how OCEJ defines clean energy, estimates baseline employment, and forecasts future demand.
- Evidence was gathered in three steps. First, a desk-based search identified published national, regional and local sources. Second, a call for evidence was issued to regional stakeholders in spring 2026, inviting them to submit relevant studies, datasets and strategies. Third, the material received was screened for relevance and reviewed, giving a working evidence base of over 160 documents that informs the findings in this report.

- Review of local and regional datasets used to analyse the clean energy workforce, covering data sources, spatial coverage, sectoral classifications, time horizons, and methods.
- Targeted stakeholder engagement took the form of consultative, structured discussions with LAs, combined authorities and skills bodies. These discussions drew out qualitative insight and local intelligence rather than new statistical data.
- Assessment of alignment and divergence between national DESNZ/OCEJ projections and regional or local evidence, examining causes such as definitional differences, methodological assumptions, data vintages, and regional economic structures.
- Identification of priority clean energy sectors, technologies, and project types expected to drive job creation in the South West, based on existing evidence rather than new quantitative forecasts.

1.3 STRUCTURE OF THE STUDY

The report is structured as follows:

- **Chapter 2** – Presents the working definition of clean energy, summarises the CEJP, and outlines the OCEJ national methodology. It also presents sub-regional clean energy priorities, project case studies, and findings from the desk review and stakeholder engagement.
- **Chapter 3** - Addresses the five KRQs, classifying each as fully answered, partially answered, or not answered based on data quality, consistency, and coverage.
- **Chapter 4** - Summarises the research findings using a KRQ matrix and sets out recommendations to strengthen the clean energy workforce evidence base in the South West.

2 CLEAN ENERGY JOBS PLAN

This chapter introduces the concept of clean energy and explains how the transition to clean energy is expected to benefit the UK, and its regions, to achieve their net zero targets. As the CEJP provides the national benchmark alongside which regional evidence is considered throughout this report, this chapter summarises the CEJP methodology and the South West's strategic context before the available regional evidence is reviewed. It identifies the clean energy strengths of the SWNZH region and draws on CEJP data to translate these strengths into the numbers of additional jobs that could be created across the SWNZH from the transition to clean energy.

2.1 DEFINING 'CLEAN ENERGY' FOR ANALYTICAL PURPOSES

For the purposes of this study, clean energy is defined in line with the OCEJ analytical framework set out in the Government's CEJP, which this study treats as a common national reference point rather than the single correct measure of clean energy employment. Regional evidence is considered alongside it, to understand how the local picture complements, differs from, and adds to the national analysis. Under this framework, clean energy is understood not simply as renewable electricity generation, but as a **system-wide set of technologies, activities, and supply chains that reduce greenhouse gas emissions and enable the delivery of a net zero energy system**[2]. Consistent with the CEJP, clean energy includes activity across the following core analytical groupings[2][3]:

- **Clean power generation, including offshore and onshore wind, solar photovoltaics, and nuclear power;**
- **Energy networks and flexibility, covering electricity transmission and distribution, smart systems, storage, and hydrogen networks;**
- **Low-carbon and zero-carbon heat, including heat pumps, heat networks, and associated building technologies;**
- **Hydrogen production and use, supporting decarbonisation of power, heat, and industry;**
- **Greenhouse gas removal and carbon management, including carbon capture, usage, & storage (CCUS) and engineered removals; and**
- **Energy efficiency, focused on reducing energy demand in buildings, infrastructure, and industrial processes.**

The OCEJ framework treats clean energy as a workforce and industrial system rather than a single sector. It covers the design, manufacturing, construction, installation, operation, maintenance, and decommissioning activities needed to deliver clean energy at scale, including direct roles and supply chain employment[4].

It deliberately excludes wider environmental, sustainability and climate adaptation activity that does not directly contribute to energy system decarbonisation and does not define clean energy by firm

[2] DESNZ, Clean Energy Jobs Plan, 2025.
[3] DESNZ, Clean Energy Jobs Plan: Technical Annex, 2025.
[4] DESNZ, Clean Energy Jobs Plan, 2025.

classification. Instead, it focuses on the occupations and activities linked to clean energy outcomes, recognising that these jobs sit across a wide range of sectors and industries[5].

2.2 EMPLOYMENT IMPACTS FROM THE TRANSITION TO CLEAN ENERGY IN THE SOUTH WEST

The CEJP sets out a significant expansion in clean energy employment as the UK delivers its net zero ambitions. **Nationally**, employment is projected to grow from around 440,000 jobs in 2023 to approximately 860,000 by 2030, with continued growth through to 2050 as the energy system is fully decarbonised. This reflects the scale of investment required across clean power generation, energy networks, heat, hydrogen, carbon management, and energy efficiency[2].

CEJP regional analysis suggests clean energy employment in the **South West** could reach up to 35,000 jobs by 2030, an increase of around 15,000 on current levels. This reflects both the region's existing energy assets and its role in delivering nationally significant infrastructure and programmes[2]. In relative terms, the South West accounts for roughly 4% of the national clean energy workforce projected by 2030, somewhat below its share of the UK population (around 8.5%). This reflects the way the CEJP builds its estimates from the location of specific sectors, assets and projects, rather than allocating national totals on a simple per-head or per-area basis: clean energy employment concentrates where the enabling infrastructure and resource base sit, such as nuclear in Somerset, floating offshore wind in the Celtic Sea, and geothermal in Cornwall.

According to the CEJP, which applies its **national occupational profile to the region rather than deriving bespoke South West estimates**, the largest occupational increases between 2023 and 2030 are forecast in skilled **construction and building trades** (around 3,000 jobs) and **skilled metal, electrical & electronic trades** (around 2,000 jobs), driven by installation, construction, and engineering activity across clean power, networks, heat, and retrofit. Further growth is expected in process, plant, and machine operatives (around 1,500 jobs), alongside engineering & technology professionals and corporate managers (around 1,000 jobs each). The remaining increases are spread across associate professional, administrative, and elementary trades roles, each contributing smaller but material volumes of demand[6].

Realising this opportunity will depend on aligning the timing and scale of project delivery with workforce availability, skills provision, and regional capacity-building, ensuring that clean energy employment growth translates into accessible, high-quality jobs for South West residents.

2.3 METHODOLOGY USED IN THE CEJP TO DEVELOP THESE FORECASTS

Important: the CEJP figures throughout this chapter are indicative estimates, not firm forecasts. The CEJP adopts an experimental, multi-method approach to estimating both the current size of the clean energy workforce and the number of workers likely to be required by 2030. For the 2023 baseline, the CEJP uses Office for National Statistics (ONS) Low Carbon and Renewable Energy Economy (LCREE)

[5] DESNZ, Assessment of the Clean Energy Skills Challenge, Office for Clean Energy Jobs, 2025.
[6] DESNZ, Clean Energy Jobs Plan - Supplementary Data, 2025.

survey data to estimate employment within relevant sectors classified by Standard Industrial Classification (SIC) codes. These sectoral estimates are then combined with ONS data on the occupational composition of each SIC sector, based on Standard Occupational Classification (SOC) codes. This SIC-SOC mapping produces an estimate of employment within LCREE sectors by clean energy occupation.

The same SIC-SOC methodology is applied to 2030 projections. Future labour demand across clean energy subsectors is drawn from a range of sector-specific sources, including economic opportunity modelling tools and industry studies that estimate employment intensity (such as jobs per unit of installed capacity or investment). The CEJP also explicitly recognises several limitations and sources of uncertainty within its workforce estimation methodology. In particular:

- the analysis focuses on direct employment only, excluding indirect supply chain and induced employment;
- estimates are not net job creation, as job losses in other sectors are not accounted for;
- replacement demand is excluded (workers leaving through retirement or other reasons);
- occupational structures are assumed static and consistent across regions, with the 2030 profile mirroring 2023; and
- projections are sensitive to assumptions on the scale, timing, and delivery of future clean energy projects.

The CEJP therefore presents its workforce estimates as indicative of the scale and distribution of growth rather than precise forecasts.

2.4 SUB-REGIONAL APPROACHES TO SUPPORTING THE CLEAN ENERGY TRANSITION

Against this national picture, each sub-region has developed its own clean energy priorities, shaped by local assets and project pipelines. Each of the **seven sub-regions of the South West** has developed policies, strategies, and investment plans setting out how it will support the transition to net zero. Clean energy is consistently identified as a driver of future economic growth, but the nature and scale of activity varies with geography, existing assets, and project pipelines. The result is not a single regional specialism but a set of place-based strengths, each with different implications for workforce demand.

CORNWALL & ISLES OF SCILLY

Cornwall and the Isles of Scilly host one of the South West's most distinctive clean energy economies, with strengths in geothermal energy, floating offshore wind (FLOW), and wider marine technologies. The Cornwall Good Growth Plan and the Cornwall and Isles of Scilly Local Area Energy Plan both identify clean energy as a major opportunity for economic diversification.

Geothermal energy is the County’s defining specialism. Cornwall hosts nationally significant developments including the United Downs Deep Geothermal Power project, alongside a broader geo-resources sector linked to renewable heat and lithium extraction. This sector supports around 2,600 jobs and has driven demand for specialised technical and engineering roles across drilling, subsurface engineering, electrical systems, and renewable heat infrastructure.

Cornwall is also positioned to benefit from FLOW deployment in the Celtic Sea. Studies including Harnessing the Power of the Celtic Sea identify opportunities in turbine assembly, fabrication, port infrastructure, and long-term operations and maintenance, with Falmouth and Hayle expected to support offshore renewables supply chains.

Cornwall is also a national leader in solar generation. The South West has the largest installed solar capacity and highest solar output of any English region, and Cornwall is the highest-generating LA for solar in the UK, supporting demand for solar installers, electricians and related engineering and maintenance roles.

DEVON

Devon combines offshore energy, hydrogen and retrofit opportunities with some of the region's more developed local workforce analysis. Stakeholders reported that the county has built baseline datasets and scenario models of future workforce demand and supply, drawing on Lightcast, regional business intelligence, legacy LEP evidence and developer-led assumptions, and **using CEJP definitions and SIC-SOC mappings to structure the analysis**. This gives Devon a comparatively mature evidence base at county level.

Priority opportunities identified include hydrogen and nuclear, including Small Modular Reactors (SMRs), alongside FLOW linked to the Celtic Sea, solar PV, waste-to-energy and battery storage, with North Devon and Torridge positioned around green hydrogen production, distribution and storage. Aerospace was also highlighted as a related sector with clean energy workforce implications. Stakeholders noted that delivery is constrained by policy uncertainty, delays to leasing and licensing, and grid connectivity. Together these point to demand for offshore and marine roles, hydrogen technicians, retrofit trades, and engineering & technical occupations.

SOMERSET

Somerset contains some of the South West's largest clean energy and advanced manufacturing investments, combining nationally significant nuclear infrastructure, battery manufacturing, offshore energy and major retrofit activity. This generates substantial projected demand for construction, engineering and technical occupations.

Hinkley Point C is the most strategically significant project. The £35 billion nuclear development is one of the largest infrastructure projects in Europe and is expected to support around 26,000 direct and indirect jobs through construction and delivery, with approximately 700 long-term operational roles. It has also funded apprenticeships, construction skills centres and employment brokerage programmes (see Case Study 1). Somerset is also emerging as a national centre for low-carbon manufacturing through the Agratas battery gigafactory at the Gravity Enterprise Zone near Bridgwater; the £4 billion facility is forecast to create around 4,000 direct operational jobs linked to battery cell manufacturing and electric vehicle supply chains.

The Somerset Energy Investment Plan sets out further opportunities across solar, heat pumps and low-carbon heat. Wider opportunities span FLOW, tidal energy, solar generation, electricity infrastructure and retrofit, with green construction and low-carbon infrastructure delivery consistently identified as major drivers of demand for electrical trades, engineering and advanced manufacturing roles.

DORSET

Dorset is developing a multi-technology proposition centred on the Dorset Clean Energy Super Cluster (DCESC), which could unlock up to £28 billion of investment across Dorset and the wider English Channel area. It brings together offshore wind, hydrogen production & storage, carbon capture, port infrastructure, and industrial decarbonisation.

The UKEN South Dorset Hydrogen Storage project is the most significant proposed component, supporting around 2,100 direct construction jobs, more than 5,000 supply chain jobs and approximately 135 long-term operational roles once complete (see Case Study 4). Dorset is also strengthening its offshore wind supply chain role through the Channel Gateway port facility at Portland, which could support around 1,000 direct jobs alongside substantial wider supply chain impacts.

WEST OF ENGLAND

The West of England functions as a clean energy innovation and delivery centre, with strengths in retrofit, industrial decarbonisation, low-carbon heat, and energy systems integration. **Bristol City Leap** is the flagship joint venture partnership delivering investment in heat networks, renewable generation, smart energy systems, and building retrofit, while industrial decarbonisation is advancing through the West of England Industrial Cluster at Avonmouth and Severnside, which benefits from strong rail, road and deep-water port connections along the Severn corridor.

The area's clean energy workforce demand is spread across a broad base of sectors and technologies rather than concentrated in a single scheme, reflecting a diverse and well-established low-carbon economy. Regional Green Skills and Employment Plans identify strong future demand in retrofit, low-carbon heating, engineering, and electrical occupations.

GLOUCESTERSHIRE

Gloucestershire's role centres on enabling technologies, advanced engineering, and digital energy systems. Strengths in cyber security, advanced manufacturing, and engineering are increasingly applied to energy infrastructure management, smart grids, and industrial decarbonisation. There are links to Severn corridor and West of England economy, though Gloucestershire's clean energy role rests primarily on its own enabling-technology and engineering strengths rather than on the West of England Industrial Cluster specifically.

Beyond enabling technologies, stakeholders identified three further opportunities for Gloucestershire. Onshore wind features through the Ecotricity ambition for up to 100 turbines; SMRs, which are centrally funded, have been raised repeatedly in relation to the county; and tidal energy in the Severn is being pursued jointly with the Mersey. Leadership on the nuclear and tidal opportunities, previously driven by the Western Gateway partnership, now sits with WECA following the Partnership’s closure. These remain at an early stage, so quantified workforce evidence is limited, but they point to future demand in nuclear, marine & civil engineering, and construction trades

Future demand is expected to concentrate in technical and professional occupations including systems engineering, digital infrastructure, and project delivery, with growing importance attached to hybrid engineering and digital skills as energy systems become more data driven. At this stage

there remains relatively limited quantified evidence on future clean energy workforce growth within Gloucestershire specifically.

SWINDON & WILTSHIRE

Swindon and Wiltshire are positioning around retrofit, infrastructure, logistics, and low-carbon construction, supported by transport connectivity along the M4 corridor and established engineering capability. Strategic plans across both areas consistently identify decarbonisation of buildings and transport as central priorities.

The Swindon and Wiltshire Local Skills Improvement Plan (LSIP) highlights significant demand in construction and the built environment, particularly for energy efficiency and low-carbon retrofit. Wiltshire's Climate Strategy and Swindon's Net Zero Emissions Action Plan, together with Swindon's more recent Decarbonisation Framework, reinforce these priorities, generating demand for electricians, retrofit specialists, insulation installers, heating engineers and energy assessors. The SWNZH Retrofit Skills Report , which covers the South West region as a whole rather than Swindon and Wiltshire specifically, identifies substantial future labour requirements across insulation, heat pump installation and associated construction roles. The area's distribution and engineering strengths also create opportunities to support advanced manufacturing and low-carbon infrastructure delivery linked to clean energy investment across the South West.

THE SOLENT

The Solent supports the wider South West clean energy economy through its maritime infrastructure, ports capability, and links to offshore energy along the south coast. Strengths are concentrated in marine engineering, offshore renewables, and low-carbon logistics, with demand expected across maritime engineering, electrical installation, logistics, technical maintenance, and construction occupations.

Southampton and Portsmouth provide strategic ports infrastructure supporting clean energy supply chains and maritime decarbonisation. The Solent LSIP and Southampton's Economic and Green Growth Strategy both emphasise clean energy innovation, with the Isle of Wight adding capability in renewable energy and offshore engineering. The area's ports are well placed to support offshore renewable deployment across the South Coast and potentially the Celtic Sea, with opportunities in vessel operations, offshore maintenance, and marine engineering.

2.5 KEY CLEAN ENERGY PROJECTS IN THE SOUTH WEST OF ENGLAND

This section introduces the major clean energy projects that underpin employment growth across the South West, providing a project-level perspective to complement the sectoral overview presented earlier in the chapter. These projects vary significantly in scale, technology, and stage of development, ranging from nationally significant infrastructure schemes to emerging programmes and concept-stage opportunities. Collectively, they illustrate how the transition to net zero is being delivered “on the ground”, shaping the scale, timing, and geography of workforce demand across the region.

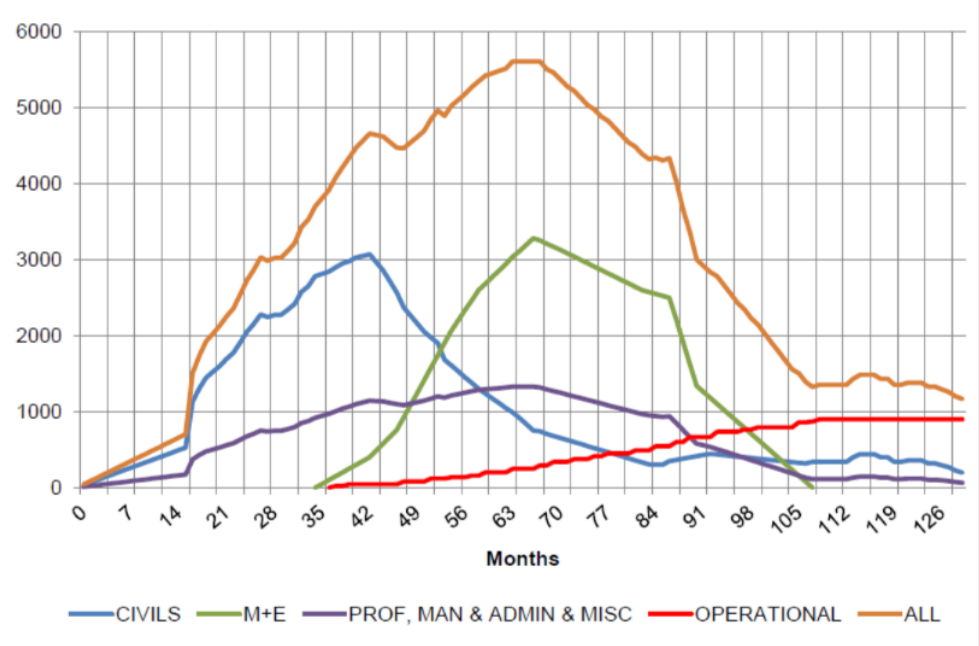
The projects featured here were identified from a combination of sources: nationally significant schemes recognised in Government and industry evidence, projects set out in regional and local strategies and prospectuses, and additional intelligence confirmed through stakeholder engagement. The case study detail draws on published project documentation, developer socio-economic assessments, and regional studies, with sources cited at the relevant points.

The case studies in this section draw on available evidence to highlight the nature of employment associated with each project, including construction-phase activity, operational roles, and wider supply chain impacts, while also identifying key uncertainties relating to delivery timelines, and workforce requirements.

Case Study 1 - Hinkley Point C, Somerset

Hinkley Point C, Somerset	
The Hinkley C project involves the construction of two new nuclear reactors by EDF. The new nuclear power station will generate enough energy to power 6 million homes, approximately 10% of Britain's low-carbon electricity, at an estimated cost of £35bn (2015 prices).	
Timescales	• Construction start date – 2017 • Estimated completion – 2030
Workforce, occupational and skills demand estimates (include brief reference to the methodology used)	The Hinckley C project is expected to support 26,000 direct and indirect jobs[7]. The project recently reached peak construction (2023) with an estimated 8,500 workers employed, 38% (or approx. 3,230 workers) of which are estimated to be home based.

[7] https://www.edfenergy.com/sites/default/files/2025-05/Socio%20Economic%20Brochure%202025.pdf

Hinkley Point C, Somerset	
	 Operational workforce – An operational on-site workforce of approximately 700 permanent staff is forecast during normal operation; of which approximately 180 would be employed in professional and management positions; 60 in clerical / admin positions; and 460 in industrial positions. There is expected to be a further 200 to support operational activity. Up to 100 operational staff would work shifts to cover the 24 hr/day operational requirements. The remaining 800 staff would be likely to work day shifts. Maintenance and refuelling outages are expected to generate demand for a further 600-1000 staff. The project's socio-economic impact goes beyond the direct employment generated with: • 4,600 British businesses in the supply chain. • 1,520 apprentices trained. • £24m invested in education, skills and employment activity. • 30,000 training places being taken at the Centre of Excellence.
Strategic activity to maximise project employment and skills impact	EDF set out its commitment through the Construction Workforce Development Strategy (CWDS) which would seek to maximise employment benefits to West

Hinkley Point C, Somerset	
	Somerset, Sedgemoor, and Somerset [8]. The CWDS comprised the following six key projects: • Employment Brokerage (now the Jobs Service). • Employment Outreach. • Construction Skills Centre. • Hinkley Skills Ready Project. • Apprenticeships. • The Enterprise Centre Project. An Employment Skills and Operations Group (ESOG) has been established to oversee the aims and actions of the CWDS. The group meets quarterly and includes senior members of staff from key stakeholders and partner organisations. EDF's workforce team, the Employment Affairs Unit (EAU) provides the secretariat function for the Group to track agreed actions and decisions. Three sub-groups also need to track project specific activity which is all summarised in an annual implementation report whilst an annual socio-economic impact report in issued publicly[9]

Case Study 2 - Celtic Sea Offshore Wind, South West

Celtic Sea Offshore Wind (Floating Offshore Wind), South West	
The Celtic Sea offshore wind programme involves the development of large-scale floating offshore wind (FLOW) capacity in deep waters off the coast of South West England and South Wales. The programme forms part of the UK's Round 5 offshore wind leasing and has the potential to deliver an initial 4.5GW of generating capacity, alongside significant supporting infrastructure including turbines, floating platforms, subsea cabling, and port facilities. The programme is expected to play a key role in delivering the UK's clean power targets and establishing a new industrial cluster for floating offshore wind in the Celtic Sea. **The scale of infrastructure required is substantial, including the deployment of approximately 264 turbines and floating platforms, over 850km of cabling, subsea substations and anchoring systems, alongside significant port and supply chain activity.**	
Timescales	• Development phase – Early 2020s • Construction and deployment – Late 2020s to early 2030s (subject to leasing and consenting)

[8] The CWDS has since been replaced by the Workforce Development Strategy (WDS) in 2019.
[9] https://www.edfenergy.com/sites/default/files/2025-05/Socio%20Economic%20Brochure%202025.pdf

Celtic Sea Offshore Wind (Floating Offshore Wind), South West	
Workforce, occupational and skills demand estimates (include brief reference to the methodology used)	The Celtic Sea programme is expected to generate significant employment through the development of offshore wind generation and associated supply chains. Evidence from programme-level studies suggests: • Around 5,300 jobs supported on average over a five-year period associated with the initial 4.5GW deployment • An additional peak of approximately 3,600 jobs across the South West and Wales during peak construction activity Workforce estimates are derived using programme-level modelling, linking employment to installed capacity and supply chain requirements rather than detailed project-level occupational analysis. As a result, the evidence provides indicative job numbers associated with construction and supply chain activity but limited detail on occupational breakdowns. Employment demand is expected across a range of occupations, including offshore construction and installation roles, marine and vessel-based occupations, electrical and mechanical engineering, and manufacturing and fabrication associated with turbine and platform production. There is also expected to be longer-term demand for operations and maintenance roles across the lifecycle of offshore wind assets.
Strategic activity to maximise project employment and skills impact	The Celtic Sea offshore wind programme is being delivered through a national leasing process and involves multiple developers, with strategic coordination led by organisations including The Crown Estate and regional partnerships. The programme is supported by wider regional initiatives to position the South West and South Wales as a hub for floating offshore wind development. Strategic activity includes investment in enabling infrastructure, particularly port facilities and supply chain capacity, which are critical to supporting manufacturing, assembly, deployment, and maintenance of floating offshore wind technology. The programme also aligns with regional economic development strategies and energy prospectuses, which identify offshore wind as a key driver of clean energy employment. Skills and workforce activity is primarily delivered through regional and national initiatives, including LSIPs and sector-specific workforce studies, which identify offshore wind as a priority growth sector requiring engineering, marine, and technical skills. As with other early-stage programmes, there is limited evidence of detailed workforce interventions at project level. Key challenges include uncertainty in delivery timelines, the need to develop a specialised workforce for floating offshore wind technologies, and competition for labour from other offshore wind regions and major infrastructure projects. The mobile nature of the

Celtic Sea Offshore Wind (Floating Offshore Wind), South West	
	offshore workforce also presents challenges in maximising local employment capture in the South West.

Case Study 3 - Dorset Clean Energy Super Cluster, Dorset

Dorset Clean Energy Super Cluster (DCESC), Dorset	
The Dorset Clean Energy Super Cluster (DCESC) is a programme of nationally significant clean energy infrastructure projects being developed across Dorset and the wider English Channel. It brings together a portfolio of technologies including offshore wind, hydrogen production and storage, carbon capture and storage, and small modular nuclear reactors. The programme aims to unlock up to £28bn of investment and support delivery of the UK's clean power and industrial strategy ambitions.	
Timescales	Programme stage – Concept Delivery horizon – Late 2020s onwards (subject to individual project development and consenting)
Workforce, occupational and skills demand estimates (include brief reference to the methodology used)	The DCESC programme is expected to support significant levels of employment across both construction and operational phases. High-level estimates suggest: • Around 20,000 jobs during construction stages across the programme • Approximately 1,200 direct full-time equivalent (FTE) jobs during operation, increasing to around 1,600 FTE when including supply chain and wage effects The programme brings together a number of individual projects, with more detailed workforce estimates available for specific components. For example: • The UKEN South Dorset Hydrogen Storage project is expected to support up to 2,100 direct construction jobs and around 5,100 supply chain jobs, alongside approximately 135 permanent operational roles. • The proposed Channel Gateway offshore wind port facility at Portland is anticipated to generate around 1,000 direct jobs and a further 5,000 supply chain jobs. Workforce estimates are derived using high-level programme and investment assumptions, rather than detailed bottom-up occupational modelling. As a result, the evidence provides indicative job numbers across construction, supply chain, and operational phases without detailed occupational breakdowns. The programme is expected to generate demand across a wide range of occupations, including construction & civil engineering roles, offshore & marine occupations, electrical & mechanical engineering, and process & industrial roles associated with hydrogen and carbon capture infrastructure. Long-term

Dorset Clean Energy Super Cluster (DCESC), Dorset	
	operational activity is expected to support ongoing demand for technical and maintenance roles across assets such as ports, energy generation, and storage facilities.
Strategic activity to maximise project employment and skills impact	The DCESC is structured as a collaborative programme of projects rather than a single developer-led scheme, with a focus on creating the conditions to attract investment and maximise local economic benefit. The programme supports alignment with national policy objectives, including the UK Industrial Strategy and clean power targets. Strategic activity is focused on enabling infrastructure and supply chain development, including investment in port facilities, hydrogen storage & production, and offshore wind deployment capacity. The programme also seeks to position Dorset as a hub for clean energy innovation and delivery through collaboration between public sector partners, developers, and supply chain organisations. Skills and workforce activity is supported through wider regional initiatives, including LSIPs, which identify priority roles such as engineers, renewable energy technicians, and construction trades required to support clean energy delivery. Due to the early stage of the programme, there is limited evidence on detailed workforce planning interventions at the project level. The scale and diversity of projects within the DCESC presents challenges for coordinated workforce planning, including uncertainty in delivery timelines, competition for skilled labour from other regions, and the potential for a significant proportion of the workforce to be sourced from outside the local area.

Case Study 4 - UKEN South Dorset Hydrogen Storage Project, Dorset

UKEN South Dorset Hydrogen Storage Project, Dorset	
The UKEN South Dorset Hydrogen Storage project involves the development of large-scale underground hydrogen storage within salt caverns in South Dorset. The site represents one of only a small number of locations in Great Britain suitable for strategic-scale hydrogen storage. The project forms part of the wider DCESC and is intended to support the growth of hydrogen as a low-carbon energy vector, enabling the integration of renewable energy, and supporting decarbonisation across power, heat, and industrial sectors.	
Timescales	Project stage – Concept Delivery horizon – To be confirmed, aligned with wider hydrogen and energy system deployment in the late 2020s onwards

UKEN South Dorset Hydrogen Storage Project, Dorset	
Workforce, occupational and skills demand estimates (include brief reference to the methodology used)	The UKEN hydrogen storage project is expected to generate employment across both construction and operational phases. Estimates presented within project documentation suggest: • Up to 2,100 direct jobs during the construction phase. • Around 5,100 additional supply chain jobs associated with construction activity. • Approximately 135 permanent operational roles (direct and indirect) once the facility is operational. These figures are derived from project-level impact assessments, combining estimates of direct employment with wider supply chain effects, rather than detailed bottom-up occupational modelling. As such, the available evidence provides headline job numbers but does not include a detailed occupational breakdown. The workforce demand is expected to span a range of occupations, including civil engineering and construction roles associated with cavern development, drilling and infrastructure installation, alongside mechanical and electrical engineering roles linked to hydrogen handling, storage systems, and associated energy infrastructure. Operational roles are expected to focus on plant operation, maintenance, safety, and monitoring functions.
Strategic activity to maximise project employment and skills impact	The UKEN project is being delivered as part of the wider DCESC, with a focus on enabling hydrogen infrastructure as a key component of the future low-carbon energy system. Strategic activity is primarily aligned with national policy objectives around hydrogen development and energy system flexibility, as well as regional ambitions to position Dorset as a hub for clean energy investment. The project contributes to the development of supply chains associated with hydrogen production, storage, and utilisation, with potential to support wider economic activity across the region. Skills and workforce development is expected to link to broader regional initiatives, including LSIPs, which identify engineering, technical, and construction roles as priorities for clean energy delivery. As an early-stage project, there is limited evidence of dedicated workforce interventions specific to the scheme. Key challenges include uncertainty around delivery timelines, the need to develop specialist hydrogen-related skills, and competition for skilled labour from other clean energy and infrastructure projects. As with other large-scale infrastructure schemes, there is also potential for a proportion of the workforce to be drawn from outside the region, particularly for specialist roles.

2.6 SUMMARY OF THE DESK-BASED REVIEW AND CONSULTATION FINDINGS

This section draws together the headline findings from the desk-based review and stakeholder engagement. The overall picture is consistent: the South West has a strong, widely shared policy commitment to clean energy and good evidence on the sectors and projects driving demand, but a much weaker and more fragmented evidence base on the workforce itself, particularly on occupations, future demand, and local labour impacts. The detailed findings on data holdings and the causes of divergence (i.e., between national and regional workforce estimates) are developed under the relevant KRQs in Chapter 3; this section sets out what the evidence shows overall and the main limitations that shape those answers.

2.6.1 DESK REVIEW OF EVIDENCE

Stakeholders shared over 160 documents on which the desk-based review was based. Documents shared included LSIPs, local economic and climate strategies, Local Area Energy Plans, sector studies, investment prospectuses, skills reports, and project-specific economic assessments, produced by LAs, sub-regional partnerships, Chambers of Commerce, education and skills bodies, industry organisations and national agencies. Six findings stand out:

1. **Policy support for clean energy is strong and consistent**. Almost all sub-regional strategies identify net zero, clean growth, or clean energy as a future economic opportunity. As set out in Section 2.4, this translates into a set of place-based strengths rather than a single regional specialism, with each area focusing on the technologies that reflect its assets and project pipeline.

2. **Evidence is stronger on sectors and projects than on workforce detail**. The collective evidence gives a good picture of the sectors and major projects likely to drive employment, but far less on the workforce itself. Many project documents provide headline job figures without a clear methodology, occupational breakdown, or confirmation of whether numbers are presented as gross or net, or segmented in terms of direct, indirect, or induced. This limits comparison across projects and aggregation into a robust regional estimate.

3. **Quantified workforce evidence is variable**. Sources mix employment stock estimates, workforce requirements, and investment-led job figures, using full-time equivalents (FTE), headcount, or job-years interchangeably. Construction-phase employment is well covered; long-term operational and maintenance roles far less so. These published figures are useful for gauging scale and direction but unreliable as the basis for a consistent regional forecast.

4. **Occupational evidence is relatively weak**. Few sources provide quantified occupational forecasts for baseline, 2030, and 2050, and alignment to SOC codes is rare. Detail is strongest where it relates to specific sectors, particularly retrofit, low-carbon heat, hydrogen, and offshore wind (for example the North Devon and Torridge Hydrogen Skills Report and the SWNZH Retrofit Skills Report).

5. **Evidence improves as projects mature**. Hinkley Point C offers the clearest example of detailed workforce monitoring, covering construction and operational profiles, local labour content, apprenticeships, and supply chain impacts. It also shows the limits of project

forecasts: delivery timetables and peak workforce profiling have shifted from earlier assumptions, with direct implications for skills planning.

6. **Headline job forecasts often carry significant uncertainty,** particularly for long-term projects. Across the evidence base, clean energy and net zero are consistently presented as major sources of future employment, typically supported by economic impact studies. In practice, these forecasts are frequently based on studies containing considerable uncertainty, and in some cases the scale and timing of employment have not matched earlier expectations. This is clearest for large, long-term schemes: the Severn Estuary tidal programme, for example, cites potential construction employment ranging from 30,000 to 645,000 depending on the scheme adopted, a range so wide it offers little basis for practical workforce planning. Delivery timescales for major projects also tend to move backwards rather than forwards, as seen at Hinkley Point C, which pushes forecast employment impacts further into the future. The evidence from comparable studies suggest that projected clean energy employment is best understood alongside delivery realism and local absorptive capacity rather than at face value.

Many of these differences reflect the fact that regional evidence has been developed for different purposes, at different spatial scales and using different analytical approaches, rather than indicating deficiencies in the underlying studies. With that in mind, the recurring limitations that shape how far the evidence can be compared and aggregated are summarised below and carried through into the Chapter 3 assessments:

- **Variable definitions**: a mix of clean energy, low-carbon, net zero, green jobs, and wider green economy framings, not always aligned to the CEJP.
- **Variable geography**: evidence produced at LA, county, combined authority, former LEP, Great South West, and regional levels.
- **Limited occupational granularity**: priority sectors identified, but demand rarely quantified by occupation or aligned to SOC codes.
- **Limited future forecasting**: forecasts to 2030 and 2050 exist for some sectors and areas, but not consistently across the region.
- **Project uncertainty**: many opportunities remain at concept or early development stage, so workforce figures are indicative.
- **Limited local labour attribution**: few sources set out the share of jobs likely to be filled by local residents rather than mobile labour.
- **Risk of double counting**: some figures include supply chain or wider economic impacts, others only direct jobs, complicating any combination of sources. This leads to a position whereby employment demand from clean energy investments could be overstated, which creates a challenging environment for investment or service planning for public agencies.

2.6.2 CONSULTATION FINDINGS

Stakeholder engagement tested the emerging desk-review findings, explored how workforce data is used in practice, and identified additional intelligence held by regional and local partners.

Discussions were held with LAs, skills bodies, Chambers of Commerce, and clean energy & net zero teams; the full list is provided in Appendix A. Engagement confirmed the desk-review picture: partners draw on a combination of national datasets, commercial labour market intelligence, local strategy evidence, project-level data, and provider intelligence, but stakeholders reported no single source gives a complete or sufficiently granular view of workforce demand for their purposes.

What data are partners using? The most frequently cited source was Lightcast, used to understand job postings, occupational demand, and current labour market pressures, with Southampton, Dorset, BCP, and Devon all referencing it directly or through partner access. National datasets are also widely used, including ONS, NOMIS, Census data, DESNZ datasets, and CEJP classifications. Local and regional sources include LSIP evidence, Local Area Energy Plans, commissioned studies, and project-level information. The datasets partners hold and their uses are set out in full under KRQ3 (Section 3.3).

What are they using it for? Partners use workforce evidence primarily for strategy development (economic strategies, skills plans, Local Growth Plans, LSIPs, and investment propositions), skills planning (identifying priority occupations and provision gaps), and project and pipeline planning around major schemes. It also informs investment decisions, both in supporting funding and grant applications and in underpinning capital commitments such as colleges and training providers investing in new facilities and equipment. Several stakeholders noted that weak or unclear demand evidence can undermine funding applications and make providers reluctant to invest in new provision without confidence that the demand will materialise.

What works well? Lightcast and similar tools were valued for live vacancy and short-term demand signals, and LSIP evidence for its employer engagement and sub-regional insight. Project-level evidence was seen as most useful where schemes are mature enough to provide credible assumptions. Many consultees stressed the value of qualitative intelligence, noting that conversations with businesses, developers, and colleges often give more current insight than published data in fast-moving sectors.

Where are the gaps? Stakeholders themselves raised **three recurring issues**, developed further in Chapter 3. Of these, our analysis points to the absence of a shared definition of clean energy employment as the most foundational, since it underpins several of the other differences (see section 3.5):

- **No shared definition of clean energy employment:** stakeholders themselves echoed the desk-review finding, reporting that "clean energy", "green jobs", "net zero skills" and "low-carbon economy" are used interchangeably in practice, and separating clean energy work from wider activity in transferable occupations such as electricians and engineers is difficult. This is explored under KRQ5 (Section 3.5).

- **Forecasting difficulty** particularly where project timelines hinge on external factors such as market conditions, leasing, grid connection, developer appetite, and public-sector decision-making, and where provider data on learner destinations is incomplete.

- **The gap between demand and provision**. Stakeholders reported that training provision often lags industry need in retrofit, low-carbon heat, solar and hydrogen. They also cautioned that headline job figures can overstate local employment demand, because major projects draw

heavily on mobile and specialist labour, and because the timing of that demand is often uncertain. These points inform the analysis and recommendations in Chapters 3 and 4.

These findings form the evidence base used to answer the five KRQs in the next chapter.

3 KEY RESEARCH QUESTIONS

This chapter draws together the evidence synthesised in Chapter 2 to assess how far each of the five KRQs can be answered. The KRQs were set by the SWNZH and OCEJ at the outset of the commission to focus the study on the areas of greatest value for regional and national workforce planning: the sectors and projects driving demand, the occupations required, the data partners hold and use, and the discrepancies between national and regional evidence and their causes. Each question is addressed in turn, drawing on both the desk-based review and stakeholder engagement, and concludes with a classification (answered, partially answered, or not answered), a confidence level, and the reasoning behind it. The classifications and confidence levels are informed professional judgements based on the quality, coverage and consistency of the available evidence, rather than statistical measures.

3.1 WHAT ARE THE KEY CLEAN ENERGY SECTORS AND PROJECTS DRIVING JOB CREATION IN THE SOUTH WEST?

The South West is a nationally significant region in the UK's transition to net zero, with a diverse portfolio of clean energy assets, natural resources and industrial capabilities. Large-scale infrastructure, particularly in nuclear and offshore wind, acts as anchor investment generating substantial labour demand across construction and operation, while more distributed technologies such as solar and onshore renewables support dispersed job creation in installation, maintenance, and professional services. This section identifies the priority sectors and major projects driving that demand; the sub-regional context and project case studies are set out in sections 2.4 and 2.5.

3.1.1 PRIORITY CLEAN ENERGY SECTORS DRIVING EMPLOYMENT

Employment growth is concentrated in a defined set of priority sectors that reflect the region's industrial strengths and natural resource advantages. These vary in maturity and scale but together underpin demand across construction, engineering, operations, and professional services. Table 1 summarises the key sectors, their geographic distribution, and current and future employment, with the source of each figure provided. It is not a comprehensive picture of every sector in every area - it sets out what the evidence review identified, and blank or "not specified" cells indicate that no quantified intelligence was found for that combination rather than an absence of activity.

Table 1 - Priority Clean Energy Sectors and Associated Employment

Sector	Location	Current Estimated Employment	Future Estimated Employment Growth	Source
Renewable energy (incl. solar, wind, tidal, geothermal, hydrogen)	**South West (regional)**	**Not specified**	**856,000 total clean energy jobs supported by 2030 across sectors, ~35,000 of which will be based in the South West,**	**Clean Energy Industry Insights Business West LSIP Report, Business West**
	Cornwall & Isles of Scilly	59,387 total green occupations (2022 baseline, includes clean energy)	5,962 renewable energy jobs; 1,035 heat network jobs linked to planned investment	Cornwall's Green Economy and Skills Deep Dive Research, CIOS LEP Cornwall & Isles of Scilly Local Area

Sector	Location	Current Estimated Employment	Future Estimated Employment Growth	Source
				Energy Plan, Cornwall Council
	Gloucestershire	118 current vacancies in renewable energy sectors	Hydrogen: 200 jobs; Nuclear: 4,400; Solar PV: 1,800; Onshore wind: 700; Offshore wind: 100 (2030)	Gloucestershire LSIP – Green Skills Provision Report, Business West
Nuclear energy	**South West (regional)**	**17,301 workers (2024 baseline)**	**27,186 workers required by 2043**	**Nuclear Workforce Assessment, Cogent Skills**
	Gloucestershire	Included within wider renewable / nuclear baseline	4,400 jobs required by 2030	Gloucestershire LSIP – Green Skills Provision Report, Business West
Offshore wind / wind energy (incl. floating)	**South West (regional)**	**Not specified**	**2,235 peak workforce demand (2025-2030)**	**Wind Industry Skills - Intelligence report, Offshore Wind Industry Council**
	Cornwall & Isles of Scilly	Not specified	Included within wider renewable energy projections	Cornwall & Isles of Scilly Local Area Energy Plan, Cornwall Council
Hydrogen (production, storage, CCUS-linked)	**South West (regional)**	**Not specified**	**Not specified**	
	Gloucestershire	Not specified	200 jobs required by 2030	Gloucestershire LSIP – Green Skills Provision Report, Business West
	Solent	Not specified	50-100 FTE (production); 150-400 FTE (operations)	Solent LEP Low Carbon Skills Report, Solent LEP
	North Devon & Torridge	Not specified	200 jobs by 2050	North Devon & Torridge Hydrogen Routemap - Technical Report, City Science
Retrofit / energy efficiency / low-carbon heat	**South West (regional)**	**Not specified**	**15,000 retrofit jobs by 2028; 26,000 heat pump jobs**	**South West Net Zero Hub Retrofit Skills Report, Gemserv**
	Dorset & BCP	Not specified	2,000 jobs by 2035; 1,000 by 2050	BCP Local Area Energy Plan, BCP Council
	North Somerset	Not specified	Workforce expected to at least double to meet net zero targets	North Somerset Climate Emergency Action Plan, North Somerset Council
	Somerset	Not specified	6,575 FTE retrofit jobs; 1,083-887 FTE heat pump jobs by 2050	Somerset Energy Investment Plan, somerset Council
Low-carbon electricity / broader low-carbon energy system, Energy	**South West (regional)**	**Not specified**	**Not specified**	
	South West (Somerset; WECA)	Not specified	Battery manufacturing via Agratas gigafactory (~4,000 jobs, see Table 2); electrical energy storage a WECA priority to 2030	Great South West Clean Energy Powerhouse Prospectus, Great South West Partnership

Sector	Location	Current Estimated Employment	Future Estimated Employment Growth	Source
Storage (incl. battery)	Wiltshire	Low-carbon electricity: 2,163 jobs; Alternative fuels: 1,430; Low-carbon heat: 1,308; Energy efficiency: 433; Low emission vehicles: 1,224	Low-carbon electricity: 4,683; Alternative fuels: 2,152; Low-carbon heat: 1,380; Energy efficiency: 1,218; Low emission vehicles: 3,156	Wiltshire Climate Strategy Discussion Document, Wiltshire Council
General clean energy / low-carbon economy (cross-sector)	**South West (regional)**	**Not specified**	**190,000 jobs across the wider net zero economy by 2035**	**Devon Carbon Plan, Devon Climate, Devon Climate Emergency**
	Dorset & BCP	5,900 clean energy jobs (current workforce)	2,000 additional jobs by 2030	A Framework for Economic Growth for the Pan Dorset Area, Dorset LEP Get Dorset and BCP Working Plan, Dorset Council and BCP Council
	Gloucestershire	Not specified	12,500 jobs by 2030; 20,000 by 2050	Gloucestershire's Economic Strategy 2024-2034, Gloucestershire County Council
	Devon	33 jobs identified in specific programme baseline	Included within wider regional projections	Devon Carbon Plan, Devon Climate Emergency

3.1.2 MAJOR PROJECTS DRIVING JOB CREATION

Job creation is closely linked to a pipeline of major infrastructure and development projects, which drive both direct employment and wider supply chain activity. These vary in scale, stage, and sectoral focus and collectively shape the timing, location, and nature of workforce demand. Table 2 summarises the key projects and their associated workforce implications; and shows how the sectoral demand in Table 1 is delivered through specific schemes (for example, nuclear through Hinkley Point C and offshore wind through Celtic Sea FLOW); fuller detail on the four anchor projects is provided in the case studies in Section 2.5.

Table 2 - Major Projects and Associated Employment

Key Project	Location	Current Estimated Employment	Future Estimated Employment Growth
Hinkley Point C	Somerset	8,500 peak construction workforce (current phase)	26,000 jobs supported (construction and supply chain); 700 operational jobs
Celtic Sea Floating Offshore Wind	South West (offshore, Cornwall/Devon coastline)	Not specified	5,300 jobs (average); 3,600 peak construction jobs
Dorset Clean Energy Super Cluster (DCESC)	Dorset & BCP	Not specified	20,000 construction jobs; 1,200-1,600 operational jobs
UKEN Hydrogen Storage Project	Dorset	Not specified	2,100 construction jobs; 5,100 supply chain jobs; 135 operational jobs

Key Project	Location	Current Estimated Employment	Future Estimated Employment Growth
Severn Estuary Tidal Energy Programme	Severn Estuary (Somerset / wider estuary region)	Not specified	Large-scale construction employment ranging from 30,000 to 645,000 jobs depending on scheme
Geothermal Programme	Cornwall	2,600 jobs (current geothermal / geo-resources workforce)	Not specified
Agratas Gigafactory (battery manufacturing)	Somerset	Not specified	4,000 operational jobs

3.1.3 ANALYSIS OF AVAILABLE DATA AND KEY LIMITATIONS

The evidence gives a strong picture of the sectors and projects likely to drive clean energy employment, but a much weaker basis for detailed workforce planning. As set out in Section 2.6, policy support is consistent across all sub-regions, yet this is rarely matched by robust, quantified workforce evidence at LA level.

Where quantitative evidence exists, it is fragmented and hard to compare. Some sources give headline job figures linked to projects or investment; others give FTE requirements for specific sectors such as retrofit. These are not directly comparable and often exclude supply chain impacts or occupational detail. The evidence also skews towards construction-phase employment, with far less on long-term operational roles, which leaves an incomplete picture for skills and training planning. Finally, the timescales associated with clean energy projects, as with other major infrastructure projects, is highly uncertain. This leads to further challenges for the accuracy and use of workforce data for informing investment or interventions to support workforce planning.

Occupational detail is the weakest element. While some sector studies and LSIPs identify priority roles, comprehensive occupational mapping is rare and alignment to SOC codes limited, which restricts the ability to translate sectoral demand into actionable workforce interventions. Evidence quality improves markedly at project level once schemes reach delivery: Hinkley Point C (Section 2.5) provides detailed construction and operational profiles, supply chain activity, and skills interventions, but such examples remain the exception, and even these are subject to changing delivery timelines.

A further limitation is the difficulty of attributing employment locally, particularly for large infrastructure projects where labour markets are regional or national in scope and a share of jobs may be filled by mobile workers rather than by local residents. Overall, the evidence supports a confident view of which sectors and projects will drive demand, but not a precise view of the scale, occupational make-up, timing, or local capture of that demand.

Answering the question - What are the key clean energy sectors and projects driving job creation in the South West?

Headline answer: Yes, the key sectors and projects are well identified; the main gap is a single comparable regional employment figure.
Classification: Partially answered
Confidence: 70%

Reason: Existing evidence provides strong coverage of priority sectors and major projects driving employment, with multiple quantified job estimates at regional and project level. However, the evidence is fragmented, differs in methodology, and lacks complete geographic and sectoral coverage, limiting the ability to produce a fully coherent and comparable regional figure.

3.2 WHAT PRIORITY OCCUPATIONS IN CLEAN ENERGY SECTORS ARE EXPECTED TO BE IN DEMAND FOR BASELINE, 2030, AND 2050 AT REGIONAL AND LOCAL AUTHORITY LEVEL?

The transition to net zero could drive significant change in the South West's labour market, with demand for clean energy occupations evolving over time as the project pipeline matures and technologies develop. Understanding requirements at baseline, 2030, and 2050 is therefore critical to ensuring skills provision and labour supply can respond. Demand also varies by geography, shaped by the location of major projects and local economic structures. This section sets out the priority occupations at baseline and in the future, and how these differ across the region. Quantified occupational forecasting was relatively scarce, especially beyond the baseline, so the picture below is partial and strongest where major projects have driven detailed analysis.

3.2.1 PRIORITY OCCUPATIONS AT BASELINE

Table 3 sets out current priority occupations across the component parts of the South West. All available documents relating to the clean energy workforce were reviewed, and any evidence citing current demand for specific occupations was extracted and aggregated by geography. Occupations are grouped into three categories:

- **Clean Energy Specific Occupations** – roles specific to clean energy sub-sectors, not transferable from other sectors.
- **Green Occupations** – roles linked to the environment, net zero, circular economy or wider green economy, many transferable across green sub-sectors including clean energy.
- **Other Occupations -** all other roles, including general STEM, business and administration and support services, transferable from across the economy.

Occupations in all three groups are required as part of the clean energy workforce in the South West, whether directly responsible for clean energy generation or in a supporting capacity.

The reviewed documents used a wide range of methodologies and datasets. Many took a bottom-up approach, building occupations from the requirements of major projects or net zero goals; others drew on employer engagement (for example through LSIPs) or national datasets such as Lightcast and, less commonly, LCREE. There was no consistent approach, dataset, or methodology across geographies. Cornwall, Plymouth, and Devon hold the most, likely reflecting the major projects located there (Celtic Sea FLOW and the Cornwall geothermal programme, see Table 2).

Where an area is not represented below, this means no occupation-level intelligence was identified in the evidence reviewed rather than an absence of activity: some areas with clear clean energy ambitions, such as Gloucestershire, hold strong sector and project evidence but less at occupational

level. Consistent with the approach taken in the North East and Yorkshire Net Zero Hub study, occupations are described using the terms in the source evidence; these are aligned to the 4-digit SOC used in the CEJP only where the national analysis provides it, as the local sources reviewed here rarely classify roles to that level. The recurring occupations identified across geographies include:

- Solar panel installers and engineers.
- Offshore and onshore wind turbine technicians.
- Retrofitters.
- Data analysts.
- Project managers.

Table 3 – Current Priority Occupations by Geography

Geography	Clean Energy Sectors	Clean Energy Specific Occupations	Green Occupations	Other Occupations	Source
Cornwall & Isles of Scilly	Retrofit Solar power Onshore and offshore wind Geothermal Hydrogen Biomethane	Solar Engineer Energy engineer Energy assessor Solar installer Wind turbine technician	Sustainability specialist Environmental engineer Environmental scientist / specialist Environmental technician Environmental conservationist Water treatment specialist / Waste	Geologist Biologist Wildlife biologist Soil/plant scientist Microbiologist Researcher / research associate Communications manager Product development engineer Public Relations specialist Copywriter Lawyer Marketing manager University Lecturer Electrician	Cornwall & Isles of Scilly LSIP, CIOS LEP
Cornwall	Hydrogen Carbon Capture Usage and Storage Offshore and onshore wind Solar power Heat networks and heat pumps Bioenergy Retrofit and building fabrication Renewable electricity generation Renewable power integration	Solar engineer Energy engineer Energy assessor Solar installer Wind turbine technician Offshore wind engineers Offshore operations and maintenance technicians FLOW-related training and education providers	Sustainability specialist Environmental engineer Environmental scientist / specialist Environmental technician Environmental conservationist Water treatment specialist / waste Environmental and consenting specialists	Geologist Biologist Wildlife biologist Communications manager Product development engineer Public Relations specialist Soil/plant scientist Copywriter Lawyer Marketing manager Microbiologist University Lecturer Researcher / research associate Electrician Freight and logistics operators Subsea engineers Marine engineers Port and harbour operations staff Marine logistics and vessel crew Data analysts Project managers Infrastructure development managers Workforce and skills specialists	Cornwall's Green Economy and Skills Deep Dive Research, CIOS LEP Cornwall FLOW Process and Quantitative Causal Impact Evaluation, Celtic Sea Power

Geography	Clean Energy Sectors	Clean Energy Specific Occupations	Green Occupations	Other Occupations	Source
				Research and development engineers Supply-chain and manufacturing specialists	
Dorset and BCP	Renewable heat Solar power Onshore wind and offshore wind Small modular nuclear reactors Carbon capture and storage Hydrogen storage Retrofit	Solar PV installers Solar electricians Renewable energy consultants	Not specified in available evidence	Not specified in available evidence	Dorset LSIP - LMI Sector Insights Green Jobs, Dorset Chamber of Commerce
Swindon & Wiltshire	Renewable heat Solar power	Solar Installer	Heat Engineer Heat Pump Installers and Technicians	Not specified in available evidence	Swindon & Wiltshire LSIP Green Skills Provision Report, Business West Chambers of Commerce
Plymouth	Offshore wind Hydrogen fuel cell technology Solar power Wave geothermal Ground or ocean heat pumps Heat networks Retrofit	Renewable Energy Technician Solar Panel Installer Energy Efficiency Auditor Renewable Energy Software Developer Renewable Energy Consultant	Sustainability and Environmental Management Sustainable Design and Planning Professionals Environmental Research and Scientific Professionals Environmental Data and Digital Specialists Community, Engagement and Advocacy Professionals Circular Economy and Resource Management Professionals Sustainability Coordination and Programme Management	Cooperative Development Specialist Project Manager Ranger	Green Skills Training Directory & Green Horizon, Plymouth City Council
Devon & Somerset	Retrofit	Not specified in available evidence	Retrofitters	Not specified in available evidence	Devon & Somerset LSIP, Devon & Plymouth Chamber of Commerce and Somerset Chamber of Commerce

Geography	Clean Energy Sectors	Clean Energy Specific Occupations	Green Occupations	Other Occupations	Source
Greater Devon	Floating offshore wind Hydrogen & carbon capture and storage Solar power Geothermal Battery cell manufacturing Retrofit	Floating Offshore Wind Operations and Maintenance Technician	Retrofitters EV and Electric Propulsion Systems Engineer Retrofit Coordinator / Low-Carbon Construction Specialist	Data Analysts Electrical Engineers Mechanical Engineers Production and Process Engineers Quality Control and Planning Engineers	Greater Devon LSIP, Devon Chamber of Commerce
East Devon	Retrofit	Not specified in available evidence	Retrofitters	Not specified in available evidence	East Devon Economic Development Strategy, East Devon District Council

3.2.2 PROJECTED FUTURE OCCUPATIONAL DEMAND

Where projections for future occupations were included in the policy, strategy, and evidence documents that were collected and reviewed, Table 4 below summarises available projections aggregated by geography and occupational groupings for the year in which they are estimated to be a priority.

The priority sectors in 2030 are short- to medium-term priorities that are quickly emerging in their respective geographies while the long-term priority occupations are up to 2050. There is no consistent approach to timeframes associated with future priority occupations with different documents listing 2030, 2035, and 2050. None of the geographies list both short-term priorities and long-term priorities, and there are fewer documents citing future looking occupations than there are current priority occupations. As is the case for analysis relating to current priority occupations, there is no consistent methodology or dataset that is used to estimate future occupations. Similar datasets have been used (Lightcast, LCREE, sector/project reports, consultations/engagement) but with the addition of other national datasets such as the CEJP, Oxford Economics Forecasts, ONS and DESNZ data.

Future occupational demand has mostly been considered across larger geographical areas, such as region-wide, sub-regional, or countywide. This reflects where responsibility for economic growth and skills planning sits: strategic authorities, including county councils, combined authorities and sub-regional partnerships, tend to hold more resourced and mature workforce evidence than individual LAs. WECA is a clear example: although one of the smaller geographies by area, its remit and resourcing as a strategic authority mean it holds one of the more developed evidence bases for future occupations, alongside the region-wide South West evidence.

The recurring occupations that are projected to be in demand in the future are:

- Solar panel installers and engineers.
- Retrofitters.
- General construction trades.
- Engineers.

Table 4 – Future Priority Occupations by Geography

Geography	Clean Energy Sectors	Clean Energy Specific Occupations	Green Occupations	Other Occupations	Source
South West - Priorities up to 2030	Retrofit Heat pumps Offshore wind Onshore wind Nuclear Geothermal Hydrogen Biofuels Solar Wave and tidal energy	Not specified in available evidence	Cavity wall installer Solid wall installer Loft insulation installer Double glazing installer Retrofit assessor Retrofit coordinator Heat pump engineer Heat pump electrician Ground workers Heat pump engineer Heating controls installer	Skilled construction and building trades Science, research, engineering and technology professionals Skilled metal, electrical and electronic trades Corporate managers and directors Process, plant and machine operatives Business, media and public service professionals Business and public service associate professionals Administrative occupations Science, engineering and technology associate professionals Elementary trades and related occupations	South West Net Zero Hub Retrofit Skills Report, Gemserv Clean Energy Industry Insights Business West LSIP Report, Business West
WECA (inc. North Somerset) - Priorities up to 2030	Retrofit Heat pumps/low-temperature heating Solar PV Electrical energy storage Low-carbon electricity Alternative fuels Industrial decarbonisation Industrial electrification Hydrogen Carbon Capture and Storage	Solar PV installers Nuclear Energy assessors	Retrofit assessors Retrofit coordinators Solid wall insulation installers Cavity wall insulation installers Loft insulation installers Heat network engineers Heat pump installers/technicians EV technicians Low-carbon services	Aerospace Construction Engineering Construction Process roles	West of England Green Skills Provision Report, Business West Chambers of Commerce West of England Green Market Skills Analysis Report, WECA West of England Retrofit Skills Market Analysis, WECA West of England Local Industrial Decarbonisation Plan, West of England Industrial Cluster

Geography	Clean Energy Sectors	Clean Energy Specific Occupations	Green Occupations	Other Occupations	Source
Hampshire - Priorities up to 2050	Domestic Retrofit	Renewable Heat Specialists	Insulation Specialists Retrofit Coordinators	General Builders Plasterers and renderers Carpenters Window fitters Electricians Heating Engineers	A Green Economic Recovery for Hampshire, NEF
The Solent - Priorities up to 2035	Retrofit Heat Pumps Hydrogen Marine carbon capture	Renewable energy engineers	Cavity wall installer Solid wall installer Loft insulation installer Double glazing installer Retrofit assessor Retrofit coordinator Heat pump engineer Heat pump electrician Ground workers Heat pump engineer Heating controls installer	Civil engineers Chemical engineers Electrical engineers Mechanical engineers Marine biologists Marine environmental science Oceanography Social scientists	Solent LEP Low Carbon Skills Report, Gemserv
North Devon & Torridge - Priorities up to 2050	FLOW Green Hydrogen Hydrogen production, distribution and storage Retrofit	Electrolysis Technician Hydrogen Systems Technician Marine Bunkering Manager (hydrogen-certified) Hydrogen Bunkering Operator	Environmental Specialist / Advisor Housing Retrofit Assessor	Built Environment Engineering Trades Marine Engineering Trades Electrical and Energy Systems Engineering Trades Chemical and Material Engineering Trades Data Engineering Technical Trades Maintenance and Skilled Trades Operations and Utility Services Project, Asset and Supply Chain Support Engineering and Operations Management Safety, Health and Risk Management Research, Development and Innovation Digital and Data Specialists Regulatory, Legal and Compliance Professionals	North Devon & Torridge Hydrogen Skills Report, City Science

Geography	Clean Energy Sectors	Clean Energy Specific Occupations	Green Occupations	Other Occupations	Source
Somerset - Priorities up to 2050	Low-carbon energy Nuclear energy Hydrogen Solar PV Onshore wind Tidal energy Tidal lagoon Low-carbon heat Air-source & ground-source heat pumps Heat networks Geothermal (early stage) Battery manufacturing Battery storage	Heat pump installers Solar installers	Not specified in available evidence	Not specified in available evidence	
Gloucestershire - Priorities up to 2050	Hydrogen production Nuclear Solar PV Onshore wind Offshore wind Heat pump installation Retrofit	Solar PV installers Renewables specialisms	Heating engineers Heat pump electricians and engineers Heat network engineers Cavity wall insulation installers Solid wall insulation installers Loft insulation installers Double glazing installers Retrofit coordinators Retrofit assessors Other retrofit specialisms	General construction training Smart metering Electricals	

3.2.3 SUMMARY

Every part of the SWNZH area has some coverage of priority occupations, whether current or future. For most LAs this sits within a wider grouping (a set of LAs, a combined authority, a county, or a sub-region), though Cornwall, Plymouth, East Devon, and Somerset set out their own individual priorities. For Cornwall and Somerset, this likely reflects the major projects coming forward there, Hinkley Point C, Celtic Sea FLOW, the Severn Estuary tidal programme, the geothermal programme, and the Agratas gigafactory, indicating that major projects are a strong influence on the richness of the evidence base.

Strategic bodies such as WECA, county councils, and sub-regional partnerships hold explicit responsibilities for economic growth and skills planning, and therefore both require and commission more robust workforce evidence than individual LA, which rarely have the same remit, capacity, or need. Occupational evidence is consequently strongest where strategic planning responsibility sits, and thinnest at individual LA level.

No single geography sets out both current and future priorities, or both short- and long-term priorities, which points to the partial nature of the evidence, driven by project or investment uncertainty, rather than a lack of interest or activity. The most commonly cited roles are similar across both time horizons, with solar panel installers prominent throughout. Qualitative engagement suggests demand is likely to shift towards more regulated and technical sectors such as nuclear, hydrogen, and carbon capture, and the occupations that support them, though the current evidence does not allow this shift to be quantified. Across all time horizons there is a clear demand for a mix of clean energy specific roles and more general transferable occupations.

The absence of shared methodologies, datasets, and occupational definitions makes comparison across documents and geographies difficult, and much of the evidence is shaped by local projects, adding further variation based on project maturity and local requirements. Priority occupations at sub-regional and regional level also show less overlap with those of their constituent areas than might be expected, reflecting the different bases on which each was produced rather than a genuine divergence in need.

Answering the question: What priority occupations in clean energy sectors are expected to be in demand for baseline, 2030 and 2050 at regional and local authority level?

Headline answer: Partly; broad occupational priorities are clear, but future forecasting is scarce and varies across geographies.
Classification: Partially Answered
Confidence: 50%
Reason: There is some coverage of priority occupations across all geographies in the South West, with some areas holding extensive detail driven by major projects or their size. A lack of consistent definitions, timeframes, datasets, and methodologies produces significant disparities and gaps, making it difficult to aggregate or compare the evidence across a consistent set of current and future occupational priorities.

3.3 WHAT CLEAN ENERGY WORKFORCE DATA DOES WECA, SKILLS LEADS, AND KEY LAS HOLD AND USE?

LAs, skills leads, and regional partners across the South West hold a substantial amount of workforce, skills, and labour market intelligence relating to clean energy. No single organisation maintains a comprehensive clean energy workforce dataset. That said, engagement indicated a clear difference by tier of authority: strategic bodies with economic growth and skills-planning remits, notably WECA and county authorities such as Devon, hold more structured and joined-up workforce evidence than individual LAs, drawing on scenario modelling, employer engagement, and commissioned analysis. This suggests the emergence of Combined Authorities across the region could support more comprehensive and consistent workforce evidence than is achievable authority by authority, even if no organisation yet holds a complete clean energy workforce dataset.

- **National datasets provide the common baseline**. Stakeholders referenced ONS labour market statistics, NOMIS, Census data, DESNZ datasets, and CEJP classifications throughout. Devon reported using CEJP definitions, SIC codes, and occupational mappings to structure its workforce modelling. Stakeholders valued these sources for establishing consistent baselines but reported that they typically require local interpretation and supplementation to be useful for workforce planning.

- **Commercial labour market intelligence**, principally Lightcast, was the most widely cited single source. LAs and skills leads use its vacancy data, occupational profiles, and skills intelligence to identify emerging demand and workforce shortages. Southampton accesses Hampshire County Council's Lightcast licence, and Dorset, BCP, and Devon all reported using it alongside local intelligence. Stakeholders found vacancy data useful for current demand but less effective for forecasting requirements tied to major projects.

- **Skills and provision evidence forms a further layer**. WECA and comparable regional skills bodies draw heavily on LSIPs, Green Skills Provision Reports, Employment and Skills Plans, and employer engagement, particularly in retrofit, construction, low-carbon heat, renewable energy, and engineering. Colleges and training providers hold valuable intelligence on course provision, learner numbers, and training capacity, though stakeholders noted that data sharing is varying and that information on learner destinations and employment outcomes is often limited. BCP specifically highlighted difficulty obtaining provider data and consistent outcome information.

- **Project-level evidence** was generally regarded as the most useful source for understanding future demand. Many authorities hold workforce forecasts, occupational assumptions, and supply chain estimates linked to major schemes including Hinkley Point C, the DCESC, Celtic Sea FLOW, Agratas, and Bristol City Leap (see Sections 2.4 Sub-regional Approaches to Supporting the Clean Energy Transition and 2.5). Stakeholders stressed, however, that these forecasts are highly sensitive to project timing and investment decisions. It is not possible to provide a sector-wide workforce forecast for the region based on project level evidence due to inconsistencies and unknowns in definitions and timescales.

- **Bespoke local modelling** exists in some areas. Devon has developed workforce demand and supply models drawing on baseline datasets, regional business intelligence, project assumptions, and scenario modelling, including analysis of workforce movements and

commuting patterns. A range of other local studies use bottom-up approaches to estimate demand from retrofit, offshore wind, hydrogen, tidal and infrastructure investment.

- **Qualitative intelligence** remains important throughout. LAs, Skills Hubs, Chambers of Commerce, colleges, and the SWNZH regularly engage employers, developers, and sector bodies on skills shortages and recruitment challenges. Several stakeholders considered this more valuable than published data in fast-moving sectors, as it captures emerging opportunities not yet visible in official statistics.

Despite this breadth, stakeholders identified consistent gaps. Most organisations do not maintain a dedicated clean energy workforce dataset; definitions vary considerably; and there is limited ability to track workforce flows, career pathways, and learner destinations. Several highlighted the difficulty of separating clean energy activity from general construction and engineering employment for transferable occupations such as electricians, plumbers, and engineers, meaning many organisations fall back on proxy measures and local assumptions. In short, WECA, skills leads, and LAs hold a large quantity of workforce intelligence, but it is distributed across multiple sources rather than held in a single coherent system, with the strongest reliance on Lightcast, ONS and NOMIS, LSIP evidence, provider data, project-level studies, stakeholder engagement, and locally developed models.

Answering the question: What clean energy workforce data does WECA, skills leads, and key LAs hold and use?

Headline answer: Yes; the datasets and intelligence sources partners hold and use are well evidenced.
Classification: Answered
Confidence: 90%
Reason: Both the engagement programme and the evidence review provide extensive information on the datasets and intelligence sources used by LAs, skills leads, and regional organisations, with strong consistency across consultees on their reliance on Lightcast, ONS, NOMIS, LSIPs, provider intelligence, project-level studies, and stakeholder engagement. The principal limitation relates to understanding the detailed structure and accessibility of some locally held datasets, rather than identifying the types of data available.

3.4 WHAT DISCREPANCIES AND/OR GAPS EXIST BETWEEN NATIONAL DATA AND REGIONAL DATA ON CLEAN ENERGY WORKFORCE FORECASTS?

This section sets out how published regional and local sources align with the national benchmark for clean energy jobs in South West England. It covers three points: what the national benchmark estimates; what the main regional sources measure and how those measures differ; and, where gaps remain that prevent a like-for-like comparison. The national benchmark used here is the same CEJP estimate introduced in Section 2.2, so it represents one consistent benchmark running through the report rather than a separate figure.

3.4.1 NATIONAL BENCHMARK USED IN CEJP

The national benchmark is taken from the CEJP, which defines clean energy employment across a specified set of subsectors and estimates the jobs supported by those activities. It focuses on direct employment at regional level and presents figures as indicative ranges, reflecting the underlying uncertainty.

Table 5 - National benchmark (CEJP) for South West England (ITL1)

Measure	Geography	Value	Year	Source	Notes
Direct clean energy jobs supported	South West England (ITL1)	20,000 to 25,000	2023	Clean Energy Jobs Plan regional estimates.	Both the 2023 and 2030 figures are drawn from the same CEJP regional analysis (DESNZ, 2025), representing the baseline and projected points of a single dataset. They are therefore directly comparable, based on the same scope, definition and method. The CEJP figure is a direct clean energy jobs estimate (regional chart), based on experimental DESNZ analysis and a different scope and definition from the LCREE sector totals.
Direct clean energy jobs supported	South West England (ITL1)	30,000 to 35,000	2030		
LCREE sector workforce (employment, FTE)	South West (English region)	29,300 FTE	2020	ONS experimental regional LCREE estimates (method combining LCREE Survey + business structure/location data)	LCREE is a sector activity measure (businesses reporting activity in LCREE sectors). The ONS experimental regional method assumes LCREE activity takes place at all sites associated with businesses that report LCREE activity, and the ONS flags these regional estimates as indicative with uncertainty

Source: per row.

What the regional evidence measures. The regional evidence base is not a single dataset but several distinct types of analysis, which carry different weight depending on how closely they align to the CEJP definition:

- **Core workforce and sector baselines (closest match to CEJP).** ONS LCREE estimates are the primary national dataset on low-carbon and renewable activity, reporting employment in FTE from business survey responses. They classify by sector rather than clean energy occupation and include any business reporting activity in those sectors. Regional LCREE estimates are experimental and presented as indicative.
- **Delivery-focused workforce requirement studies (high sector depth, partial coverage).** The SWNZH Retrofit Skills Report provides role-specific FTE requirements under delivery scenarios, designed for planning rather than as a whole-economy employment estimate.

- **Sector-specific workforce modelling (robust but narrow).** The Wind Industry Skills Intelligence Report 2025 (RenewableUK / OWIC) models wind sector requirements, estimating around 55,000 UK jobs currently with substantial growth to 2030. Other sector studies, such as Celtic Sea FLOW, follow a similar capacity-linked structure.
- **Place-based pathway plans and investment programmes (mixed metrics).** Documents such as the Somerset Energy Investment Plan and the WECA Green Skills Market Analysis combine FTE requirements, project-linked direct jobs, and scenario-based totals; they are geography-specific and not aligned to a consistent regional definition.
- **Prospectus and opportunity material (lowest comparability).** The Great South West Energy Prospectus frames economy-wide opportunity (for example up to £10 billion GVA and 175,000 jobs), which reflects opportunity rather than a defined clean energy workforce measure.

3.4.2 REGIONAL QUANTIFIED SOURCES USED LOCALLY

Table 6 summarises the main quantified regional publications, the geography and metrics that each report, and the primary reason each diverges from the CEJP benchmark.

Table 6 - Quantified regional evidence that is regularly used locally

Publication (regional)	Geography	What it quantifies	Headline quantified figures (as published)	Primary reason it diverges from CEJP totals
SWNZH Retrofit Skills Report	South West region	Workforce requirements for retrofit and low carbon heating under scenarios	Example requirement figures include 10,700 FTE solid wall insulation installers required by 2027 under an urgent action scenario (vs 451 in 2023), and 18,000 heating engineers required by 2028 (vs 524 in 2023).	Subsector-specific (retrofit and heat), uses role-specific FTE requirements under scenarios rather than an all-sector regional employment total.
GSW Energy Prospectus 2024	Great South West footprint	Programme-style opportunity framing, mixing clean power, projects, and supply chain	States the region could supply up to 11% of Great Britain's clean power demand by 2035 and "unlocking up to £10 billion in GVA and 175,000 jobs".	Different geography (Great South West), and the jobs figure is presented as an economy-wide opportunity claim rather than a CEJP-style direct clean energy employment estimate.
Harnessing the Power of the Celtic Sea	Great South West footprint and Celtic Sea	FLOW focused economic case and enabling actions	References 5,300 jobs associated with the first 4.5 GW programme, and cites an "ambitious scenario" where 24 GW could realise 26,381 jobs and £16.7bn GVA.	Subsector-specific (FLOW) and scenario-based, not intended as a single all-sector South West employment baseline or a CEJP comparator.
Wind Industry Skills Intelligence	UK (with regional analysis in the report)	Wind sector workforce and skills demand,	Estimates a UK wind workforce of 55,071 in 2025 (39,898 offshore and 15,173 onshore). Forecasts peak	Sector-specific (wind) and UK-wide workforce modelling, not a South

Publication (regional)	Geography	What it quantifies	Headline quantified figures (as published)	Primary reason it diverges from CEJP totals
Report 2025 (Renewable UK / OWIC)		based on industry job records and modelling	offshore workforce demand of 74,065 (39GW scenario) to 94,564 (52GW scenario) by 2030, with onshore workforce demand of 18,969 (27GW).	West ITL1 clean energy total.
Somerset Energy Investment Plan	Somerset	Local net zero pathway with jobs estimates for selected measures and sectors	Sets out milestone metrics including: by 2050 “as many as 3,700 FTE jobs” installing new rooftop solar, “around 1,970 FTE jobs” for heat pump installers, and the Gravity gigafactory could bring “4,000 to 7,500 direct jobs”.	County geography and measure-specific job estimates (FTE and direct jobs for particular investments), not an all-sector regional clean energy employment estimate.
Green Skills Market Analysis (Phase 2) (WECA)	WECA region (includes North Somerset in scope definition)	Scenario-modelled “green jobs” totals under net zero pathways	Under scenarios where net zero is met, the report states “the number of green jobs totals over 45,000 in 2030” and gives job-type shares (around 10% manufacturing, 52% construction and installation, 38% operations and maintenance).	Broader “green jobs” framing and different geography (WECA). It is not expressed as a CEJP-style direct clean energy ITL1 total.

Source: Various. Per row.

3.4.3 MAIN DRIVERS OF DISCREPANCY

The differences between the CEJP benchmark and regional evidence are explained by a small set of recurring factors, summarised in Table 7. In each case the effect is a difference in *what is being measured* rather than a conflict in the underlying analysis: broader definitions and wider geographies tend to produce higher totals, while different metrics and time horizons make figures non-comparable even where the underlying activity overlaps.

Table 7 - Drivers of discrepancy between CEJP and regional evidence

Driver	How it shows up in South West evidence	Implication for comparing against CEJP
Sector boundary (clean energy vs wider green economy)	Several regional plans and studies present "green jobs" totals (for example WECA scenario modelling), while other documents frame broader net zero opportunity narratives.	Broader definitions generally yield higher totals than CEJP, even where underlying activity overlaps.
Geography mismatch	Evidence is often county, LEP, or combined authority footprint (Somerset, WECA, Great South West) rather than South West England ITL1.	These cannot be aggregated cleanly to an ITL1 comparator without boundary reconciliation and double-counting controls.
Metric mismatch (employment stock vs requirements vs investment jobs)	The retrofit report expresses role-specific FTE requirements under scenarios; the Somerset plan mixes FTE jobs for measures and direct jobs for a gigafactory; FLOW documents cite jobs linked to specific capacity programmes.	These are operationally useful but not directly comparable to a CEJP regional employment estimate.

Driver	How it shows up in South West evidence	Implication for comparing against CEJP
Time horizon mismatch	Regional sources use different horizons (2027, 2028, 2035, 2050) depending on technology pathway or policy target.	Even where definitions align, different years can create apparent discrepancies that are simply timing differences.
Subsector focus (partial coverage)	The strongest quantified evidence often sits in single sectors (retrofit and heat, offshore wind, wind sector workforce).	Partial sector coverage will not reconcile to an all-sector CEJP total unless the missing sectors are also quantified consistently.
Direct vs wider employment	Some regional sources include indirect and supply chain jobs, and ONS LCREE reports indirect estimates, whereas the CEJP measures direct employment only.	Totals including supply chain effects sit above a direct-only CEJP figure; ONS notes indirect estimates may be biased upward pending further methodological development.

Source: Stantec

A further methodological point concerns double counting: the ONS LCREE indirect estimates series notes that further development is required to address potential double counting, and that total (direct plus indirect) estimates may be biased upwards while these limitations remain, reinforcing why direct-only measures such as the CEJP benchmark are the more reliable basis for comparison.

3.4.4 EVIDENCE GAPS

The gaps relevant to KRQ4 are specific:

- No second estimate matches the CEJP on both geography (South West England ITL1) and definition (direct clean energy employment).
- Subsector workforce requirement studies cannot be aggregated into a single regional total without mixing units or introducing duplication.
- Several widely used figures are designed for delivery planning or investment positioning rather than comparative workforce analysis.

Of these, the absence of a second estimate matching the CEJP on both geography and definition is the most significant, as it is the precondition for closing the other two: without a comparable direct, ITL1-level estimate, subsector studies cannot be reconciled into a regional total. This points to the recommendation on strengthening occupational and workforce evidence at a consistent geography.

Answering the question: What discrepancies and/or gaps exist between national and regional data on clean energy workforce forecasts?

Headline answer: Largely; the differences are well understood and explained, but no directly comparable regional estimate yet exists.
Classification: Partially answered
Confidence: 80%
Reason: The available evidence supports a clear explanation of why national and regional figures differ and identifies the main quantified sources used locally. It does not provide a consistent alternative estimate aligned to the CEJP framework for South West England.

3.5 WHAT ARE THE CAUSES OF THESE DISCREPANCIES?

The discrepancies set out in Section 3.4 arise because there is no single agreed way to define, measure or forecast the clean energy workforce, so different organisations, working to different purposes, produce evidence that is not directly comparable. Six underlying causes recur. The most significant is the first: the absence of a shared definition of a clean energy job, which underpins most of the others

Definition of a clean energy job. Many roles cannot be cleanly classed as clean energy or not. Electricians, plumbers, construction workers, and groundworkers routinely split their time between clean energy deployment and conventional work, and many would not identify as part of the clean energy workforce despite delivering net zero projects. This is likely to particularly be the case in the early stages of demand occurring and due to clean energy jobs requiring transitional occupations such as electricians, plumbers, welders, and concrete pourers. This makes consistent measurement and self-reporting difficult, and is the single largest cause of divergence, sitting behind the sector-boundary differences identified in Section 3.4.

Purpose and methodology. The CEJP applies a top-down, national SIC-SOC mapping, whereas most regional evidence is built bottom-up from specific projects, sectors, or local skills priorities, drawing on employer engagement, labour market intelligence, and scenario modelling. Because each source is produced for a different purpose (national strategy, delivery planning, investment positioning), they measure different things, which is why the metric and coverage mismatches in Section 3.4 arise.

Geography. The CEJP reports at South West regional (ITL1) level, while local analysis is typically undertaken at combined authority, county, or LA level, aligned to local growth plans, LSIPs and delivery responsibilities. Local intelligence therefore does not aggregate cleanly to the national geography. This is particularly challenging in the South West given the size of the region and limited number of combined or unitary authorities, creating a fragmentation of responsibility for local delivery.

Project-based forecasting. Much of the strongest regional evidence is tied to major projects with the greatest delivery certainty such as Hinkley Point C, Celtic Sea FLOW, and the DCESC (Sections 2.4 and 2.5). Delivery timescales for these projects shift frequently and have been subject to significant delay, so workforce forecasts date quickly and different sources capture different points in the pipeline. Hinkley Point C is the clearest example, with both schedule and peak workforce evolving significantly over time. This provides challenges in terms of the employment impacts forecast not being accurate and consequential risk for planning and investment designed to maximise the workforce benefits of clean energy investment.

Workforce mobility. Major projects draw heavily on national and international labour during construction, so headline job figures do not translate directly into local employment. The extent of local benefit depends on procurement, training pipelines, and the availability of skilled labour at the right time, which the evidence rarely quantifies.

Workforce monitoring. Learner destinations, career progression, and the link between training and subsequent employment are poorly tracked. The difficulty begins with provision itself: there is very little dedicated clean energy or green skills training, with most relevant skills delivered through traditional courses in areas such as electrical installation, engineering, and construction. Because there is no linear path from qualification to occupation, it is hard to even count how many learners

are being trained for clean energy roles, let alone whether they go on to fill them. This weakens any attempt to validate workforce forecasts against real-world outcomes.

Overall, these causes mean national and regional estimates are best treated as complementary rather than competing: the national evidence gives a strategic view of workforce requirements, while regional evidence offers sharper insight into local delivery, skills needs, and project-specific demand. Reconciling them would require a shared definition of clean energy employment, consistent geographies and metrics, and better tracking of workforce and learner outcomes.

Answering the question: What are the causes of these discrepancies?

Headline answer: Yes; a consistent set of causes is identified, led by differing definitions of a clean energy job.
Classification: Partially answered
Confidence: 75%
Reason: The review and consultation provide a clear, well-evidenced explanation of why national and regional figures diverge, consistent across multiple sources. The causes are understood, but the absence of shared definitions, consistent geographies, and outcome tracking means they cannot yet be fully resolved or quantified.

4 CONCLUSIONS AND RECOMMENDATIONS

This study reviewed the available evidence on clean energy workforce demand across the South West and assessed how far it answers the five KRQs set by the SWNZH and OCEJ. The South West is well placed to benefit from the net zero transition, with nationally significant infrastructure and emerging technology clusters expected to drive substantial employment growth. The evidence base, however, is stronger on where that growth will happen than on the workforce needed to deliver it.

4.1 SUMMARY OF KEY RESEARCH QUESTIONS

The evidence is strongest on priority sectors, major projects, and the datasets stakeholders currently use, and weakest on future occupational demand and the reconciliation of national and regional forecasts. The full assessment is set out below.

Key Research Question	Classification	Confidence	Summary Finding
KRQ1: What are the key clean energy sectors and projects driving job creation in the South West?	Partially Answered	70%	Strong evidence exists on priority sectors and major projects, including nuclear, offshore wind, retrofit, hydrogen and advanced manufacturing. However, employment estimates are fragmented and use varying methodologies, limiting direct comparison and aggregation.
KRQ2: What priority occupations are expected to be in demand at baseline, 2030 and 2050?	Partially Answered	50%	Evidence identifies a broad range of current and future occupational priorities, particularly in construction, engineering, retrofit and renewable energy. However, occupational forecasting varies across geographies and time horizons, with no common methodology being applied.
KRQ3: What clean energy workforce data do WECA, skills leads, and local authorities hold and use?	Answered	90%	Extensive evidence was available through stakeholder engagement and the desk review. Organisations make widespread use of Lightcast, ONS, NOMIS, LSIPs, project-level studies, provider intelligence, and employer engagement data to inform workforce planning.
KRQ4: What discrepancies and/or gaps exist between national and regional workforce forecasts?	Partially Answered	80%	Clear discrepancies exist between national and regional estimates due to differences in geography, sector definitions, metrics, time horizons and sector coverage. However, the evidence enables these differences to be understood and explained.
KRQ5: What are the causes of these discrepancies?	Partially Answered	75%	Consultation and evidence review identified a consistent set of causes, including differing definitions of clean energy employment, methodological approaches, geographic boundaries, project uncertainty, workforce mobility and limitations in workforce monitoring systems.

Note: Confidence levels are informed professional judgements based on the quality, coverage and consistency of the available evidence, rather than statistical measures

4.2 RECOMMENDATIONS

The recommendations that follow are designed to be useful on two levels. They show how regional and local evidence can sharpen the national picture, while giving the authorities, skills bodies and partners who produce that evidence practical reasons to invest in it: stronger funding cases, better-targeted provision, and more confident planning.

They follow directly from the findings of this review. The evidence is strong on where growth will happen but weaker on the workforce needed to deliver it, held back by varying definitions, thin occupational forecasting, and intelligence spread across many sources. Each recommendation targets one of these gaps, so the actions address the specific weaknesses the review identified rather than general good practice.

Six actions would strengthen the clean energy workforce evidence base and support future delivery. They are grouped by priority, with the KRQs each one addresses shown in brackets.

High priority

- **Improve the comparability and transparency of workforce evidence.** When producing workforce evidence, organisations should clearly describe the definitions, assumptions and methodologies they use, and align with the OCEJ definition where this supports comparison, while recognising that local studies may legitimately adopt different approaches to answer specific local questions. Addressing the varying definitions that underpin most of the discrepancies identified is the most valuable single step. Nationally, this makes regional evidence easier to read against the CEJP; locally, it helps partners compare their evidence with neighbours and present a consistent case to funders (KRQ4, KRQ5).

- **Strengthen occupational forecasting**, particularly in priority sectors such as offshore wind, retrofit, hydrogen, nuclear and low-carbon heat, using consistent time horizons and mapping to SOC codes where possible. This addresses the weakest area of the current evidence base. It gives national analysis firmer occupational detail, and gives local areas a stronger basis for commissioning training provision and demonstrating demand to providers (KRQ2).

- **Improve data sharing and coordination** between LAs, skills providers, industry, and regional partners, building on the intelligence already held to create a more joined-up evidence base. The continued development of Combined Authorities across the region offers a particular opportunity to build clean energy workforce evidence at a strategic scale, providing a more consistent and robust basis for planning than a fragmented LA by LA approach. This gives national partners a more coherent regional picture, while reducing duplicated effort across authorities and helping smaller LAs access intelligence they could not produce alone (KRQ3).

Medium priority

- **Improve workforce monitoring and evaluation**, covering learner destinations, career pathways, workforce transitions, and employment outcomes following training, so that forecasts can be validated against real-world outcomes (KRQ5).

- **Review major project pipelines and workforce assumptions regularly**, keeping forecasts aligned with changing delivery programmes and investment decisions (KRQ1, KRQ4).

- **Improve understanding of workforce mobility and local labour capture**, enabling more realistic assessment of the local employment benefit from major projects (KRQ1, KRQ5).

Together, these actions would move the region towards a more consistent and usable evidence base. Without them, the current gaps are likely to persist: unclear demand evidence has already made some funding bids harder to sustain and left providers cautious about investing in new provision, and it risks training being commissioned out of step with actual need. Acting on the recommendations would reduce these risks and help the South West turn its clean energy pipeline into local jobs.

APPENDIX A SUMMARY OF STAKEHOLDER ENGAGEMENT

Stakeholder engagement formed a key component of the Clean Energy Workforce Mapping Study, complementing the desk-based evidence review and helping to address the study's five Key Research Questions. The engagement programme was designed to gather practical insights from organisations involved in workforce planning, skills delivery, economic development, and clean energy project delivery across the South West. The primary objective was to understand how clean energy workforce data is currently collected and used, identify additional sources of evidence, validate findings emerging from the desk review, and explore the opportunities and challenges associated with workforce planning for the clean energy transition.

To support this process, a stakeholder survey was distributed across the study area to gather information on the datasets, workforce intelligence, and analytical approaches currently used by organisations involved in clean energy and skills planning. The survey was complemented by a programme of targeted engagement sessions with representatives from local authorities, skills organisations, Net Zero Hub partners, and other key stakeholders. These discussions provided an opportunity to explore survey responses in greater detail, validate emerging findings from the desk review, and capture qualitative insights on workforce challenges, opportunities and evidence gaps.

Engagement sessions were held with the following stakeholders:

- South West Net zero Hub
- WECA
- Business West
- NESO
- Plymouth City Council
- Devon Council
- Dorset Council
- BCP Council
- Southampton City Council
- Cornwall Council

Together, the survey and engagement sessions provided an important source of evidence for understanding the current clean energy workforce landscape across the South West and identifying priorities for future workforce planning and analysis.