



Offshore Wind Skills Intelligence Report - Executive Summary

June 2023

**OffshoreWind
IndustryCouncil**

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Foreword

We are delighted to present the results of the third annual skills survey, conducted by the Offshore Wind Industry Council (OWIC). Since the first survey was conducted in 2021, the British Energy Security Strategy (BESS), published in 2022, has placed offshore wind at the heart of our nation's efforts to boost home-grown, low carbon energy sources as the long-term answer to an affordable, secure energy system. The Offshore Wind sector deal set a realistic but ambitious target of 30GW; the BESS set a target of 50 GW by 2030, including 5GW floating offshore wind. The people and the skills needed across industry, government, regulators and NGOs to deliver on this ambition should not be underestimated.

With leasing auctions for offshore windfarms taking place later this year in the Celtic Sea, the annual CfD auction round ongoing and development and construction work continuing for consented projects, our industry has never been so active; against a backdrop of environmental and supply chain challenges.

As OWIC, we continue to actively support the Government's Green Job Delivery Group supporting cross-sector efforts to identify shared skills gaps in the UK energy sector and how to address them. This will ensure coordinated action and support to support people across the UK joining our sector, whether they need information and advice about careers, employment support, training to develop technical skills, or access to apprenticeships, further and higher education.

We are working with the North Sea Transition Deal to ensure that we can successfully support the transfer of workers from offshore oil and gas into offshore wind. Additionally, we continue to develop our partnerships to support the development of the skills and ambitions of younger people to encourage them to consider a job in offshore wind, across the full range of opportunities from offshore turbine technicians to environmental roles, electrical engineers and digital engineers; skills that are required across our sector.

This year's report reflects the continuing upward trajectory of our industry¹:

- a current workforce figure of **32,257** (an increase of 4% from the 2021 report)
- a forecast workforce of over **104,401** by 2030;
- a positive trend: **20.6%** of our workforce are women (an increase of 4.6% since 2019 and 2.6% since our first report in 2021);
- we have surpassed our sector deal target of 2.5% of our workforce being apprentices - we now have **2.7%**, and finally;
- of those who provided information on ethnicity, **7%** were from non-white backgrounds, compared to 3.8% in 2021.

However, with the ambitious 2030 offshore wind targets, we have to pick up the pace. To meet the BESS 50GW target, which assumes that every project in the current pipeline is successful, we need to attract and retain around 10,000 people every year. Simply put- the **challenge is growing** whilst our **time to achieve it is reducing**. We recognise this challenge and have set out seven priority areas for the offshore wind sector:

1. Workforce Strategy and Sector Ambitions

¹ based on the current pipeline of 51GW and assuming that every project is successful

2. Attraction, Recruitment and Retention
3. Education and Engaging Young People
4. Focus Effort on Critical Occupations
5. Diversity and Inclusion
6. Collaboration with Clusters for Place-Based Solutions
7. Data Collection

Whilst we work and build relationships across the skills landscape, we are ever mindful of the need to support and improve the diversity of our industry, across all characteristics and regions. Research shows that diverse teams lead to better and more innovative decision making and with the challenges that now face our sector, we need to ensure that we reach out to the full talent pool right across the country.

Thank you to everyone who has provided data to support this year's report and the continued support over the year to People and Skills agenda. We look forward to continuing to work closely over the next year.



Richard Sandford

Co-Chair, Offshore Wind Industry Council
Vice President of Offshore Wind UK, BP



Jane Cooper

Director of Offshore Wind, Renewable UK

TODAY'S
WORKFORCE



32,257



Total UK Offshore Wind Workforce

17,394

Direct Jobs

14,863

Indirect Jobs

INVESTMENT
IN SKILLS

Current
Apprentices

2.6% (270)



Graduates
& Trainees

0.93% (96)



DIVERSITY &
INCLUSION



20.6%

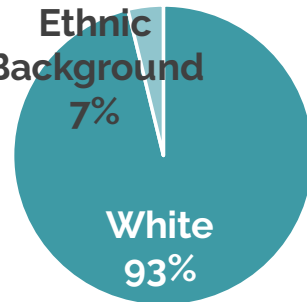
Women



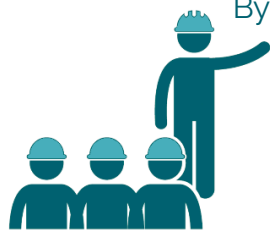
79.4%

Men

Ethnic
Background
7%



TOMORROW'S
WORKFORCE



By 2030, UK Offshore Wind is forecast to employ

104,401

Jobs. 56,296 Direct jobs and 48,105 Indirect Jobs

Executive Summary

Introduction

This report presents a snapshot of the UK Offshore Wind workforce and an analysis of the projected future workforce requirements to 2030 to meet the 50GW, including 5GW floating offshore wind, target set by UK Government in the British Energy Security Strategy (BESS) in 2022.

More than **10,150** individual job records were received from **81** companies for this third annual OWIC survey and the projected results show the number of people working in UK offshore wind at the start of 2023 now stands at **32,257**, comprising **17,394** direct jobs and an additional **14,863** indirect jobs. It is forecast that by 2030 there will be **104,401** jobs in offshore wind in the UK to deliver the current pipeline, assuming that all projects are successful.

Last year the Offshore Wind Industry Council (OWIC) published the results of its second skills intelligence modelling survey to benchmark the workforce active in the offshore wind industry. The number of employees working in UK offshore wind at the end of 2021 had risen to **31,082**, an increase of **16%** from the inaugural survey.

This ongoing growth in the survey results and the increasing forecast numbers reflect the growing UK offshore wind pipeline of future projects contained in the RenewableUK Energy Pulse database.

The last 3 reports show that the workforce in offshore wind is growing (see Figure 1); however, the forecast of employment required in 2030 (shown in red) is growing at a quicker pace than the current workforce. This is due to increases in the planning pipeline and Government targets (from 30GW in 2019, 40GW in 2021, to the current 50GW target in 2022). Simply put- the **challenge is growing** whilst our **time to achieve it is reducing**.

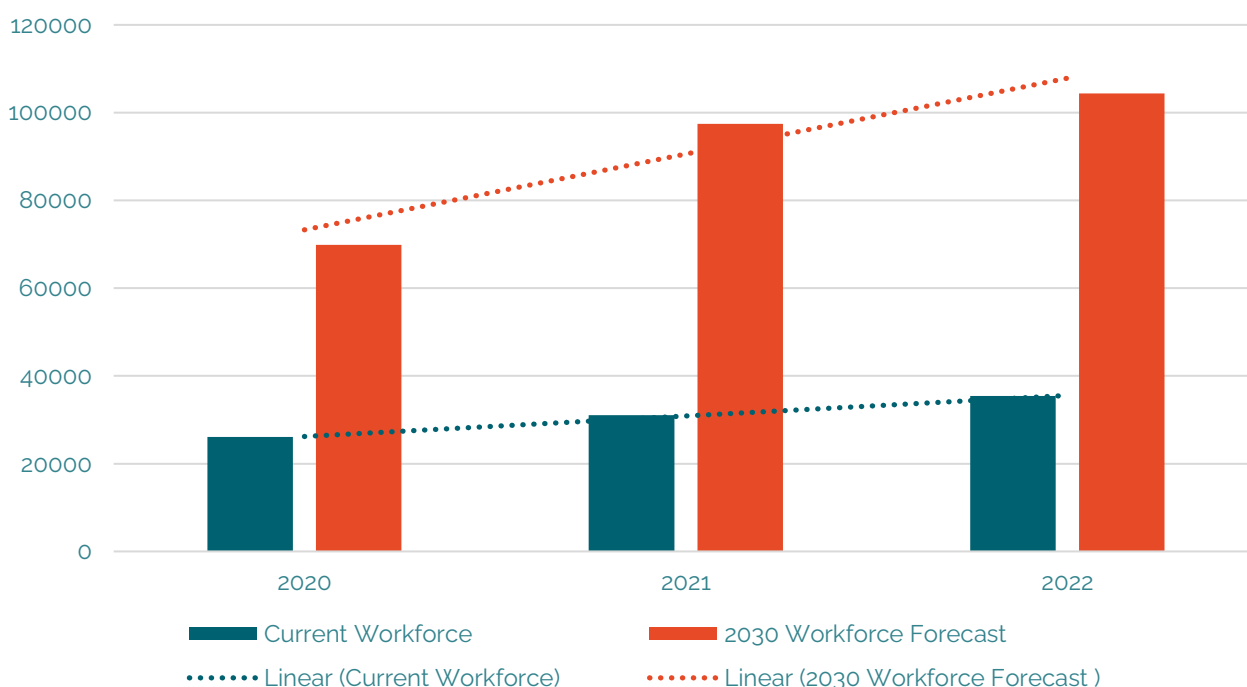


Figure 1 - OWIC UK Annual Offshore Wind Survey and Future Forecasts Results Over 3-Years

The results presented in this report build on the sector's positive trajectory over the past 2 years and demonstrate a now maturing industry, albeit one that is continuing to grow as the demand for its product increases, particularly in view of the UK's efforts to decarbonise its energy mix. In 2022, the offshore wind industry continued to grow steadily across all fronts: we reached a total of **2,392** installed turbines with a generation capacity of **11.4GW**.

Delivery of floating offshore wind at scale will substantially increase the demand for people and skills in the near future. There will be an increase in the number of jobs in both the direct and indirect employers, increased demand for technical and vocational skills training, additional need for the transfer of workers from other sectors and an imperative to attract young people into a career delivering cleaner, greener energy.

Offshore Wind Sector Deal

In 2019 the Offshore Wind sector deal set targets across several areas, which has been endorsed and supported by other sectors; this report presents positive progress against all of them.

The Current Workforce Profile

Progress on Gender Balance

The 2022 survey data included **2,036** women out of a total of **10,150** returns, representing **20.6%** of the current workforce. This represents a **1.3% increase** compared to last year's results and shows an average year-on-year trend of women coming into the sector growing at a rate of around **1.25%** each year. Whilst this is positive and signifies a good chance of achieving the sector deal target of **33%** women by 2030, there remains much work to be done to ensure the sector achieves a genuine gender balance in the future.

Progress on Apprenticeships

Developing the next generation of talent, in particular supporting apprenticeships, is a key target of the Offshore Wind Sector Deal and again positive progress is reported. The Deal set the industry a target of **2.5%** of the workforce to be recruited through apprenticeship programmes, with the 2022 survey showing apprentices now make up **2.6%** of the workforce, an increase of **0.6%** on last year's numbers. This is a pleasing result, but continuing to develop and attract young people into apprenticeship roles is critical for the future success of the sector and the industry's efforts must continue.

Progress on Diversity

Ensuring that the offshore wind workforce is diverse and inclusive is important for the future growth of the industry, allowing the sector to tap into the largest possible talent pool and better reflect the composition of the society in which we work. The 2022 survey results highlight that **7%** of the workforce that provided information was from a non-white background, compared to **3.8%** in 2021.

Although this represents good progress again, there remains more to do to meet the target of 9% of workers from ethnic minority backgrounds in 2030, aiming for a more ambitious target of 12% if feasible.

Regional Breakdown

Based on the data received from industry we know that the DeepWind Cluster in Scotland has almost 30% of the UK's offshore wind workforce population, followed by Humber with 16.4%, and then London with 15.2%. Northern Ireland has the lowest offshore wind workforce population in the UK, with only 0.3%. Scotland is likely to have the most people working in the industry due to the region's maturity in the energy sector.

The Celtic Sea cluster in the South West, has the highest proportion of women working in the industry at 45.9%. This is followed by Northern Ireland at 38.5%, and then London at 35.4%. The Yorkshire and Humber cluster has 13.5% women working in the industry, which is the lowest of all regions in the UK.

The spread of apprentices working in the offshore wind industry shows that Yorkshire and Humber cluster have the highest number of apprentices in industry with 76 apprentices in that cluster alone, followed by the North-East with 49 apprentices, and then South East with 22 apprentices. The regions with the least number of apprentices in the industry are Northern Ireland, Wales, West Midlands and London.

The Future Workforce Profile

The workforce future casting model built in support of this report, draws from the pipeline of future projects contained in the [RenewableUK's Energy Pulse Database](#).

The Offshore Wind Sector Deal's original target of **27,000** direct jobs by 2030 and **30GW** of capacity have now been updated to reflect the Net Zero Strategy published in 2021 and subsequently the Energy Security Strategy published in 2022 which raised the target to **40GW** and then subsequently **50GW** of offshore wind projects by 2030.

Increasing the target to **60GW** by 2030 which, if possible, with the constraints of volumes of raw materials, network connections, and marine capability, would likely require a workforce nearing **120,000**.

This report highlights a substantial increase in the proportion of indirect jobs when compared to direct jobs in the same data set. In both 2020 and 2021 indirect roles were **42%** of the total workforce, but in 2022 this had increased to **48%**. The main report hypothesises that this could be as the supply chain starts to prepare for the growth and that developer organisations are slowing down in their employment growth to contract out a greater degree of the consenting, construction and supporting functions.

Current and Future Skills Gaps

Future casting, informed by the survey results, we forecast that by 2030, the industry will employ **104,401 people** – **56,296** of those being direct, with **48,105** indirect roles. There is a rapid increase in jobs through to 2026 at **88,509** jobs, before slowing down to 2030, reaching 104,401 at the end of 2029. The reason for this is likely because of the nature of project phases - there is substantial activity expected in 2023, with further subsequent growth as the planning phase moves into construction.

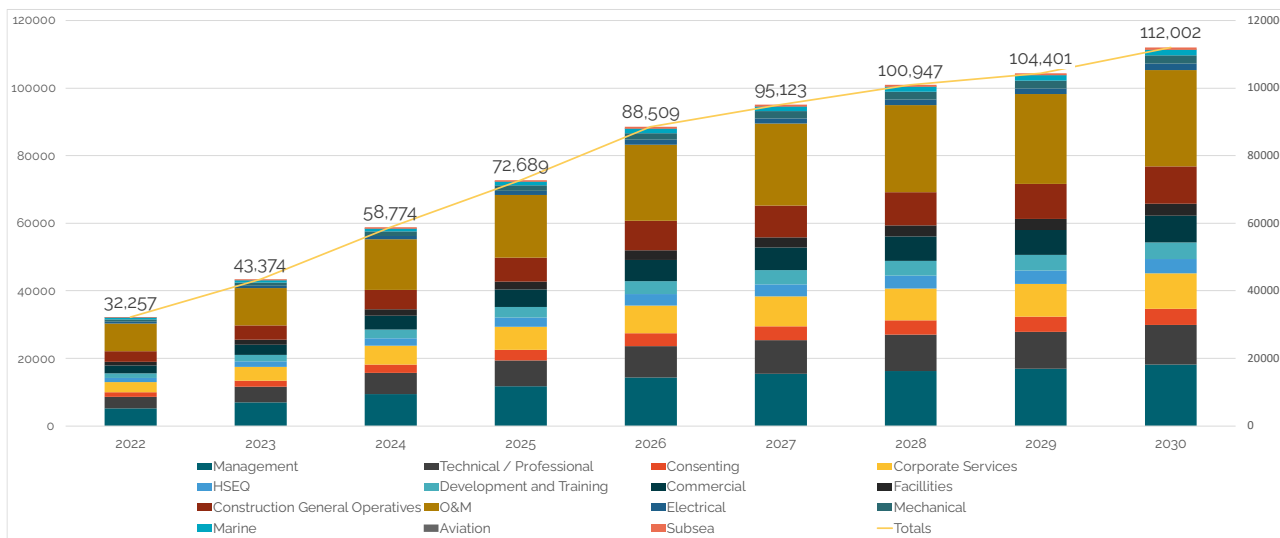


Figure 2 - Breakdown of number of UK offshore wind jobs by Job Role

There are several skills gaps and shortages which need to be addressed across the industry, including those persisting in the same areas as last year:

- High level electrical skills, including Senior Authorised Persons;
- Digital skills e.g., data analysts/scientists etc and engineers with an understanding of data analysis and presentation;
- Consenting skills, particularly amongst SNCBs and regulators but increasingly within the industry, and
- Marine & Port orientated skills.

Over the longer-term, anticipated skills shortages include:

- Electrical technical and engineering skills (particularly substations, HV and cables). These will be exacerbated by the upgrading of the power network and the introduction of battery storage sites;
- Project Management and the ability to manage significant sized projects and multiple contractors;
- High level digital specialisms including data analytics, artificial intelligence, robotics, digital engineering/science, machine learning, SCADA related skills, software development;
- On and offshore logistics, and
- Construction resource for floating wind projects, which are anticipated to require high numbers of people in fabrication and welding.

Conclusions

There are a number of conclusions to be drawn from this year's survey:

1. **Delivery of the Sector Deal Target** - This report projects that the offshore wind industry has the potential to employ 104,401 people to 2030, albeit with the growth in workforce demand projections outstripping the pace of growth in current workforce numbers
2. **Job Roles and Skills** - the offshore wind industry shows a normal proportion of job roles and skills when compared to other industries except for Technical and Professional trades which are higher than average for the offshore wind workforce. Additionally, over 60% of the roles in our industry require scient, technology, engineering and maths (STEM) skills, highlighting the importance of young people pursuing STEM subjects in education.
3. **Gender Balance** - There has been an increase in the proportion of women working in the offshore wind industry since the first survey was conducted in 2020. However, we still have a significant amount of work to do to increase the percentage of women in the workforce from 20.6% this year to 33% by 2030.
4. **Ethnicity** - This year has shown that there has been a significant increase in the ethnic diversity of our workforce: rising from 3.8% last year to 7% of our workforce being from BAME backgrounds.
5. **Apprenticeships** -The proportion of apprentices in our workforce is currently at 2.6% which is an increase of 0.8% from last year. It is possible that the effects of the COVID-19 pandemic halted many apprenticeships between 2020 and 2022, and that many apprentices are now returning to their apprenticeship programmes, hence there is a bounce-back.

Recommendations

For the first time, we have included a Recommendations section to support the work of OWIC and wider industry as it strives to meet the 2030 targets and deliver 50GW of clean energy. These include:

1. **Develop a Workforce Strategy and update sector ambitions** - providing a shared plan for industry around which it can coalesce.
2. **Attraction, Recruitment and Retention** - developing a compelling offer for the workforce, including through a step change in apprenticeships and attracting people from other industries.
3. **Educate and Engage Young People** - to promote the offshore wind sector to the next generation.
4. **Focus Effort on Critical Occupations** - ensuring the industry tackles the skills and recruitment to the roles industry needs most and engaging with those training providers who will help us to do so.
5. **Diversity and Inclusion** - reaching the widest possible talent pool and promoting inclusive working cultures in organisations.
6. **Work Collaboratively with Clusters for Place-Based Solutions** - where strategies and plans delivered at a national level work hand in glove with tailored, impactful local solutions.
7. **Improve future Sector Data Collection** - aim to increase survey returns from across small and medium-sized businesses and in respect of diversity data.

Offshore Wind Industry Council

www.owic.org.uk/people-skills

