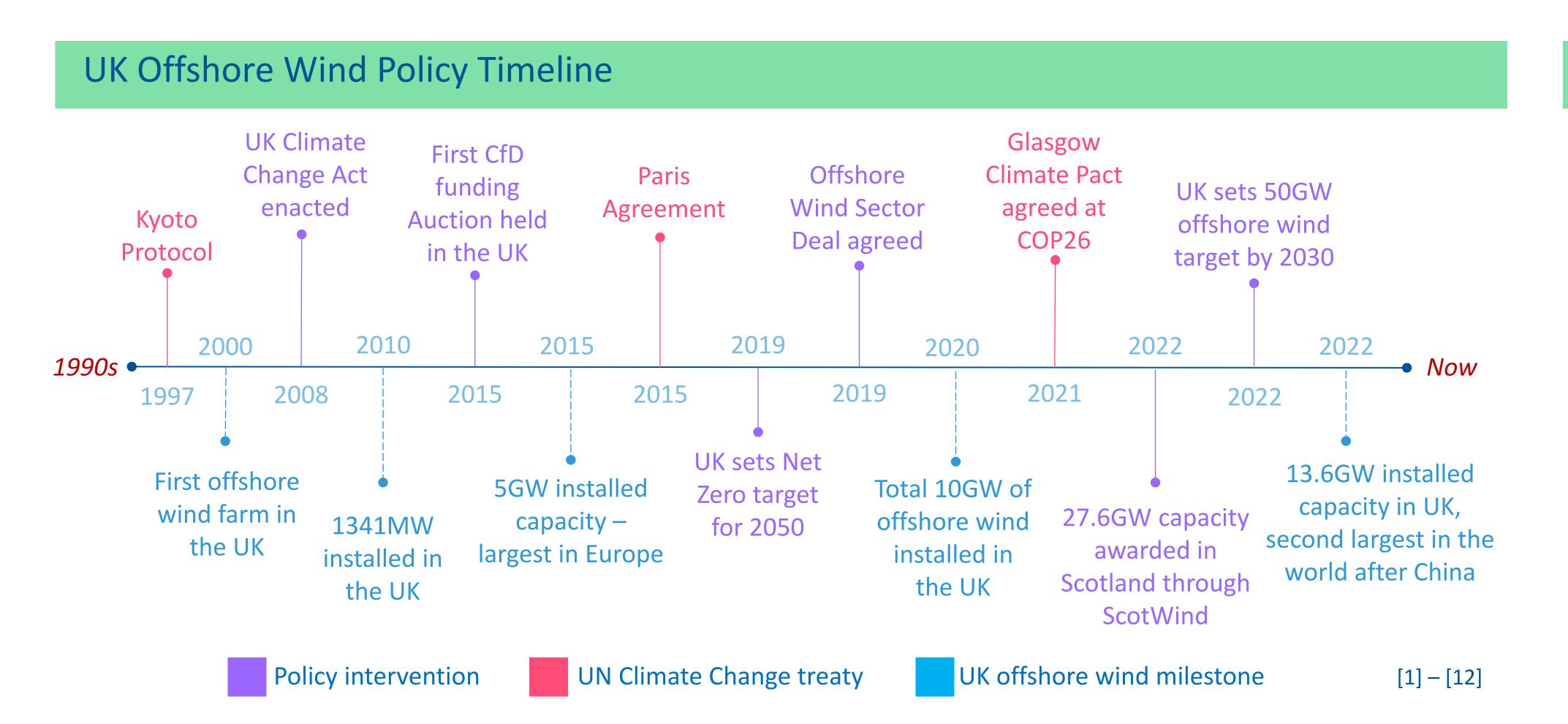
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Offshore wind policies and local content: what can we learn from the UK's experience?

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Abstract

One of the key areas of emphasis for the UK offshore wind sector is the growth of the UK supply chain, with the 2019 Offshore Wind Sector Deal targeting 60% local content in new projects by 2030 [8]. At the time of the deal, there was around 50% UK content in domestic offshore wind farms. This research looks at the development of UK energy policy relating to offshore wind, with a focus on how policy can stimulate the development of the local supply chain and maximise the economic benefits to the UK. In particular, the results of the recent Round 1 ScotWind leasing for new offshore wind projects in Scotland are presented, with these commitments assessed against the 60% Sector Deal target.

Mechanisms for local content

There are currently two main mechanisms for stimulating the development of a local supply chain in the UK. Submissions for funding through Contracts for Difference (CfD) require a Supply Chain Plan (SCP), which is marked against relevant criteria by the government and must score a minimum percentage before applicants are eligible to apply for CfD [13]. If a developer does not meet the goals approved in the SCP, contractual penalties can apply. Within Scotland, each project bid for Round 1 of ScotWind Leasing required a Supply Chain Development Statement (SCDS) to be submitted [14]. Though developers were not ranked on their SCDS when leases were being considered, they were asked to detail their expected expenditure across four project stages and geographical locations. For successful applicants, contractual remedies may be applied in the future if they do not adhere to the commitments laid out in their SCDS [15].

ScotWind

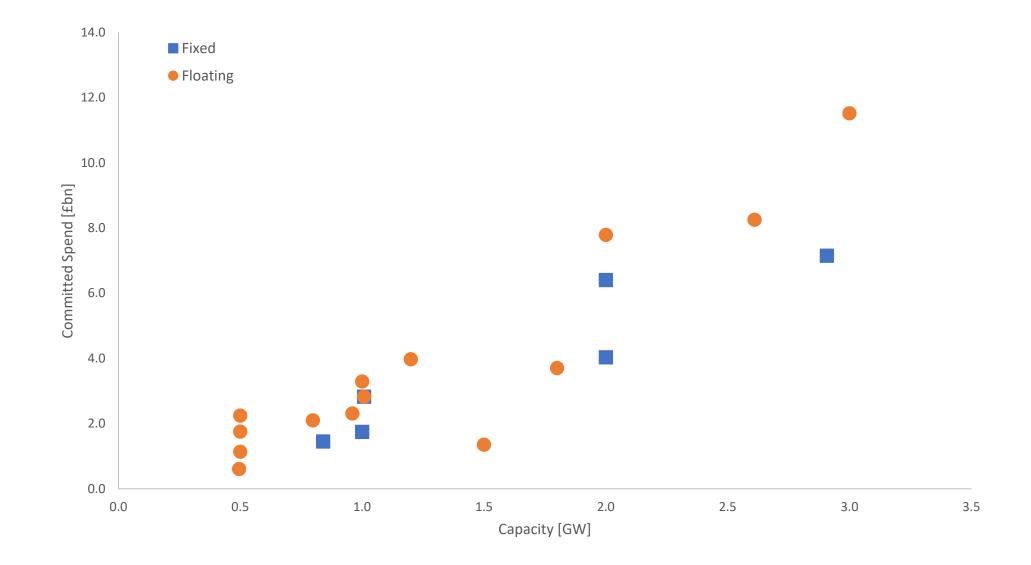
Twenty bids in ScotWind Round 1 were successful in receiving option agreements to construct projects in Scottish waters ^[14]. Fourteen of these projects expect wholly or partly to use floating technology, while six were for fixed bottom wind farms. The successful bids committed a combined expenditure of £76bn, with 55% of this to be spent within the UK. The bids also detailed their 'Ambition' spend, which aligned with the case where more of a UK supply chain had been developed and thus local sources could be used. In this case, a combined expenditure of £83bn was expected.

The breakdown of the planned, committed expenditure of the 20 projects is provided in the table. This shows that 55% of the total spend is expected to be within the UK. In the ambitious case, this rises to 68%. The fourteen floating projects were found to utilise a higher proportion of UK

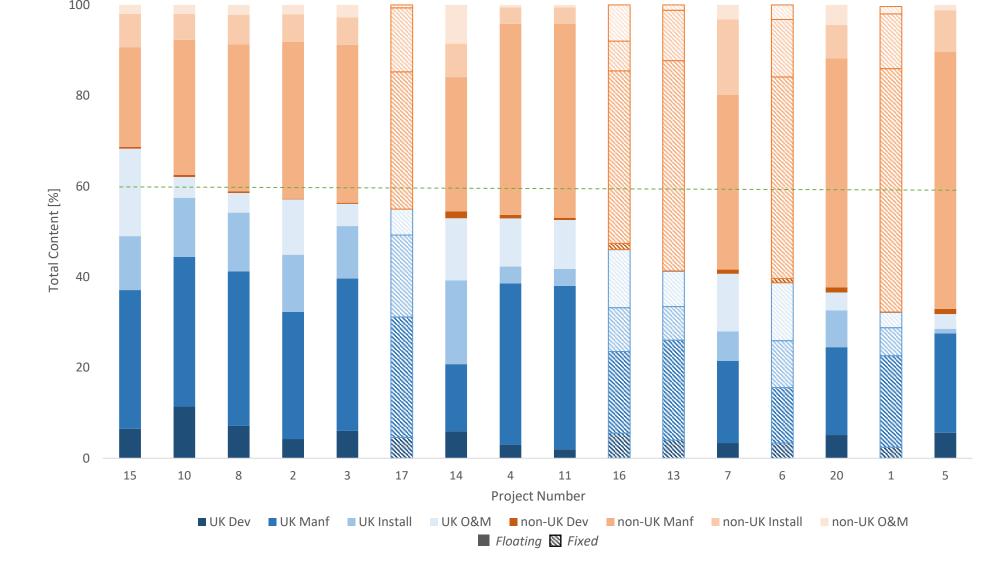
| (% total expenditure) | Scot. | Rest of UK | EU | Rest of World | Total |
|-----------------------------|-------|------------|----|---------------|-------|
| Development | 3 | 1 | 0 | 0 | 5 |
| Manufacturing & Fabrication | 19 | 12 | 26 | 10 | 67 |
| Installation | 7 | 2 | 6 | 1 | 17 |
| Operations | 8 | 2 | 1 | 0 | 12 |
| Total | 38 | 17 | 34 | 11 | |
| | | | | | |

content than fixed projects (59% vs 46%). Most of the discrepancy came from the manufacturing stage. Floating foundations present an improved opportunity for UK construction compared with more established fixed bottom technologies [16].

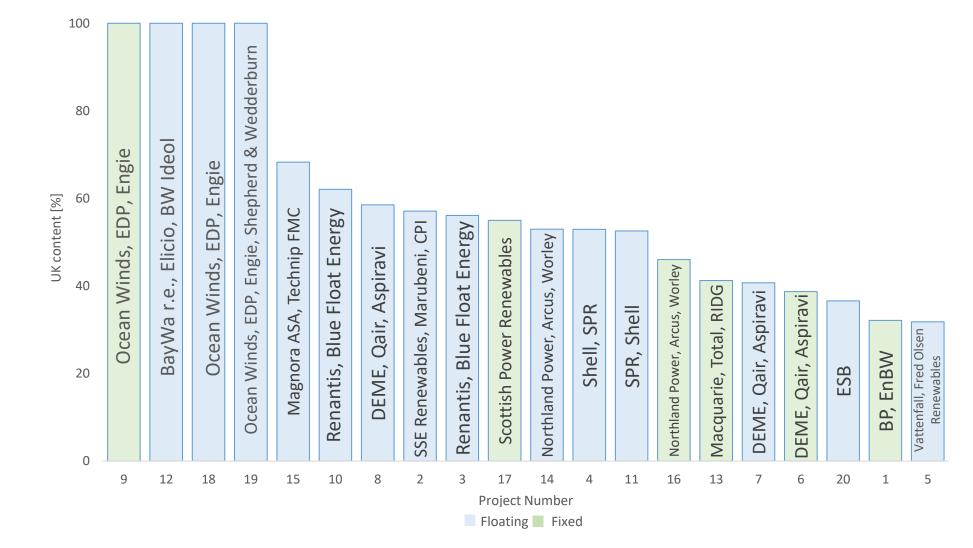
ScotWind Supply Chain Expectations



For similar offshore wind farm capacity, projects utilising floating technology have a higher planned expenditure.



Breakdown of committed spend for each project. (Note: four projects outlined 100% UK content. These are not displayed)



Note: Projects with 100% UK content may have suppressed non-UK content for confidentiality

Primary developers of each project, shown with the percentage of UK expenditure committed in their SCDS [10].

Conclusions

The offshore wind industry in the UK has developed from the first 4MW installed in 2000 to a capacity of almost 14GW today. This increase can be traced back to policy interventions and the growing emphasis on limiting climate change through the transition to renewable energy. With a 60% target for local content by 2030, policy mechanisms around supply chain planning have been put in place to stimulate the UK offshore wind supply chain. The results of Round 1 of ScotWind leasing show that the committed spends of the successful projects do not reach the 60% target, with delivery dates around or beyond 2030. This shows that if the goal is to be reached, opportunities within the UK supply chain must be improved to encourage greater investment and increase the level of economic benefit delivered in the UK.

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