

Insights

OFFSHORE WIND PROJECTS: CONTRACTS, RISKS AND LOOKING FORWARD

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SUMMARY

An article about offshore wind projects and some of the unique issues specific to the delivery of this type of project that are not typically addressed by existing standard form contracts.

2023 proved a challenging year for offshore wind projects. Stubbornly high project costs up and down the supply chain, high interest rates, an unstable geo-political environment (with wars in Ukraine and the Middle East) and inflexible fixed price offtake agreements have all, one way or another, contributed to failed or aborted tender processes and project cancellations. One commentator characterised 2023 as the offshore wind industry's *annus horribilis*.^[1] But as the year drew to a close, some rays of sunshine started to appear on the horizon.

A LOOK AT THE CURRENT POSITION

In late November 2023, Taiwan's Ministry of Economic Affairs announced details for the second phase of Round 3 of its offshore wind auction program that will offer approximately 3 GW in March 2024 (and which includes an increase in the maximum available project capacity to 900MW following feedback from the local market).^[2] The first phase of the Round 3 auction awarded offshore wind capacity to seven projects in December 2022. Then in mid-December 2023, Japan's Ministry of Economy, Trade and Industry (METI) announced the results of its second offshore wind auction awarding development sites to three separate consortia with a total capacity of approximately 1.4GW, with a fourth site to be announced in Q1 2024.^[3] In the nascent Australian offshore wind market, the Government of the southern state of Victoria released its Offshore Wind Implementation Statement^[4], which includes a plan for expressions of interest from proposed projects in late 2024 and to award contracts in 2026 to meet Victoria's offshore wind targets of 2GW by 2032, 4GW by 2035 and 9GW by 2040.^[5] In the UK market, a failed 5th allocation round has led to policy adjustments which have received a positive response from the industry. For the sixth

round of CfD (Contract for Difference) auctions, the Government has raised the ceiling price by 66% from £44/MWh (including grid connection) to £73/MWh.[\[6\]](#)

While the dark clouds might be lifting, what is clear is that the experience of the past 18 months offers an opportunity for calm reflection as planning for new projects commences. The same set of macro-economic, geo-political and supply chain risks which played havoc with financial models on previously awarded projects now need to be factored into the risk assessment and delivery strategy of future projects. It is in this context that a re-emergence of the discussion on appropriate forms of contract specific to the delivery of offshore wind projects is welcome.

Offshore wind projects are by their nature highly complex, technically challenging, technology dependent and expensive. The combination of unpredictable weather and ocean conditions, scarce logistical resources and contracted offtake arrangements leave little room for error. Despite this, project delivery methods and perceived project risks tend not to deviate in nature (for the most part) from jurisdiction to jurisdiction. And because offshore wind generation remains an important component of government plans for decarbonisation of power supply (in jurisdictions with offshore wind resources), a number of investors, developers, sponsors, lenders and OEMs with global operations have emerged as key industry players. It is therefore somewhat surprising that, to date, a standard industry form of engineer, procure and construct (EPC) or engineer, procure, construction and install (EPCI) contract has yet to emerge.

While EPC contracts offering a full project EPC wrap are, nowadays, unusual given the value, risk, and complexity of a typical offshore wind project, it is typical to see EPCI contracts utilised under a multi-contract strategy for key offshore wind packages (e.g. wind turbine supply and installation) to be contracted on the basis of a heavily modified FIDIC conditions of contract for Plant and Design-Build (Yellow Book), more usually the 1999 edition, with modifications being so substantial (and varying from project to project) that the arrangement can only really be described as being bespoke. It is also not unusual to see the preferred offshore oil and gas standard industry forms published by Leading Offshore Energy Industry Competitiveness (LOGIC) adapted for use on offshore wind projects. However, the adaptations tend to be significant (and therefore bespoke) due to the differences between offshore wind and offshore oil and gas projects. While bespoke contracts may offer the superficial attraction of being tailored to a specific project taking account of the variables of a single location, the time and transaction costs involved in extensive negotiation create increased costs and inefficiency where one might argue the industry would be better served focusing on execution and delivery.

Recent announcements by FIDIC and the International Marine Contractors Association (IMCA) suggest that this might be about to change. FIDIC has announced that work has started on the development of a new FIDIC contract for offshore wind projects and anticipates its publication by the end of 2025.[\[7\]](#) IMCA has also announced the publication of what it says is the industry's first standard contract for transport and installation works in offshore wind projects[\[8\]](#), however at this stage the contract is only available for purchase by IMCA members.

UNIQUE (YET COMMON) RISKS TO PROJECTS

The remainder of this article will examine some unique issues that are specific to the delivery of an offshore wind project, which are not typically addressed in the existing standard form contracts and which are material to risk allocation. We hope the industry recognises the need for such provisions when developing standard form contracts.

VESSEL AND CRITICAL ENABLING INFRASTRUCTURE AVAILABILITY

The limited availability, on a global basis, of installation vessels for turbine installation and the resulting long lead times has elevated the need for early procurement of suitable installation vessels to the top of a project's critical issues list. In turn this has resulted in bespoke EPCI contracts for offshore wind turbine supply and installation including detailed provisions for early reservation and entry into charter party arrangements in order to secure availability and exclusive use of the installation vessel to meet programme requirements.

It is also not unusual to see similar detailed arrangements for reservation of other material and equipment supply and personnel transportation vessels, as well as arrangements with third parties for adequate berthing facilities covering the programmed installation periods.

SITE INFORMATION AND PHYSICAL CONDITIONS

Unique to offshore wind projects and particularly under-sea cable and fixed foundation wind turbine packages, is the difficulty of properly assessing sea-bed conditions, both at and below the seabed surface. It is often impossible, or at least impractical, to undertake a comprehensive survey of seabed conditions prior to contract award. Often, this also means that the exact positioning of wind turbines cannot be determined until the actual conditions are known. Unlike onshore projects, a contractual allocation of risk based on known or assumed conditions is not feasible, and alternative or additional provisions are required to provide for progressive time and cost adjustments as actual marine data becomes available. Similar issues arise in relation to under-sea cable laying where difficult to obtain marine survey information is required for finalising cable positioning and for the selection and approval of the appropriate cable laying methodology.

WEATHER AND CLIMATIC CONDITIONS

Weather conditions at sea are a variable which will inevitably play a significant role in the planning and execution of offshore wind projects. Virtually all operations, from transport of people and machinery to turbine installation, will be susceptible to the adverse impact of weather conditions. In addition to the delaying effect of unpredictable sea and wind conditions, the various types of vessels necessary for offshore operations (heavy lift, installation, support and transportation) will typically only be available at a particular location during pre-determined seasonal weather windows. Delays caused by adverse weather can therefore compound because the delay results in the missing of a weather window for a particular vessel. Further compounding this issue is that vessels

are often reserved for limited exclusivity periods before they are reserved for other projects and delays due to weather can therefore result in the project needing to wait until the vessel becomes available again.

The commonly adopted FIDIC Yellow Book contracts (1999 version) allocates risk for weather conditions by reference to whether the delay in question was caused by 'exceptionally adverse climatic conditions'[9] and the updated 2017 suite adds the further qualification that the conditions must occur at the Site and must be "Unforeseeable having regard to climatic data made available by the Employer . . . and/or climatic data published in the Country for the geographical location of the Site".[10] While the 2017 version of FIDIC introduces the opportunity for the parties to agree on a baseline set of climate data, typical bespoke forms of contract include more detailed provisions built around seasonal windows and allowances for weather down time by reference to an agreed set of limitations on installation operations for each category of installation work covered by the contract. In addition to covering the assessment of time and cost consequences of weather related delay events, such provisions will typically include a requirement for programmes to include sufficient information (forecast and actual) to allow Employers to establish whether a cause of delay is due to weather down time or other causes, and pro-active requirements for risk assessments and method statements to include contingency for mitigating the effects of adverse weather.

CO-OPERATION AND INTERFACE

The increasing scale, cost and complexity of offshore wind projects in recent years have seen most developers adopting a multi-contract delivery strategy for their project being one where the developer or SPV (referred to as an 'owner' or 'employer') procures separate contracts for various packages of work required to complete the project. Whilst there are some real advantages to multi-contract strategy for employers with the requisite experience, skills and resources necessary to administer and project manage the various packages, this trend has largely been driven by specialist contractors and suppliers (particularly turbine supply install OEMs) being unwilling to take on the full project risk and provide a complete EPC warranty wrap for the completion and performance of the project as a whole.

The adoption of a multi-contract approach creates a more complex matrix of interfacing stakeholders and managing that interface and dealing with the resulting risks are key issues for developers of offshore wind projects. Accordingly, various bespoke or amended contract forms for the numerous packages comprising an offshore wind project contain enhanced provisions to deal with (1) co-operation with and amongst project stakeholders; and (2) managing and mitigating interface risk. Such provisions might include:

- Clear demarcation of responsibility for internal interfaces at the risk of the contractor (i.e. subcontractor and other suppliers who are appointed by or otherwise the responsibility of the contractor) and external interfaces (typically) for the employer to manage, such as the

transmission network operator, off-takers, lenders (and agents), insurers (and agents), statutory authorities, and port or harbour operators.

- Inclusion of a detailed interface matrix as a technical document.
- Establishment of a project coordination committee with a governance and escalation procedure for the early identification and resolution of interface issues as and when they arise.
- Detailed programming requirements which demarcate employer responsibility for the interface between other contractors (i.e. the programme for contractors appointed by the Employer to undertake associated works packages) but which require a contractor to incorporate such programmes of other contractors into its own programming and to re-sequence activities when the works of such other contractors have been delayed.
- Express obligations on contractors not to obstruct, prevent or hinder the associated works of each other, but which are subject to Employer responsibilities for sequencing and provision of access.

RISK OF LOSS AND DAMAGE

The combination of highly complex operations, state of the art technology, unpredictable and often harsh weather conditions, and oftentimes a live power generating environment create a high-risk environment in which the consequences of accidents or incidents can be significant for multiple affected parties. It is in this context that the concept of 'knock for knock indemnities', otherwise known as mutual hold harmless regimes, has been discussed as a possible means of efficient risk allocation in the context of offshore wind projects.

Under this arrangement, each party to the contract takes responsibility for loss or damage to property or persons suffered by a member of their 'party group' (which often includes the relevant party, its subcontractors and affiliates), regardless of cause or fault. This is achieved through interlocking indemnities reflected in all contracts required for the construction of the project, hence also why this arrangement is suitable for multi-contract delivery strategies. The 'knock for knock indemnities' approach is common in offshore oil and gas projects and is a feature of the LOGIC suite of contracts. It is attractive in the sense that an inquiry into the cause of fault, which is often at the heart of expensive legal proceedings, becomes unnecessary and therefore, theoretically, should bring down the overall cost of insurance for the project. Participants in offshore wind projects with a background in the oil and gas industry will be familiar with the arrangement.

From the perspective of inclusion in standard form contracts for the offshore wind industry on a global basis these benefits will need to be weighed against some possible drawbacks. In some jurisdictions there may be the possibility of challenge or interpretation in a way that the parties may not have intended, given the disassociation of liability from fault. Definition of the relevant groups of parties to which the regime applies will be project and context specific needing to be considered

on a case-by-case basis. Typical exclusions such as for gross negligence and wilful default need to be carefully considered and consistently applied.

DATA AND TECHNOLOGY

Operational wind farm data has become a valuable commodity in the race to develop offshore wind projects globally. This includes data collected during construction, testing and commissioning processes. Contracts for the construction and installation of the various elements of an offshore wind project should therefore include provisions dealing with ownership of wind farm data generated through the construction process, means and methods for the collection and storage of, and access to, wind farm data, requirements for the protection of wind farm data, and clear usage and license provisions setting out the extent and purposes to which such data may be used by the contractor both during and after completion of the Project.

COMPLIANCE AND SANCTIONS

Lastly, a final few words on compliance and sanctions. It is now commonplace for bespoke contracts for the construction of offshore wind farms to include specific clauses going over and above the usual requirements to comply with local laws in the jurisdiction in which the works (including off site manufacture) are undertaken. Such provisions will include a requirement on the contractor to comply with binding obligations on the developer for local content requirements forming part of the regulatory permission regime. In addition, contracts which include the supply of technology underpinning the operation of the wind farm will contain provisions dealing with export controls from the jurisdiction out of which the relevant components will be exported. Lastly, contracts will typically need to deal with international sanctions and often include a requirement for monitoring the supply chain for activities that potentially contravene sanctions imposed by governments on states through which funds may pass.

CONCLUSION

The offshore wind industry has reached a pivotal moment in its evolution. There can be little doubt that regardless of the challenges, the technology will remain an important component of government efforts to decarbonise power generation in jurisdictions with coastal resources. Achieving economies of scale through the supply chain to efficiently deliver committed projects is one way in which the current challenges may start to be resolved and standardisation of contractual frameworks will need to play its part in helping to bring down transaction costs and move from development into construction at a faster pace. There is much work to do in this area and time is short, but the prospect of efficient large-scale production of green energy from renewable sources means that we must move quickly and collectively to bring down as many barriers as possible. Globally accepted forms of contract for the delivery of offshore wind farms should help in this effort.

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- [9] See clause 8.4(c), FIDIC Yellow Book (1999)
- [10] See Clause 8.5(c), FIDIC Yellow Book (2017)

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