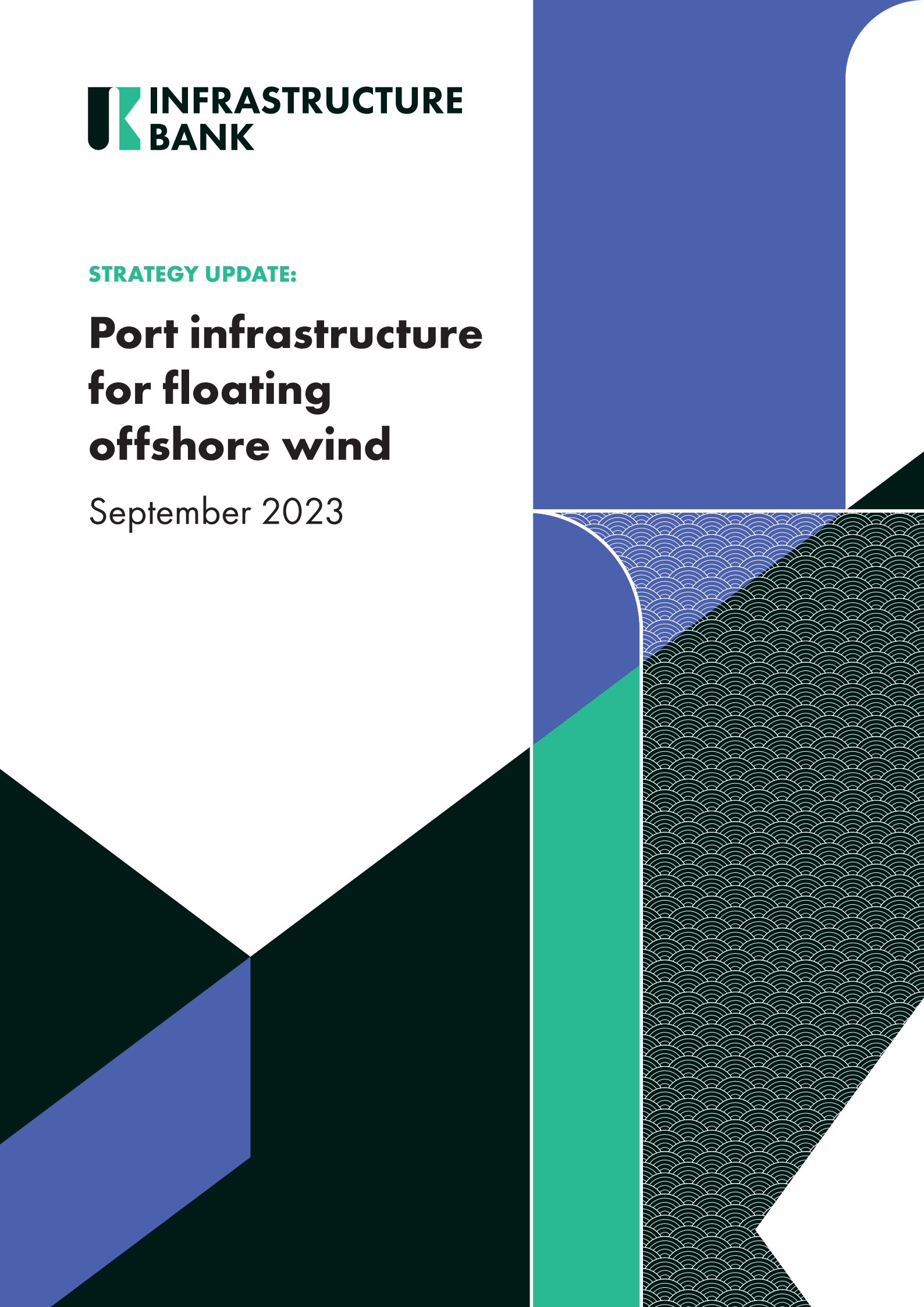




STRATEGY UPDATE:

# Port infrastructure for floating offshore wind

September 2023



# Sector summary: port infrastructure for floating offshore wind

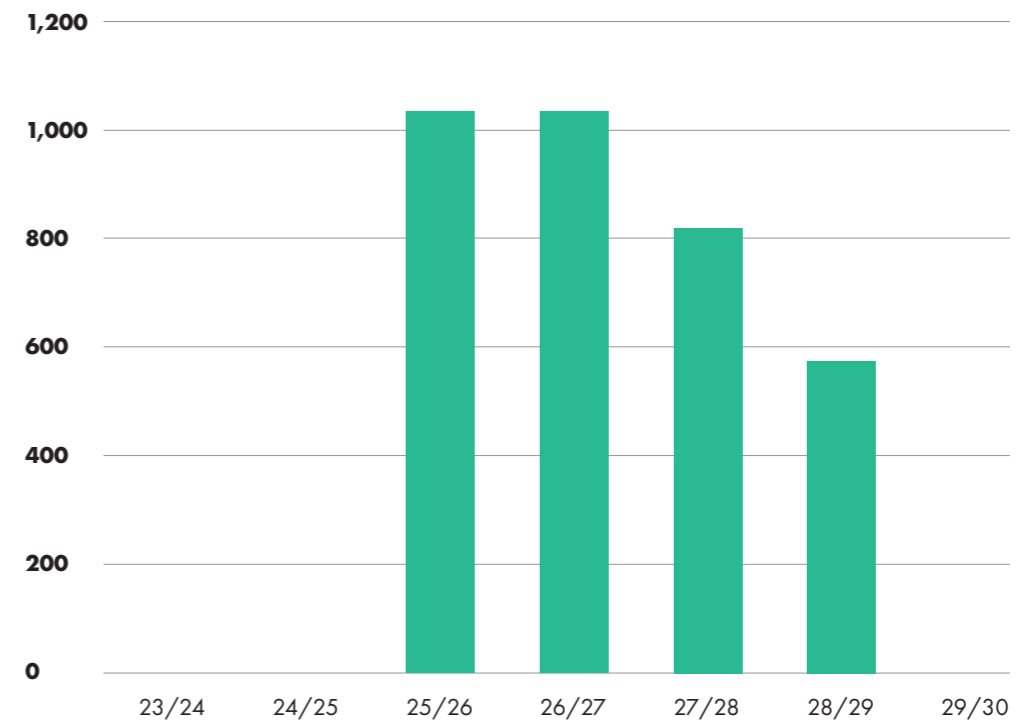
## Government ambition

- > **Supporting infrastructure is required to service the construction, operations and maintenance** for 50GW of offshore wind by 2030, including 5GW of floating.
- > **Floating offshore wind requires reinforced quays and significant laydown area within close proximity of project** – Floating Offshore Wind Taskforce estimates indicate approx. £3.45bn investment needed by 2030.

## Government funding

- > **£160 million FLOWMIS grant funding expected** to support early enabling works.

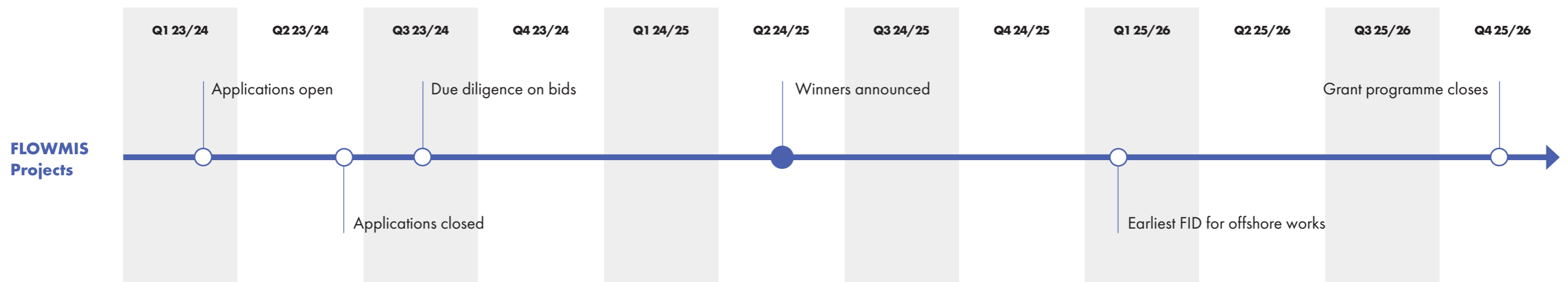
## Estimated profile of investment requirements (£m)



### Data note:

Estimates based on the total capital expected to be required to fund the port infrastructure required to deploy 5GW of FLOW by 2030, according to capex estimates set out by the Floating Offshore Wind Taskforce and internal high-level estimates on phasing ([Industry Roadmap 2040](#), March 2023). This profile does not pre-judge future policy that may look beyond 2030.

## Investment roadmap



**Government has an ambition to deploy 50GW of offshore wind by 2030, including 5GW of floating offshore wind (FLOW).** Ports play a critical role throughout the life cycle of an offshore wind project, from initial installation, through to operations and maintenance and eventual decommissioning. This means significant additional port infrastructure needs to be built in advance of 2030 for the UK to stay on track for net zero. Ports can also play an important role in regenerating and stimulating regional and local economic growth – UK ports create £10.8 billion in direct GVA each year, and every £1 spent on a port has a multiplying impact of £2.87 on the economy. Ports provided 126,000 jobs across the UK in 2022,<sup>1</sup> often relatively well-paid and in less economically prosperous regions.

Port infrastructure constraints are particularly acute for FLOW, as the size and nature of floating foundations mean these projects have more specialised, and localised, enabling infrastructure and supply chain requirements. Because FLOW projects are in deeper waters, turbines and foundations must be integrated onshore, rather than offshore as is typical for bottom-fixed projects. Floating foundations are also much larger and heavier than bottom-fixed, requiring significantly wider berths, access channels and wet storage, as well as very large heavy-lift cranes and stronger quays. There are also likely to be significant cost, schedule, and technical benefits from locating FLOW manufacturing facilities and related services close by.<sup>2</sup>

Government has launched FLOWMIS (the Floating Offshore Wind Manufacturing Investment Scheme) to help ports develop the infrastructure required for FLOW. However, there is a clear need for significant further investment – FLOWMIS will only provide £160 million in grant support across the UK, while the investment need at ports for FLOW infrastructure has been estimated at £3.45 billion by 2030.<sup>3</sup>

The FLOW Taskforce estimates that, by 2030, five integration ports will be needed to service Scottish projects, with another two required in the Celtic Sea. A further four ports are thought to be required to service steel and or concrete component manufacturing and assembly.<sup>4</sup> As the floating offshore wind industry develops, complementary clusters of ports are likely to be needed to service its enabling infrastructure and supply chain needs. These should be strategically located, given the importance of proximity to FLOW project sites. Coordination between private and public sector actors can help to ensure this.

We think investment in port infrastructure currently represents one of the most significant challenges to meeting the government's FLOW deployment ambitions, and it is an area where the Bank's levers can help overcome barriers.

Barriers to investment are well documented and not all can be solved through finance.<sup>5</sup> We have worked closely with a wide range of stakeholders, including ports, offshore wind developers, commercial lenders, trade bodies and public sector organisations to validate and deepen our understanding of the barriers to investment for FLOW infrastructure at ports and develop our approach.

1 [The Economic Contribution of the UK Ports Industry](#), Maritime UK (May 2022),

2 [Industry Roadmap 2040](#), Floating Offshore Wind Taskforce (March 2023)

3 [Industry Roadmap 2040](#), Floating Offshore Wind Taskforce (March 2023)

4 [Industry Roadmap 2040](#), Floating Offshore Wind Taskforce (March 2023) pp30-32

5 Including (but not limited to): [Independent Report of the Offshore Wind Champion](#) (April 2023), [Industry Roadmap 2040](#), Floating Offshore Wind Taskforce (March 2023); [Strategic Infrastructure and Supply Chain Development](#) Floating Offshore Wind Centre of Excellence (May 2022)



## Wider support for offshore wind

Beyond port enabling infrastructure for FLOW, we can also support the offshore wind sector more broadly where we identify barriers to investment. Some of the ways we can invest in the sector are:

- > **Investment in port infrastructure for bottom-fixed offshore wind projects**, particularly through debt finance (see our investment in Port of Tyne below).
- > Providing equity or lending to early **FLOW generation** projects.
- > Making our financial guarantee available to companies bidding to become **offshore transmission owners (“OFTOs”)** through Tender Round 10.
- > Investing in the offshore wind **supply chain**, particularly manufacturing of key components such as fixed and floating foundations, towers, blades, and subsea cables (such as HVDC cables). We are open to deploying our full range of financial products, including innovative structures and/or partnerships where required.

We can also invest in **bottom-fixed offshore wind generation** where we see evidence of private finance capacity gaps. This may include projects taking significant merchant risk, those with specific technology solutions which are not yet widely banked, or where there is a clear need for enhancing liquidity in response to emerging financing challenges.

# Problems we want to address

## Revenue risk

The key financing barrier we can help to address is the lack of visibility ports have over utilisation of their infrastructure at the point of investment, which makes it challenging to forecast revenues. This is particularly acute for FLOW because the technology is much more nascent than bottom-fixed offshore wind, and the enabling infrastructure requirements are much more complex and larger-scale.

Several factors drive this uncertainty – key amongst these is the timing of when the investment is required. Offshore wind developers typically do not commit to contracts until they have a Contract for Difference (CfD) in place – by which point the port infrastructure would need to be close to completion, with investment committed several years beforehand.

Without firm contracts in place, the lack of certainty over the return on investment makes it very challenging for ports to commit equity capital and access debt finance for these infrastructure upgrades. We want to work with developers of projects to understand what conditions would need to be in place to incentivise earlier investment into port infrastructure.

With no firm ambitions for deployment after 2030, there is also a lack of long-term pipeline visibility for FLOW. Combined with the ongoing evolution of FLOW technology, this creates uncertainty over long-term port infrastructure demand.

We cannot fully address revenue risks on our own. We do not provide revenue guarantees, nor can we provide grants. We expect to work alongside others to develop bespoke structures for strategically positioned individual ports that enable risk-sharing between multiple sources of public and private finance. We want to play a prominent role developing these and have identified some ways we could do this below.

# Our approach

We will work with industry to develop viable investment models for the first FLOW enabling infrastructure projects. The next 12 months will be important for the sector as plans are developed to deliver port infrastructure for FLOW. We can help to play a coordinating role between the public and private sectors.

The award of FLOWMIS grant funding, expected in the first half of 2024, will be a key first step in unlocking transactions for FLOW infrastructure at ports. We have already indicated our willingness to consider investing in these projects to applicants through the scheme guidance. We currently expect to begin investing in these projects in 2025/26, when the first phases of enabling works have been delivered through a combination of sponsor equity and FLOWMIS grant funding. We will consider investing earlier if the opportunity arises.

The financing needs of each port are likely to be unique, at least initially, depending on factors like size and ownership structure. We will work closely with ports themselves, their financial advisors, and other public and private investors (for example, government, the Crown Estate, Crown Estate Scotland, other UK development banks, and commercial banks) to come up with bespoke, innovative structures to help address the needs and challenges of each port. In time, it may be possible to develop a more consistent investment model or framework, and we are keen to support this work alongside individual deals.

**Where investment is required ahead of committed demand, we will consider equity investments.** We will need to have sufficient confidence in the underlying demand dynamics to invest, but as a policy bank our risk appetite can be different to the market. There are initiatives underway encouraging developers to provide stronger evidence of interest earlier in the project lifecycle, including the Crown Estate's requirement for developers to indicate preferred installation port(s) as part of tenders for the upcoming Celtic Sea leasing round; and the Scottish Offshore Wind Energy Council's Strategic Investment Model process. These approaches could make it easier for us to take a view on expected demand in advance of formal contracts being signed. The stronger the signals on which ports are best placed to be the first integration hubs for FLOW – whether from developers, government or both – the easier it will be for investors to have confidence in future demand.

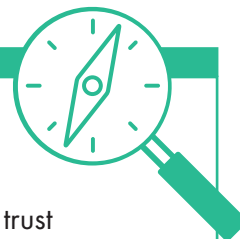
We are open to productive discussions around equity co-investment with port owners or project developers where, for example, we could be a minority co-investor in a **Special Purpose Vehicle (SPV)** or development company. We think this could work for both private and trust ports, although trust ports have bespoke governance structures which mean their ability to be involved in an SPV needs to be considered on a case-by-case basis.

**Where there are sufficiently firm commitments in place for use of a facility, we can provide debt.** We expect this is most likely at later stages of a project, where port upgrades are phased or where a project has wider use cases beyond FLOW.

**Across all our private products, our indicative minimum ticket size is £25 million.**

There are several initiatives underway to address the wider barriers to delivering FLOW infrastructure at ports, as well as new funding and financing approaches. We will continue to work with government and the market to understand how our products could be deployed alongside wider public and private finance, and potential non-financial interventions. We will remain flexible and adapt our approach where necessary.

## OUR ROLE SO FAR:



### Port of Tyne

In June 2023, we provided a £50 million capex facility to the Port of Tyne, a major trust port, to enable the regeneration and redevelopment of land that will provide a base for green industries, including offshore wind.

The development sites are in strategic locations close to North Sea bottom-fixed offshore wind farms. Potential expansion opportunities relating to offshore wind could include component manufacturing, marshalling, operations and maintenance. Other industries, including hydrogen production, electric vehicle and battery manufacturing may also make use of the sites.

We were able to offer a 10-year Capex Facility, which is a longer tenor than would typically be available to a trust port from commercial banks. This helped to crowd in other lenders, including an institutional investor.



# Get in touch

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