Port Finance Roundtable 28th September 2023 - Notes

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Glossary

BPA	British Ports Association
CAPEX	Capital Expenditure
CfD	Contract for Difference
CSP	Celtic Sea Power
CLCI	Centre for Local Content Innovation
DBT	Department of Business and Trade
DCO	Development Consent Orders
DESNZ	Department of Energy Security and Net Zero
DEVEX	Development Expenditure
DfT	Department for Transport
EPC	Engineering, Procurement, Construction
EPCI	Engineering, Procurement, Construction, Installation
EPCM	Engineering, Procurement, Construction, Management
EU	European Union
FID	Financial Investment Decision
FLOW	Floating Offshore Wind
GW	Gigawatt
HMG	His Majesty's Government
ITT	Invitation to tender
MW	Megawatt
NSIP	National Significant Infrastructure Projects
O&G	Oil and Gas
O&M	Operations and Maintenance
OFTO	Offshore Transmission Owners
OPEX	Operating Expenditure
OSW	Offshore Wind
RAV	Regulated Asset Value
TCE	The Crown Estate
UKIB	UK Infrastructure Bank
UKMPG	UK Major Ports Group

1 Introduction

Floating Offshore Wind (FLOW) is on the cusp of industrialisation in the UK, with recent existing and upcoming leasing exceeding 20GW (including 15GW via ScotWind and 4.5GW via the Crown Estate Celtic Sea programme). This equates to over 1,300 turbines which will need to be installed at an average rate of two a week (within six-month weather windows) for at least five years from the start of construction, and foundations produced across the year at a rate of one a week. The Offshore Wind Accelerator Task Force industrialisation roadmap has deduced that the UK will need around 11 coastal locations with industrial capacity (7 ports for WTG integration and storage, 2 locations for steel assembly and 2 for serial concrete manufacture). This is additional capacity to what exists today, and it is estimated that £4bn will be needed to meet the demand. This investment needs to flow **now** if the port and other FLOW coastal infrastructure capacity is to be ready for the later 2020's.

However, despite individual ports and coastal facilities developing masterplans in response to the FLOW pipeline and the launch of the Floating Offshore Wind Manufacturing Investment Scheme (FLOWMIS), there are limited capital investments as yet being made. This should be concerning as improved coastal infrastructure in the region bordering the wind resource areas is **critical** to the success of FLOW as an industry.

To discuss the challenges related to bringing forward/unlock the £4bn of investment needed to deliver the UK's FLOW ambition, and to formulate possible solutions, Celtic Sea Power Ltd and the Centre for Local Content Innovation brought together a range of experienced industry representatives for a frank, roundtable conversation. This took place in London on the 28th September 2023.

This roundtable was the second in a series, with the first focussing on risk. The notes from this event are here Risk Roundtable Notes (celticseapower.co.uk) and a resultant thought piece is here Industrialized Floating Offshore Wind is risky. An opportunity for the UK? - Celtic Sea Power.

2 Acknowledgements

All discussions took take place under Chatham House rules; therefore, no individual has been quoted or the source of comments and/ or thoughts has not been explicitly identified.

However, Celtic Sea Power Ltd would like to extend our thanks to those who gave their time, expertise and enthusiasm to this exercise.

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3 Discussion Points

3.1 Challenges

3.1.1 Complexity of UK port ownership structure.

It was noted that many of the issues related to port infrastructure requirements for FLOW (and Offshore Wind more generally) are global in nature. However, the diversity of port ownership and commercial models in UK ports is a unique challenge. In essence;

- UK Ports are fragmented profit seeking entities, including Private, Trust & Municipal.
- Each model will have a different approach to risk. For example, a trust post may not have access to, or be able to take, equity. Investment. There is the possibility that a "policy bank" could take a view on that. Private ports could have quite complex debt structures.

It was also noted that, from a business perspective, Ports currently have a number of trades and cargos that use the space that FLOW operations might utilize. How do they maintain a diversity of Business as Usual whilst developing for FLOW?

It was considered that privatization of UK ports in the 1980's has in part generated risk-adverse ownership structures of some Celtic Sea ports, with owners (especially Trust Ports who have no government backing as lender-of-last-resort) reluctant to take on the uncertainties of raising finance for large upfront investments to expand FLOW facilities. There is a fear of creating 'White Elephants' – large scale port expansions against which revenues fail to materialize. The challenge is how to incentivize such owners to move away from safe business models, built on low-risk income sources, eg leasing fees, service charges, berth fees, cargo dues and pilotage and mooring fees.

Given that the challenge is pan-regional, how do we take an ownership blind approach to port capacity and strategy? How do you place incentives in front of infrastructure owners?

3.1.2 Lack of future revenue certainty.

The discussion circled back to this point a number of times. In general terms, the feeling was that there was affordable capital on offer, however the risk profile remained too high for infrastructure owners due to a lack of future revenue certainty. More specifically:

- Port investments have always been on the risky side, with high upfront costs incurred before the first vessel has tied up (and revenues flow). Known business models, including accurate forecasts of number of vessels, are more investable.

- Currently, there is a lack of secure long-term pipeline visibility of FLOW projects for 2030 and beyond.
- This is exacerbated by Contract for Difference (CfD) timelines which don't align with port investment timelines.
- Essentially, without certainty of contracts, any port investment decisions are highly speculative. The current 4.5GW leasing round represents market demand, but this is not as yet accompanied by commitments to ports (although we await to see if such commitments are to be made integral to the Crown Estate's leasing process).

It was noted that from recent Government speeches, political priorities for Net Zero targets appeared to be softening, and therefore skepticism from port operators about Government commitment is understandable. The well publicised lack of offshore wind bids in the recent CfD Auction Round 5 (AR5), and the perception that the UK is massively overcomplicating any support mechanisms (in comparison with other jurisdictions including Germany and US), led to the question: Is the UK still a believable market?

The two key policy initiatives that could support early investment in FLOW port infrastructure is FLOWMIS - a subsidy scheme – and the UK Infrastructure Bank – providing equity, loans and commercial bank guarantees. There are currently no, and no known proposals for, a UK government 'revenue support' scheme for ports to overcome the demand uncertainty of taking on risk capital to expand FLOW infrastructure.

The discussion included some interesting points.

- There is a tension between exclusivity (individual concessions between ports and operators providing revenue certainty) and a strategic approach (recognition that there will need to be a multi-port/ multi-site/ wet storage approach to delivering multiple projects in parallel).
- If a port has a 15-year contract offer from an O&G Major or an offer for something that may or may not happen in 5 years' time, then investment becomes a "no-brainer".
- It was noted that sweating existing assets is always going to be plan A.
- There appears to be confidence in speculative Port development in France because early work is funded by the state.
- Is there a hybrid solution to help drive multi-port contracts?
- Investors consider risk associated with a single port, even if port is part of a bigger group. This makes concepts around strategic approaches difficult.

3.1.3 Demand risk needs to be carried by someone.

It was widely recognised that port infrastructure investment is essential and, moreover, early DEVEX (feasibility studies, business case preparation, investor meetings, engineering, consenting etc.) is urgently required now if FLOW targets are going to be met. However, there was debate around what should be considered priorities and how the demand risks associated with a lack of revenue certainty should be dealt with. A number of challenges were identified:

- Prioritisation, what infrastructure needs to be tackled first and who will be developer 1, 2, 3, or 4? How will the port need to allocate space. Is auctioning of port capacity to successful lease bidders a way forward?
- There was concern that the delay caused by 100MW projects not bidding into AR5 could mean that they won't deliver lessons into the GW scale projects arriving towards the end of the decade. It was discussed that Cherbourg has existing capacity which might meet the needs of the early Celtic Sea projects.
- Based on the work of the Offshore Wind Acceleration Taskforce, some believed that Investable business cases for individual integration ports is the immediate key challenge.
- Others believe that we should be considering fabrication requirements (serial production in undercover facilities with quayside access) in parallel with development of ports for integration, on the basis that there is a 3-to-5-year window to compete against the embedment of fabrication elsewhere in the word. It was noted that if you do something first, then the way it is done is the way it will always be done.
- Are we building ports for a 5-year capex phase or something for 40/50 years? Are we building for a small number of high value contracts.? This is important because there is a payback period of 20 years for port infrastructure.

It was interesting to consider whether demand risk could be mitigated through commercial mechanisms alone. For example:

- Does the industry need to consider long-term Terminal Concessions as an approach to reducing demand risk for infrastructure owners, thereby improving the investment case? If so, who would be the counterparty and how might they mitigate the demand risk they are taking on?
- As an alternative, would an Oil & Gas (O&G) vertical integration strategy work? It was suggested that this might need O&G sized balance sheets and/or O&G type tax offsets to gain traction.

Commercially, it was noted that a developer's project contracting strategy will be significant in determining the scale of potential port usage and increasing confidence in the investment case.

- Current contract package strategies are not translating into integrated port strategies.
- Whilst there was debate, it was agreed that an EPCI strategy would work better than multi-contract strategies for supporting port investment cases.

Notwithstanding commercial mitigation, the project finance specialists agreed that such speculative risk shouldn't be project financed but should be equity financed. Although there is appetite in the private finance market to take risk in FLOW-related infrastructure projects, non-recourse project finance is not a viable option until there is much more secure revenue certainty. This reality could be a problem for both private and trust ports.

The roundtable reached the conclusion that the demand risk for early investment in FLOW ports and other coastal facilities seems unlikely to be carried by private sector without government taking a material stake. In the absence of a government FLOW port revenue support scheme, and with such a lengthy period (estimate to be circa five years) between Financial Investment

Decision (FID) for the proposed investment activity and the securing of subsequent work orders, government-backed equity seems the most realistic financing solution. It was noted that two primary investment principles for UKIB finance are that it must support Net Zero and/or deprived economic areas. Notably, both of these investment criteria play to the inherent strengths of FLOW port and coastal facilities in the Celtic Sea (Wales/South-West) region.

3.1.4 Design for local – what need is there for standardization. Convergence around main parameters.

Importantly, there was evidence provided at the workshop countering the received wisdom that one of the key obstacles to early investment in FLOW port infrastructure is uncertainty over the choice of design for FLOW substructures and turbines.

The counter case was made that 80% of design options would likely be accommodated within the parameters of port/coastal facility expansions because of commonalities in the core requirements of different designs for manufacture, final assembly, and wet/dry storage and integration, and because of the physical constraints of Celtic Sea regional ports.

It was proposed that if ports could raise the finance, then they could essentially 'max-out' their capacity with regards to the key physical parameters of laydown area, quayside length, berthing depth, navigation channel width and depth and crane tonnage. At the same time, it was also noted that turbine size is unlikely to continue to grow at the rate that it has because of the lack of availability of installation vessels.

With these parameters limiting the scope for design, developers would be incentivized to 'design-to-local'. Given the commercial imperative of geographic proximity to project sites for storage, final assembly, marshalling and integration, and given the above maxed-out capacities of available regional ports and coastal facilities, developers would elect to design their FLOW platforms to 'fit' these local limitations, ie 'design-to-local'. Will this be sufficient to make Port Infrastructure a "no regrets investment"?

If infrastructure owners can mitigate demand risk, will this also mitigate "white elephant risk"? Are they building the right infrastructure now for the right solution that the market needs in ten years' time? For example, the increasing size of turbines has caused issues post a £315m investment in Greenport Hull, which was designed for 75m blades, yet has had to be modified subsequently to accommodate 115m blades.

Specific areas of discussion included:

- There needs to be a design of an industrial eco-system which is "fit-for-purpose" for FLOW.
    - The Port based Operations & Maintenance (O&M) requirement will be much larger than for fixed Offshore Wind (OSW). This O&M story is a real challenge to insurers.
    - A new view is required from insurance companies. Interfaces, coordination and scale are all issues of concern. Consideration should be given to the need for regionally based O&M vessels for subsea asset O&M, as well as local tow-to-port arrangements for Major Component replacement.

  - Wet storage is essential to making the industrial ecosystem work. It is estimated that the Celtic Sea will need around 4 x 4km2 capable of storing 20 units. These may or may not be within existing port limits.
  - Each wet storage site will cost between £50m to £70m, and will have a significant lead time,
- The supply chain for development (consenting et al) is under huge pressure at the moment.
- The technical specialists in attendance believed there is a degree of convergence in technology. Doesn't matter which technology is selected if you know the material. (Steel or Concrete). Convergence in O&G took 10 years…we are 5 years in and on track.
- For the 20% of floated designs not accommodated by existing facility design exercises – what does that mean in terms of overspend, excess water depth, or limited supply chain?
- If you standardize the platform, you might also be able to work towards standardizing other services and vessels.
- Standardisation will help insurers to respond much more quickly and increase their confidence.

3.1.5 Policy and Policy Collaboration.

The discussion included debate around what the UK's policy is or should be towards deployment versus local content. There was a view that, from a supply chain perspective, the value is in fabrication, and this will drive UK Green Gain.

It was noted that;

- A global supply crunch is forecast to hit between 2027-2030 which will include, but not be limited to, steel, cables, vessel and infrastructure availability across the world.
- What are the EU and US doing that we are not? The lack of policy parity as it relates to global trade and subsidy control was discussed.
- Steel will have to be imported to support any UK based fabrication. Freeports could help with steel import tariffs, however the irony of possibly supporting steel imports into South Wales was not lost on the group.

The roundtable raised the importance of alignment of policy instruments across Whitehall to incentivize investment in FLOW port and coastal infrastructure. Such alignment would give confidence to financing institutions, in that they would have line of sight of how developers could navigate a low-risk pathway across the timeline from lease award, through planning DCOs to CfD. For example, incentives for FLOW port infrastructure using the Social Value model criteria in lease option award, need to be aligned with developers. Interestingly, there was a feeling that;

- Port investors are not looking for absolute revenue certainty, it's a degree of certainty and longevity of certainty. Stable policy is crucial here.
- The degree of certainty required varies across differing ownership models. Smaller balance sheets need higher granular certainty commensurate with project finance. This may be too much detail for large corporates capable of bearing investment on their larger balance sheets.

It was generally agreed that the missing piece is UK coherence. Is there a UK wide masterplan? Do we have a believable build out strategy for UK supply chain capacity to meet FLOW demand? Who owns the problem with Ports?

As previously discussed, ports are a diverse set of independent commercial entities whilst, in Government, the challenge is split across several departments including DESNZ (Offshore Wind), DFT (Ports), DBT (Export/ Trade) with limited coherence.

Does the strategic infrastructure challenge need to be owned by someone who is not specific to any entity?

In parallel, how do we get the Celtic Sea Port community to be more collaborative and present the regional vision with cohesion and single voice?

It was recognised that individual ports don't have to own the FLOW problem. They have existing customers to service and the opportunity to choose between market opportunities that may be less speculative and provide better returns.

3.1.6 FLOWMIS (Floating Offshore Wind Manufacturing Scheme)

The currently live competition for £160m of support for capital port projects leading to 10m deep quays for FLOW integration was discussed. There was a feeling that the results of this competition could provide guidance on where "policy" funds might be best deployed to meet strategically important priorities.

However, most workshop participants concluded that the slow rate of FLOWMIS roll out, its competitive structure generating one or two winners, and the low levels of funding budget, all limit the role the scheme can play in leveraging FLOW coastal infrastructure in the Celtic Sea region. It was also suggested that FLOWMIS is not the only market indicator. More specifically:

- FLOWMIS has stalled any discussions around collaboration or coordination. It has also delayed early DEVEX as bidders await the outcome of the round.
- The value of FLOWMIS fund is £160m vs £3.5bn of total investment required.
- FLOWMIS is not the only market indicator. – Ardesier has had a £300m private equity investment and, therefore, hasn't applied to FLOWMIS. Private Equity is interested in shovel-ready projects such as these.
- Could £160m of DEVEX (as opposed to CAPEX) spread evenly across interested ports move us forward with a wider range of strategic shovel-ready projects?

3.2 Solutions

3.2.1 Improve the Business Case and Improve Certainty.

It was broadly agreed that in the absence of solutions, it will be the UK that loses rather than individual ports and/ or investors. The comment "lack of FLOW pipeline represents an opportunity loss, but not for the banks. If they don't invest a penny, they don't lose a penny" resonated with the group. To this end:

- Annual targets and CfD auction rounds have helped and need to continue. However, this needs to convert to firm pipeline (leases, CfD award, FID) which translates into an industrial requirement. There needs to be a realistic timeframe that is believable.
- This should de-mystify technology and requests of ports by developers. In turn, consideration of a "design envelope" informing an industrial strategy and parallel narratives around fabrication, assembly, storage, integration. This may mitigate the demand and white elephant risk for individual ports building a business case.
- Consideration needs to be given around longevity of service of developed infrastructure across the FLOW project lifecycle and diversification of it into other markets for resilience. There needs to be realistic possibilities around which we can coalesce. A critical mass of activity is helpful for insurers.

Notwithstanding the above, the finance specialists felt that a "Design Envelope" wouldn't be enough for investment. Therefore, the discussion considered the feasibility of a multi-port portfolio approach bound by a common industrial strategy on the basis that:

- Such an approach could help de-risk early investment decisions.
- Single ports need to make investment decisions, however most 1GW+ projects will need to use multiple ports. Individual developers are already speaking to 4+ ports and considering multi-port strategy.

Could Joint Venture's (JV) facilitate this approach? (Aberdeen Harbour's expansion was cited as a good case study). There was some reticence within the room for JV's across multiple sites as, currently, investors consider risk associated with single port, even if port is part of a bigger group.

It was discussed that the CCUS scheme, which is based on a regulated asset value (RAV) business model across CAPEX and OPEX, might offer a possible policy approach to FLOW port infrastructure that balances investor risk with fair return. It was also noted that the recent Offshore Wind Champion's report had suggested that a port revenue support scheme, possibly a capacity market, could have a role to play in improving demand and revenue certainty.

The Government has admitted through FLOWMIS that we have a problem. However, there was a feeling that it would be better to run a follow up FLOWMIS as a DEVEX-only fund, ie smaller grants for feasibility and economic studies, on offer to all applicant regional ports in the UK who pass some minimal pre-qualification hurdles. Such a format for FLOMWIS would enable owners to develop 'bankable' business plans with which to approach private investors. In support of this proposal:

- The port of Adesier had undergone early development work and was geographically well located for ScotWind pipeline (which should still be considered speculative ahead of individual offshore project FID). As such, it could be considered "shovel ready" and

has attracted £300m of private sector investment (with no requirement for public sector leverage).

3.2.2 Policy, Coherence, Coordination and Collaboration

It was broadly agreed that Ports represent critical infrastructure in the UK. It was asked why are we not treating ports like Offshore Transmission Owners (OFTO) or similar?

As a means to reduce the period of uncertainty for FLOW port investors, question were asked in the roundtable about how the planning system might be streamlined to reduce the time-lag between lease option award and FLOW ports securing first orders. The proposed reforms to National Significant Infrastructure Projects (NSIP) include consideration of ways to speed up planning Development Consent Orders (DCO) for offshore wind and transmission network expansion. Further, Ports are already one of the 12 designations under NSIPs, but designation was back in 2012 and as such the scope of eligibility may need updating to ensure inclusion of other coastal FLOW infrastructure, such as non-port wet and dry storage and FLOW foundation final assembly.

The roundtable also noted concern that in the process of The Crown Estate applying the public procurement Social Value model to award, in part, seabed rights for FLOW in the Celtic Sea, they intend possibly to focus only on incentivizing investment in FLOW integration ports, and not investment in final assembly or manufacture of foundations. Participants await the release of the agency's Round 5 (Celtic Sea) Information Memorandum to clarify the position.

Moving forward, it was broadly agreed that policy and industrial strategy coordination will be essential. Discussion points included:

- HMG should be considering policy parity with the EU and USA, at least in the interpretation of the legal room for manoevure if unable to match on scale of subsidies.
- Solving the lack of policy coherence is likely to need to start with No 10. Would the solution be a cabinet office and/or cross departmental office focused on the problem?
- Supplementing this, there needs to be a responsible entity delivering practical "unblockers" and driving coordination in the public and private sectors.
- Could this be a FLOW industrial strategy office covering wind, ports and supply chain, similar to the National Shipbuilding Office (NSO)?
- The outcome of this coordination should inform effective risk sharing and long-term investment needed to underpin the brisk development of critical port and coastal infrastructure essential for the delivery of UK FLOW.