

Corporate Off-taking: A Wind Developers Perspective

CIARÁN O'BRIEN

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One of the **largest public pure-play renewable** businesses globally

100 years of experience in power generation

Full operating, development and power marketing capabilities

Over **2,000** operating employees

\$40 Billion

POWER ASSETS



843 power generating facilities

16,300

MEGAWATTS OF CAPACITY



24 markets in 14 countries

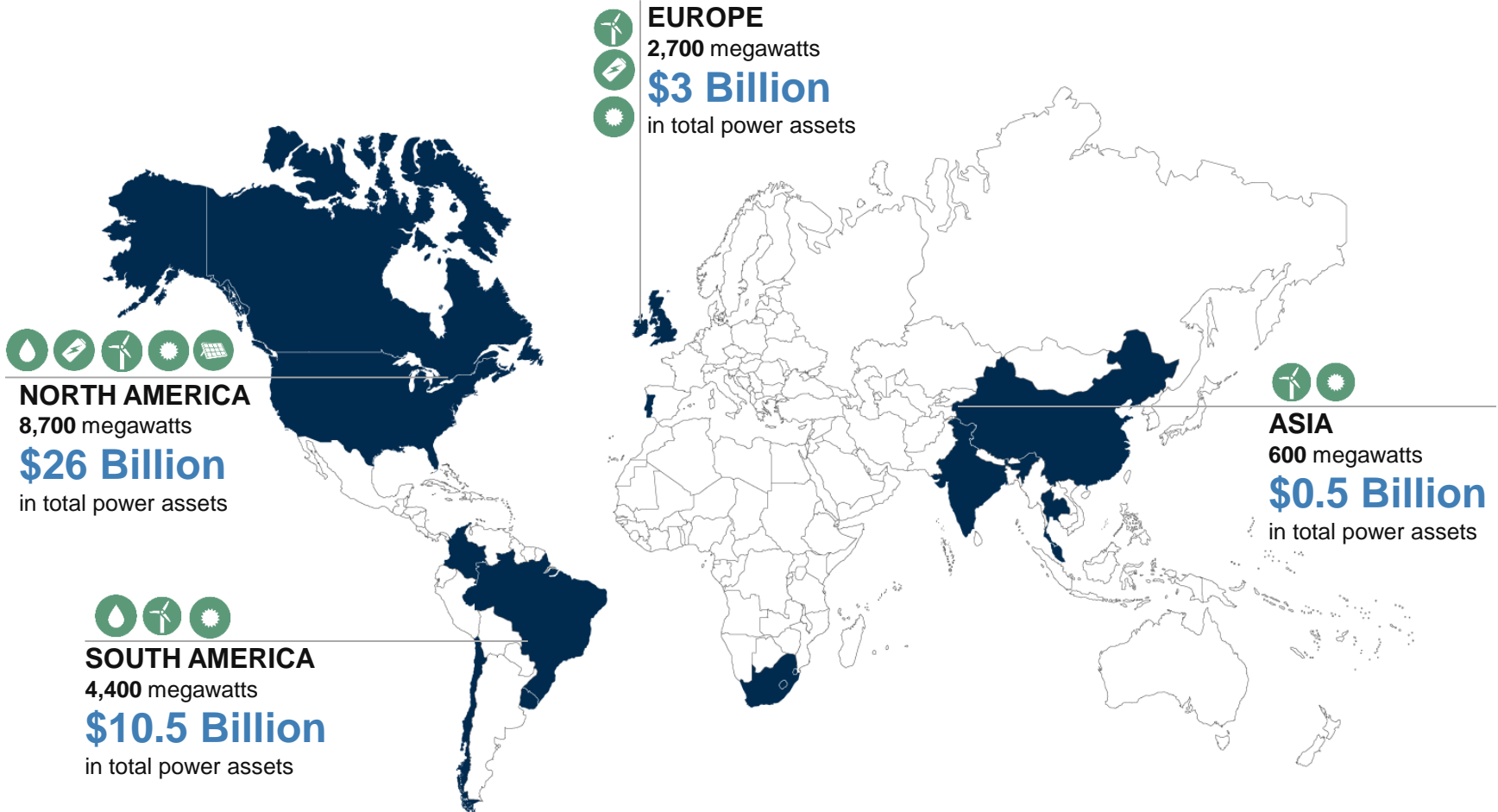
82%

HYDROELECTRIC GENERATION



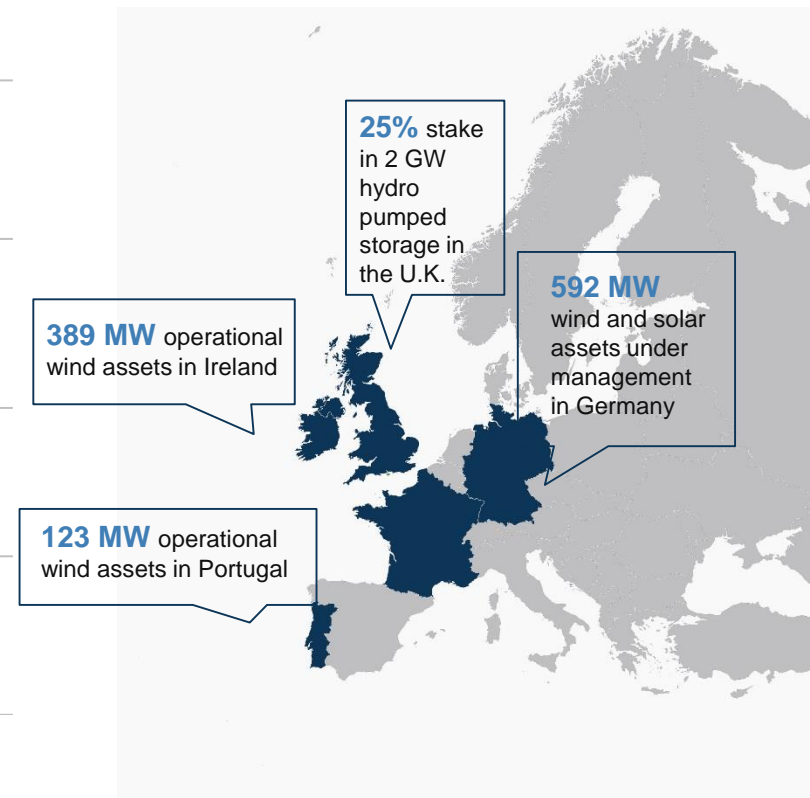
Situated on 81 river systems

We have **integrated operating platforms** on **four continents** with local operating and power marketing expertise



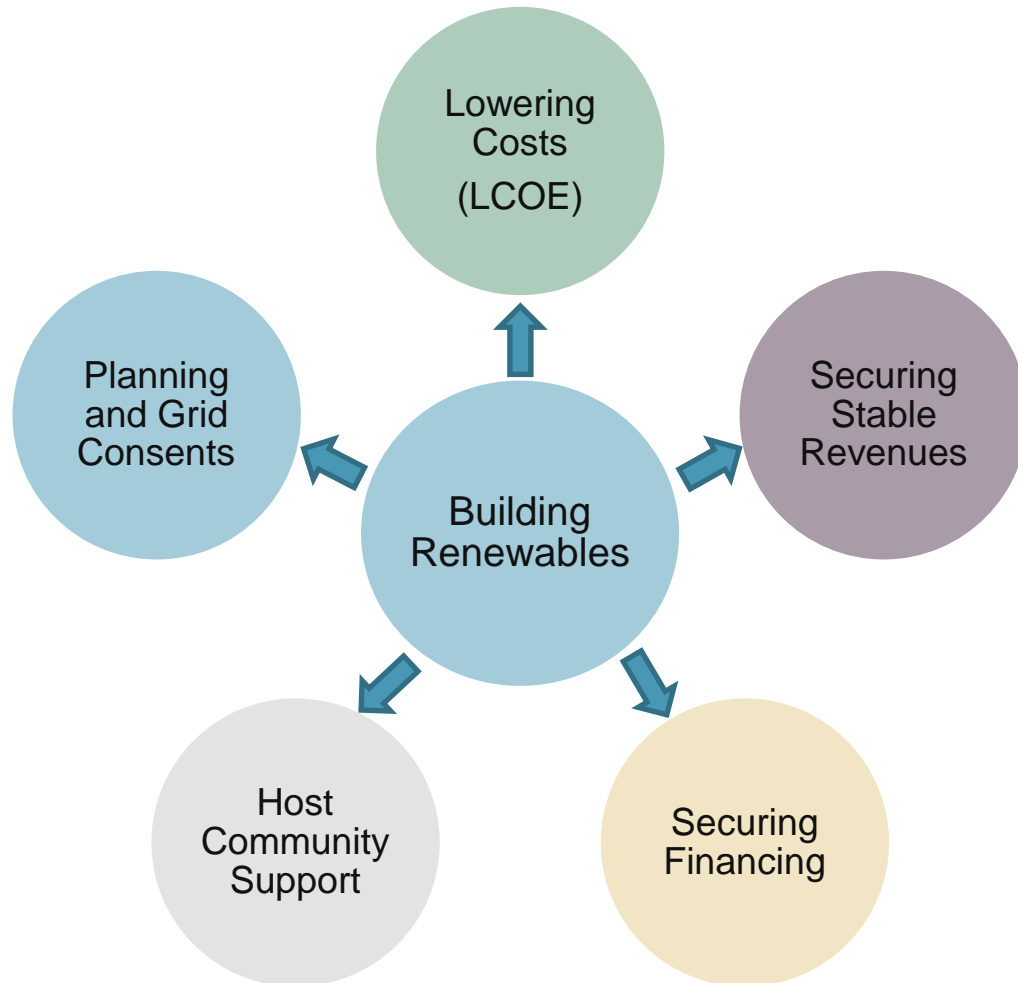
Since entering the market, Brookfield Renewable in Europe has experienced significant growth

- ✓ **Acquired wind businesses in Ireland, Portugal and Scotland**
 - ~500MW operational wind capacity
- ✓ **Built out team and capabilities across operations**
 - A team of over 100 professionals across jurisdictions, offering entire spectrum of operational capabilities
- ✓ **Acquired 25% stake in First Hydro a strategic European hydro**
 - Brookfield's first acquisition of hydro on the continent
- ✓ **Completed the acquisition of CEE business in Germany**
 - Strategic presence in key European markets
- ✓ **Developing Ireland & U.K greenfield pipeline**
 - 48 MW currently in construction across two wind farms in Ireland and Scotland



- **Agenda:**
 - **Developing Wind Generation Projects in Ireland**
 - **The Role of Stable Revenues in delivering Renewable Projects**
 - **Onshore Wind is becoming a compelling offering for Buyers**
 - **How Corporate Off-taking can help deliver additional Wind Generation**

Developing renewable generation can be grouped into a number of different activities; beginning with the support of a host community to achieving planning and grid and making a project viable by lowering costs, securing stable revenues and securing financing.

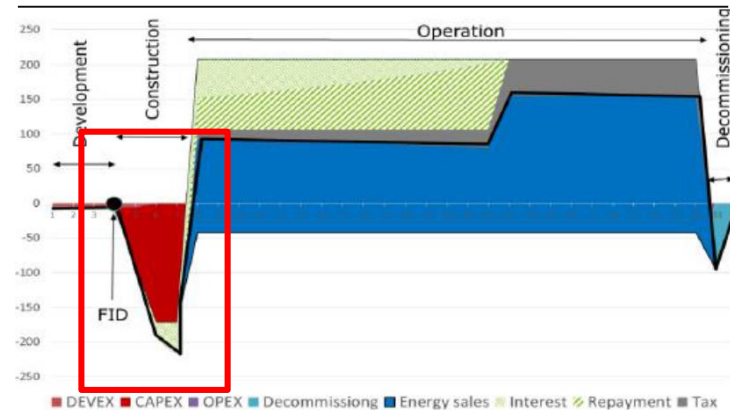


Renewable generators need long term stable cash flows to attract investment and financing to make new build renewable projects viable.

- Renewable generation projects have a large up front capital expenditure
- Security around stable cash flows is required to obtain financing and mitigate the exposure to volatile energy prices
- Stability of revenues, length of contract and quality of counterparty are key elements of what is considered by banks credit committees
- Ireland has been very successful in providing investor certainty, keeping WACC competitive and attracting renewable investment through the REFIT schemes

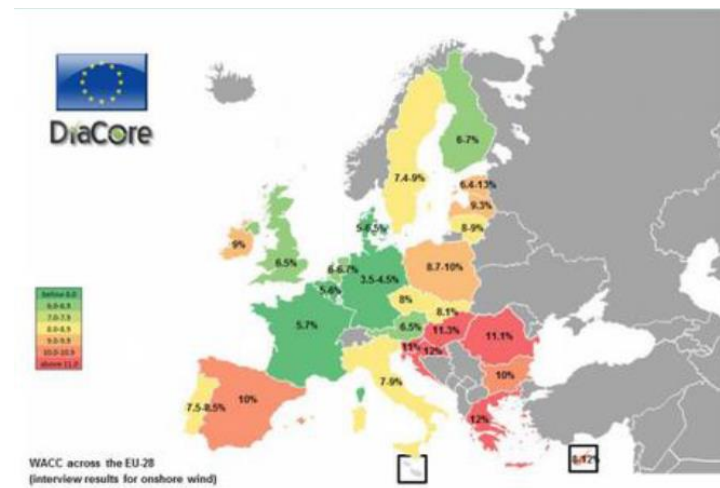
Cash Flow for a Renewable Project

Source: Diacore Project, 2016



WACC for Onshore Wind Turbines Across EU

Source: Diacore Project, 2016

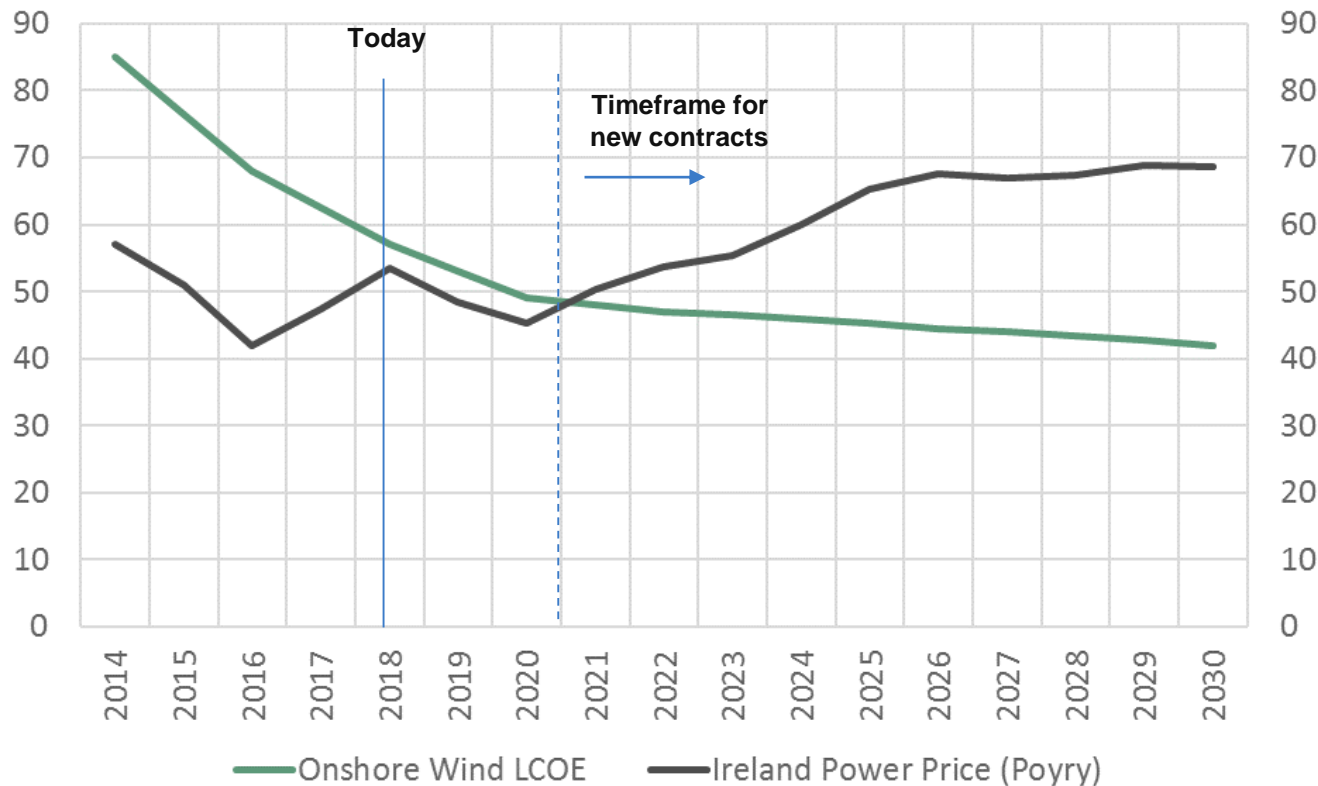


As the LCOE of onshore wind continues to drop it is becoming increasingly attractive to energy consumers seeking to fix their costs for 10 – 15 years

- De-risked onshore wind approaching a tipping point
 - **But revenue stabilization / securing a price floor remains key for financing**

Onshore Wind LCOE* vs Market Prices (€/MWh)

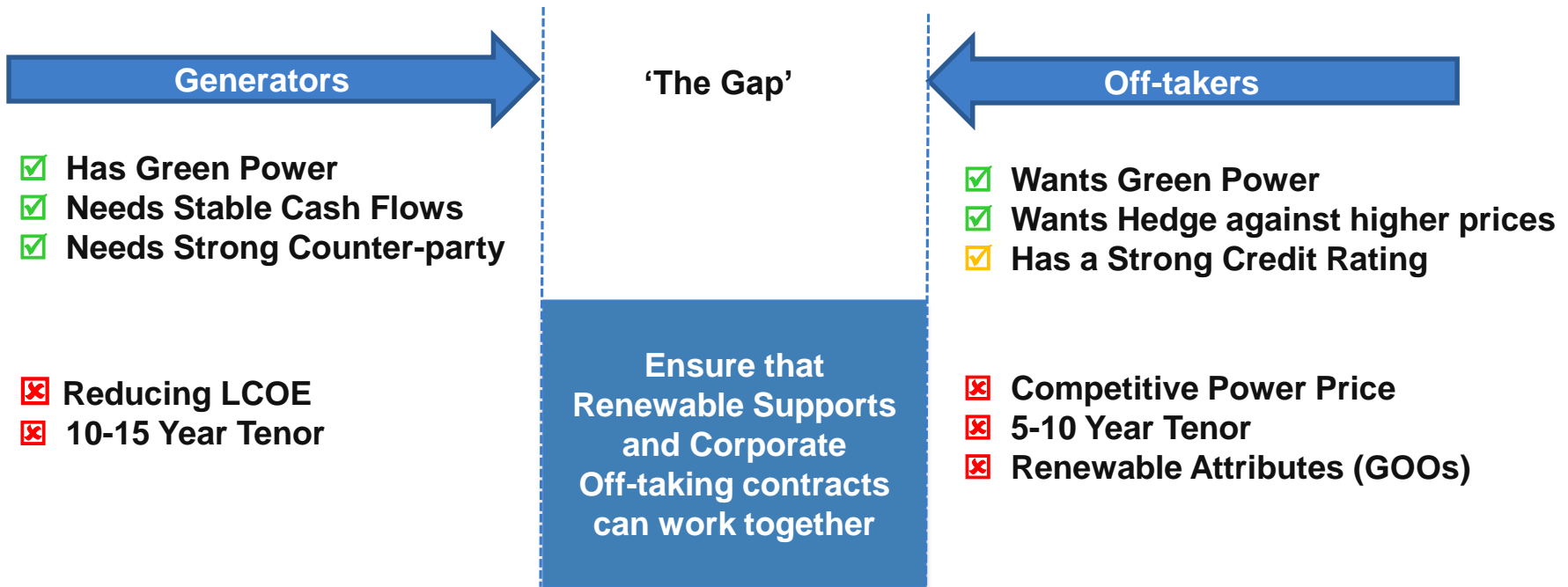
Source: BNEF



* Assumes current capex trends to continental European benchmarks; capacity factors based on BNEF forecast
Sources: BNEF, IEA Wind, Poyry, Brookfield

Converging Corporate PPAs with the RESS auctions offers the opportunity to reduce costs to the PSO.

- **Markets for Corporate PPAs have developed in other jurisdictions**
 - Corporate PPAs are being executed in other countries such as the US and the Nordics
 - However, in these markets, generators benefit from support that brings down the cost of energy such as tax incentives and renewable certificates
- **Due to the higher LCOE in Ireland, there is a gap between renewables generators and off-takers**
 - Bridging the gap will attract corporates to new build renewables and help to offset consumer-supported costs



- **Key Take Aways:**

- Corporate PPAs offer a good opportunity to reduce costs to the PSO
- Ireland is in a global market for Corporate PPAs and without measures to remove barriers the opportunity may be missed
- If Renewable Supports and Corporate PPAs can work together, the costs to consumers of new build renewables can be reduced