



The **Offshore Wind** Consultants.

The Impact of “Scaling Up” on Foundation Supply Chains

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OWC

Long standing experience of developing and realising projects.

- The Offshore Wind Consultants.
- Established in 2011 by a team of experts who had been involved in offshore wind farm construction since 1990s
- Global specialist offshore wind consultancy with a local presence

Providing project development services, owner's engineering and technical due diligence, OWC are the only global consultancy dedicated to offshore wind.

- >100 offshore wind experts in 9 countries
- Dedicated OWC teams in London, Edinburgh, Cork, Hamburg, Warsaw, Taipei, Tokyo, Busan, Seoul, Boston, New York and Rio de Janeiro

Renewables Segments

Fixed OWFs



Floating OWFs



Onshore



Solar



Energy Storage



“Scaling Up” in Offshore Wind

- **Huge growth in offshore wind development**

- 35 GW of offshore wind across the world at the end of 2020
- Anticipated that a further 235 GW will be delivered globally by the end of 2030
- Just over 10 GW of offshore wind in the UK in 2020
- The UK aims to have 40 GW of offshore wind by 2030



- **More complex solutions**

Larger turbines



Larger foundations

Deeper locations



More floating wind

LCOE optimisation



Lean designs
Cheaper construction and
installation methods

Supply Chain Readiness ➡ Investment and Long-Term Commitment



THE ISSUES

- Limited number of suppliers for certain aspects of projects
- Lack of supply chain readiness for complex solutions such as floating foundations
- Difficult to secure UK content

THE MITIGATIONS

- Government investment in the supply chain
- Cross-industry investment from suppliers and developers
- A message of a clear and lasting pipeline by the government
 - Regular seabed leasing, regular CfD auctions etc.
 - Suppliers need to have confidence in the pipeline of work
 - Investment has to be commercially viable



Delivery Programmes ➡ Early Engagement and Partnering

THE ISSUES

- Projects are seeing increasingly compressed delivery programmes
- Puts further pressure on the supply chain to deliver

THE MITIGATIONS

- Early engagement with the supply chain
 - Understand supply chain challenges
 - Build relationships early
- Consider partnering with suppliers
 - Share risk with partners rather than pushing risk on to a supplier
 - Could cost more however the risk of delayed project delivery may outweigh this



Limiting Project Supply Chain ➔ Design Phase Optioneering

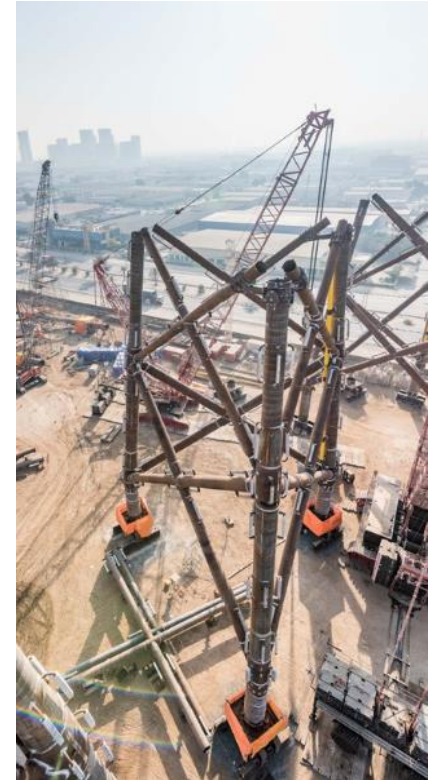
THE ISSUES

- Limiting options during the design phase in turn limits the supply chain
- Focusing solely on one foundation option closes off other potential suppliers that may have better availability for the project



THE MITIGATIONS

- Keep options open in early development while supply chain engagement is ongoing
- Invest time in understanding the challenges around fabrication, transportation and installation of various foundation concepts
- Assess which options are most feasible for the project requirements



Summary

- Growth in offshore wind and complex projects are increasing the pressure on and already limited supply chain
 - Rising costs and risk of delayed project delivery
- Solutions for projects:
 - Cross-industry investment in the supply chain by government, supplier and developers
 - Engage with potential supplier early or consider partnering
 - Keep options open during the design phase to not limit supply chain options





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