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The Offshore Wind Industry Council (OWIC)

The Offshore Wind Industry Council (OWIC), a senior Government and industry forum, was established in May 2013 to drive the development of the world-leading offshore wind sector in the UK.

It is comprised of members drawn from the leading UK and global firms in the offshore wind industry, including developers and original equipment manufacturers.

The Council oversees and drives the implementation of the Sector Deal, supported by the Offshore Wind Sector Deal Programme Manager, hosted within RenewableUK.

OWIC is comprised of the following companies:

- Crown Estate Scotland
- Department for Business, Energy & Industrial Strategy (BEIS)
- EDF Renewables
- Equinor
- GE Renewable Energy
- JDR Cables
- MHI Vestas Offshore
- Ocean Winds
- Offshore Renewable Energy Catapult (OREC)
- Ørsted
- · Red Rock Power
- RenewableUK
- RWE Renewables
- ScottishPower Renewables
- Siemens Gamesa Renewable Energy
- SSE Renewables
- The Crown Estate
- · Vattenfall Wind Power

Foreword



The offshore wind sector is a vital part of the future of the UK's energy system and economy and its success will, to a large degree, determine whether the UK and other countries meet the challenge of decarbonisation.

The power sector has made the single biggest contribution to reducing emissions in the UK to date and rapidly and cost-effectively decarbonising our electricity system is key to wider success in achieving net zero. The scale of the challenge ahead is considerable. Not only do we have to complete the decarbonisation of our electricity system, we must more than double the amount of power we generate to meet new sources of demand. This will be driven by new electric heating in our homes, and the growth in numbers of electric vehicles on our roads, as well as the development of new low carbon industries.

Primary among these will be a hydrogen economy to unlock decarbonisation in hard to reach parts of the economy, such as heavy transport, aviation, industrial processes, and even inter-seasonal power storage. Renewable hydrogen produced from offshore wind can be competitive with fossil-fuel derived hydrogen within a decade, and projects to drive down costs are already underway.

As the leading global market for offshore wind, the UK Government is right to press home our advantage, ensuring offshore wind plays a critical role in delivering net zero, growing jobs and delivering low cost electricity. The UK's singular success in developing offshore wind is one that countries around the world are now following, and this technology will be crucial to meeting net zero targets not just in the UK but across the globe.

The Baroness Brown of Cambridge DBE FRENG FRS

Offshore Wind Sector Champion



When we agreed the Sector Deal with the UK Government in March of 2019, it was a huge step forward for the industry – putting us on track for offshore wind to become the backbone of the UK's electricity system – and was the culmination of over a decade of hard work by industry, government and stakeholders.

As this report sets out, the industry and Government have together delivered huge progress against our Sector Deal commitments; long term planning for how we connect projects to the grid, managing the grid most efficiently in a high renewables system, supporting the development of a hydrogen economy, developing solutions for radar compliance, increasing the number of apprentices and building a workforce that better reflects our communities. to name a few. OWIC members have achieved this working collaboratively with government and stakeholders across multiple workstreams, supported by RenewableUK.

Offshore wind in the UK, which started with just 2 turbines 20 years ago, is now reshaping our energy system. We're working to meet the Government's new 2030 target of 40GW, with at least 1GW of floating wind. Alongside this, new support for investment in ports and manufacturing will help unlock the huge opportunity for the UK to build a world-leading, competitive supply chain.

Offshore wind is rightly at the heart of a green economic recovery from Covid-19, with tens of billions of pounds of investment coming forward which will support thousands of new jobs in communities across the UK. I'm very proud of all that the industry has achieved together; it has taken a huge collective and collaborative effort from people and organisations across the UK to bring us from an emerging technology to a world leader in less than a decade.

It has been a hugely rewarding challenge as OWIC Chair to bring the Sector Deal into being, and to see the ambitions of that Deal already being delivered by the committed efforts of colleagues – too many to name - across the industry, together with officials from across government and many others in the wider sector. As the offshore wind industry gears up to meet the country's growing need for clean, low cost power, I look forward with confidence to the continued success of the sector as offshore wind becomes the backbone of Britain's 21st century electricity system.

Benj Sykes OWIC Co-Chair

The Offshore Wind Sector Deal

In March 2020, we celebrated a year of the Sector Deal at the Houses of Parliament, with key figures across government and industry present to both celebrate the progress made and commit to the next steps to reach 40GW of Offshore Wind by 2030, as recently confirmed by Prime Minister, Boris Johnson.

This report highlights the key achievements and progress against the commitments we made in the Sector Deal, and the next major steps in delivery.

An OWIC website has been launched to support the evergrowing requests for updates on Sector Deal progress from across the Sector and beyond. Through our **Stakeholder and Communications** workstream we are working closely with communications and media professionals from RenewableUK and the OWIC membership, to improve the promotion of our successes and information sharing across the membership, and the wider industry. The coming months will also see www.owic.org.uk become a hub of information for the Sector Deal, featuring information on workstreams, careers information, and resources for OWIC members. Work is also being undertaken to build a more robust governance structure for OWIC (and Sector Deal workstreams), ensuring we are working as efficiently and effectively as we can across a complex programme of delivery.

IDEAS

The Sector has established an Offshore Wind Innovation Group with industry, academic and public sector representatives. This group has built on the technology roadmaps of the Offshore Wind Innovation Hub (turbines, substructures, electrical infrastructure, floating wind and Operations and Maintenance (O&M) and offshore windfarm Lifecycle) to develop an innovation plan for government, aligned with the Sector Deal vision and goals. This has been developed using projected UK economic benefit through intellectual property and long-term job creation for both domestic and export markets, as well as improved efficiency of offshore wind farms with reduced lifecycle costs and a lower price of electricity for consumers. Leading with Smart & Sustainable Operations & Maintenance as an initial key priority, an Innovation Programme proposal has been submitted to BEIS by ORE Catapult.

What's Next?

The Innovation Group will work with ORE Catapult and BEIS to secure support to deliver the Smart and Sustainable O&M programme. In parallel the group will continue to support the Pathways to Growth workstream to help unlock barriers to future deployment. The group will review the requirements to develop Innovation Proposals in other areas such as Electrical Systems and Floating Wind.



"What has become clear to me over the past year is that our ambitious offshore wind target must be accompanied by equally ambitious actions to address the barriers to achieving this level of deployment. Only then can we unlock the benefits envisioned in the Sector Deal and contribute to net zero targets. Success will require commitment from a wide range of key stakeholders, which has so far been exemplified by the number of excellent work programmes and forums being set up to tackle the barriers identified. The Pathways to **Growth Coordination Group** has made a positive start by agreeing and prioritising the key Pathways to address the barriers, and I look forward to working with the Group and the Executive Board in making substantive progress with each of the Pathways to Growth."

Brian McFarlane

Pathways to Growth Workstream Lead

BUSINESS ENVIRONMENT

As part of the Sector Deal, a flagship £100 million **Offshore Wind Growth** Partnership (OWGP) fund was established, and funded, by the Sector to help raise productivity and improve supply chain competitiveness over the next 10 years. With a Secretariat provided by the Offshore Renewable Energy (ORE) Catapult, this fund will help UK companies to move up the value chain and seize the opportunities of a growing, global market. The OWGP is chaired by Martin Whitmarsh, former CEO of McLaren Racing, and author of the in-depth review of the UK offshore wind supply chain undertaken as part of the Sector Deal.

The OWGP has completed an assessment of offshore wind foundations, assessing current and projected requirements for turbine foundations in the UK and abroad, identifying potential barriers to growth and making recommendations to overcome these challenges.

In January 2020, the results of the first funding call were announced. Seven UK companies from industries including oil and gas, manufacturing and robotics secured £364,000 in grant funding from the OWGP with an additional £156,000 leveraged in match funding contributions. These projects will drive cost reduction from advanced manufacturing techniques and work to develop advanced sensors, Internet of Things, and communication solutions for offshore wind.

In July 2020, a new £2m package of funding and business support activities were launched. The package included two new funding calls totaling £600k, as well as intensive business transformation support activities through the £1.5m Sharing in Growth Programme.

The **Supply Chain** workstream published a response to the Whitmarsh Review was published and is now hosted on the OWIC website.

A supply chain roundtable discussion was held with the Energy Minister, The Rt Hon Kwasi Kwarteng MP, with the aim of developing a shared action plan for both industry and Government. There is a renewed focus on 'what can be achieved', and we are moving forward collaboratively.

What's Next?

The Offshore Wind Growth
Partnership (OWGP) will be
launching a Playbook, titled
'Collaborating for Growth'. The
Playbook aims to capture the
engagement activities between
individual developers and their
existing and potential supply chain to
support future developments.

The intention is to provide greater near-term visibility of the market and support the investment cases for enhanced supply chain capability that may be needed to help deliver contracts for UK projects.

Supply Chain work will continue with BEIS, who are sharing input on this as a basis for discussion with developers and key OEMS. Joint development of an agreed action plan for supply chain development is under development and will be discussed with the Energy Minister.



"The signing of the Sector Deal gave the supply chain a strong signal of the industry's intentions and ambitions for offshore wind and it's very rewarding to be a part of the activities that are being conducted to help achieve these ambitions. The OWGP in particular presents a real opportunity to get funding to those companies that can capitalise on the growth of offshore wind in the UK and it's great to be able to support that by chairing the OWGP Reference Group."

Sophie Banham (Equinor)OWGP Workstream Lead

PEOPLE

A Skills professional (Celia Anderson) was appointed to lead on delivery of the people and skills Sector Deal commitments. An Investment in Talent Group was established comprising senior representatives from across the sector and the devolved administrations. Four subgroups have also been established (HR Forum, Gender Balance, Ethnicity and Apprenticeships) to drive forward the work in those areas.

An industry figure for BAME was baselined (5%) and a target of 9% (with a stretch target of 12%) by 2030 was set. A target of 2.5% apprentices by 2030 was set for the sector, which would total approximately 3000 apprentices across the workforce. This ensures that people can be brought in at all levels, upskilling people currently in the workforce and transitioning those from other sectors to increase diversity and build a more inclusive industry.

The Sector has introduced a workforce and skills model developed by the National Skills Academy for Rail (NSAR) to track and report on workforce data. Data has been gathered from the operators, developers, and original equipment manufacturers (OEMs) and is the process of being gathered from the clusters and the supply chain. To date, data on approximately 10,000 industry employees has been gathered from over 40 companies.

The **People & Skills** workstream partnered with the Equal Group to develop a best practice guide for recruiting and supporting women and those from BAME backgrounds across the Sector. The document focuses on intersectionality and includes practical guidance for ensuring a more diverse workforce, as well as case studies from industry. The Guide will be launched at Global Offshore Wind 2020 and will be reinforced with a session during the conference.



"Working closely with the People & skills workstream sponsor from RenewableUK (Hugh McNeal and now Melanie Onn) it has been hugely rewarding to see how companies have moved the discussions from the working groups to senior levels within

the companies. The significant commitment in support for the workstream activities in terms of people and time is reflected in the delivery against many areas of the commitments, particularly increasing the diversity of the people, apprenticeships, the military engagement. There is strong stakeholder engagement from government, the devolved administrations and the industry which will support the industry's continued growth."

Celia Anderson

People & Skills Workstream Lead

The industry is committed to supporting the military encouraging companies to sign the Armed Forces Covenant and the Employer Recognition Scheme (through which they pledge to actively committing to support military personnel and service leavers at either bronze, silver or gold level). Since signing the Sector Deal, two military interns have supported the delivery of the People and Skills workstream. A LinkedIn group has been established to provide informal mentoring for serving, service-leavers and veterans that are considering a career in the industry.

On the Offshore Energy Passport, a methodology for conducting a gap analysis has been agreed with the Global Wind Organisation (GWO). There has been agreement between RenewableUK, International Marine Contractors Association (IMCA), and GWO to work together to align work on this area through the International Collaboration Committee (ICC) and include G+ in discussions. Discussions with training providers is ongoing.

What's Next?

A review of how apprenticeships are delivered within industry is currently underway with the Apprenticeship subgroup. A Charter for supporting women coming into the industry and an Offshore Wind Careers website are also in development. A project to understand what the industry is doing in regards to gender and ethnicity in education and academia is been explored.

INFRASTRUCTURE

The Sector formed a Solving the Integration Challenge (StIC) Steering Group, chaired by the Offshore Wind Sector Champion, Baroness Brown of Cambridge, and an Expert Group. The groups included representatives from OWIC member companies, Johnson Matthey, ITM, BEIS, National Grid ESO, Atkins Global, the CCC, Crown Estate Scotland, Good Energy, and Scottish Government, to consider how to integrate 40GW of offshore wind into the energy system. In partnership with the Offshore Renewable Energy Catapult (OREC), a study was carried out to explore the viability, and economic opportunities of combining offshore wind with hydrogen, via electrolysis. In September 2020, the workstream delivered a hydrogen report, which concluded that by 2050, the cost of green hydrogen generated from UK OSW (OSW-H2) will cost less than hydrogen produced from natural gas, with carbon capture and storage (typically referred to as 'blue' hydrogen).

The report also sets out a roadmap of actions for the UK to rapidly scale up OSW-H2 and become competitive with other fuels. The roadmap also demonstrates substantial economic benefit and up to 120,000 jobs for the UK. The report has had over 900 downloads, and a webinar (held jointly with RUK and OREC) in early October was attended by over 270 people.

A second report with the Energy Systems Catapult (ESC) is in its final stage of development, which will enable the industry to understand the impact, and potential solutions, as more renewables are added to the energy system. Following the finalisation of the ESC report, this workstream will have delivered its Sector Deal commitments, and will close.

Through the **Aviation and Radar** workstream, the Sector and Ministry of Defence (MOD), with Department for Business, Energy & Industrial Strategy (BEIS) and The Crown Estate, have set up a Joint Offshore Windfarm and Air Defence Mitigation Task Force, overseen by a senior level executive Programme Board.



"It's been great to set up this novel, dynamic and agile joint programme, working closely with my Co-chair of the Joint Task Force, Wing Commander Helena Ramsden, the teams across MOD and of course colleagues of the OWIC Aviation Task Force from across the OWIC membership. We have an ambitious and exciting set of studies and work ongoing and being planned with key deliverables for the sector, MOD and wider stakeholders due from 2021. The OWIC team is now looking to scope studies exploring the interface between offshore wind and the civil aviation sector to bring about positive change and win-wins for all."

Dujon Goncalves-Collins, VattenfallAviation & Radar Workstream Lead

This forms part of the commitment for Government and industry to collaboratively find solutions to unblock barriers to offshore wind deployment in the UK.

To support the Task Force, the Royal Air Force is recruiting a sector funded Wing Commander programme manager to work jointly with the OWIC Lead. Starting in August 2019, the Task Force's programme of studies and works includes the BEIS funded Defence & Security Accelerator Innovation Challenge, the sector funded MOD Air Defence Mitigation Feasibility Study, a MOD funded Next Generation Mitigation Study led by Defence Science & Technology Laboratory, and MOD leading on operational analysis through the Defence Science & Technology Laboratory and strategy development works.

Through the **Pathways to Growth** (P2G) workstream, the Sector has been engaging with a wide group of stakeholders who make up the P2G Coordination Group, including the decision makers and environmental nature conservation bodies across different jurisdictions. Since the group formed in January 2020 it has discussed the environmental, consenting, licensing and regulatory barriers to future offshore wind farm growth and defined 11 key barriers to focus on resolving. These have been prioritised into low, medium, and high priorities to tackle.

The Coordination Group is overseen by the P2G Executive Board. They are currently recruiting for a Coordination Group manager as an impartial leader to guide the P2G Coordination Group to seek resolutions to the identified barriers to meet the challenge of increasing offshore wind deployment in the UK in a coordinated and sustainable way. There is a huge task ahead to resolve some of these barriers which are complicated and will require cross boarder collaboration.

A specific barrier identified in the Sector Deal was the current OFTO regime. the current approach to designing, building and operating offshore transmission was developed when offshore wind was a nascent sector and industry expectations were as low as 10GW by 2030. However, in the context of increasingly ambitious targets, constructing individual point to point connections for each offshore wind farm may not provide the most efficient approach and could become a major barrier to delivery given the environmental and local impacts, particularly from the associated onshore infrastructure required to connect to the national transmission network.



"Both the OWIC Offshore
Transmisison Group workstream
and newly announced Network
Review demonstrate the power
of the collaboration that has
been delivered via the Sector
Deal. The fact that we now
have such a broad range of
stakeholders working together
to consider fundamental policy
reforms for grid infrastructure,
in such ambitious timescales, is
testament to the hard work and
commitment of all involved."

Zoë Keeton, RWE Renewables

Offshore Transmission Workstream Lead

The **OWIC Offshore Transmission Group** workstream published two papers, setting out the long- and short-term parameters that they consider need to be addressed to mitigate the grid transmission barriers to deployment and the timescales required to enable 2030 targets. These were then discussed with key stakeholders including BEIS, Ofgem and the Electricity System Operator (ESO).

In July, Energy Minister Kwasi Kwarteng announced the Offshore Transmission Network Review, which aims to report at the end of 2021. This will bring together the key stakeholders to consider all aspects of the existing regime and how this can be done more efficiently considering an appropriate balance between environmental, social and economic costs.

Its terms of reference, focus on both identifying actions that can be taken

for projects in the short to medium term, plus a longer-term strategic review to develop a new regime that can ensure a more coordinated approach for the future.

What's Next?

The Aviation Taskforce is planning a set of Concept Demonstration activities to better understand the capabilities of mature mitigation solutions. Informed by these inputs, the aim is to publish an initial Air Defence and Offshore Wind Mitigation Strategy & Implementation Plan in early 2021, with followon studies and work planned in 2021-22 to update the Strategy & Implementation Plan for future offshore wind deployment.

The **OWIC Offshore Transmission group** will continue to be involved in the OFTO Transmission Network Review. OWIC will continue to be actively involved in this work to provide an industry perspective. The OWIC Offshore Transmission workstream lead will be chairing the independent Expert Advisory Group to support this work and the group itself will provide inputs into and a review of the work being undertaken by various work streams. This will include feedback on the government and ESO's papers and reports. The **OWIC Offshore** Transmission Group will also undertake independent analysis, where necessary, to ensure that the technical and commercial challenges are understood and address by the Review.

For **Pathways to Growth**, a more detailed Roadmap and list of actions to tackle these barriers is expected by mid-2021. The workstream is working closely with The Crown Estate via their recently formed Offshore Wind Evidence and Change (OWEC) pathfinder projects. Four of the P2G key barriers directly link to key projects of OWEC, who will fund and manage some of the deliverables for these actions.

PLACES

As part of the work of the **Clusters** workstream, eight clusters have been established: DeepWind (North Scotland), Forth & Tay Offshore, North East England, Humber, East Anglia, Solent, Celtic Sea Cluster, North West and North Wales, and an infographic has been produced to push the regional growth narrative. A series of one-to-one meetings were held with each cluster to understand their progress and organization status. This made it clear that a wide range of progress was made, with several clusters still at an early 'seed' stage.

Quarterly cluster workshops were held to share progress, explore challenges and opportunities, and make introductions to initiatives (such as OWGP). The opportunities for exchange were well received.

At this point in the UK project cycle, the significant supplier opportunities have been allocated for the next 18-24 months. Increased funding and engagement from cluster members, local enterprise partnerships (LEPs), their equivalents, and central Government will enable clusters to prepare for Auction Round 4 and export opportunities.

What's Next?

Due to the excellent feedback regarding one-to-ones and quarterly cluster workshops, it is intended that these will resume when it is safe and appropriate to do so. This will give an understanding of progress over the last few months, and any impacts Covid-19 have had on clusters.

Building on Success

The Sector Deal has played a significant role as a unifying force for government and the Offshore Wind Industry, and this increased collaboration has enabled great progress against Sector Deal commitments.

Despite the challenges Covid-19 has presented in 2020, Sector Deal activity has continued without major delay. This highlights not only a commitment to the programme of delivery, but also the resilience of the Sector.

One of the key successes of the Sector Deal has been the increased collaboration across the sector, government, and industry stakeholders, and we look to harness this enthusiasm and cooperation to build on the excellent progress made to meet our 40GW targets, and as Offshore Wind becomes the backbone of the energy system and delivers a significant step in the journey to Net Zero.



"Having been involved in the Investment in Talent Group from pre- Sector Deal, the journey we have taken has, without doubt, inspired and guided our Vattenfall skills work at both a project and national level.

Highlights include:

Signing the Armed Forces
Covenant, creating a new policy
for reservists, collaborating over
skills webinars aimed at the forces
and achieving Bronze recognition.
Our work has supported our
move towards creating a more
welcoming and inclusive culture.

Establishing an Apprenticeship
Policy, utilising the levy to up-skill
our own colleagues whilst also
transferring levy to our potential
supply chain. We have been
learning from others in the group
whilst developing our own way
forward. We now have some exciting
initiatives and new training models.

Other areas have also impacted and inspired our day-to-day work. As we take constant steps to improve diversity and inclusion - the Investment in Talent group and its Director help to create the like-minded community that both motivates and recognises the progress. We all win.

It has been a most impactful journey to be part of where everyone is learning from each other...and we have just begun!"

Sue Falch-Lovesy, VattenfallPeople & Skills Workstream Member

