

## SUPPLY CHAINS

# The UK is working to bring offshore wind home



**For all its success in playing host to offshore wind farms, the UK is lagging behind in supplying the sector. Andrew Maurant looks at efforts to build a truly homegrown offshore wind industry.**

Britain is the world leader in building offshore wind farms. They symbolise self-reliance – a source of energy independent of imported gas, oil or coal. But they've also provided rich pickings for foreign engineering firms and suppliers – an imbalance, some feel. The need for a greater domestic input has, for some time, been a preoccupation within industry and government.

This became evident when, three years ago, the Offshore Wind Industry Council (OWIC) hired former McLaren Racing CEO Martin Whitmarsh to review matters. He concluded that for offshore wind to hit a government target of providing half the UK's forecast electricity demand by 2050, the domestic supply chain must develop significantly to become competitive.

Undoubtedly things have progressed since 2018, when Whitmarsh found only a few UK firms pitching to supply major infrastructure components such as foundations, substations, and export and array cables. He also felt that innovative small businesses

(SMEs) should play a far bigger part and called for a tangible commitment to supporting them.

Whitmarsh has remained close to the action. He chairs the Offshore Wind Growth partnership (OWGP), spawned in 2019 when government struck its sector deal with the industry. Funded by OWIC members, OWGP has a budget of £100mn over 10 years. Part of its remit is to promote collaboration across the supply chain.

## Transformative projects

Since Whitmarsh first set to work, some notably big deals have been struck between developers and the home suppliers. There's also been plenty of noise, and no little activity, in backing small firms. In May, OWGP announced its latest grant funding and business support in a package totalling £4.2mn. This includes a £3.5mn competition to develop transformative projects.

The sort of thing OWGP wants to encourage is exemplified across five winning firms that are among 22 that OWGP has helped with grants. Covering a range of specialisms, they're intent on further developing distinctive technologies.

Sedwell develops bolting solutions for safety and performance critical equipment, while EchoBolt has created an advanced ultrasonic bolt inspection technique for offshore wind turbines. With OWGP money, the latter can develop its in-house cloud data platform for use by customers, enabling them to track asset condition and to self-perform inspections.

Other recent winners include Northern-Ireland based CASC, which mobilises/demobilises pre-assembly activities for some of the world's largest offshore wind farms. OWGP funds will help it invest in equipment to enable full automation of manufacturing processes.

Cambridge Vacuum Engineering produces electron beam welding systems. Being a winner with OWGP allows it to focus on developing a process for

circumferential welds on offshore wind monopiles, towers and tubular floating foundations. Finally, LiveLink Aerospace specialises in innovation to help bring about safer air operations and carbon neutral transport offshore. Its competition windfall will be used to determine the feasibility of using onshore air surveillance systems.

## Expanding the industry

Despite this measurable progress, the GMB union is still calling for a broader, more interventionist approach. It wants government to link subsidies for offshore wind farms to the use of UK suppliers. This, it says, could help create 30,000 new steel fabrication jobs in coastal and industrial areas lacking skilled employment. Melanie Onn, Deputy Chief Executive of RenewableUK, says some of what the union is seeking has already happened 'though I expect not as fast as GMB would like to see.'

To that end, GMB has also called for the creation of a Renewables Development Authority. This would procure private sector capacity to build new yards and work with training bodies to develop whatever skills are needed. Gary Smith, Secretary of GMB Scotland, says government can set legally binding conditions for franchises to supply the market via a UK chain. 'The EU trade agreement has provisions for development of disadvantaged regions,' he adds.

OWIC has published a guide for companies hoping to become part of the supply chain, and for those already in it. *Collaborating for Growth – Playbook* contains case studies of relationships between offshore developers and supplier companies – of contract-winning firms, and ways in which offshore developers engage with them early on. Examples of best practice include making suppliers aware of exact requirements on timings and technical specifications.

Meetings of offshore developers and suppliers have led to thousands of contracts being awarded to new companies, OWIC

Able Marine Energy Park, on the south bank of the Humber, will receive up to £75mn in government funding

Photo: Able Marine Energy Park

claims. Its guide also highlights developers working with the chain on technology for the next generation of larger projects, including more powerful turbines.

OWIC claims the UK's global lead in offshore wind makes it uniquely placed to sell innovative products and services overseas. Yet there remains a sense that the government is playing catch-up. Onn believes that delays in committing to build ports for offshore wind left the UK supply chain behind its rivals. Only in March did government announce funding for two new ports, one on the Humber, one on Teesside, designed to build the next generation of offshore wind projects.

Able Marine Energy Park, on the south bank of the Humber, will receive up to £75mn, while Teesworks Offshore Manufacturing Centre has been allocated £20mn. They'll have the capacity to house up to seven offshore wind equipment manufacturers, and government claims each will directly create around 3,000 new jobs.

With Teesside also receiving free port status, GE Renewable Energy is to build a new blade manufacturing factory there. This is due to start production in 2023, supplying blades to the 3.6 GW Dogger Bank wind farm off the northeast coast. The aim is for a completion date in 2026. Dogger Bank will, it's claimed, become the world's largest offshore facility, capable of powering up to 6mn homes.

### Domestic supply chains

In March 2021, Aberdeen-based North Star Renewables fought off foreign competition in landing contracts worth £270mn to deliver three service operation vessels (SOVs) for use at Dogger Bank. This, by any standards, is big business for the home supply chain.

North Star will deliver the SOVs from summer 2023. The vessels will be chartered for ten years with an option for three one-year extensions. The firm expects to create 130 full-time jobs in crewing and shore-based roles throughout the contract's lifetime.

However, offshore developers still cry out for more guidance when preparing plans to satisfy government officials of a commitment to UK suppliers. They feel the criteria by which projects pass or fail too subjective and lacking in clarity.

There are signs of change. Government, when considering Contracts for Difference (CfD) bids,

now allows offshore firms to show earlier in the process how they're making a material contribution to developing supply chains and receive a decision from the Secretary of State on that basis. 'There are improved relationships in the corridors of Whitehall, and probably with a broader range of people,' says Onn. 'Government wants to see progress it can point to.'

Although government has committed £557mn for future CfD auctions and support for offshore wind, Onn would like to see these held annually. 'That would give the industry more security, capacity and secure investment at regular intervals, rolling out procurement to give security to the supply chain,' she says. 'More projects and people would know where they are.'

Whatever its best intentions, government policy is being caught in post-Brexit crosswinds. Following a commitment to increase the UK lifetime content of offshore wind farms to 60% by 2030 – up from 48% – reports of EU disquiet surfaced in the summer, alleging that this breached the trade deal signed last December. That agreement prohibits any requirement for companies to achieve a given level or percentage of domestic content.

With several of the world's largest offshore windfarms in UK waters, EU-based companies have hungry eyes on the potential market. However, the Department for Business, Energy and Industrial Strategy (BEIS) has denied setting mandatory requirements for supply chains to use UK products. The picture remains unclear.

### Scotland looks ahead

To some extent, Scotland is ploughing its own furrow. Its national economic development agency, Scottish Enterprise, has appointed energy consultancy Xodus Group to develop the offshore supply chain. It will support Scotland's existing offshore clusters, DeepWind and Forth & Tay Offshore, with a remit to foster collaboration, drive competitiveness and improve productivity.

There's a focus on helping SMEs through one-to-one support, events, workshops and market intelligence. The idea is for Xodus to connect and simplify the sector, focusing both on supply chain areas already available and on expanding into identified gaps.

Meanwhile Vestas, manufacturing turbines and blades for what will be Scotland's largest

offshore wind farm, has confirmed that 87% of the blades will be UK-produced. Production is underway for the Seagreen project, off the coast of Angus, at the company's factory and development centre in Newport, Isle of Wight. Of 114 blade sets to be installed by the end of 2022, 99 will be made there.

Seagreen lies 27 km off the coast, in the Firth of Forth. It's a £3bn joint venture between TotalEnergies (51%) and SSE Renewables (49%). The first power is expected to be generated by early 2022, and the farm to enter commercial operation in 2022–23. Vestas' and SSE Renewables' collaboration also extends to the 443 MW Viking wind farm being built in Shetland, and the 30 MW Lenalea farm in Co Donegal, Ireland, on which work began in May.

Another significant slice of offshore business has been won by Harland & Wolff. It's been awarded a contract by Saipem Ltd to make eight wind turbine generator jacket foundations for the EDF Renewables and ESB-owned Neart na Gaoithe offshore farm, in the outer Firth of Forth.

Work was due to start in July and the project is expected to create almost 300 direct and indirect jobs. Manufacturing will mainly be carried out at Harland and Wolff's recently-acquired Methil facilities in Scotland, but the firm says there may be scope to spread this across other sites in Belfast, Arnish and Appledore.

Belfast has two of the UK's largest dry docks, while Arnish is said to have Europe's largest fabrication hall. Harland & Wolff is a wholly-owned subsidiary of InfraStrata. Its CEO, John Wood says Methil's proximity to the North Sea makes it the ideal location. 'It validates expanding into regions near major wind farm projects,' he says. 'This will enable us to drive down costs and deliver against tight schedules.'

### Flourishing

The signs look promising on several fronts for firms big and small positioning themselves to grab a stake in supplying offshore wind. Moreover the UK government is desperate to show that home industries are flourishing. 'It must show that the country can be successful,' says Onn. 'Criticism will come its way if it's not achieving growth and reinstating manufacturing.' ●

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