



GREENLINK - CONNECTING THE ENERGY TRANSITION

*The Greenlink Interconnector is the first privately funded interconnector in Europe and reached financial close in March 2022. Greenlink is a key piece of the energy transition story leading to further integration of national grids which will ultimately lead to consumer benefits, write **MICHAEL DE WITTE**, director, Energy Advisory & Project Finance, **NATHALIE LEMARCIS**, co-head London Energy Advisory & Project Finance from **SOCIETE GENERALE CORPORATE & INVESTMENT BANKING** and **JAMES O'REILLY**, CEO of Greenlink Interconnector Limited.*

Receiving financial close notification is always a relief after long months of structuring for what is the first of a new asset class, a privately funded interconnector. It also marks an important milestone for the construction of the project which is expected to last ca.34 months with the objective of being operational before the winter of 2024-2025 reinforcing security of supply for both the Irish and UK consumers.

The EU has set an interconnection capacity ratio of at least 15% by 2030 corresponding to the import capacity over EU countries' installed generation capacity. Whilst the UK is now outside of the EU, BEIS in the 2020 Energy White Paper committed to work with European partners to build 18GW of interconnector capacity.

THE PROJECT

The Greenlink Interconnector has been in development since 2013. The project is being developed by Greenlink Interconnector Limited, a sole purpose company fully owned by Partners Group.

Greenlink will link the Irish and British power systems with ca. 190km of direct current cables, including ca. 160km of subsea cables and ca. 30km of onshore cables from marine landing up to the respective converter

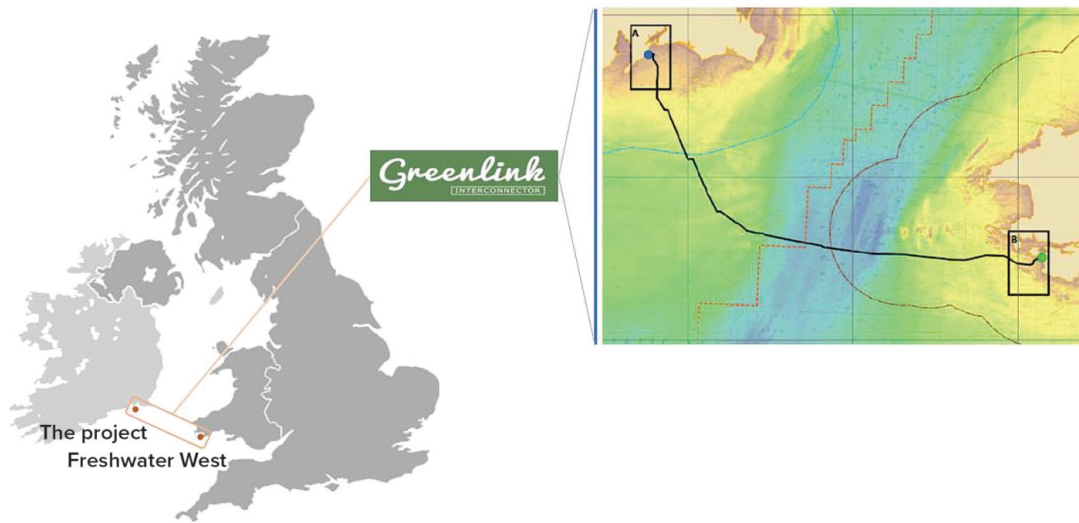
stations. Following a programme of submarine surveys, a preferred offshore route corridor of ca. 160km was confirmed between Baginbun Bay, Ireland and Freshwater West, Wales. The offshore cable corridor was selected to reduce the impact of a large area of sand waves in St. George's Channel, hence the curved shape of the cable route.

Greenlink will be a bi-directional power system capable of continuously transferring 504MW of power between the 220kV substation at Great Island, Ireland, and the 400kV substation at Pembroke, Wales UK, and vice versa. Greenlink Interconnector will use an HVDC system for the transmission of electrical

power between the British and Irish grids. This will be achieved by combining HVDC cables with a converter station at each end, to change alternating current to direct current, and vice versa. HVDC is used as an alternative to HVAC to efficiently transport high volumes of electricity over long distances, or when electricity is being transmitted underwater.

As part of the EPC process, functional specifications were issued to the market for tender in 2018, which led to the appointment of an EPC preferred bidder in April 2020 and the finalisation of technical, commercial, and

FIGURE 1 - THE LINK



scheduling aspects. In parallel the project continued developing in other areas such as environmental, planning and regulation.

In September 2021, following extensive negotiations with the preferred bidder, the EPC contract was signed between the parties, marking an important milestone in the development of Greenlink. The project opted to enter a single lump-sum, fixed-price EPC contract with a consortium made of Siemens Energy and Sumitomo Electric Industries for the full scope of works.

REVENUE PROFILE

While the project benefits from the support of the cap & floor regime, Greenlink's revenues are anticipated to be essentially merchant and to be primarily realised through electricity trading across national borders, which is also called congestion rent.

The fundamental value driver of these revenues is the pricing spread between the interconnected power markets, which is mainly driven by: (i) the power market fundamentals on either side of the cable, (ii) the structural attributes of the two systems in terms of generation mix and demand patterns, (iii) the way in which the markets are designed and regulated and (iv) the level of interconnection between the markets.

Greenlink, and traditionally other interconnectors, will be able to choose to monetise congestion rents by selling capacity rights either through forward contracting - ranging between multiple days to one year ahead of delivery - where they can lock in the revenues in advance of capacity usage, or through implicit day ahead and intra-day auctions, where the revenues will be decided by outturn hourly power prices in the day-ahead or intraday markets.

REGULATORY REGIME

The development of the project was initiated and progressed due to the compelling case for additional electricity interconnections between the UK and

Ireland as both countries plan for increased renewable capacities in their electricity production mix.

For the United Kingdom, there has been a resurgence in interest for additional cross-border capacity, and the Office of Gas and Electricity Markets ("Ofgem") recognised that interconnectors have long-term strategic value in balancing intermittent renewables output and maximising the efficient use of renewable resources.

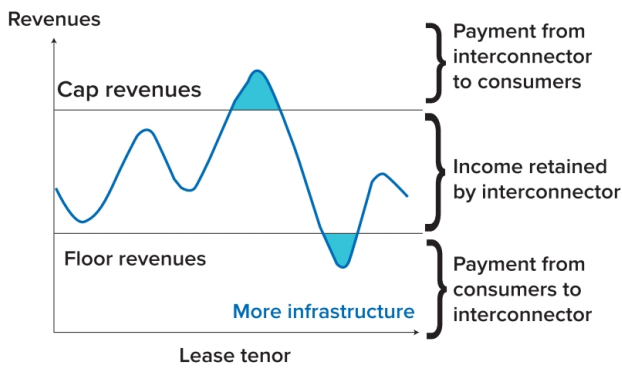
The Republic of Ireland market that is regulated by the Commission for Regulation of Utilities (CRU) is one of the EU Member States with the lowest expected share of interconnection capacity and has the target of adopting 80% renewable electricity by 2030. This makes a strong case to bring additional interconnection capacity to maintain security of supply.

Greenlink has worked closely with both regulators to secure similar cap and floor regimes in each jurisdiction that will underpin cashflows for the project through a revenue floor. The cap and floor Regime introduced by Ofgem in 2014 for both TSO and independent interconnector developers combines economic incentives and regulatory protections:

- Interconnector owners are exposed to a degree of merchant risk within the bounds of the cap and floor, thereby economically incentivising the asset owners
- The cap and floor regime provides for a minimum level of revenues, the floor, while revenues in excess of a set threshold, the cap, are to be returned to consumers. Any

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FIGURE 2 - CAP AND FLOOR



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Ofgem has recognised that the default regime would need to accommodate variations to enable private developers while enhancing the benefits for consumers. Greenlink submitted to Ofgem its requested variations specific to the project in February 2019. Following a public consultation in November 2019, Ofgem published its final decision on 6 May 2020 in respect of changes to the cap and floor regime to enable project finance solutions.

On 18 June 2021, these changes were reflected into the Greenlink electricity interconnector licence to include the Special Licence Conditions, which give effect to the UK cap and floor regime. In Ireland, CRU published its final decision in relation to the cap and floor at the end of September 2021 granting the project a first-of-kind regime for an interconnector in Ireland.

Based on its analysis, and further to the process for varying the standard cap & floor regime with Ofgem, the CRU decided to adopt an approach that provides a similar level of support but which is specific to the Irish market and Irish regulatory requirements.

THE FINANCING

The total project cost was in excess of €500m and debt was raised from eight institutions to support the financing. The financing package included a long-term loan and usual ancillary facilities for these types of financing as well as facilities specific to the regulatory regime.

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The bank pool composed of AIB, Societe Generale, Lloyds, Mizuho, Helaba, Siemens Bank, DZ Bank, and Caixa, cuts across traditional power project finance lenders and regulated assets liquidity providers as the project combines power market dynamics and the understanding of the cap & floor regime.

The narrative and the positioning of the financing in the market was aligned with the energy transition rationale for the project and this was very well received by the market in terms of competitiveness of pricing and structuring parameters such as cover ratios and tenor. The deal was significantly oversubscribed.

Given the 50/50 split in terms of capital cost, the debt amounts were split between euro and sterling tranches. The euro and sterling amounts for the financing do consider several other sizing parameters and foreign exchange impacts and as such they are not evenly split. The lenders were advised by Norton Rose Fulbright and A&L Goodbody as English and Irish Law advisors respectively. Greenlink was advised by Linklaters and Arthur Cox.

KEY CHALLENGES

- *Communication between regulators* – Given the different timelines between the two regulatory frameworks, both Ofgem and CRU have put in substantial efforts to align their respective understanding of what the regulatory regime could look like. Reaching financial close would not have been possible without the strong commitment of the regulators to the project.
- *Creating mutual understanding with the lenders* – This project being a pioneer, insertion of the interconnector story into the right narrative by referring to the appropriate building blocks of the risk allocation was key in getting the lenders over the line in terms of risk approvals. As a result, Q&A sessions on these transactions were probably more extensive and detailed than on other recent transactions which carried the benefit of precedent deals
- *Alignment of regulatory and financing processes* – Financial close on this project has only been made possible by reaching a convergence point between lenders, the Irish and UK regulators and the EPC. The processes were run in parallel and while bringing the banks along with us in our journey with the regulators, we also needed to give enough due diligence to de-risk the execution of the financing. Some elements such as the Irish licence, were available before financial close only. Simultaneously, Greenlink needed to firm up the construction timeline and costs.

A LANDMARK TRANSACTION

Interconnectors are key for accommodating growing renewable capacity, allowing fluctuations in renewables generation to be balanced out across markets, hence more efficiently. As such, the project will ensure security of supply and potential smoothing of spikes across the UK and Irish grids. Whilst over the last ten years few interconnectors have been built, Greenlink shows the case for private investment underpinned by supportive regulatory frameworks and sets a very positive precedent. ■