



We can build them

Supporting Irish ports to build offshore wind farms

April 2023

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AIB	Allied Irish Banks
BOOT	Build Operate Own Transfer
CEF	Connecting Europe Facility
CINEA	European Climate Infrastructure and Environment Executive Agency
CVAE	Corporate Value-Added Tax
DAFM	Department of Agriculture, Food and the Marine
EIB	European Investment Bank
EMRA	Eastern and Midland Regional Assembly
ERDF	European Regional Development Fund
ESPO	The European Sea Ports Organisation
FEDER	Fonds Européen de Développement Régional
GBER	General Block Exemption Regulation
HIE	Highlands and Islands Enterprise
ISGB	Irish Sovereign Green Bond
ISIF	Ireland Strategic Investment Fund
MAC	Maritime Area Consent
MARA	Maritime Area Regulatory Authority
NDFA	National Development Finance Agency
NDP	National Development Plan
NTMA	National Treasury Management Agency
NWRA	Northern and Western Regional Assembly
O&M	Operations and Maintenance
OECD	Organisation for Economic Cooperation and Development
ORE	Offshore Renewable Energy
ORESS	Offshore Renewable Electricity Support Scheme
R&D	Research and Development
REACH	Regional Economic Action Coalition
RRF	Resilience and Recovery Facility
SB	County of Santa Barbara
SFPC	Shannon Foynes Port Company
SLO	County of San Luis Obispo
SOWEC	Scottish Offshore Wind Energy Council
SPV	Special Purposes Vehicle
SRA	Southern Regional Assembly
TEN-E	Trans-European Energy Network
TEN-T	Trans-European Transport Network
TFEU	Treaty on the Functioning of the European Union
TII	Transport Infrastructure Ireland

Executive Summary

The Irish offshore wind sector is picking up momentum. With the first Irish projects awarded Maritime Area Consent (MAC) in December 2022 and the first Offshore Renewable Electricity Support Scheme (ORESS) auction scheduled for Q2 2023, there is an urgent need to focus more closely on the practicalities of how offshore wind can be delivered. The Wind Energy Ireland [National Ports Study](#) sought to understand the extent of existing port infrastructure in Ireland. The study highlighted that only Belfast's D1 facility is entirely suitable to support fixed-bottom construction, with limited infrastructure to support the deployment of floating wind. Considering the current infrastructure deficit to serve the Offshore Renewable Energy (ORE) sector, the port study considered the suitability of proposed development plans around the coast. Whilst several encouraging plans are in the pipeline for port development, funding has been cited as a key issue.

The funding challenge is being exacerbated by the current economic headwinds, with inflation impacting material costs and interest rates at levels not seen for decades. This will serve to further increase funding gaps and reduce the commercial viability of projects, with increased scrutiny from lenders reviewing business cases for proposed projects.

The expanded Ports Policy statement published in December 2021 cites the Connecting Europe Facility (CEF) funding as the main mechanism for funding port infrastructure supporting Irish ORE. Of the locations considered within the WEI *National Ports Study*, four had applied for funding in the 2021 call for applications. However, each of the Irish port applications were unsuccessful. It was hoped that the availability of European funding would serve to de-risk some of the upfront spending of the ports.

The WEI *National Port Study* made several key recommendations which included Government or State led support for port development plans hoping to serve the offshore industry. This report has sought to demonstrate how State support for port infrastructure is common throughout Europe and has also highlighted global examples where financial assistance has been provided by governments. Where State support is provided for commercial enterprises, the European Commission State Aid Legal Framework becomes relevant. The report has given a short overview of the rules and the opinion of the Commission in respect of the case studies included.

Within the reporting, the current funding challenges are explored and the potential options for the involvement of the Government and State entities such as the Ireland Strategic Investment Fund (ISIF). The document looks in more detail at the potential limitations of the CEF funding mechanism in respect of ORE port infrastructure and highlights how this is more likely to be helpful as a complementary measure alongside additional funding made available through the State.

Irish Ports have demonstrated resilience in the past number of years, particularly in response to the twin challenges of Covid-19 and Brexit. The existing National Ports Policy has served the State well, however, with the emergence of the green economy (and other contemporary investment drivers), review of the current Policy appears timely. A change to the existing National Ports Policy could allow for Irish ports to become engines for economic growth and ensure Ireland can maximise the renewables opportunity.

Conclusions

The study highlights the following conclusions in respect of funding for port infrastructure:

1. The provision of State funding for port infrastructure is common and widespread in Europe. It is recognised that ports are critical infrastructure with high societal value. Where projects exhibit a funding gap, provision of grant funding is essential to ensuring viability. The port investment study completed by the European Sea Ports Organisation (ESPO) in 2018 highlighted Belgium, Greece, the Netherlands, Poland, Portugal, and Slovenia as Member States where port projects have been part funded by State resources [1]. These are in addition to those specific ORE examples which have been covered within the case studies.
2. The CEF funding is considered a key part of the funding puzzle, but it is not a silver bullet. There are several limitations in respect of relying solely on the CEF to solve the funding issue. Whilst success for the latest Irish CEF applications would be welcome, additional forms of funding are required to ensure the ORE port projects are bankable.
3. The selected ORE port case studies demonstrate that the provision of State resources for projects of high societal value is not uncommon. The case studies also serve to demonstrate the potential supply chain benefits and how the use of State resources for port infrastructure can be compatible with the State Aid rules. A theme amongst the case studies included was the use of European Regional Development Fund (ERDF) to support the projects. This may be a route to explore for Irish projects. It is noted that ERDF cannot be awarded alongside CEF funding and so this may only be relevant for harbours which are not within the TEN-T Network, or those which are unsuccessful in obtaining CEF funds.
4. The challenge surrounding the funding of ORE ports is not unique to Ireland. Across Europe and the US, ports and the supply chain are experiencing similar issues. Scotland is undertaking a partnered approach with the Scottish Government to tackle the issue, with developers working alongside the Government on a Strategic Investment Model for ports and the supply chain. A similar model could be adopted in Ireland, with collaboration and a partnered approach likely to be more conducive to solving the funding problem. A strategic investment model for Irish projects could identify 'strategic projects' through a robust framework and would be the first step in providing Government support for the development of ORE ports.
5. Solving the funding challenge in the early stages of port projects will be key to ensuring project viability. Provision of equity in the early stages will be essential, with the limited visibility of revenue at present a key issue. As considered previously, identification of 'strategic projects' through a clear investment framework would identify the ports alongside relevant projects, helping to tie the ports to a potential revenue stream and de-risking the investment prospect.
6. Some level of Government involvement will likely be essential. It would be anticipated that the CEF will play some role with 50% of eligible cost available for the early stages of projects. Private investment is deemed unlikely at this stage given the 'at-risk' nature of the early port project stages and the lack of visibility on revenue streams. Early-stage funding could be facilitated through Government grant funding. ISIF commercial investment is possible at this early stage provided there is visibility on the commercial viability of the project. It is possible for ISIF's commercial investment to work alongside CEF or any other grant funding that may be available.

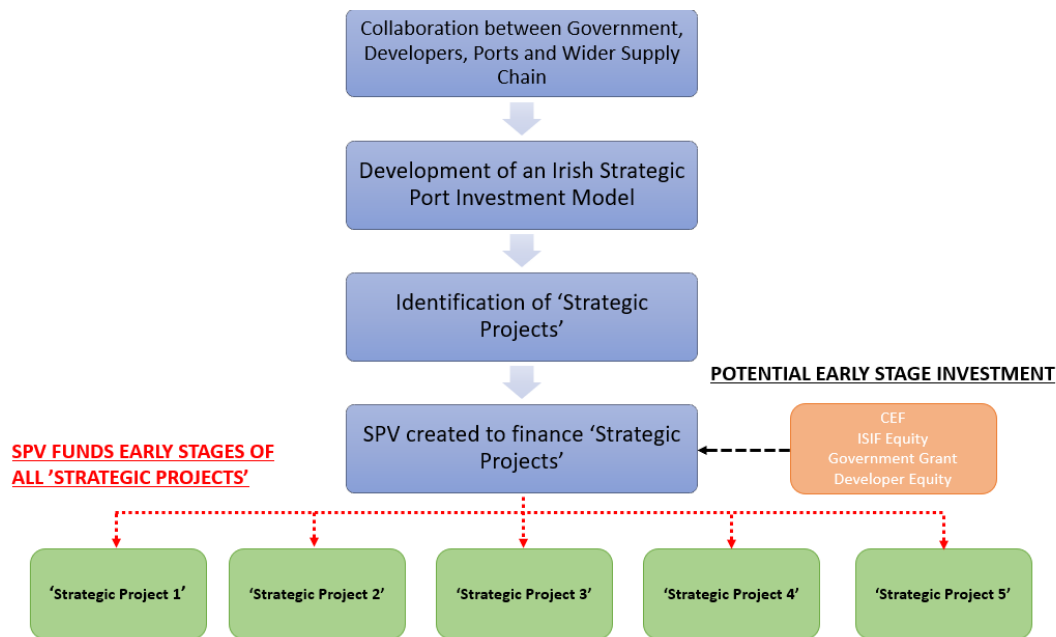


Figure 0-1: Flow Chart of Potential Irish Strategic Investment Model

7. Beyond the initial early stages and once the demand is clearer, it would be expected that traditional forms of funding could be utilised, with debt arrangements made available through the national banks or through the European Investment Bank (EIB). There are options to avail of financial tools, such as the InvestEU Guarantee Facility to further increase the bankability of projects. Green loans (available through the national banks) are highlighted as another high potential option for reducing borrowing costs, with green loans typically able to offer lower interest rates than equivalent traditional products.
8. Additionally, once the demand is realised, and where potential Government support were provided, it would be anticipated that private investment may be more likely. State funding is often found to be a catalyst for private investment. Government involvement for ORE port infrastructure projects will increase confidence in the Irish offshore sector generally and reduce the risk associated with the port projects. Greater certainty surrounding timelines for offshore wind deployment will be critical to attracting private investment.
9. Tax relief for port infrastructure appears viable under Capital Allowances. Through the Industrial Buildings Allowance, 4% relief over 25 years can be claimed for those items considered as 'dock undertakings.' Whilst this would be a welcome reduction in tax over the 25-year period, it is noted that the capital costs must be incurred upfront. Whilst still potentially helpful, this is only helpful on the proviso that the projects get to construction stage. This would be seen as a complementary measure to improve the bankability of projects.
10. The study considers a high-level overview of the State Aid rules. Notable from the research and the case studies are the following:
 - Breakwater structures and associated elements were deemed not to constitute State Aid as they are not of commercial nature and are provided to protect the port from environmental conditions. Where breakwaters are constructed these offer shelter to the port and the community as a whole and as such are provided on a non-discriminatory basis. This interpretation

is unsurprising given these structures and activities provide safe means of entry and exit and given that their use cannot be refused on commercial grounds (those using the port do not pay fees for the use of breakwater structures);

- Where State funding was provided for port infrastructure and the Commission ruled that the funding was considered State Aid under Article 107 (1) of the TFEU, the Commission was able to find compatibility with Article 107 (3) (c) and consequently no objections were raised.

The updates to the General Block Exemption Regulation in 2017 to include for port infrastructure, and again in 2021 to exempt projects supporting the green and digital transition, demonstrate the European Commission’s attitude toward port projects and those initiatives which support Europe’s climate agenda and the broader goal of European energy independence. While this report does not claim to be a legal analysis, the research and the case studies identified suggest that State Aid rules are not a roadblock to Government support for ORE port infrastructure in Ireland.

Recommendations

Considering the conclusions of the study, the following recommendations are proposed in respect of funding for port infrastructure:

Table 0-1: Proposed Recommendations for European Port Funding Study

Item	Recommendation	Reasoning & Proposed Action	Relevant Government Department or Organisation
1.	Government collaboration with Phase 1 and 2 developers, ports managing bodies and wider supply chain	Collaboration and partnered thinking are essential to solving the funding challenge. Providing a focused group (which could be facilitated through the Offshore Wind Delivery Task-force), with the key stakeholders including the Department of Transport, developers, ports and the wider supply chain will be critical in understanding the challenges and opportunities in respect of port funding.	Offshore Wind Delivery Task-force
2.	Consideration of a Strategic Investment Model for port infrastructure	Similar to what is currently being done in Scotland, a collaborative approach to understanding the most suitable investment strategy could be considered. The investment model would examine the specific port development plans and timelines alongside the various proposed projects to understand what may be best suited to serve each project and how developers could potentially share facilities. This may also provide a way for developers to help fund the port projects, as the risk will be reduced.	Department of Transport, Department of Expenditure and Reform
3.	Government engagement with ISIF to understand potential options to support ORE port projects.	GDG have engaged with ISIF to understand the possibility of the fund investing commercially to support the development of Irish ORE port infrastructure projects. The initial high-level discussions were promising with a clear indication that the wider economic impact of these investments is understood. It would be recommended that the Government engage directly with ISIF to explore the opportunities more fully and potentially consider options where grant funding could play a role alongside ISIF’s commercial investment in supporting projects.	Department of Expenditure and Reform, Department of Finance
4.	Commitment to timely approval of key projects, including ORE port infrastructure and Phase	Following on from the recommendations of the WEI <i>National Ports Study</i> , it is recommended that key infrastructure projects are prioritised through the consenting process. At present, across the renewable energy industry, there is serious and growing	Department for Housing Local Government and Heritage, An Bord Pleanála, Maritime

	1 & 2 projects through the consenting system.	<p>concern at the state of the Irish consenting system for foreshore, planning, and MAC applications.</p> <p>This concern is having a direct effect on the ability of Ireland to attract, and retain, international investment for ORE.</p> <p>The Government approved consenting prioritisation for projects in the Irish maritime area in September 2022. However, the commitment to prioritisation must be matched with an increase in resourcing and tangibly improved decision timescales.</p> <p>Demonstrable improvements to the consenting system would build investor confidence in the Irish offshore wind market.</p>	Area Regulatory Authority (once in existence)
5.	Update National Ports Policy to remove prohibition of Exchequer funding for commercial ports.	<p>The current National Ports Policy follows on from the 2005 policy document which stated that the commercially run ports should receive no further Exchequer funding for infrastructure development [2].</p> <p>Ireland's ports are critical for ensuring the continuing flow of trade in/out of the country and are essential in supporting the climate ambitions of the Climate Action Plan and Programme for Government. It is noted that Government funding for port infrastructure is not unusual across EU Member States.</p> <p>Whilst the study seeks to explore options beyond direct Exchequer funding, removing the blanket exclusion on Government support for ports will allow for flexibility when considering potentially viable funding opportunities, including ERDF funding given the requirement for matched Government funding.</p>	Department of Transport
6.	Consideration of ORE Port Infrastructure within the ERDF framework	<p>The ERDF is considered a potential option to help finance ORE port infrastructure projects. This was a common theme throughout the case studies and was highlighted by ESPO as a frequently used method for helping fund port infrastructure across Europe. This should be explored in full and the potential for part of the current allocation to be used to support port developments considered.</p> <p>Whilst the contribution from the ERDF itself may be relatively modest given the requirement for the current pot to fund projects between 2021-27 across several sectors and regions, the match-funding nature of the ERDF will double the contribution. ERDF funding would likely be most effective as part of a funding mix alongside potential grant funding from the State and other financial vehicles.</p> <p>It is noted that there is a prohibition on the overlapping of ERDF and CEF funding for ORE projects. Consequently, this may only be a viable funding solution for projects which are unsuccessful in obtaining CEF funding or those locations which are ineligible to apply for CEF funding.</p>	The Department of Public Expenditure and Reform, the Department of Education and Skills, and the Regional Assemblies
7.	Engage with EU State Aid legal specialists	<p>The GDG research seeks to give a high-level overview of the State Aid rules and the General Block Exemption Regulation in respect of port infrastructure. The case studies detail the opinion of the European Commission in respect of similar projects availing of public resources supporting infrastructure schemes. The case studies demonstrate how publicly funded port projects are possible within the State Aid Legal Framework. It is recommended that professional and specific legal advice is sought in relation to any potential methods of Government financial support for port infrastructure projects.</p> <p>As GDG understands, the Department of Enterprise, Trade and Employment is the national point of contact at EU level on State Aid policy.</p>	The Department of Enterprise, Trade and Employment

1 Introduction

Within the next eight years Ireland intends to develop 7 GW of offshore wind energy – approximately 7-10 offshore wind farms – and this creates an urgent need to consider how this might practically be accomplished. The Wind Energy Ireland [National Ports Study](#) shows conclusively that this target cannot be accomplished using only the port facilities currently available at the time of writing.

Port infrastructure is a significant constraint on deployment, with limited port infrastructure of the scale required available across Europe, and particularly in Ireland. Offshore wind deployment in Irish waters offers a significant economic opportunity for Ireland. Ports can serve as a hub for suppliers to congregate and can act as a catalyst for upskilling and upscaling of maritime businesses to become key suppliers to the offshore wind sector. The development of a strong offshore wind supply chain could generate huge numbers of highly paid jobs and act as a catalyst for external investment into our coastal regions.

The positive impact of dedicated ORE Ports on growing the supply-chain has been seen in many mature offshore wind markets (eg. Esbjerg in Denmark and the Port of Nigg in Scotland) [3]. A lack of suitable Irish ports to support the construction stage and service the operations and maintenance of offshore wind farms will ultimately serve to delay offshore deployment in Ireland and drive up the price of renewable electricity for consumers.

1.1 Recommendations of WEI National Port Study

Following completion of the Wind Energy Ireland *National Ports Study*, the lack of existing port infrastructure to support the deployment of offshore wind in Ireland is apparent. Considering the current infrastructure deficit to serve the ORE sector, the port study considered the suitability of proposed development plans around the coast. Whilst several encouraging plans are proposed for port development, funding is repeatedly cited by ports as a key issue. Each of the ports surveyed in the study anticipated their plans would separately require more than €100 million. These projects represent some of the largest marine civils schemes Ireland will ever have seen.

Significant funding is needed to help cover the capital costs of the developments and raising this money is particularly difficult as no future ORE revenue is guaranteed at this stage. Considering the anticipated duration to take large-scale port projects from feasibility to completion, there is a need for ports to pursue these developments now (without the assurance of future revenue from the ORE sector), if the port infrastructure is to be operational for the Phase 1 and 2 project construction stages [3].

1.2 CEF Funding

Port locations seeking to avail of traditional equity or debt instruments to fund ORE port infrastructure may find themselves with a relatively substantial funding gap, with additional funding required to ensure projects are commercially viable. European Union funding is available through the TEN-T/CEF scheme to support 'Core and Comprehensive' ports. However, of the locations considered within the

port study, four had unsuccessfully applied for funding in the 2021 call for applications (applicants for funding were Bremore, Cork Dockyard, Rosslare and Moneypoint).

Considering the scale of investment required, the lack of guaranteed ORE revenue and the outcome of the initial round of CEF applications, a key recommendation of the WEI *National Ports Study* is for the Irish Government to support the development of port infrastructure for ORE. This could mean direct Exchequer funding, access to low-interest loans in addition to access to investment vehicles such as the ISIF and EIB.

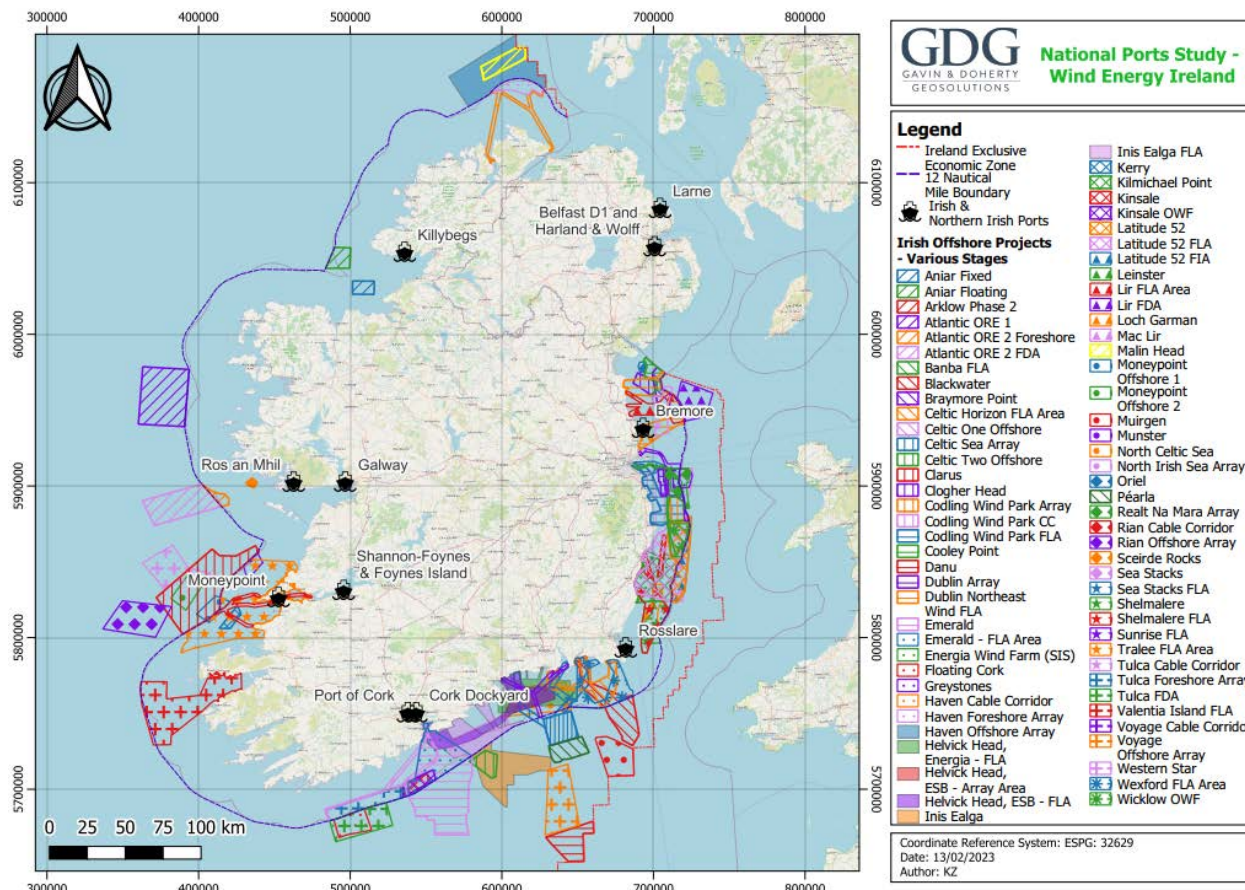


Figure 1-1: Ports Considered within National Port Study Relative to Proposed Irish Projects

1.3 National Development Plan (NDP)

The Irish National Development Plan (NDP) for the period 2021-2030 was published in October 2021 and the document sets the priorities for large scale Government infrastructure expenditure for this period. The document highlights the importance of the recent and ongoing investments made at the Tier One ports, Dublin Port, Port of Cork, and Shannon Foynes serving to improve connectivity and facilitate trade [4]. Whilst there is an understanding of the criticality of port infrastructure, the Exchequer has not helped fund this essential national infrastructure, despite the scale of the capital investment and the associated wider societal benefits. The NDP specifically discusses the role of ports in facilitating offshore wind and cites the investment challenge anticipated, with reference only to the Trans European Network for Transport (TEN-T) as a means to solve the problem.

1.4 Current National Ports Policy

The expanded Port Policy Statement released by the Government in December 2021 follows on from the NDP and highlights the criticality of port infrastructure to serve the offshore wind sector. The document recognises that several ports will be required to allow for Ireland's climate goals to be realised [5]. To date the Government's Ports Policy has cited the CEF funding scheme as the preferred method to support ports seeking to develop ORE infrastructure. Whilst the policy also considers the potential involvement of the ISIF and EIB in providing future finance, there is an acknowledgement that both ISIF and EIB require projects to be supported by an underlying commercial/business case.

The large ports in Ireland underwent corporatisation beginning in 1997, with ports encouraged to compete commercially and fund themselves through revenue producing activities. The current Ports Policy, which is due to be revised in 2023, followed-on from the previous 2005 Policy which prohibited Exchequer funding for infrastructure development of commercial ports as defined in the Harbours Acts (1996-2015) [2].

Whilst corporatisation may have been relevant in the early 2000s, ports are now facing an evolving landscape with the need to ensure infrastructure keeps pace with demand [6]. The drivers for port investment in the current age are diverse, with ports requiring upgraded infrastructure to deal with the changing needs of the maritime sectors. Typical current investment objectives for ports include; accommodation of larger vessels and new trends in the maritime industry (including supporting greener fuel vessels), addressing congestion from existing port activities, upgrading facilities to deal with the fall-out of Brexit, addressing greater security concerns, reacting to the pressure from expanding towns/cities, in addition to servicing climate related industries such as ORE port infrastructure and green fuels [1].

Operations and maintenance (O&M) ports will also require investment. It is anticipated that the majority of the O&M facilities will be located within some of the smaller regional ports. Examples of such ports are Wicklow (chosen as the preferred O&M port for Codling Wind Park) and Arklow (chosen by SSE as their preferred location). Provided that investment is made in these smaller ports, the potential benefits to the local area are far reaching and include training and apprenticeship opportunities which will be available over the lifetime of the installations. Ensuring those ports can be supported will also be critical to the success of offshore wind in Ireland.

1.5 Regional Balance

With the population anticipated to grow by approximately 1 million people between 2016 and 2040 [4] there is a need to ensure an even distribution of both population and jobs. The Government's National Development Plan for 2021-2030 and Project Ireland 2040 – National Planning Framework seek to ensure regional balance is achieved across Ireland. The roll-out of offshore wind offers a significant opportunity for regional development around the Irish coast.

The potential for economic growth, job creation and external investment is enormous and can allow for development of vibrant economic hubs outside of Dublin. Government support for port

infrastructure projects would align with the ambitions of the NDP and Project Ireland 2040 in respect of balanced development across Ireland.

1.6 State Aid Considerations

The potential provision of Government financial support for ports is complicated by European Union Law. Government funding would have to be considered within the context of the State Aid Framework given the commercial nature of port activity and the potential for funding to distort competition between Member States. This document offers several European Case Studies where State resources have helped fund ORE port infrastructure, and where available, document the European Commission's opinion in respect of State Aid.

2 Current Economic Climate

The timing of the port infrastructure projects is unfortunate given the current economic climate. The war in Ukraine has served to destabilise much of Europe with soaring energy costs and inflation currently at 8.2% [7] leading to enormous hikes in material costs. Additionally, with interest rates reaching 2.5% at the end of Q4 2022 [8] the cost of borrowing is significantly greater than in previous years.

The current economic headwinds are an additional constraint on an already significant financing challenge, with lenders needing greater certainty that projects are commercially viable. The increasing interest rates will be putting further pressure on port business cases and will serve to further exacerbate funding gaps. With Ireland facing a potential recession, there are further challenges facing the Irish development plans including supply chain challenges, currency fluctuations and contractor attitude toward perceived risk of projects, all of which will likely increase capital costs.

The cause of much of the current economic instability is directly rooted in Europe's reliance on external energy sources. Ensuring Irish port infrastructure projects can be developed to accelerate the delivery of offshore wind energy would be a major step towards energy independence and avoiding energy instability in the future.

3 EU Emergency Regulation

In November 2022, the European Commission proposed a new temporary Emergency Regulation to accelerate the deployment of renewable energy sources. The Emergency Regulation will serve to expedite the roll-out of the REPowerEU Plan to help end the EU's dependence on Russian fossil fuels [9]. Within the Regulation, renewables are treated as 'of overriding public interest' and the emergency measures allow for a simplified assessment within the EU environmental legislation.

The provisions of the Emergency Regulation will help to ensure new applications are dealt with efficiently. However, there are concerns at present that this will do little to assuage the existing bottlenecks within the system. It is anticipated that the European Commission will address this with

further clarifications on the scope of the Emergency Regulation. The point has been made that the Emergency Regulation should also extend to enabling infrastructure, such as grid infrastructure and ORE ports.

With the EU proposals (via the REPowerEU Plan), there has been a concerted effort to address planning, consent and permitting processes across the EU and at national level. In Ireland, the Attorney General is close to completing the planning reform with this anticipated to be delivered in the early 2023. There have already been welcome changes, with new provisions regarding Judicial Reviews announced in October 2022. The Government approved consenting prioritisation for projects in the Irish maritime area in September 2022 to address the energy and climate crises. These measures include prioritisation of infrastructure projects to support the deployment of offshore wind including port infrastructure [10].

The EU has taken positive steps toward stepping-up the pace of the energy transition, with the Emergency Regulation expected to have a positive impact on the risk profile of many offshore wind projects. Should these emergency measures be extended to include for port infrastructure supporting the offshore wind industry, it would also reduce the risk associated with the early stages of port projects where permitting and revenue certainty from offshore activity are significant factors.

4 Port Business Cases for Investments

For investment in port infrastructure to make sense the proposed project must create value, either be for the end-users of the infrastructure, wider society or both [1]. Port infrastructure projects with a clear demand demonstrate the value of the investment through projected revenues. Whilst the monetary value of port business streams can be relatively easily understood, it is much more difficult to quantify the value to wider society.

The European Sea Ports Organisation (ESPO) created a conceptual framework to allow for wider societal considerations to feed into investment decision-making for port infrastructure. This has been included for reference in Figure 4-1. This framework was included in the 2018 report on the infrastructure investment challenges faced by the ports sector.

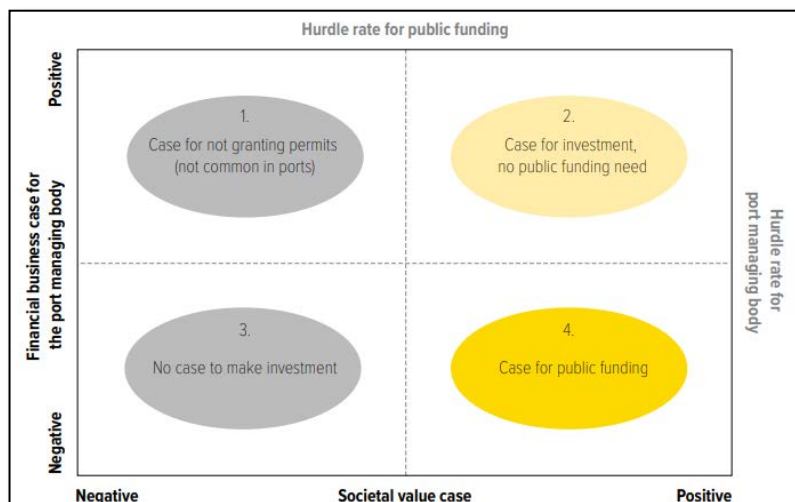


Figure 4-1: Investment Projects Frameworks [1]

Often times where projects fall into category 4, i.e. there is strong society value but a negative business case, these projects can only be undertaken when additional grant support is provided to reduce the funding gap (often from EU or State resources).

When considering Irish ORE ports, distinction must be made between long-term commercial viability and the short-term contractual revenue certainty for a proposed facility. For the projects considered to fall within category 4, as illustrated within Figure 4-1, these will demonstrate a negative business case over the lifetime of the asset (i.e. there is no long-term commercial viability). In these instances, the capital cost of developing the infrastructure is so high that associated revenues forecast for the facility would not cover the initial costs nor provide a return on the investment. It is obvious why proposals of this nature would struggle to attract commercial investment.

Conversely, and in the case for Irish ORE port developments, there may be long-term commercial viability, but no short-term contractual certainty. The present funding issue is related to the status of the Irish offshore wind projects. There is a lack of revenue certainty as none of the Phase 1 projects have planning permission or a contract under the Offshore Renewable Electricity Support Scheme. This is creating a lag between when investment is needed to ensure the viability of the port projects and when developers will be in a position to sign contracts. The current position in respect of short-term contractual revenue certainty is limiting the availability and nature of commercial investment capital to support such projects. It is likely that commercial investment capital can only be provided at this stage by investors with an ability to take on early-stage speculative risk.

Ports in general are key infrastructure for wider society, with international trade and travel reliant on their continued functioning. Specific port infrastructure supporting the deployment of offshore wind in Ireland has the potential to unlock an enormous chain reaction of wider societal benefits, these include:

- Job creation and benefits to local suppliers during the construction phase of port infrastructure projects.

- Having several Irish ports to serve the ORE sector will ensure Ireland can reach as much of the 7 GW offshore wind target by 2030, cutting carbon emissions through alternative methods of electrical generation. If Irish Phase 1 and 2 projects must use UK or European ports, delays are highly likely given the significant activity across the sector.
- Uncertainty surrounding the availability of Irish ports is feeding into the developers pricing strategy for the ORESS-1 auction. Greater surety on the availability of ports will reduce the cost associated with such bids.
- Providing ports in proximity to the installation sites will reduce transit times and vessels costs leading to a reduction in the levelised cost of energy for electricity generated by offshore wind, leading to cheaper prices for consumers and reducing the carbon footprint. This is also true for operations and maintenance ports which will service the installation over the lifespan of the assets.
- Port upgrades will allow for the possibility of undertaking the production of green fuels at port locations with upgraded infrastructure. Thus, providing alternative fuel sources and contributing to the achievement of the 2030 climate goals and Net-Zero by 2050. Provision and adoption of green fuels will also serve to improve the air quality for all inhabitants.
- Supporting innovation. Ports with this scale of infrastructure will be key to the successful commercial deployment of floating wind in Ireland. Harnessing the floating wind opportunity will be key to meeting Net-Zero. Research and development activities (which could be carried out quayside) and the development of an Irish supply chain will also serve to lower the cost associated with floating wind electricity.

Of the port locations seeking to develop ORE specific port infrastructure the majority are State owned and commercially operated. These ports are required to operate on a commercial basis, funding infrastructure projects through their own resources, either via cash reserves or through private debt and equity arrangements.

Where these projects demonstrate a funding gap, the likelihood of obtaining traditional forms of debt and equity becomes difficult and consequently ports are unable to undertake projects of this nature despite the strong societal value created. Port projects are also typically capital intensive, with a long payback period and this further intensifies the financing challenge.

The situation is hampered too by the nature of offshore wind construction and the likely lease periods for the facilities by comparison to typical port business streams. Typically, developers enter relatively short-term contracts (2-3 years), beyond which the demand may be difficult to predict. This adds another degree of uncertainty to the potential revenue projections, which in turn leads to increased financing costs as the risk to investors and lenders is greater than if the demand were steadier and contractual arrangements longer for use of the facilities.

The Government is aware of the significant capital investment required to deliver these projects and the potential issues with producing a positive business case given the current lack of revenue surety. The expanded 2021 Ports Policy Statement highlights the EU Connecting Europe Facility (CEF) funding stream as the primary method of supporting Irish port developments. However, the failure of the initial Irish applications in 2022 raises a question over whether Ireland has been too reliant on this approach.

In addition to the lack of funding allocated to the recent Irish applicants, there are several characteristics of the CEF which are unfavourable in respect of Irish ORE port infrastructure projects. These are discussed in detail in Section 8. A form of Government support appears key to ensuring ORE port development plans can be realised in time to support Phase 1 and 2 deployment and ensure Ireland can avail of the far-reaching societal benefits in the longer term.

The positive societal value created through investment in port infrastructure makes government co-funding legitimate when the revenue expectations from user charges are insufficient (or in this case unclear due to the lack of contractual certainty) to demonstrate a positive business case. The Port Investment Study published by ESPO in 2018 concluded that port infrastructure is often partially funded by the public sector, allowing for a reduction in the ‘funding gap’ for projects that demonstrate high societal value [1]. The study highlighted Belgium, Greece, the Netherlands, Poland, Portugal, and Slovenia as Member States where port projects received State funding (typically alongside EU funds – CEF, ERDF and Cohesion Fund) to help finance port infrastructure projects [1].

The case for investment in ORE specific port infrastructure is even more compelling as the demand is there, it is simply difficult to identify at this stage. Having engaged with developers throughout the development of the WEI *National Port Study*, there is a genuine and strong appetite to utilise Irish ports as staging facilities. Looking beyond the short-term Phase 1 and 2 deployment, significant volumes of offshore wind are anticipated to help meet Net-Zero by 2050. Irish ports are essential to meeting Net-Zero targets and the demand for the facilities is anticipated to be strong over the next few decades. Beyond the ORE sector, several examples of ports utilising these facilities for multi-modal purposes can be seen across Europe, further demonstrating how the upgraded facilities could still be revenue producing assets even when not being used for offshore staging and marshalling.

Several European cases studies are detailed in Section 10 specific to the ORE sector. In addition to the EU examples presented, significant grant funding was recently announced in the US including for port projects aiming to serve the offshore wind industry [11]. The indication of Government led support from administrations across the globe further demonstrates the typical nature of this type of intervention.

The worsening climate crisis and the reliance on external sources for Irish energy are issues of national significance. The societal value could hardly be any greater. Whilst it is recognised that the business case must stack up, the demand is there with developers indicating a clear preference to use Irish port facilities, the present issue is the visibility on demand. Provision of some form of Government support in the short term would help ports get over the initial funding hurdle and provide surety of the plans moving forward. It would be anticipated that any support provided would be upon the proviso that applicants can demonstrate medium to long-term commercial viability, and that further capital investment is likely to emerge to deliver the project in full.

5 Potential Funding Sources

From engagement with the ports seeking to develop infrastructure to service the ORE sector, a funding mix is anticipated with finance obtained from several sources. The following are potential sources of funding to finance the proposed Irish port redevelopment plans:

Table 5-1: Potential Funding Source for Irish Ports

Funding Source	Examples	Description
Cash Reserves	Profits from port commercial activities	Where ports have generated revenue from existing port business streams there may be some level of cash reserve to reinvest back into infrastructure projects. In the case of Trust Ports, such as those seen in the UK including Belfast Harbour, profits will be reinvested back into the port for the development of its own business activities and for the benefit of stakeholders. For the State owned but commercially operated Irish ports, whilst dividends are paid to shareholders, this will only be at the recommendation of the board of directors. Typically, some or all profits will be retained as cash reserves to ensure the port can maintain assets and allow for a degree of spending on capital projects as commercial requirements dictate.
Private Debt Instruments	AIB, Bank of Ireland, Green Funds through National Banks	Ports can seek to borrow money from banks to support infrastructure developments over a defined period and on specific terms. The conditions set by the banks will be influenced by several key criteria including creditworthiness of borrower, counterparty risk of tenant, certainty of demand, contract length and the level of existing commitments. The borrowing conditions (term length, interest rates, payment profile and presence of any restrictive covenants) will influence the profitability of the project [12]. Green finance is another private debt instrument offered through the national banks. This form of 'green' lending is offered to projects which serve the green agenda and typically provides more attractive rates than traditional loan products. This type of lending also benefits the banks as this helps to optimise the balance sheet in respect of the EU Taxonomy Regulations (Green Asset Ratio through Article 8). Bank of Ireland increased their Sustainable Finance Fund in 2021 to €5 billion the enable to bank to continue to support projects with green ambitions [13]. These loans are available across the lending spectrum up to large corporate loans and ORE port infrastructure would likely fall within the remit for green loans.
Private Equity	Private equity funds, large banks, pension funds, sovereign wealth funds, green funds	Equity financing involves selling a percentage of the company in return for a cash investment. The types of firms typically involved in private equity financing of infrastructure projects will be private equity funds, large banks, pension funds and sovereign wealth funds. As any investor will be a shareholder in the project, they will have a degree of ownership and consequently control. Unlike debt arrangements, equity financing does not require repayment obligations. Therefore, equity providers are earning a return on the risk associated with the performance of the company. A greater proportion of equity funding may be used where risks surrounding the project are higher. For example, in the case of ORE ports where the demand is unclear, the debt capacity will be low due to lack of revenue certainty. Equity typically plays a significant role in the early stages of infrastructure projects, again due to the risk profile, and this is discussed in detail in Section 6. Green funds would be another potential private equity option. Like green finance offering debt arrangements for climate conscious projects, green funds are mutual funds or other investment vehicles that only invest in companies that are deemed socially conscious or directly promote environmental responsibility. ORE port infrastructure would likely meet these requirements.

Funding Source	Examples	Description
European Debt	InvestEU, EIB	<p>As per private debt, port infrastructure projects can borrow money from European sources to help finance projects.</p> <p>The European Investment Bank (EIB) is an option for obtaining European finance through loans for port infrastructure projects. The EIB can offer excellent lending rates given the not-for-profit nature of the organisation. The EIB has helped finance major Irish port projects in the past, such as the Alexandra Basin Project in Dublin Port. It is noted that the commercial nature of the Irish ports and the limited means for recourse will likely mean EIB can only become involved at a later stage as a debt provider where there is greater certainty of revenues.</p> <p>InvestEU was established in 2018 as the successor to the European Fund for Strategic Investments (EFSI, or the 'Juncker Plan') [14]. Whilst no specific loan facilities are available, InvestEU has a budget guarantee of €26.2 billion between 2021-27 to support strategically important projects across the EU. As the facility has been developed to offset project risk, the fund typically stimulates private investment. 'Sustainable Infrastructure' is covered within the remit of InvestEU (€9.9 billion of total is earmarked for Sustainable Infrastructure) and the next call for expressions of interest is scheduled for 2023 [15]. A guarantee product facilitated through InvestEU could be used as complementary measure to offset risk thus facilitating more favourable rates and improving project bankability.</p>
European Equity	InvestEU (facilitated through EFI), EIB	<p>Both InvestEU and EIB offer equity financing products depending upon project needs. InvestEU, facilitated through the European Investment Fund (EIF), offer Climate and Infrastructure Funds for equity investment in projects which fall under the six Thematic Strategies, including Clean Energy Transition & Climate [16]. The call for applications for equity investment from this fund is open until June 2027, note allocation is on a first come first served basis. It is unknown whether any of the ports intend to apply for InvestEU financing.</p>
European Funding	TEN-T/CEF, TEN-E/CEF, European Regional Development Funds (ERDF)	<p>Funding is available for ports through the Connecting Europe Funding facility (CEF) which is the funding instrument for the EU's Trans-European Transport Network (TEN-T). Whilst the ports and the DoT have focused on TEN-T, for ORE port infrastructure there is the possibility of ports availing of TEN-E funding given the critical role of ports for supporting the roll-out of green energy. The initial 2021 CEF Funding Call allowed for identification for synergies with other CEF sectors (Energy and Digital) or other EU programmes (Resilience and Recovery Facility (RRF), Digital Europe, Horizon Europe, Structural Funds). Whilst no 'double funding' is allowed, there is an opportunity to receive funding for elements of the project which may be specific for the energy transition.</p> <p>European Regional Development Funds are another potential source of funding for ports. The ERDF Initiatives for 2021-2027 have recently been finalised with over €850 million available for ERDF programmes [17]. It is noted that to date only modest sums have been allocated to port infrastructure projects from the ERDF across Europe [1]. There is an element of match-funding to ERDF whereby any grant funding is matched by the State.</p> <p>Where EU funds come under the control of a public authority (i.e. not paid directly to the party seeking the funding), the funds will be treated as State resource and as such subject to State Aid rules. This would be the case for ERDF funds.</p>

Funding Source	Examples	Description
Public Sector Debt (direct and indirect)	ISIF	<p>Loans to support the development of projects could be facilitated through the Irish Government. Similar schemes are currently available for other sectors, examples of such include the Future Growth Loan Scheme. The scheme can offer competitively priced loans with favourable terms to support strategic long-term investment for Irish SMEs. The Future Growth Loan Scheme is operated through the Strategic Banking Corporation of Ireland (SBCI), with loans ranging from €25,000 to €3 million. The Future Growth Loan Scheme is offered by the Government of Ireland, through the Department of Enterprise, Trade and Employment and the Department of Agriculture, Food and the Marine, and the Strategic Banking Corporation of Ireland, supported by the EIB Group's Guarantee Facility [18]. Whilst this is available for SMEs within the agriculture and fishing sectors, a similar scheme with more advantageous terms would improve the commercial viability of ORE port projects by lowering the cost of lending. The viability of such a scheme is unknown as the scale of loans required would need to be in the tens of millions given the anticipated capital costs (all of the significant development plans are estimated at upward of €100 million). This would represent a significant addition to the General Government Debt (GGD).</p> <p>Another potential avenue of public debt could be arranged through the Ireland Strategic Investment Fund (ISIF) as the Irish sovereign development fund. ISIF can offer loans over a range of tenures and have flexibility in the debt mechanisms which can match the risk profile and objectives of the project. ISIF's investment capital is deployed on fully commercial terms including repayment obligations on loans which have commercially benchmarkable pricing and therefore do not require any direct state support or subvention. ISIF prioritises the use of its capital and resources to address strategic challenges in Ireland and would be an ideal vehicle to help finance Irish port projects hoping to serve the offshore sector. ISIF was involved with financing the recently completed Cork Container Terminal at Ringaskiddy where the fund offered a mezzanine debt facility to support the development [19]. By comparison to private debt facilities which typically offer loans over a maximum period of 7 years, the potential to offer a longer tenure would provide more flexibility to the port development proposals.</p>
Public Sector Equity	ISIF	<p>In addition to offering loans to support Irish projects, ISIF act as a commercial investor serving to generate investment returns and facilitate projects and initiatives that have a positive economic impact in Ireland. As per other forms of equity, investment by ISIF as an equity partner tends to be accompanied by appropriate involvement by ISIF nominees in the governance of the entity, proportionate to the percentage stake in the project. ISIF promote active ownership as part of the responsible investment requirements of the fund [20]. There is additional discussion on the potential role of ISIF as an investor for ORE port infrastructure projects in Section 6.1.</p>

Public Grants	Sector	Direct funding from the Exchequer	<p>Port infrastructure projects could be part financed by direct Exchequer funding, particularly where projects exhibit a funding gap. It is noted that this does not align with the current National Ports Policy [2].</p> <p>Exchequer funding raised through the Irish Sovereign Green Bond (ISGB) could be relevant for ORE port infrastructure where the ISGB allocates proceeds from the sale of Green Bonds for climate positive projects. The NTMA’s “Irish Sovereign Green Bond Framework” underpins its activity in this space [21]. The ISGB has allocated funds to many capital infrastructure projects since 2018 with similar climate positive characteristics to ORE port developments.</p> <p>In the instance that State grant funding was made available, this would have to be considered in respect of State Aid rules. A brief overview of the implications of State Aid rules will be covered within Section 9.</p> <p>If viable, Government grant funding would be provided as a part of a funding mix and considered in instances where the infrastructure projects exhibit a funding gap. There would be no requirement for entire projects to be funded by the State.</p>
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6 Funding Profile for Port Projects

Port infrastructure projects are typically capital intensive, even in the early stages prior to construction. They are often characterised by lengthy early phases with investigations and studies required to inform the design and consenting processes. The investigations will typically include marine site investigations, marine sediments sampling, and various environmental surveys depending upon the sensitivity of the location and the planned marine civil works. This is often followed by a relatively lengthy design and environmental assessment period prior to contractor procurement.

The early stages are typically associated with relatively significant costs and there is a risk that projects never reach construction or are significantly delayed in getting there. In Ireland particularly, the planning system comes under intense scrutiny with significant approval periods typical for infrastructure projects. An example of how protracted port project early stages can be has been demonstrated by the recently completed Ringaskiddy Container Terminal at the Port of Cork. The container project was circa 9 years in the planning system before finally gaining approval, with the first application rejected and a resubmission required [22].

In addition to the risk surrounding the cost of the early stages prior to consents and planning approvals, typically revenues will be difficult to determine even when business streams are pre-existing. In the case of ORE port infrastructure, the issue is compounded by the poor visibility on demand and the nature of the proposed business stream (short duration of leases for facilities).

Given the up-front and ‘at-risk’ nature of the spending associated with the early stages of port projects, it is typical for equity contributions to finance the early project phases. A typical infrastructure financing profile has been included in Figure 6-1. The funding profile was provided by Ernst & Young during discussions around the financing challenges faced by port infrastructure projects. The early stages of the project (pre-development and development) are shown to be financed entirely through equity, with the finance shifting into debt arrangements during construction when contracts are signed, and the demand understood. Once operational and when the assets become revenue producing, the finance split biases toward project debt.

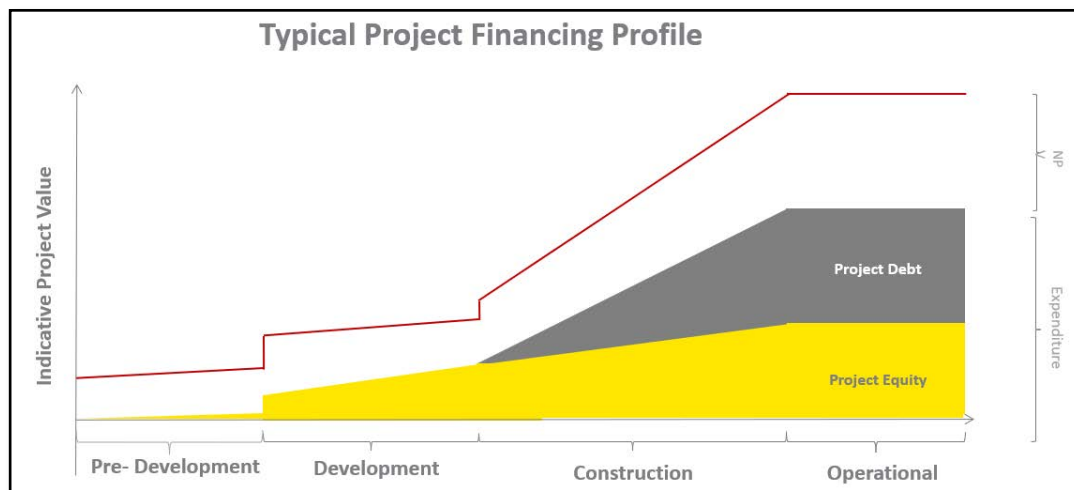


Figure 6-1: Typical Financing Profile for Port Infrastructure Projects [23]

If ORE port projects are to progress further, equity at these early stages must be provided. This could originate from infrastructure investment funds, organisations such as InvestEU or EIB, ISIF or from the Government. A special purposes vehicle would be required in the case where private investment was proposed given the mostly state-owned nature of the port assets in Ireland.

Whilst private investment may be possible, port projects often struggle to attract private investment due to the long payback period [1]. Additionally, the short-term nature of port leasing for ORE staging and the difficulty in predicting future demand increase the risk profile for private investors. It is anticipated that private investment may be more probable in the later stages of port developments when there is greater certainty of revenue. Private capital may be more likely to support the development of landside infrastructure, such as warehousing or manufacturing facilities similar to what has been seen in the mature markets across Europe.

In the instances that the Government were involved in providing grant funding for the early project stages, the State Aid rules would come into play. It would be essential that the Government contribution was not seen to distort competition. To avoid distorting competition, a Designated Activity Company (DAC) (Irish equivalent of SPV) could be created with certain conditions around the use of the facility, this could help to avoid issues with State Aid complaints in the future.

ISIF would be an alternative for providing early-stage equity on commercial terms for the initial project stages and ISIF's commercial investment capital could work alongside Government grant funding.

6.1 Role of ISIF

The Ireland Strategic Investment Fund (ISIF) is specifically mentioned as part of the expanded Port Policy Statement published in late 2021 as a potential vehicle to finance ORE port infrastructure. As part of the research conducted for study, GDG and WIE engaged directly with ISIF in relation to the potential for port investment. The attitude was positive toward the sector, with ISIF beginning to think about how the fund could support the proposed ORE port developments. From discussions with ISIF it was clear that investment in ORE port infrastructure is likely to meet the economic impact requirements of the Fund's legislative mandate, as well as having potentially transformative impact on a range of regional locations – thereby consistent with a strategic priority of ISIF.

A common thread throughout the discussion was that the fund would only support commercially viable projects. This means the fund can only support projects with a positive business case where the anticipated revenue generated by the facility is sufficient to make the project investable or those projects where grant funding has been used to reduce the funding gap.

The issue specific to the port development plans in Ireland is the timing of the revenue surety, with a delay between when the investment is needed and when the demand will be fully visible. ISIF indicated flexibility in how the fund can be used to invest in various types of projects with both equity and debt mechanisms possible depending upon the nature and risk of the proposal. ISIF assesses its return requirements for an investment based on the specific risks and opportunities of the project. The fund can consider a range of tenures – for example it has provided facilities for up to 25 years. It is noted that for port infrastructure a payback period of 30-40 years is typical.

Given the 'at risk' nature of any early-stage investment for this purpose, ISIF discussed potential methods to deal with this through an equity investment mechanism (which as discussed previously is typical in the early stages of infrastructure projects). For example, the early stages of a project could avail of an equity facility to fund the initial stages of the development, with the terms reflecting the level of speculative risk. Once the project had developed sufficiently and demand was realised through contractual arrangements with developers, additional phases of the project could be financed through a more typical debt facility with the term reflecting the shift in risk profile demonstrated by the demand.

Ensuring commercial viability will be essential if port projects are to obtain commercial investment from ISIF. To this end, the potential suitability of the ORE port infrastructure to serve other sectors should be leveraged by ports to improve the business case for the developments. During discussions with ISIF, the GDG/WIE team raised the potential multi-modal functionality as an advantage of high specification port infrastructure. This was received positively, and it may be an aspect which the ports need to specifically highlight to improve the bankability of the projects in the current situation where the ORE specific revenue is difficult to quantify.

GDG were keen to understand how investments or debt arrangements made through ISIF are handled in respect of State Aid law given the public nature of the resource. ISIF advises that all of its investments are assessed from a State Aid perspective to ensure that any investment ISIF makes is consistent with the principles on which a market operator would invest.

In summary, this appears to be a tangible potential route for potential investment by ISIF on a commercial basis (equity and or debt) to support the development of new or improved port facilities to support the enabling of the ORE projects. However, projects must demonstrate commercial viability.

6.2 Government Tax Incentives

Tax breaks and incentives are another potential measure where the Government could provide support for port infrastructure projects without direct Exchequer funding. Tax incentives would have the potential to reduce the tax costs over the life of the project thus improving its cash flow and commercial viability.

At present most of the tax relief and incentives schemes offered by the Irish Government are directed toward research and development. These incentives are not considered compatible with the port infrastructure proposals.

In addition to the R&D tax credit schemes, there is potential that Capital Allowances could be utilised to reduce the tax payable on profits from use of the ORE port infrastructure. Capital Allowances are often considered a tax incentive to encourage investment in plant and machinery, however it is also relevant for construction, fit-out, refurbishment, or acquisition of commercial property (within a trade). This Government incentive reduces taxable profits by claiming tax relief on certain types of capital expenditure to reduce taxable trading profits.

A company can claim capital allowances at a rate of:

- 12.5% over eight years for plant and machinery
- 4% over 25 years for most industrial buildings [24].

The Accelerated Capital Allowance (ACA) is a tax incentive scheme that promotes investment in energy efficient products & equipment. The ACA is based on the long-standing 'Wear and Tear Allowance' for investment in capital plant and machinery (as per the Capital Allowances), whereby capital depreciation can be compensated through a reduction in an organisation's tax liability [25].

6.2.1 Consultation with KPMG

GDG engaged with a tax expert within KPMG to understand the suitability of port infrastructure to utilise Capital Allowances.

In respect of the consultation with KPMG, the most likely avenue for port infrastructure tax relief appears to be through Industrial Buildings Allowances (4% over 25 years as noted above). Having reviewed the guidelines for Capital Allowance, Section 268 of the Taxes Consolidation Act includes 'dock undertaking' within the definition of 'industrial building or structure' [26]. To that end the 'dock' is clarified to mean any 'any harbour, wharf, pier or jetty or other works in or at which vessels can ship or unship merchandise or passengers.'

Consequently, port infrastructure appears eligible for Capital Allowances under Industrial Buildings Allowances. It is unclear if 'dock undertakings' includes for all port development capital expenditure, including dredging and breakwater construction.

It is worth noting that while this would certainly improve cash flow over the duration of a port project increasing commercial viability, it does not solve the problem of funding in the early stages where revenue certainty is the dominant issue. Additionally, the construction costs will be incurred up-front, and the tax benefit realised once the facility becomes revenue producing. The facility must be built and revenue producing before any benefit can be realised as the allowance is applied to taxable trading profits. Phased delivery of the construction stages would allow for the benefits of Capital Allowances to be realised earlier in the project.

6.3 Role of the Offshore Developers

There has been much discussion around the role of developers in paying for ORE port infrastructure in Ireland. The developers at present have little certainty for their own projects given the pre-ORESS auction and pre-planning approval status of all Phase 1 projects. Given this it would be very unwise for developers to provide finance for the early stages of port infrastructure projects, even if the location was the most suitable to serve their own project. Looking beyond the Phase 1 projects, the Phase 2 developers have even less certainty and are unlikely to be in a position to financially support port developments.

The opportunity for developers to financially support port infrastructure could come at a later stage when they have surety of their own projects. However, whilst this is certainly possible, given the relatively short-term nature of the leasing arrangements (2-3 years), the business case for this might be hard to sustain. Whilst developers may have a pipeline of projects, they will likely vary geographically, and whilst one port may be ideally located to serve a current project it may not suit following installations. To make an investment in one specific port with the intention of using it exclusively over several years would reduce flexibility, impact logistics and increase vessel costs for future projects.

If a more strategic investment plan were considered whereby ports were assessed alongside potential projects with a consideration of potential shared facilities, the role of the developers in the funding mix may be clearer.

7 Alternative Financing Arrangements

7.1 Private Concession Agreements

In the context of financing capital port infrastructure projects, there are means to facilitate 'off-balance sheet' financing for port managing bodies. A port concession is a contract in which a port managing body transfers operating rights to a private enterprise, which then engages in an activity conditional on approval from the port and subject to the terms of the contract. With concession

arrangements, the up-front capital cost is borne by a Special Purposes Vehicle (SPV), the port managing body may or may not choose to be equity providers for the SPV. Concessions are common across Europe as a means for delivering port infrastructure.

The concession contract may include the refurbishment or construction of infrastructure by the concessionaire. Under this type of arrangement, the private enterprise is granted a concession from the port authority to build, finance, own and operate a facility (known as BOOT - build, own, operate and transfer strategy), and after a specified time is obliged to hand it back to the port managing body [27].

Where a private partner is a shareholder in a development vehicle then the SPV becomes the owner of the asset during the lifetime of the arrangement acting in a landlord role. The concession agreement between the port managing body and the SPV will then define the terms for which the facility is paid for over the lifetime of the agreement. In the period which the SPV owns and operates the facility, the governance framework and Harbours Acts duties remain with the original port entity. For this type of arrangement, the concessionaire will be required to maintain the assets over the duration of the concession which is a significant benefit of this method of financing.

7.2 Public Private Partnerships (PPP) Concession

When considering the involvement of the State in supporting port infrastructure, projects could be delivered through public-private partnership (PPP). Through a PPP concession agreement, port infrastructure could be facilitated through a Build-Own-Operate -Transfer (BOOT) agreement, with the difference being that the State would grant the concession rather than the port managing body. By contrast to direct Exchequer funding, PPP involvement from the State to develop port infrastructure would be 'off balance sheet' over the construction period, with the State making annual payments over the extended period of the agreement.

PPP arrangements have been utilised in Ireland for road construction projects, social housing, schools and nursing units to great effect. The National Development Finance Agency (NDFA) advises the Government on procurement and have particular expertise in PPP arrangements. Additionally, Transport Infrastructure Ireland (TII) has been involved in a significant number of PPP projects with eight number Toll Concession Scheme PPPs [28]. Both organisations could play a significant role in any future PPP arrangements for the roll-out of offshore wind, including for port infrastructure.

Whilst the individual port infrastructure schemes are large capital projects, it is unclear if they are of significant enough value to make them an attractive prospect for both investors and port authorities through a PPP (or private concession) method. Typically, where PPP has been used in Ireland, individual projects have been bundled to increase the value of the project and increase the projected returns (examples include the nursing units and social housing PPP schemes). A bundled option would increase the value of the total PPP and deliver several port schemes through one SPV.

It would be noted that this method of finance would not address the short-term contractual revenue surety issue and may bring additional complexity through the administration of such arrangements.

8 CEF Funding Overview

The Connecting Europe Facility (CEF) is an EU funding instrument to promote growth, jobs and competitiveness through targeted infrastructure investment at European level. The CEF is noted by CINEA as critical in delivering the European Green Deal and is deemed an important enabler towards the Union's decarbonisation objectives for 2030 and 2050 [29]. The funding stream is available to ports through the Trans-European Transport Network (TEN-T) and serves to support investment in building new transport infrastructure across Europe and has been utilised by several Tier 1 Irish ports in recent years.

The CEF offers grant support for port projects within the TEN-T Network, and the existence of the CEF (TEN-T) funding is a tacit acceptance from the European Union that ports face challenges in funding significant infrastructure projects. Whilst port projects have wide societal and economic benefits, by comparison to projects of comparative scale, the projects are typically not as financially attractive for external investors. The CEF is an essential vehicle for ensuring the ongoing development of European ports can be facilitated.

The CEF criteria were recently expanded to allow for the development of port infrastructure supporting offshore wind deployment. Successful eligible TEN-T applicants can obtain grant funding of up to 50% of eligible costs for studies and up to 30% of infrastructure works costs [5]. The CEF funding mechanism is specifically mentioned within the expanded 2021 Ports Policy Statement as the primary method by which ORE port infrastructure in Ireland will be funded. The following section will consider the nature of the CEF funding stream in respect of application to Irish ORE port infrastructure projects.

8.1 Irish Ports and CEF

In previous years there have been several successful TEN-T/CEF applications for port projects in Ireland, including the Alexandra Basin Redevelopment in Dublin, Shannon Foynes Jetty Extension and Port of Cork's Container Terminal. Of the Irish ports seeking to develop ORE infrastructure several applied for support from the CEF during the first call for applications. The ports were seeking support from the initial call to fund studies informing the preliminary and planning stages of the projects. These applications were submitted in January 2022 with a decision announced in July 2022. All of the Irish port applications were unsuccessful. The second call for applications opened in September 2022, with each of the locations indicating they intend to submit again. The Department of Transport has since liaised with CINEA to understand why the Irish projects were unsuccessful and have supported the reapplication process.

From discussions with the ports that applied for funding from the CEF, the following areas were cited within the feedback as to why the applications scored poorer than those which were awarded funding:

Risk Management – Whilst the Irish applications were for preliminary studies to inform the later planned capital works, the feedback indicated that greater emphasis was needed in respect of risk management for the projects.

Communications – Applications scored poorer relative to successful projects in respect of the planned communications with local stakeholders. More detail would be beneficial as to how local groups can be reassured of the positive impact of the proposed port projects.

Maturity – The typical feedback from those who applied cited maturity as a key issue, with more information needed to demonstrate that the projects can meet the timelines required to serve the Phase 1 and 2 projects. More detail in respect of the foreshore and planning process would serve to improve the maturity score with discussion around the MAC process and obtaining of the required consents through MARA.

8.2 Nature of CEF Funding

Whilst the CEF funding mechanism has proven to be beneficial to Irish port infrastructure projects over past years, this funding stream has several limitations. Firstly, the CEF funding is a competitive process which is quantitatively assessed, consequently there is no guarantee that any project will be awarded funding. This was clearly demonstrated by the lack of funding granted to the recent Irish port applications.

Additionally, the pot available in the period between 2021-2027 will allow for the allocation of €25.8 billion of EU funding, however the funding is distributed on a frontloaded basis. The first call for applications had a total pot of €7.0 billion, the second allocation has €5.12 billion available, the available funding for each call thereafter will be diminishing. Consequently, the potential funding available may be less than half of the initial pot once the ports seek funding to support capital works. This will reduce the potential availability of significant sums and increase competition for grants.

Whilst the CEF funding allows for 50% of eligible costs for studies and 30% for capital works, in recent years CINEA has typically awarded less than the requested funding. In the period between 2014-2017 the average of the recommended funding was 75% of the requested funding [1]. Whilst port managing bodies may be seeking the full 30% of eligible costs for capital works, there is no guarantee that the requested funding will be allocated. Where the actual funding is less than the requested sum, this will leave the project with a funding gap (though smaller) and may render projects unviable despite the provision of grant funding. The CEF funding also only covers ‘eligible costs’, with relatively significant spends associated with the delivery of the ORE port schemes likely to sit outside this definition.

It is also noteworthy that of the total €7.0 billion available in the first call, only €4.2 billion was allocated. This calls into question of suitability for ORE port infrastructure projects within the TEN-T CEF scheme. The lion share of the funding was allocated to rail projects, and it is worth considering how ORE port infrastructure schemes are being viewed by CINEA. Of the total grant funds allocated by the first call, 77% of this was awarded to rail projects totalling €4.2 billion worth of funding [30]. This is not a new trend and previous CEF calls have seen similar focus toward rail-based projects, in the period between 2014-2017 rail projects accounted for 72% of the total funding allocated [1].

The TEN-E scheme allows for EU support for sustainable energy infrastructure projects, and there may be an argument that the ORE port projects sit somewhere between TEN-T and TEN-E. The current call for applications allows funding for synergies with other CEF sectors (Energy and Digital). The synergy

funding with CEF TEN-E was sought by at least one Irish applicant in respect of support for green hydrogen, however this was rejected with the wider application. There may be an issue of familiarity with these types of projects and how CINEA is perhaps more accustomed to assessing rail projects despite the suitability of ORE port infrastructure within the remit of the application criteria.

8.3 TEN-T Network

For ports to be eligible for funding from the current CEF scheme they must be considered within the TEN-T Networks as Core and Comprehensive. The Networks are defined as follows:

- The Core Network includes the most important connections, linking the most important nodes, and is to be completed by 2030.
- The Comprehensive Network covers all European regions and is to be completed by 2050 [31].

There are five Irish ports of National Significance which fall under the European Core and Comprehensive Trans-European Transport Network. These are Dublin, Cork and Shannon Foynes which are classed as Tier 1 Ports (EU Core Transport Network) and Rosslare and Waterford which are classed as Tier 2 ports (EU Comprehensive Transport Network) [32]. In addition to those considered Core and Comprehensive, there are five ports of Regional Significance, Drogheda, Dun Laoghaire, Galway, New Ross and Wicklow. Ports of Regional Significance are not eligible for CEF funding as they do not sit within either Network.

It is noted that Galway was recommended to be added to the TEN-T Network in December 2022 as part of the revised TEN-T Network Regulation (General Approach) [33].

This provides a significant hurdle and disadvantage to port locations outside of the Core and Comprehensive Network. This may not directly impact any of the locations hoping to develop ORE port infrastructure for staging and marshalling, but it may impact regional ports hoping to develop port infrastructure to accommodate O&M activities. Whilst the anticipated spend for O&M ports may be comparatively less (than staging ports), where ports are required to accommodate Service Operation Vessels (SOV), the infrastructure requirements are still relatively significant. Consequently, ports hoping to accommodate these activities will also require investment in critical infrastructure to support the ORE sector. Regional ports not on the TEN-T Network cannot access EU funding to support such developments.

The metric for determining Core and Comprehensive status is based on the percentage of total port tonnage the individual port handles annually. Whilst this is a useful metric for gaining an understanding of the levels of activity, it does not provide an accurate representation of the importance of ports which may be handling significant movement of passengers or large volumes of low-density project cargoes. The use of this metric to determine the availability of EU grant funding is restrictive and impedes the development of regional communities.

8.4 Summary of CEF Overview

Whilst CEF funding is a valuable mechanism for financially supporting infrastructure projects of this nature, complementary measures will likely be required given the following:

- The competitive nature of CEF funding scheme and the lack of guaranteed success.
- CEF only available as a percentage of ‘eligible costs’.
- The diminishing nature of the CEF pot, there may be less than half of the initial €7.0 billion available when ports are seeking funding for capital works.
- Tendency of CINEA to allocate less funding than the requested amount.
- The suitability of TEN-T for ORE port infrastructure projects given the significant focus toward rail projects seen to date.
- The lack of eligibility for Regionally Significant ports to avail of CEF funding.

8.5 Additional European Grant Funding

In addition to the CEF grant funding discussed, the Recovery and Resilience Facility was made available for Member States to support recovery post COVID-19. Through the RRF Ireland will receive circa €989 million in European Union grants, with grants to be used in the period between 2020-2026. Ireland’s National Recovery and Resilience Plan cites three priorities, with number 1 as “Advancing the Green Transition”, and number 3 “Social and Economic Recovery and Job Creation” [34].

Ireland’s National Recovery and Resilience Plan consists of 16 investment measures and 9 reforms across 3 components. The investments proposed within the ‘Advancing the Green Transition’ category vary in nature with none directly relating to the development of renewable energy sources. Whilst the plan has already been submitted and subsequently approved by the European Commission, ORE port infrastructure would have been compatible with RRF priority number one “Advancing the Green Transition”.

The RRF has been utilised by other Member States to fund renewable energy sources and in particular ORE port infrastructure, Poland’s Recovery and Resilience Plan, for example, earmarks €3.7 billion of grant funding to be utilised for financing of offshore wind farms and terminal infrastructure [35]. The Recovery and Resilience Facility represents a missed opportunity for gaining grant support for port developments which are critical to meeting Ireland’s climate ambitions.

9 State Aid Implications

9.1 Overview of State Aid Rules

European Union Law and the area of State Aid is a complex and extensive topic. This section gives a brief overview of the key points in relation to port infrastructure projects only.

In general, State Aid is prohibited under the Treaty on the Functioning of the EU (TFEU) because of its anti-competitive effects (Article 107 (1)). What may be deemed State Aid can come in a variety of forms. Examples of such include the following; direct grants from the State, interest and tax reliefs, government guarantees, provision of land in a port at less than market value, investment by State bodies on terms that a market economy operator would not have invested, government holdings of all or part of a company, or providing goods and services on more preferential terms than the market would offer [36]. The consequences of the aid are that the recipient obtains an advantage on a selective basis for example, to specific companies or industry sectors, or to companies located in specific regions, so competition has been or may be distorted. State Aid rules are also relevant where the provision of the financial support has the potential to impact trade between Member States.

However, there are instances where the TFEU allows State Aid to be permitted. These fall under the conditions of Article 107(3). Most relevant to ports is Article 107(3)(c). This states that ‘aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest’ [36]. Under Article 107(3)(c), the measure should comply with the following:

- (i) Presence of a clearly defined objective of common interest;
- (ii) Necessity, proportionality and incentive effect of the aid;
- (iii) Effects on competition and on trade between Member States limited to an extent not being contrary to the common interest; and
- (iv) The aid complies with the transparency principles [37].

9.2 General Block Exemption Regulation

As discussed previously, the ESPO assessed the nature of investments in port infrastructure across Europe. Their study found that most port projects are at least partially funded by public resources, typically as grant funding. The ability of ports to be funded in such a manner is typically accommodated by the EU’s State Aid policy with respect to the General Block Exemption Regulation. The General Block Exemption Regulation were updated in 2017 (Commission Regulations (EU) 2017/1084) to allow for ports to avail of direct public financing for port infrastructure and dredging, below a certain threshold, where it is compatible with the internal market and of common interest [38].

Further conditions are as follows:

- That the aided port infrastructures must be available to interested users on an equal and non-discriminatory basis on market terms.

- Concessions and other entrustments to third parties for the construction, upgrade, operation or rent of port infrastructures must be assigned on a competitive, transparent, non-discriminatory and unconditional basis [39].

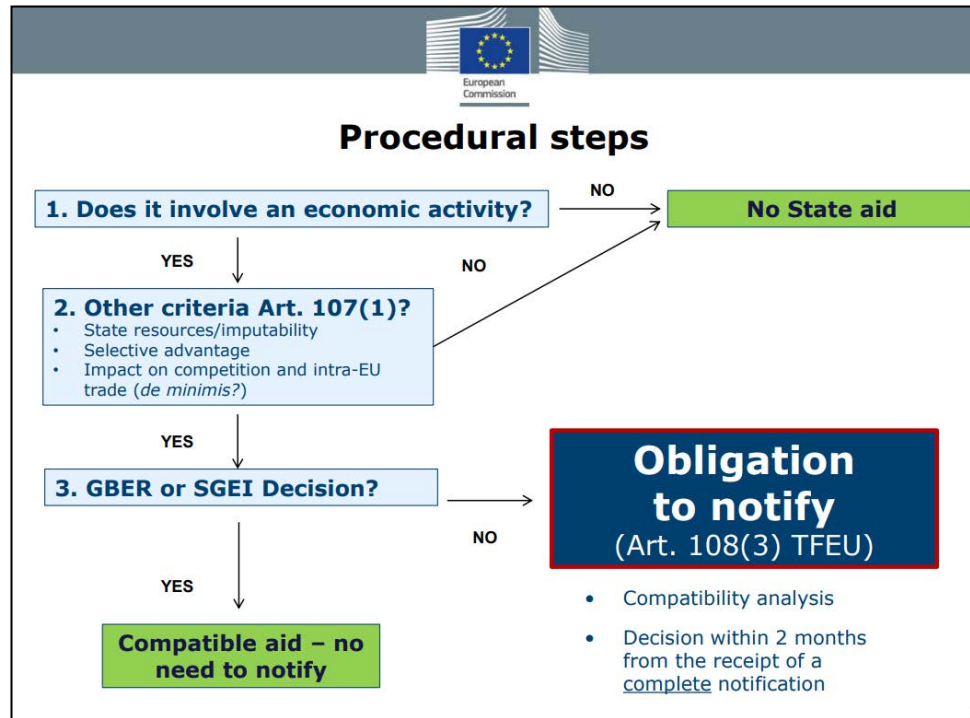


Figure 9-1: Flow Chart for State Aid Procedure and GBER [40]

The General Block Exemption Regulation was updated in October 2021 to widen the possibilities for Member States to provide aid measures supporting the green and digital transition without prior notification and approval by the Commission [41]. The update to the GBER is hoped to encourage State funding in projects which contribute to the European Green Deal. Port infrastructure to support the build-out of offshore wind farms in Ireland would fall within this category.

Where projects are beyond the General Block Exemption Regulation threshold, there is a requirement that the proposal is notified to the European Commission for a ruling. The European Commission will then consider the compatibility of the proposed port investment with Article 107(3)(c) TFEU [40]. In 2015, the Commission stated that circa 95% of the implemented State Aid measures was exempted under the GBER [39].

Threshold Values for port infrastructure (quay walls, floating pontoon ramps in tidal areas, internal basins, back fills and land reclamation and alternative fuel infrastructure) projects are as follows:

- 100% of eligible costs for maritime port projects with eligible costs up to €20 million.
- 80% of eligible costs for maritime port projects with eligible costs between €20 million and €50 million.
- 60% of eligible costs for maritime port projects with eligible costs between €50 million and €130 million.

- 60 % eligible costs for maritime port projects with eligible costs up to €150 million (TEN-T Core ports only).

Threshold Values for access infrastructure (public roads, rail, locks, dredging of rivers, access routes and channels, etc) are as follows:

- 100% of eligible costs for access infrastructure up to €130 million (non TEN-T Core ports).
- 100% of eligible costs for access infrastructure up to €150 million (TEN-T Core ports).

Threshold Values for dredging (removal of sediments from the bottom of the waterway) are as follows:

- 100% of eligible costs for dredging up to €130 million per calendar year (to €150 million for TEN-T Core port) [40].

Widespread public funding and the block exemption rules underline that investment in port projects with a positive societal value case, but a negative business case, are common in the EU and that grants are an important instrument where projects exhibit a funding gap [1].

There are several case studies which demonstrate European ORE port projects availing of State resources without being ruled State Aid, some of these were pre-GBERs and as such by default were notifiable to the European Commission. Where the Commission is to be notified, an assessment is made on the question of State Aid for the owner, the operator and the end user. The case studies identify where known, the opinion of the European Commission in respect of the projects and State Aid.

10 Case Studies

10.1 Port La Nouvelle

Port la Nouvelle

Port owner:	Region Occitanie
Port operator:	Region Occitanie
Location:	Narbonne, France
Year of funding request:	Phase 1 2019; Phase 2 extension 2022.
Scale of investment:	Phase 1 €343 million*, Phase 2; €340million [42]



Figure 10-1: 3D Schematic of Port La Nouvelle Completed [43]



Figure 10-2: Completed Heavy Lift Quayside and Partially Complete Breakwaters [44]

**Assumed total value of works, conflicting total values recorded*

Overview of Development

Phase 1

The port expansion at Port of La Nouvelle was proposed to strengthen the port activities (liquid, project cargo, breakbulk and dry bulk) while investing in projects related to the energy transition [44]. The works encompass the construction of significant lengths of breakwater and new quay facilities.

The port extension work began in 2019 with the construction of a new 2.5 km north breakwater and the extension of the existing 600m south breakwater. The first part of the new Marine Renewable Energy (MRE) terminal has been completed and is being operated by Euroports CLTM through a concession agreement. Dedicated to the emerging floating wind sector, the new 250 m quay will provide 11 m water depth and 7 hectares of adjacent landside area (for pilot floating projects). For the Port of La Nouvelle initial phase, the majority of the heavy lift quay investment was provided by the Occitanie Region, with the remainder being divided between Greater Narbonne agglomeration (group of municipalities within the department of the Aude) and the department of Aude.

Phase 2 extension

Additional works to extend the first phase will provide a new liquid bulk terminal with 410m length and -16mCD dredge depth at the quayside (anticipated to be delivered by 2025 and operable by 2026). The MRE terminal extension will add a second 300m quay (water depth 16m) and an additional 23 ha of landside area. These facilities will be used for the mass deployment of floating wind farms by 2028-2030 [43].

The follow-on phase works are being funded and delivered through a quasi-PPP and is the first French port to be jointly managed by the public and private sector. The single-purpose vehicle private partnership brought together public players (49%) – in the shape of the Region of Occitania and Banque des Territoires (Caisse des Dépôts) – and Nou Vela with 51%. The Nou Vela consortium includes, DEME Concessions, Euroports, EPICO, QAIR, and the Aude Chamber of Commerce and Industry [45]. The Sémop signed a public service contract with the Occitania Reion for the construction, operation, management and development of the commercial port of La Nouvelle. The concession agreement is for a 40-year period [45].

Scope of Construction Works

Phase 1 (completed)

- Extension of existing southern breakwater by 600m
- Construction of new dike to the north, total length of 2400m
- Construction of 250m heavy lift quay
- 7 ha of reclamation
- Dredging associated with the above works.

Phase 2 extension (proposed to start 2023+)

- Construction of 410m length liquid bulk quay
- Additional 300m of heavy lift quay to accommodate commercial scale floating wind activities
- 23 ha of reclamation.

Source of Funds

Phase 1 (approx. €343 million total [46])

Heavy lift quay plus breakwaters;

- €48.1million by Occitanie Region
- €2.1million from the Department of Aude
- €3.0million from Greater Narbonne agglomeration.
- €150 million by EIB [46].

*Breakwaters and access works totalled circa €160million value. From assessment of EC opinion on State Aid (where breakwater and dredging works were not considered State Aid) State funds are likely to have been used to finance this element of the works although no specific values could be found. Considering the tally of values, the State may have funded the entirety of the breakwater and dredging works.

European Commission State Aid Opinion (note this relates to the Phase 1 funding)

Due to the value of capital works, the European Commission was required to be notified of the project and the use of State resource. The quayside and breakwater elements were considered separately by the Commission given the nature of the infrastructure. The breakwater and associated elements of the project were deemed not to constitute State Aid as they are not of commercial nature and have been provided to protect the port from environmental conditions. Additionally, they provide protection to both the port and the community as a whole and as such are provided on a non-discriminatory basis.

Regarding the use of State resource for the development of the quay and related dredging, the port authority was deemed to have gained an economic advantage and subsequently this was considered State Aid under Article 107 (1) of the TFEU. The Commission concluded that no State Aid was obtained for the infrastructure users given the port would be charging fees comparable with the market.

The Commission assessed the compatibility of the State Aid for port investment with TFEU Article 107 (3) (c). The Commission examines whether a measure pursues an objective of common interest, whether it is necessary and proportionate to the achievement of this objective, to what degree it entails harm to competition and intra-European trade and to ensure principles of transparency have been respected. From review of the document outlining the EC opinion, the following were noted in respect of each:

- 1) Common Interest – The project was deemed to be of common interest considering the environmental, economic and social objectives related to the port infrastructure.
- 2) Necessity, proportionality and incentive effect – The project was able to demonstrate necessity as without support the project would not have been commercially viable (exhibited a funding gap). The degree of funding did not exceed the funding gap and as such was deemed proportionate. Construction of the port facilities would allow for pilot floating wind projects to be installed thus contributing to an objective of common interest and demonstrating an incentive effect.

- 3) Distortion of competition and impact on intra-trade European – Given the nature of the activities and the impact of proximity for such, the Commission concluded that effects on competition are likely to occur at national level with limited impact on Member States. The Commission also concluded that the anticipated market share would be limited.
- 4) Aid Transparency – The Commission noted that the French authorities had undertaken to respect the principles of transparency for the aid provided.

As each of the compatibility criteria (as per Article 107 (3) (c)) were satisfied in respect of the State resources provided for the quay infrastructure no objections were raised [47].

No information could be found in relation to the opinion of the European Commission in respect of the phase 2 extension works and the part publicly funded concession agreement.

10.2 Port of Brest

Port of Brest	
Port owner:	The Brittany Region
Port operator:	Port company Brest – Bretagne
Location:	Brest, France
Year of funding request:	2016
Scale of investment:	€217 million



Figure 10-3: 3D Sketch of Completed Port Infrastructure Works [48]



Figure 10-4: Partially Complete Marine Works at Port of Brest 2019 [48]

Overview of Development

The development project at the Port of Brest has provided new port facilities to support the construction and subsequent maintenance of offshore renewable energy infrastructure and has improved nautical access for existing traffic.

As part of the development works, dredging was required to deepen the channel and a new quay structure constructed. An arc shaped breakwater structure has also been formed constructed using circular filled caissons with infill arcs.

The works are to be completed in a two phased approach with the initial construction of the new quay, breakwater structure and dredging complete. The remaining phase will complete the filling of the lagoon enclosed by the breakwater to provide an additional 14 ha of landside area.

The infrastructure was funded through a number of State sources, in addition to a significant contribution from European Regional Development Funds.

Scope of Construction Works

- Dredging of the approach and berth pocket to -8mCD and -12mCD respectively.
- Construction of 380m of quayside.
- Provision of 90m width strip of land reclamation to the rear of the new quay.
- Construction of 890m of arcing breakwater with revetment armour stone facing (which encloses planned future 14 ha reclamation).
- Reuse of dredge spoil for filling of structures and land reclamation.

Source of Funds

Total €217 million

- €70.0 million in grants from Brittany Region
- €13.5 million from Brest Métropole
- €14.5 million from the Department Council of Finistère
- €15.0 million from the European Development Fund (FEDER)
- €1.5 million from the Chamber of Industry [48].
- €70.0 million EIB loan [49]
- The remainder of the funds were financed by equity contribution from past commercial revenues by the port [50].

State Aid Considerations

As this project was commencing pre-2017, the General Block Exemption Regulation did not apply. Consequently, the project was required to be notified to the European Commission.

The project was assessed by the commission under Article 107 (1) of the TFEU to understand if the following conditions were fulfilled, (i) an undertaking benefits from (ii) an advantage conferred through State resources, (iii) that advantage is selective, and (iv) that the measure in question causes or threatens to cause a distortion of competition and an effect on trade between Member States. The Commission deemed that the Public Operating Company (the Brittany Region) had gained a selective advantage and that the completion of the infrastructure works had the potential to distort competition with Member States. Consequently, the subsidies provided were considered to constitute State Aid.

As per Article 107 (3) (c), the Commission examined whether the project was compatible with the internal market on the basis of being in the common interest. The Commission considered whether the aid provided was necessary and if it was proportional (not greater than the funding gap) and assessed the degree to which the aid impacted competition.

- 1) Common Interest – As Brest is part of the TEN-T Network the Commission concluded that State investment in the project contributed to an objective of common EU interest.
- 2) Necessity, proportionality and incentive effect – Without the aid provided the project would be commercially unviable, consequently the aid was necessary. The funding provided by the State sources was less than the funding gap and as such was considered proportional. As the funding allowed the project to be built it was considered to have an incentive effect.
- 3) Distortion of competition and impact on intra-trade European – The activities relating to offshore wind were anticipated to be 3% of the market share and deemed insignificant. The impact on competition between Member States was deemed minimal and anticipated to be mainly national given the specific nature of the activity and requirement to be in relative proximity to the wind farm.
- 4) Aid Transparency – The Commission noted that the French authorities had undertaken to respect the principles of transparency for the aid provided.

Consequently, no objections were raised in respect of the State resources to support the Port of Brest developments for offshore wind activities [50].

Overview of Development

Berth 4

Cuxhaven is operated by Niedersachsen Ports GmbH & Co KG (NPorts) which is fully owned by the State of Lower Saxony. The Berth 4 capital works represented an investment of €36 million to improve both the port infrastructure and the inland facilities. The works included the construction of a heavy-duty storage area, RoRo ramps and a gantry crane capable of handling 500 tons and included an 85,000m² expansion to the existing terminal 1. The improvement of the facilities at Cuxhaven sought to provide a multi-purpose facility serving both the offshore and RoRo sectors. Berth 4 is currently operated by Cuxport GmbH under a concession agreement following a European wide tender for use of the facility [53].

Nacelle Factory – not publicly funded but relevant

Siemens invested nearly €200 million into the development of its nacelle factory in the port of Cuxhaven, which has revolutionised the town of Cuxhaven.

In 2016 Siemens received approval to develop a nacelle factory on the ground of the Port of Cuxhaven, these works were completed in 2018. In 2020 Siemens Gamesa purchase an additional 200,000m² of land on the site in order to meet the EU capacity until 2026 to 2027 [54]. The establishment of the Siemens Gamesa factory served to attract Nordmark (a Danish manufacturing company) to set up a factory in the same area. Nordmark invested circa €15 million to develop their own facility within the port.

Whilst the cost of the additional phase was entirely borne by Siemens Gamesa, it is the perfect demonstration of how initial support from public resources can stimulate supply chain activity, attracting significant private investment and creating huge numbers of jobs (close to 1,000 jobs have been created [55]).

Future developments are planned at Cuxhaven, with planning approval received in 2020 for future berths 5, 6 and 7 adding a significant berthing length to increase the cargo handling capabilities. It was announced in January 2023 that Cuxhaven had secured €100 million in funding from the Lower Saxony government to support the proposed development. The total value of the works is €300 million. It is intended that the development will allow for the expansion of the offshore wind and marshalling capabilities at Cuxhaven [56].

Scope of Construction Works	Source of Funds
Berth 4 (completed) <ul style="list-style-type: none"> ➤ Extension of Terminal 1 by 85,000m². ➤ Construction of 240m of new quay length. ➤ Heavy load platform. ➤ Additional floating crane units. ➤ Dredging to accommodate draft of 14.3m. 	Berth 4 (€36 million [56]) <ul style="list-style-type: none"> • Direct grant by the State of Lower Saxony (€21 million) [57] • NPorts via loans on market terms (€15 million).

State Aid Considerations (note this relates to Berth 4 funding)

The project was pre-2017 and consequently was required to be notified to the European Commission.

The project was notified to the Commission in December of 2015. The project was assessed by the commission under Article 107 (1) of the TFEU to understand if the following conditions were fulfilled, (i) an undertaking benefits from (ii) an advantage conferred through State resources, (iii) that advantage is selective, and (iv) that the measure in question causes or threatens to cause a distortion of competition and an effect on trade between Member States.

On the basis of the conditions of Article 107 (1), the Commission concluded that a selective economic advantage had been obtained and that the aid would have the potential to distort competition between Member States, consequently the public funding did constitute State Aid at the level of NPorts. The status of the future operator (concessionaire) was not deemed State Aid as the facility would be tendered for on a public, open basis and concession fees charged in line with market conditions.

As per Article 107 (3) (c), the Commission examined whether the project was compatible with the internal market on the basis of being in the common interest. The Commission considered whether the aid provided was necessary and if it was proportional (not greater than the funding gap) and assessed the degree to which the aid impacted competition.

- 1) Common Interest – The Commission considered the facility of common interest on the basis of the achievement of integrated and intelligent logistics system in the EU, ensuring EU ports can cope efficiently with their proposed function and through development of the TEN-T Network.
- 2) Necessity, proportionality and incentive effect – Without the aid provided the project would be commercially unviable (exhibiting a negative NPV), consequently the aid was necessary. NPorts made an effort to fund the remainder via loans at market terms, however it would have been unlikely to succeed in obtaining the full amount through debt arrangements. The provision of the aid has an incentive effect as it allowed the project to go ahead.
- 3) Distortion of competition and impact on intra-trade European – The Commission concluded that on the basis of the market study submitted by NPorts, the market share anticipated for the upgraded facility were reasonable, and that the increase in capacity from the new berth was in line with the projected increase in port traffic. Consequently, the Commission found that the aid does not affect competition and intra-trade to an extent that would be contrary to common interest.

On the basis of the compatibility analysis with Article 107 (3) (c), the Commission decided not to raise any objections to the aid [57].

10.4 Key Points from European ORE Case Studies

10.4.1 Regional Spending Power of European Countries

A common theme across the European ORE case studies is the significant role played by regional level governments in financing port capital works schemes. By comparison, Irish local authorities have limited spending power. The differences are largely attributed to varying levels of fiscal decentralisation, with the French and German regional governments having sufficient tax-raising powers to generate significant revenue which can be reinvested in the region. By comparison to Ireland, both France and Germany have an additional level of organisation between the local authorities and the central government with regional level government (French regions and German Länder).

Germany is one of the least centralised countries in the EU and the sub-national governmental levels have significant responsibility. In 2018 50% of German government expenditure was managed by the Länder (31%) and municipalities (19%) [58]. France is typically considered relatively centralised, however there are areas of responsibility for the sub-government levels in taxation and expenditure [59].

German taxation is typically decided by the federal government and the states (Länder) together, whilst some are allocated solely at the federal level (e.g., customs), some are allocated to the region (excise taxes), and districts and municipalities may enact their own tax laws. Income tax revenue and corporation tax are shared equally between the federal government and the Länder generating significant levels of revenue for the region. Additionally, 75% of VAT revenues are redistributed across the Länder to ensure a uniform standard of living across the country [58].

In France there are several taxes raised at municipal level including property tax on buildings and land, local residence tax and the “territorial economic contribution”. Regional level tax revenues include the CVAE (corporate value-added tax) and IFER (excise duty). Regions and departments also receive fractions of indirect taxes such as tax on petroleum products or tax on insurance contracts [60].

Due to the structure of government in the Irish State, there is limited scope to fund significant capital projects at local government level. Whilst some taxes are levied at local government level, these are relatively insignificant by comparison to the scale of those received at regional level by both France and Germany. With the majority of the large ORE port development plans in the €150-300 million region, local governments simply could not afford to make meaningful grant contributions. Consequently, if State resources are to be provided in Ireland this would have to come directly from central government unlike the European examples included in the case studies.

10.4.2 European Funding (incl. ERDF)

European Regional Development Funds (ERDF) were noted as sources of funding for two of the French projects included within the case studies. It is noteworthy that of the ORE port examples included, none appear to have availed of CEF funding. This adds further credence to the suggestion made previously, that CINEA may not be familiar with this type of project, and this may be a factor in

decisions on how it allocates funding. It is noted that it is unknown if these projects applied for CEF funding.

The ERDF for Ireland for the current period offers €396 million, with national co-financing bringing the total sum to over €853 million between 2021-27. The use of ERDF funding to support ORE port infrastructure would align with the second Policy Objective of the Common Provision Regulations which supports 'A greener, low-carbon Europe – by promoting clean and fair energy transition'. The ERDF Programmes came under the control of the Regional Assemblies to act as Managing Authorities as of October 2020 and as such there may be scope for port funding administered at a regional level.

There are three regions considered within Ireland: The Northern and Western, Southern, and Eastern and Midland Regional Assembly areas. As per the European Commission classification, regions are delineated based on the level of development within the region. For the current period, the Northern and Western region is considered a "Transition Region", with the remaining two areas considered "More Developed Regions". To respect the differing EU classifications, there are two different ERDF programmes, the 'Region in Transition' is to be managed by the Northern and Western Regional Assembly (NRWA), with the 'More Developed' programme managed by the Southern Regional Assembly (SRA) in collaboration with the Eastern and Midland Regional Assembly (EMRA) [17].

Given there is a level of match-funding associated with the use of ERDF funding, this would require a revision of the current Ports Policy to facilitate Government spending on port infrastructure. As the ERDF funding would match the Government contribution there would be a reduced burden on the degree of funding that may need to originate from State resources. The co-financing rate for ERDF funds varies by region. The 'more developed' regions, the Southern and the Eastern and Midlands regions will receive 40% in EU financing, while as a 'transition' region the Northern and Western region will receive 55% in EU financing [61].

The total value of the ERDF pot will be spread over the 2021-27 period and will support several schemes. Consequently, any funding from the ERDF may be modest in comparison to the total value of the port projects proposed. However, given the match-funding nature of the grant, any provision of ERDF funding would be doubled, serving to increase the commercial viability of the proposed projects in the instance of a funding gap. Projects located within the Northern and Western region would have potential to avail of a greater portion of funding given the 'transition' status of the region.

The use of ERDF funds needs to be considered within the State Aid Legal Framework given the funds would come under the control of the Member State and that there will be an element of match-funding involving the use of State resource.

It is noted that there is a prohibition on the overlapping of ERDF and CEF funding for ORE projects. Consequently, this may only be a viable funding solution for projects which are unsuccessful in obtaining CEF funding or those locations which are ineligible to apply for CEF funding.

10.5 Non-EU Examples

10.5.1 Invergordon, Cromarty Firth

Invergordon	
Port owner:	State owned trust port
Port operator:	Port of Cromarty Firth
Location:	Invergordon, Quay West (extension)
Year of funding request:	2018 (pre-BREXIT and as such State Aid rules are relevant)
Scale of investment:	£30 million



Figure 10-7: Invergordon Port Quay West [62]

Proposed Use

Invergordon Quay West was extended in 2020 following an announcement from Moray East Offshore Wind Farm that Cromarty would be used as the staging port for the installation [63].

The works completed by Roadbridge UK in 2020 provided an extension to the existing Invergordon Quay West (known as the Service Base) adding an additional length of quay with associated dredging at the quay face and increasing the laydown area. The Service Base was constructed in phases, with the initial phase completed by McLaughlin and Harvey in 2016, with the facility used primarily as a decommissioning pad during these initial years.

The extension to the facility was provided to accommodate cruise vessels in the port and also to allow for increased activity within the energy sector, including for offshore wind staging activities. The funding for the project was part provided through grant funding from Highlands and Islands Enterprise (HIE), with a level of funding coming directly from the Scottish Government [63]. HIE are the economic and community development agency for the north and north-west of Scotland.

Scope of Construction Works

- Construction of 218m of combi-wall extension.
- 9 acres of reclamation extending the initial phase works.
- Dredging at the face of the quay extension.
- Provision of revetment armouring of the reclamation area.

Source of Funds

Total £30 million

- £7.75 million grant funding from HIE, out of which:
 - £2.3 million from ERDF
 - £0.8 million additional ERDF funding under consideration (per 2018)
 - £2.0 million from Scottish Government
- £13.0 million from the Royal Bank of Scotland.
- Cash reserves were used to finance the remainder of the capital costs.

State Aid Considerations

As this project was funded post 2017, the General Block Exemption Regulation was relevant. The total value of the State resource helping to fund the infrastructure project was beneath the threshold value and as such there was no requirement to notify the European Commission.

For previous port infrastructure projects Port of Cromarty Firth utilised the GBER Article 56b for port infrastructure and Article 56 for associated industrial infrastructure (decommissioning pads or surface storage/assembly areas).

In the case of Port of Cromarty Firth phase 4 (Quay West), the Port chose to pursue a higher technical specification on the decommissioning pad. To be cautious and comply with proposed legislative changes, the port used Article 17 for the port infrastructure and Article 14 for the industrial infrastructure. Port of Cromarty Firth is an SME, and consequently could utilise this option.

10.5.2 USA Grant Support for Port

10.5.2.1 Maritime Administration’s Port Infrastructure Development Programme

Examples of State support for port infrastructure have been seen beyond Europe, with large amounts of grant support announced recently in the US. In October 2022 the US government announced \$703 million worth of grant funding to improve port facilities through the Maritime Administration’s Port Infrastructure Development Programme [64]. Whilst the funding will serve to improve port infrastructure across multiple sectors, included in the grant funded projects were several ORE port projects. The planned ORE port projects alongside the grant awarded for each has been included in Table 10-1 for reference.

Table 10-1: US ORE Port Infrastructure Projects Grant Funding (Maritime Administration’s Port Infrastructure Development Programme)

Project	Project Description	Grant Funding
Arthur Kill Terminal for Offshore Staging and Assembly, New York	The development will provide 1365 ft (416m) length of quay with 32-acre laydown to the rear. The facility will be designed to accommodate significant loads on both the landside and quay. The project will also require dredging of 740,000 cubic yards (566,000m ³) to provide 35 ft (10.6m) water depth within the berth pocket.	\$48 million
Bridgeport Port Authority Operations and Maintenance Wind Port Project	The project encompasses design and construction of an Operations and Maintenance (O&M) base at Bridgeport, Connecticut. Project elements include the installation of approximately 1,300 ft (396m) of anchored quay walls, dredging of approximately 30,000 cubic yards (22,900m ³) of material to deepen the harbour for larger support vessels, a floating service dock to assist offshore wind (OSW) support vessels, and the installation of two reinforced crane pads that will also serve as relieving platforms for the new quaysides.	\$10.5 million
Salem Wind Port Project, Massachusetts	Redevelopment of a vacant quay for use as an offshore wind facility. The project includes 700 ft (213m) quay construction with heavy load capacity and the improvement and upgrade of circa 23 acres of laydown area.	\$33.8 million

10.5.2.2 Offshore Wind Ports Infrastructure Investment Challenge

In addition to the grant funding for port infrastructure stemming from central US Government, the State of Massachusetts recognises the need for State funding to support port infrastructure servicing the offshore sector. In December 2022, the Baker/Polito administration for Massachusetts awarded \$180 million in funding through the Offshore Wind Ports Infrastructure Investment Challenge to ports in the state. The Offshore Wind Ports Infrastructure Investment Challenge awarded the funding through a competitive process and the pot will support three ports along the Massachusetts coast, including for large scale developments at Salem and New Bedford.

“Projects funded through the Offshore Wind Ports Infrastructure Investment Challenge will have a significant impact on the advancement of the sector, and will capture high-value supply chain and workforce opportunities in the Commonwealth,” stated Lieutenant Governor Karyn Polito [65].

10.6 Other Relevant Examples

10.6.1 ScotWind and Scottish Government Involvement

Similar challenges are being experienced in the UK, with Scotland lacking enough suitable port infrastructure to support large scale offshore wind deployment. A partnered approach is being taken with the Scottish Government working in tandem with the private sector to ensure port infrastructure is prioritised. With the ScotWind leaseholders announced in January 2022, the Scottish sector has been considering options for how best to deploy and deliver the ScotWind pipeline of projects. The 2021 Strategic Investment Assessment identified the need for collaboration to tackle the significant challenges anticipated for the deployment of offshore wind. It recommended that ScotWind offshore wind developers work together on a Collaborative Framework and prioritise work on a Scottish Floating Offshore Wind Cluster.

In early 2022 the Scottish Offshore Wind Energy Council (SOWEC) held an Offshore Wind Supply Chain Summit. The event was the first engagement between all the ScotWind developers and the Scottish Government, and in April 2022, the Collaborative Framework Charter was announced as a conduit for collaboration between all stakeholders [66]. The Collaborative Framework Charter is considering how a Strategic Investment Model can ensure port infrastructure investments are made in a timely manner and allow for shared investment to stimulate port growth and the supply chain. The Investment Model will consider the options for joint funding with the Scottish Government alongside the private sector. ScotWind developers want to work alongside the Scottish Government to ensure investments are made ahead of time. The involvement of the Government will serve to de-risk the delivery of ScotWind and increase opportunities for the supply chain.

10.6.2 Scottish Freeports

In addition to the Scottish Investment Model, the award of the first Scottish Greenports was announced in January 2023. Green Freeport status was awarded to Opportunity Cromarty Firth and Forth Green Freeport as part of the UK and Scottish government-partnered scheme. The selected

locations will avail of up to £52 million in start-up funding and will benefit from tax reliefs and other incentives including streamlined planning procedures. The newly appointed Scottish Freeports are anticipated to stimulate £10.8 billion of private and public investment and create over 75,000 high-skilled jobs.

Prime Minister, Rishi Sunak stated that, *“In extending the benefits of freeports to Scotland, we are unleashing the potential of the Firth of Forth and Inverness and Cromarty Firth – backing the delivery of thousands of high-quality green jobs for future generations, as we continue to make gains on our commitments to transition to Net-Zero”* [67].

Whilst the Freeport model is complex and not directly applicable in the context of Irish ports, this is another demonstration of Government level support for critical infrastructure. The Freeports have proven successful for offshore wind deployment in the UK and the roll out of the scheme in Scotland will help encourage the development of a strong supply chain to support the build-out of ScotWind projects.

10.6.3 New York 2022 Offshore Wind Solicitation

In addition to the challenges seen in the UK and Ireland, similar issues are apparent globally with little infrastructure of the specification required available to accommodate offshore staging and marshalling activity. New York State has chosen to tackle port infrastructure and supply chain investment through the auction process. The 2022 Offshore Wind Solicitation, which is the third offshore wind auction in New York, includes the first phase of \$500 million investment in offshore wind ports, manufacturing, and supply chain infrastructure [68]. It is anticipated that most of the investment will be funnelled into ports. The State funding is expected to be matched by private finance in a 3:1 ratio, triggering over \$1.2 billion in investment in the State’s ports [69].

10.6.4 California Floating Wind Auction

With the West Coast of the US holding the first floating offshore wind auction in late 2022, port infrastructure has come under scrutiny. Several studies specifically addressing port infrastructure have been carried out in the past, with the most recent concluding in December 2022 in direct response to the California auction. The report, completed by the Regional Economic Action Coalition (REACH), focused on the County of San Luis Obispo (SLO) and the County of Santa Barbara (SB) within the state of California.

Unsurprisingly, given the previous industrial activity in the areas, there is limited infrastructure of the scale required to accommodate the commercial scale deployment of floating offshore wind. The report identifies the scale of the funding required to support the development of new facilities and specifically cites the need for Government funding as part of the financing mix to drive down the cost of private equity. *“Due to the significant cost necessary to build FLOW port facilities, leveraging funding from multiple sources could support the development of the infrastructure. By packaging funding from federal, state, local and private sectors, the risk of the project can be distributed. Government funding programs can be structured to complement and drive down the cost of private financing”* [70].

11 Conclusions & Recommendations

11.1 Public Funding for High Societal Value Projects

There is a very strong case for State support to help fund investment in Irish ports for ORE infrastructure. This research shows that State resources are frequently funnelled into port projects across the EU and Europe. This is normal practice. Recent examples of government grants have been seen globally, with the US Government providing more than \$700 million to improve port infrastructure.

Port infrastructure projects are essential for the timely deployment of offshore wind in Ireland. It will not be possible to meet the legally-binding reductions in carbon emissions set for 2030 without the necessary port infrastructure. Government financial support for construction staging and O&M port projects would align clearly with the ambitions of the Climate Action Plan and the Programme for Government. However, if no action is taken in respect of port infrastructure developments, it is very difficult to see how 7 GW of offshore wind could be built to meet the 2030 targets.

There are several other indirect benefits which would flow from State support of ORE port infrastructure projects. Examples include:

- Stimulation of supply chain activity through establishment of ORE hubs serving the sector. The positive impact of dedicated ORE ports in growing a strong supply chain has been witnessed across several of the mature European markets, with significant levels of investment into these areas and large numbers of jobs created. The emergence of staging and marshalling ports has been shown to attract the supply chain to set-up within relative proximity to the ports. These can be manufacturing facilities for turbine elements, steel rolling facilities for tower sections and fabricators of ancillary steel components in addition to other wider supply chain activities. Example ports include Cuxhaven, Esbjerg, Greenport Hull and Nigg, all of which can boast a flourishing supply chain. There is a significant opportunity for regional development.
- Increased confidence in the Irish market through Government support for ports serving the sector. Recent examples highlighting the lack of confidence in the Irish sector can be seen with both major international players pulling out of partnerships for Irish projects.
- Port infrastructure can help facilitate the future deployment of green fuels which will likely happen at port locations, a key part of the Climate Action Plan and Programme for Government.
- Providing multiple ports to serve the ORE sector will ensure the Irish projects can be built, attracting significant levels of community benefit funds to those local communities.

11.2 CEF Funding

This research considers the nature of the CEF funding stream as part of the TEN-T corridors and, while this is undoubtedly a useful tool to help fund port infrastructure, it is not a silver bullet for the Irish ORE port funding challenge.

The CEF funding has several limitations which the study highlights:

- The competitive nature of the CEF funding scheme and the lack of guaranteed success;
- The diminishing nature of the CEF pot; there may be less than half of the initial €7.0 billion available when ports are seeking funding for capital works;
- Tendency of CINEA to allocate less funding than the requested amount;
- The suitability of TEN-T for ORE port infrastructure projects given the significant focus toward rail projects seen to date;
- The lack of eligibility for Regionally Significant ports to avail of CEF funding.

11.3 ORE Port Case Studies

Several ORE projects have been identified across Europe where the projects have been part funded by State resources (at central, regional and local government levels). The case studies have been selected specifically as they relate to ORE port projects, however, numerous other examples can be observed where Member States have utilised public resources to fund port infrastructure for various applications (examples included in Table 11-1 for reference).

Table 11-1: Examples of EU State Funded Port Infrastructure Projects [1]

EU Member State	Port Infrastructure Project	Funding Structure
Belgium	North Sea Port (Ghent), Sea Lock.	CEF funding, national government, port managing body.
Greece	Patras, breakwater, road access, terminal buildings.	ERDF, national government.
Netherlands	Removing the bottleneck on the rail freight corridor by realising the Theemsweg railway section.	CEF funding, national government, port managing body.
Poland	Gdansk, expansion of quays and improvement of navigation.	ERDF, national government, port managing body.
Portugal	Leixoes, new cruise ship terminal.	ERDF, national government, port managing body.
Slovenia	Koper, dredging works to improve accessibility to Basin.	Cohesion Fund, national government.

The projects included within the case studies were typically funded through a funding mix including loans and cash reserves in addition to public funding (European and State). It is interesting to observe that many of the projects availed of significant sums from sub-governmental level. By comparison, Irish local governments have limited spending power at this level, with the majority of public spending managed centrally by the Department for Public Expenditure and Reform (DPER). Whilst there were some instances of funding directly from government level (direct Exchequer funding), the majority of the funding stemmed from regional level sources.

The positive societal impact generated by the port infrastructure projects is demonstrated across the case studies. Both La Nouvelle and Cuxhaven attracted private investment into the port following the success of the initial partly state-funded projects. The establishment of these port hubs has served to act as a catalyst for the supply chain with a significant number of jobs created around the ORE port locations.

11.4 Partnered Thinking

Ireland is not alone in experiencing a lack of suitable infrastructure to support the deployment of offshore wind. Examples of how the Scottish and US Governments are tackling the port infrastructure issue have been highlighted, where the Government has a clear role alongside the private sector. The benefits of a partnered approach are far reaching, with reduced risk and clearer alignment of ambitions.

An approach similar to what is being seen in Scotland could be taken with collaboration between developers, the Government, and the ports to solve the funding issue. It is noted that following the publication of the WEI *National Ports Study*, the Department of Transport invited the Wind Energy Ireland Supply Chain Working Group to brief the Ports Coordination Group. The Ports Coordination Group could be used as a facility to allow for collaboration in understanding a strategic investment model for the Irish ports. Alternatively, a specific group could be established to spearhead the port and supply chain investment challenge, potentially as an off-shoot from the Government's Offshore Wind Delivery Taskforce. Consideration of how the wider supply chain could be supported could also be identified within such an investment model.

A strategic investment model could allow for an understanding of where best to spend money taking account of timelines, project locations and size and the required level of port investment. Risks and opportunities could be identified through this route, including the potential to look beyond the Irish market to how Irish ports and the supply chain could play a role in ScotWind and future Crown Estate Leasing rounds. This form of strategic approach would avoid abortive investment into port facilities which may be used very little and would be the first step in Government support for port infrastructure. Once the 'what, where and why' were established, a strategic investment model could identify 'Strategic Projects' suitable for further development.

11.5 Potential Sources of Funding

In terms of how the projects may be funded, a partnered approach would be preferred where Government buy-in significantly reduces the risk associated with port projects. As per the discussions on the funding challenges of early-stage port projects, the key to ensuring viability will be getting over the initial funding hurdle. Provision of equity in the early stages will be essential, with the limited visibility of revenue at present a key issue. As considered previously, identification of 'Strategic Projects' through a clear investment framework would identify the ports alongside relevant projects, thus helping to tie the ports to a potential revenue stream and de-risking the investment prospect.

A special purpose vehicle (SPV) could be utilised which could fund all of the identified ‘Strategic Projects’. Through a funding mechanism which funded each of the port projects (which will vary in geographic location) it could open the door for developer involvement as part of the funding mix as an investment wouldn’t be tied to any particular location. Additionally, where a strategic investment model helped to identify strategic port projects based on offshore project demand, it may be easier to demonstrate the value for developer buy-in in respect of a pipeline of projects (which could include the developer’s own projects in addition to those of other developers in later phases). The backing of the Government would also demonstrate a commitment to ensuring the successful deployment of offshore wind thus de-risking the investment for developers.

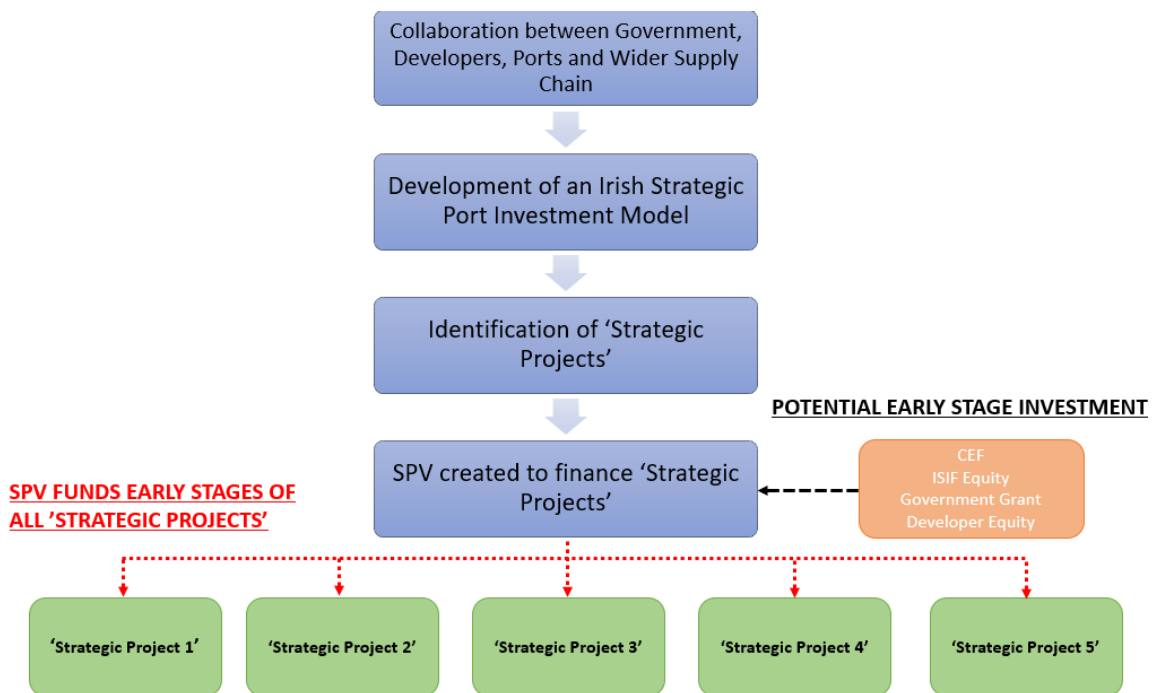


Figure 11-1: Flow Chart of Potential Irish Strategic Investment Model

The funding gap is the critical issue, with CEF funding expected to play a role in the financing of projects. However, given the limitations of the funding stream, alternative methods will be required to increase the bankability of projects alongside CEF.

The ERDF is considered another potential means to reduce the funding gap. The use of ERDF funding to support ORE port infrastructure would align with the second Policy Objective of the Common Provision Regulations which supports ‘A greener, low-carbon Europe – by promoting clean and fair energy transition’. It is likely that the availability of ERDF funds will be location dependent given the variation in the regional designations in Ireland. As there is a match-funding element of the grant allocation, the current National Ports Policy would have to be updated to allow for Exchequer funding in commercial ports. It is noted that there is a prohibition on the overlapping of ERDF and CEF funding for ORE projects. Consequently, this may only be a viable funding solution for projects which are unsuccessful in obtaining CEF funding or those locations which are ineligible to apply for CEF funding.

In the case that grant funding is awarded, the funding gap may not be entirely reduced. Equity cheques to sponsor the early stages could be facilitated through investment from private funds, European

funds (such as InvestEU or EIB as equity cheques), public funds such as ISIF or from grant funding from the Government. ISIF was engaged with directly as part of the study and were receptive to the provision of funding for port infrastructure. Representatives for the fund stipulated that they can only invest in projects with a clear business case. Although not engaged with explicitly, it is anticipated that EIB and InvestEU would have similar governance procedures. Private investment is another option, but with port projects typically unattractive due to long payback periods, the additional uncertainty surrounding the sector may render private investment unlikely during the early stages. Government financial support for ORE port projects appears critical.

Beyond the initial early stages and once the demand is clearer, it would be expected that traditional forms of funding could be utilised, with debt arrangements made available through the national banks or through the European Investment Bank (EIB). The EIB has been seen to support a significant number of European port projects, including several of the case studies considered. InvestEU offers a guarantee facility, which could be utilised to offset project risks and allow for more favourable lending conditions. Port authorities should also consider green finance options such as green loans, with the majority of the national banks offering these products. Given the 'green' nature of the proposed port activities, projects could avail of lower interest rates by comparison to normal loan products, thus improving the bankability of projects.

Additionally, once the demand is realised, and where potential Government support were provided it would be anticipated that private investment may be more likely. Currently, there is a degree of uncertainty around the viability of the sector with the demand for port infrastructure not clear given the status of the Phase 1 projects (pre-ORESS1 and planning decisions). This is not helped by concerns over the regulatory and consenting system with international players recently pulling out of the Irish market further harshening the optics. Government support and partnering would serve to build confidence in the sector in general and open the door for potential private investment into port facilities (this may be for actual port infrastructure, or perhaps more likely, for the development of supply chain facilities portside). The study highlights examples where private investment has been stimulated by initial part-publicly funded port projects.

GDG also considered the possibility of tax relief to improve the commercial viability of the projects. From review of the Taxes Consolidation Act, 1997 it can be seen that 'dock undertakings' are included under the Principal Provisions Relating to Relief for Capital Expenditure for Industrial Buildings. Through the Industrial Buildings Allowance, 4% relief over 25 years can be claimed for those items considered as 'dock undertakings.' Whilst this would be a welcome reduction in tax over the 25-year period, it is noted that the capital costs must be incurred upfront. Whilst still potentially helpful, this is only helpful on the proviso that the projects get to construction stage. The pressing issue is in relation to revenue certainty and provision of equity for the initial project stages. While tax relief may help to improve the bankability of the projects considering the funding model over the project lifetime, it is unlikely to solve the funding gap in its entirety. It would be considered as a complementary measure to improve the business case, however, grant funding appears essential to enabling ORE ports in Ireland.

11.6 State Aid Legal Framework

Where EU Member States provide state resources for commercial enterprises the State Aid Legal Framework becomes relevant. The General Block Exemption Rules have been updated several times in recent years. In 2017 the Regulation was updated to include for port infrastructure within the exemptions. The regulation was revised again in 2021 to include exemptions for projects supporting the green and digital transition. Several examples have been included which demonstrate how port projects have been viewed by the European Commission. Notable from the case studies included are the following:

- Breakwater structures and associated elements were deemed not to constitute State Aid as they are not of commercial nature and are provided to protect the port from environmental conditions. Where breakwaters are constructed these offer shelter to the port and the community as a whole and as such are provided on a non-discriminatory basis. This interpretation is unsurprising given these structures and activities provide the safe means of entry and exit and given that their use cannot be refused on commercial grounds.
- Where State funding was provided for port infrastructure and the Commission ruled that the funding was considered State Aid under Article 107 (1) of the TFEU, the Commission was able to find compatibility with Article 107 (3) (c) and consequently no objections were raised.

The consideration of breakwater structures and associated element (such as dredging) not to constitute State Aid opens the door for State funding of these specific elements without having to meet the requirements of the GBER or Article 107 (3) (c) of the TFEU.

The research and the case studies included demonstrate that State Aid rules are not a roadblock to Government support for port infrastructure in Ireland.

11.7 Recommendations

Considering the conclusions from the study, the following recommendations are proposed in respect of funding for port development plans:

Table 11-2: Proposed Recommendations for European Port Funding Study

Item	Recommendation	Reasoning & Proposed Action	Relevant Government Department or Organisation
1.	Government collaboration with Phase 1 and 2 developers, ports managing bodies and wider supply chain	Collaboration and partnered thinking are essential to solving the funding challenge. Providing a focused group (which could be facilitated through the Offshore Wind Delivery Task-force), with the key stakeholders including the Department of Transport, developers, ports and the wider supply chain will be critical in understanding the challenges and opportunities in respect of port funding.	Offshore Wind Delivery Task-force
2.	Consideration of a Strategic Investment Model for port infrastructure	Similar to what is currently being done in Scotland, a collaborative approach to understanding the most suitable investment strategy could be considered. The investment model would examine the specific port development plans and timelines alongside the various proposed projects to understand what may be best suited to serve each project and how developers could potentially share facilities. This may also provide a way for developers to help fund the port projects, as the risk will be reduced.	Department of Transport, Department of Expenditure and Reform
3.	Government engagement with ISIF to understand potential options to support ORE port projects.	GDG have engaged with ISIF to understand the possibility of the fund investing commercially to support the development of Irish ORE port infrastructure projects. The initial high-level discussions were promising with a clear indication that the wider economic impact of these investments is understood. It would be recommended that the Government engage directly with ISIF to explore the opportunities more fully and potentially consider options where grant funding could play a role alongside ISIF's commercial investment in supporting projects.	Department of Expenditure and Reform, Department of Finance
4.	Commitment to timely approval of key projects, including ORE port infrastructure and Phase 1 & 2 projects through the consenting system.	Following on from the recommendations of the WEI <i>National Ports Study</i> , it is recommended that key infrastructure projects are prioritised through the consenting process. At present, across the renewable energy industry, there is serious and growing concern at the state of the Irish consenting system for foreshore, planning, and MAC applications. This concern is having a direct effect on the ability of Ireland to attract, and retain, international investment for ORE. The Government approved consenting prioritisation for projects in the Irish maritime area in September 2022. However, the commitment to prioritisation must be matched with an increase in resourcing and tangibly improved decision timescales. Demonstrable improvements to the consenting system would build investor confidence in the Irish offshore wind market.	Department for Housing Local Government and Heritage, An Bord Pleanála, Maritime Area Regulatory Authority (once in existence)
5.	Update Ports Policy to remove prohibition of Exchequer funding for commercial ports.	The current Port's Policy follows on from the 2005 policy document which stated that the commercially run ports should receive no further Exchequer funding for infrastructure development [2]. Ireland's ports are critical for ensuring the continuing flow of trade in/out of the country and are essential in supporting the climate ambitions of the Climate Action Plan and Programme for Government. It is noted that Government funding for port infrastructure is not unusual across EU Member States. Whilst the study seeks to explore options beyond direct Exchequer funding, removing the blanket exclusion on	Department of Transport

		Government support for ports will allow for flexibility when considering potentially viable funding opportunities, including ERDF funding given the requirement for matched Government funding.	
6.	Consideration of ORE Port Infrastructure within the ERDF framework	<p>The ERDF is considered a potential option to help finance ORE port infrastructure projects. This was a common theme throughout the case studies and was highlighted by ESPO as a frequently used method for helping fund port infrastructure across Europe. This should be explored in full and the potential for part of the current allocation to be used to support port developments considered. Whilst the contribution from the ERDF itself may be relatively modest given the requirement for the current pot to fund projects between 2021-27 across several sectors and regions, the match-funding nature of the ERDF will double the contribution. ERDF funding would likely be most effective as part of a funding mix alongside potential grant funding from the State and other financial vehicles.</p> <p>It is noted that there is a prohibition on the overlapping of ERDF and CEF funding for ORE projects. Consequently, this may only be a viable funding solution for projects which are unsuccessful in obtaining CEF funding or those locations which are ineligible to apply for CEF funding.</p>	The Department of Public Expenditure and Reform, the Department of Education and Skills, and the Regional Assemblies
7.	Engage with EU State Aid legal specialists	<p>The GDG research seeks to give a high-level overview of the State Aid rules and the General Block Exemption Regulation in respect of port infrastructure. The case studies detail the opinion of the European Commission in respect of similar projects availing of public resources supporting infrastructure schemes. The case studies demonstrate how publicly funded port projects are possible within the State Aid Legal Framework. It is recommended that professional and specific legal advice is sought in relation to any potential methods of Government financial support for port infrastructure projects.</p> <p>As GDG understands, the Department of Enterprise, Trade and Employment is the national point of contact at EU level on State Aid policy.</p>	The Department of Enterprise, Trade and Employment

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