OFATE CONFERENCE - 05 MARCH 2024

Conséquences de la réforme du marché européen de l'électricité sur le financement des éoliennes terrestres

Green Giraffe Advisory

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European electricity market reform: impact on onshore wind financing

Green Giraffe Advisory

Emilie Quintin

PROJECT MANAGER

Selected projects

- Deutsche Bucht | refi | 252 MW | DE | offshore
- St Brieuc | 500 MW | FR | offshore
- Taza | 87 MW | MA | onshore
- OW | tender | 900 MW | DE | offshore
- Rentel | 309 MW | BE | offshore

Emilie has 8+ years of experience in energy transition

Throughout the years, she forged in particular an expertise in the offshore wind sector. She worked on the financing of the Rentel offshore wind project (309 MW, BE, 2016), then supported a bidder on the 2017 offshore wind tender in Germany (900 MW, DE, 2017), and was involved in an equity sell-side mandate for offshore wind projects in Japan. In 2019, she managed the successful sale by RES of its 22.5% stake in the 500 MW St Brieuc project in France (500 MW, FR, 2019), and later managed the refinancing of the non-recourse senior debt of the operational Deutsche Bucht project in Germany (252 MW, DE, 2021). She is currently active on a development fundraising for a portfolio of several floating offshore wind farms in EU

Emilie has also been active in transactions focused on other renewable technologies (solar, onshore wind, battery storage): managing the sale of a renewable energy development platform in north and west Africa (1,200+ MW, 2021), the debt refinancing of an onshore wind farm portfolio in France (42 MW, FR, 2022) and more recently managing a large-scale battery buy-side project in Europe (300+ MW, 2023)

Before joining Green Giraffe Advisory, she worked at Engie in the former Energy Services branch where she was involved in several M&A deals in Europe and Australia

Emilie holds an MSc in mechanical engineering from the Université Catholique de Louvain (Belgium) and an MSc in engineering from IFP School (ENSPM) in Paris

With our pioneering and independent advice, we help our clients accelerate the energy transition at scale

More than **EUR 45 bn** funding raised over **14 yrs** of specialised advisory

110+ professionals globally in 10 offices in 10 countries on 5 different continents

310+ transactions or projects
267+ GW total capacity

A global and independent financial advisory firm launched in 2010

- Part of the Green Giraffe Group, providing finance solutions for capital intensive renewable projects and energy transition initiatives
- Pioneer from the early days and today the largest financial advisor specialised in the energy transition
- One integrated team – acting on a global scale

An ambition to provide high quality, specialised advice

- Proven track record in renewable and energy transition technologies
- High value-added from our specialised expertise on all our missions
- We build long-term relationships with our clients

Green Giraffe Advisory follows a simple strategy

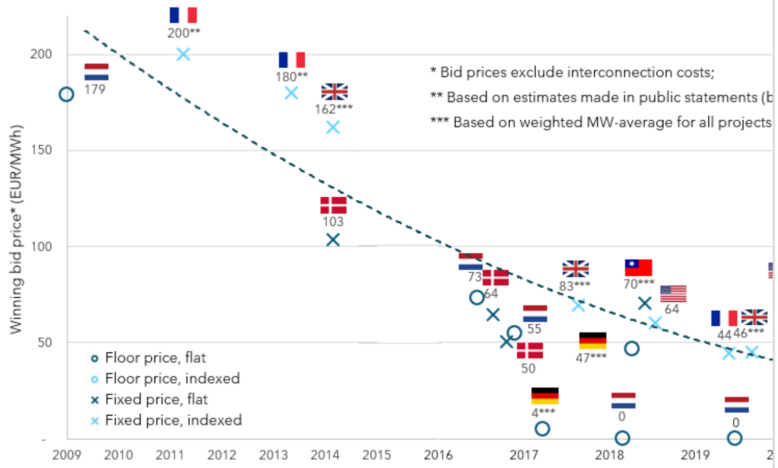
- Provide a holistic and multi-disciplinary approach, coupling sector-specific tasks and traditional debt or M&A advisory services
- We are connected locally and globally to industry expertise, and we bring this pool of knowledge to you
- We are committed to the industry, we believe in the countries we are active in, and we have the skillset it takes to **get deals done**

For over a decade, Green Giraffe has been advocating for long-term support mechanisms for renewables

Extract slides from Green Giraffe last intervention at OFATE conference, in October 2022
"European OW, dependency on mid/long-term support mechanisms?"

2. EUROPEAN OW TENDERS: PRICE DROPS IN THE PAST

Prices for OW electricity have fallen consistently in the past



3. EUROPEAN OW, DEPENDENCY ON MID/LONG-TERM SUPPORT MECHANISMS?

What is the most desirable auction regime design from society's perspective?

Financing costs in a system with more merchant risk will be higher

- They are the most important driver of LCOE and crucial for securing cheap green power in a sustainable way
- Increases in financing costs result in lower leverage, which causes LCOE to rise due to equity being more expensive than debt
- With auction strike prices almost in every European case being close to the average wholesale market price, governments providing a degree of revenue visibility does not only guarantee bankability of the projects and involvement of the private sector, but also helps governments stabilise electricity prices
- PPAs mean value leakage as fixed prices come at a discount and can be seen as an expensive substitute for CfDs

Overall system costs will be lower in a well structured fixed CfD regime that also allows for "skimming" to the benefit of the government/electricity consumers

Also, including the permit and grid connection in the tender makes a huge difference

- Development equity is the most expensive and has a direct material impact on final LCOE
- This will allow projects to accelerate drastically the development phase, hence to be operational sooner and governments to meet their timeline targets

Long-term fixed price regimes ultimately benefit all parties, including end-users and governments

The EU is reshaping its electricity market design to ensure a sustainable & independant energy supply

The reform aims at lowering energy bills and reducing dependency on fossil fuel prices while boosting clean transition

- It comes as a long-term response to the energy crisis experienced in 2022 that followed Russia's invasion of Ukraine

Vigorous political debates finally led to a provisional agreement end 2023

- The reform was presented by EU Commission in March 2023, in response to a request by EU leaders for increased EU energy security
- A provisional political agreement was reached by EU Council and EU Parliament in December 2023

The reform revolves around three main pillars

Building of a renewables-based energy system

- Facilitation of integration of renewables into the EU energy system, and enhancement of predictability for electricity generation
- This will support achieving the EU targets (45% renewable energy by 2030, EU climate-neutral by 2050)

Better protected and empowered consumers

- Wider choice of contracts for the consumers and clearer information: allow to opt for long-term contracts, or benefit from price variability if wished
- Reduced risk of supplier failure, and access to renewable electricity produced locally (surplus by neighbors)

More price stability and predictability for producers and consumers

- Two-way CfDs to become mandatory for public funded projects on both renewable and nuclear energy
- Promotion of long-term PPAs, with notably, guarantee schemes to be implemented by the Member States

Source: European Commission, European Council

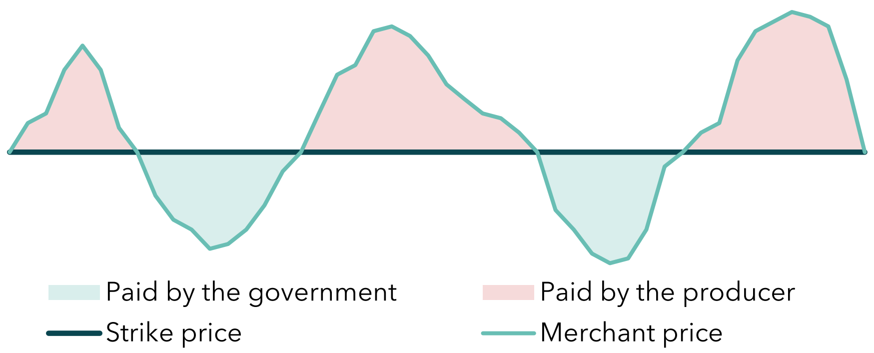
The reforms will help avoid future electricity price shocks

Long-term two-way CfDs (or equiv.) will become the norm for supporting renewable energy investments

A two-sided CfD provides revenue stability

- Under a two-sided CfD, project developers have the comfort that they will receive a guaranteed income equal to the CfD strike price for the power generated by their project
- In addition to being an (economic) **support mechanism**, the CfD will act as a **hedging product** and enhance bankability and investment of the underlying asset
  - Mechanisms structured around State-backed long-term stable prices will enhance bankability, and will enhance investment by attracting low-cost capital, which will contribute to meeting the massive EU deployment targets
  - Additionally, mechanisms with long-term fixed prices will help contribute stabilising electricity market prices by allowing less sensitivity to the merit order (cf previous slide)

Simplified illustration of two-way CfD



Long-term fixed price regimes ultimately benefit all parties, including end-users and governments

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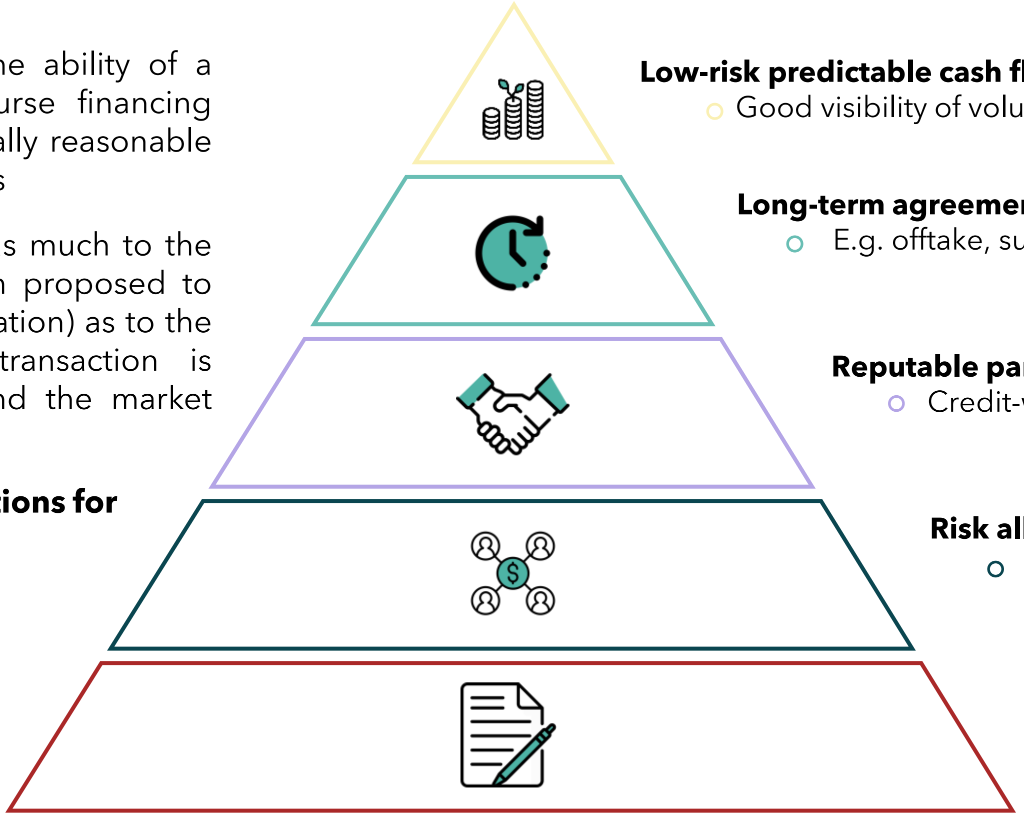
Key structuring considerations to make a project bankable include long-term fixed price agreements

"Bankability" describes the ability of a project to raise non-recourse financing from lenders on commercially reasonable terms for the project owners

Such bankability is linked as much to the structure of the transaction proposed to potential lenders (risk allocation) as to the process by which the transaction is brought to the market, and the market context when that happens

Key structuring considerations for bankability are as follows



Low-risk predictable cash flows
- Good visibility of volume and price

Long-term agreements
- E.g. offtake, supply and O&M contracts

Reputable parties
- Credit-worthy companies in stable countries

Risk allocation
- E.g. insurance, warranties, interface risk

Enforceable contracts
- Contracts are only valuable if enforceable

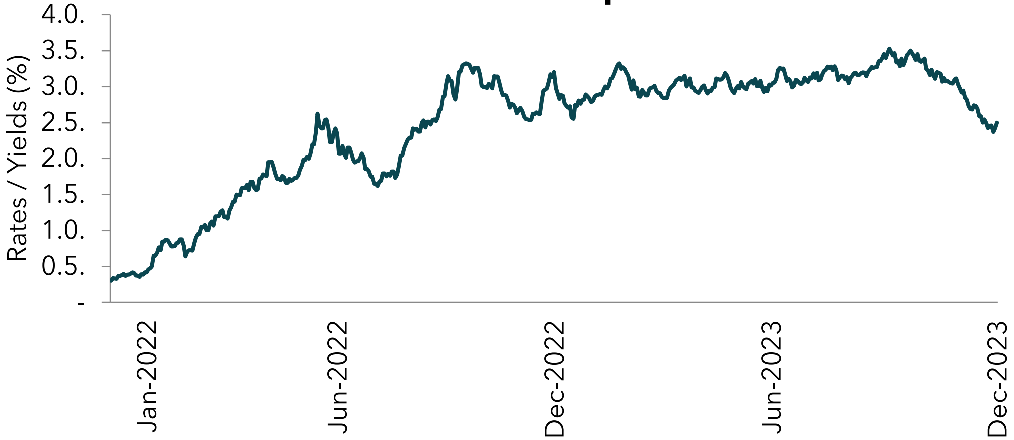
Long-term fixed price agreements will enhance bankability and allow for lower financing costs

The debt market has been moving and will likely settle on a higher cost base in the medium/long term

After 2 years of increasing cost of capital, driven by the European central bank rate hikes to fight inflation, the macro-economic environment is changing

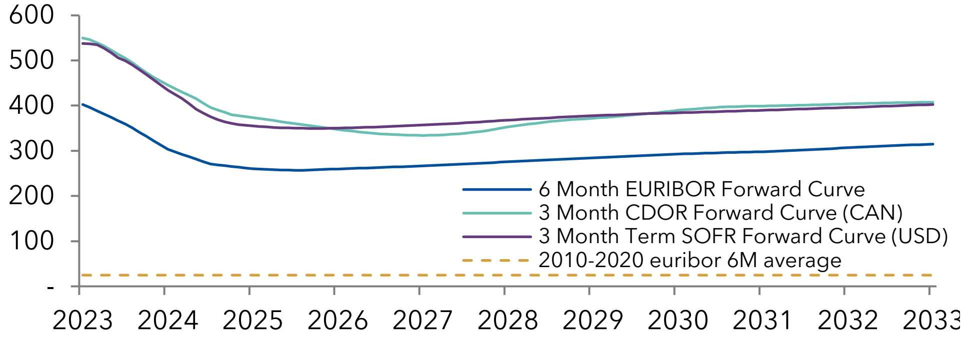
- Liquidity remains available for renewables project financing, although cost of debt will remain higher than the pre-covid era
- Going forward, although debt margins are not expected not evolve significantly, base rates and the underlying swap rates are expected to decrease in the medium term and trend up again over the longer term. They will likely remain at higher levels than pre-crisis

EUR 10Y swaps



Source: Blue Gamma, as of 31 December 2023

Forward curve vs. pre covid average (bps)



Source : Chatham Financial, November 2023

Broader market context is to be kept in mind as well

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