

Linklaters

Offshore wind in Europe

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In conjunction with

Wierholm



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Introduction

Offshore wind in Europe currently is facing a number of key challenges, ranging from continued supply chain constraints and inflationary impacts through to regulatory regimes no longer always providing the required level of support to crowd in sufficient capital in an increasingly global and competitive market for offshore wind. However, there remains an unquestionable need for an acceleration in the deployment of renewable generation capacity in order to meet the world's net zero objectives, and offshore wind remains set to play a central role in helping to deliver this essential policy objective.

Our report looks at the main regulatory, policy and market developments in key markets in Europe, as well as the challenges and opportunities facing the offshore wind industry globally.

See [here](#) for our Asia Pacific offshore wind report, which provides a complementary overview of the status of the offshore wind market in a number of key Asia Pacific jurisdictions.



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This publication looks at the main regulatory, policy and market developments in key markets in Europe.



Overview

Global market snapshot

Supply chain

The supply chain for offshore wind continues to be affected by limited manufacturing capacity, price volatility for key commodities such as steel, copper, nickel and fuel and the logistics challenge associated with ever-increasing turbine sizes (including transportation options and vessel availability for offshore installation campaigns).

The industry also continues to express concerns that the deliverability of countries' offshore wind targets may be constrained by the availability of manufacturing slots and appropriate vessels and the reliability and robustness of the supply chain more generally.

These factors are compounded by the fact that in many jurisdictions associated infrastructure such as ports require additional investment to ensure readiness for offshore wind deployment.

In addition, the recent construction issues recently experienced on a number of offshore wind farms around the world have reminded the supply chain (and investors alike) of the inherent risks associated with projects of this nature, with the result that the supply chain is generally either seeking to transfer more risk to employers or pricing risks on a much more conservative basis.

Subsidy wars

One of the areas to watch over the coming months and years will be the impact of regulatory policy on the global offshore wind market: in particular, the impact of the US Inflation Reduction Act which is seeking to incentivise US domestic manufacturing capability in support of its renewable energy goals, and the EU's response in the Net Zero Industry Act. See our related articles [here](#) and [here](#) on these regulatory developments.

The extent to which developers, financiers and the supply chain alike respond to these incentives by, for example, developing projects or relocating manufacturing facilities to the US remains to be seen.

Coupled with this is the fact that domestic subsidy or support mechanisms for offshore wind increasingly require developers to evidence local content (such as the UK's supply chain requirements in the Contract for Difference ("CfD")) and/or to show implementation of sustainability measures throughout the supply chain (for example, the push in some jurisdictions to include non-price factors in support mechanisms such as the sustainability of the supply chain).

This adds to an increasingly complex supply chain picture for offshore wind developers. The involvement of more inexperienced local suppliers could also potentially result in greater supply chain fragility and, with it, an increased risk of delays and/or cost impacts to projects.

Multi-contract construction approach

Offshore wind developers continue to adopt a multi-contract approach to construction. As the market matures, construction risk is manifesting in some projects, focusing lenders', investors' and developers' attention on management of these risks. Skilled resource to manage these risks remains a key focus for the industry.

The industry may move towards greater risk-sharing in its contracting strategy (such as the use of target cost mechanisms) or a more standardised approach to contracting in order to mitigate some of the risks of a multi-contract approach and constrained supply chain as discussed above.

Planning and grid

Cumbersome planning regimes, conflicting government policies and a constrained grid remain an issue in a number of jurisdictions. Governments throughout Europe are actively seeking to overcome planning and grid delays in order to speed up the deployment of offshore wind.

In mature markets, an increasingly crowded seabed (and onshore transmission network) requires active management by governments to minimise interference between projects, avoid disputes and reduce delays to project implementation.

Declining subsidies in mature markets

Mature markets for offshore wind are grappling with expectations for continued price reduction against the backdrop of the supply chain and inflationary challenges described above. The UK Government continues to review the CfD terms and structure to ensure that the CfD remains a support and not an obstacle for investment in offshore wind.

Against this backdrop, developers are increasingly looking to alternatives to long-term government subsidies for offshore wind. The Corporate Power Purchase Agreement ("CPPA") market is continuing to grow rapidly in Europe and project finance lenders and investors may also be increasingly willing to consider an element of merchant power price exposure for offshore wind projects.

Floating offshore wind

Floating offshore wind offers an exciting new frontier for the market but also poses its own challenges given the nascent stage of deployment at scale, limited supply chain capacity and wide variety of technology types under consideration by developers.

It's not all bad news!

However, it's not all bad news for the global offshore wind industry!

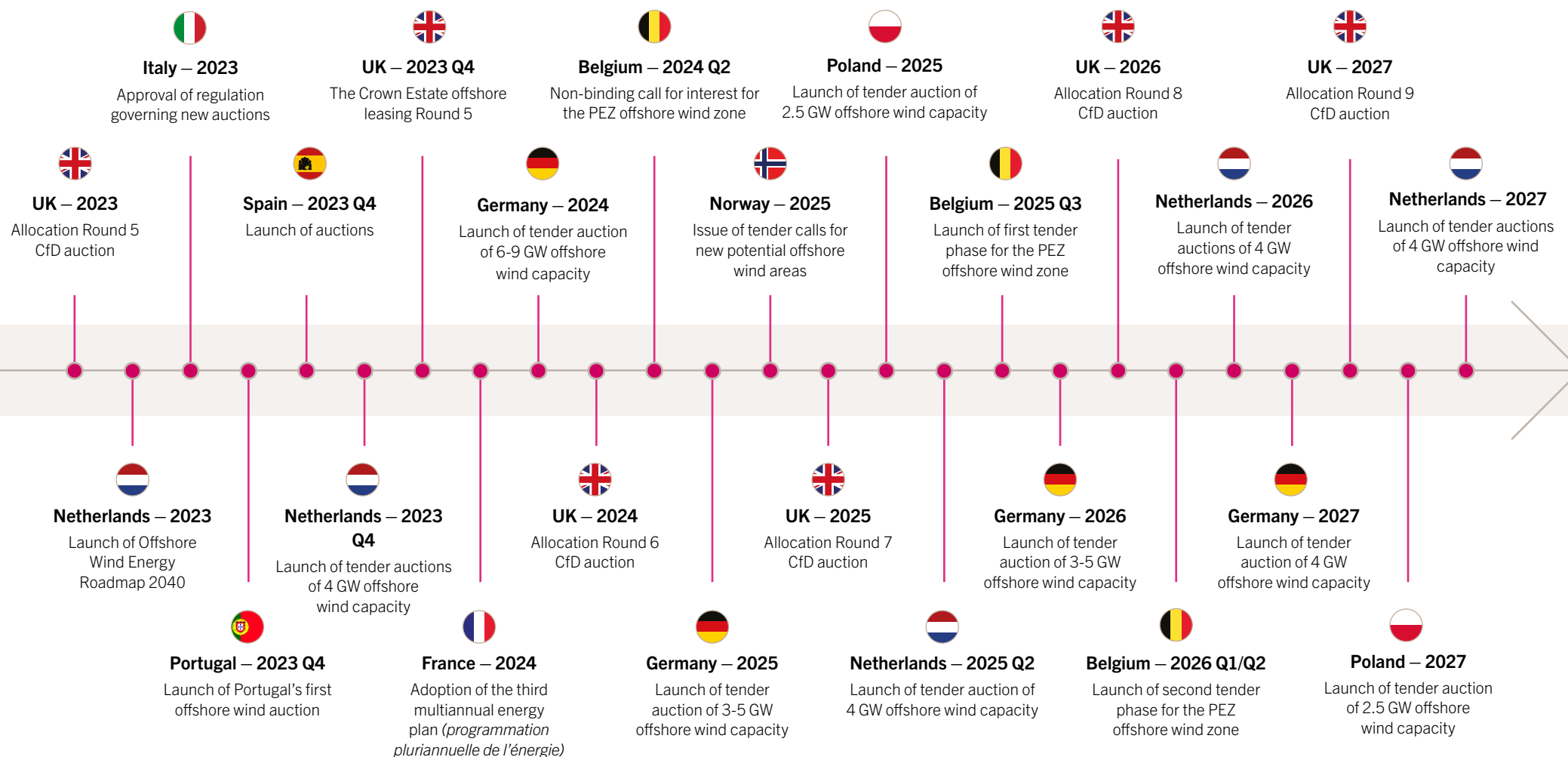
The march to net zero requires a huge increase in electrification, and offshore wind is integral to this.

Commercial bank liquidity remains high for offshore wind projects despite recent increases in the cost of funding. Strong M&A activity, including in early development stage offshore wind projects, is evidence of continuing strong investor appetite for these assets. There continues to be sufficient capital ready to be deployed for well-structured offshore wind projects globally.

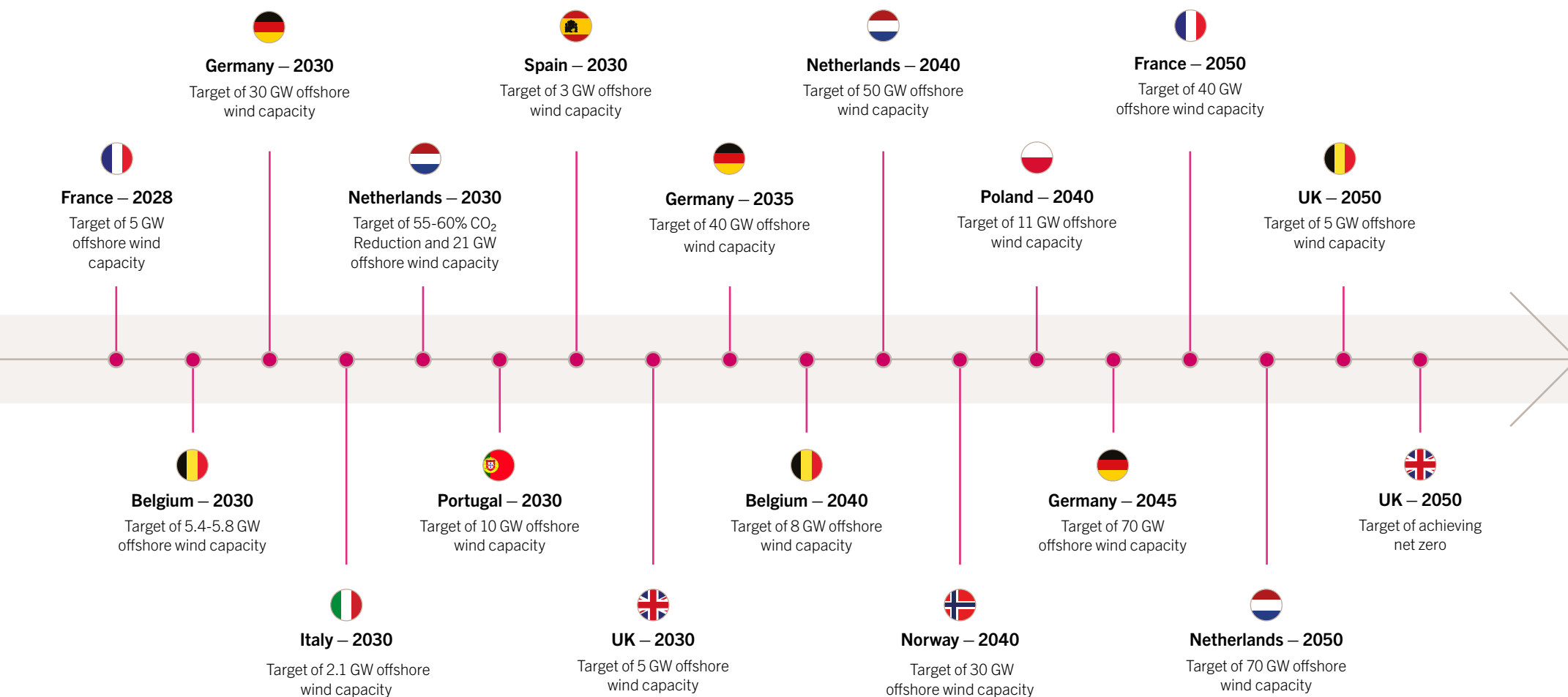
Against this backdrop, a number of European jurisdictions have announced upcoming tenders for offshore wind.



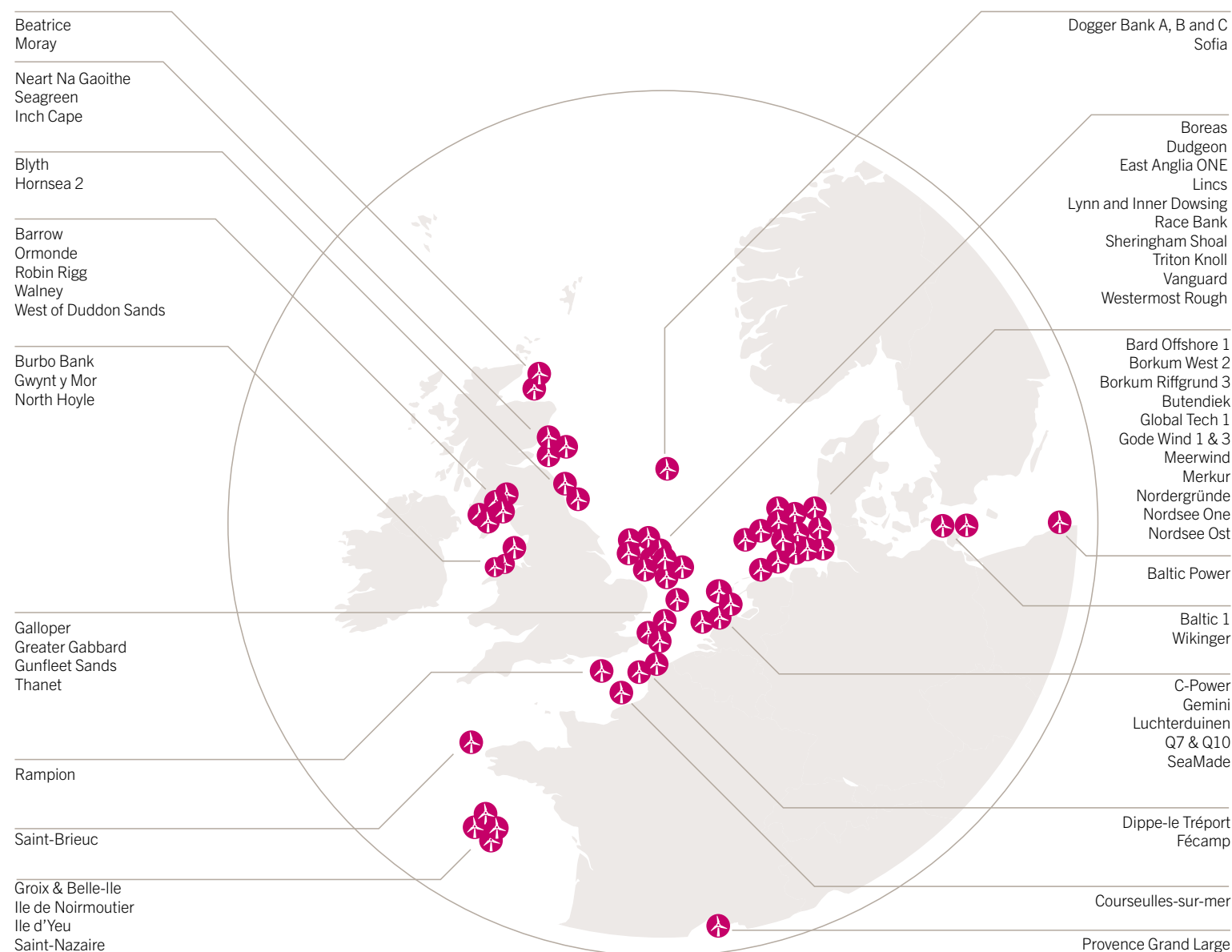
Auctions and announcements timeline:



Capacity target timeline:



Linklaters' European Offshore Wind Expertise





Belgium



Belgium

Background and timeline

The federal Electricity Law allows the Belgian Government to organise competitive tenders to issue new domain concessions for offshore wind production with a maximum term of 40 years (including the construction, operation and decommissioning phase). On 22 May 2019, the marine spatial plan for the period 2020-2026 was approved, providing for a new offshore wind area in the northeast of the Belgian North Sea (the “Princess Elizabeth Zone” or “PEZ”), subdivided into three zones (“Noordhinder North”, “Noordhinder South” and “Fairybank”).

In 2021, the federal Belgian Government confirmed plans to increase Belgium’s offshore wind capacity by 3.15 – 3.5 GW, to be realised within the PEZ and connected to an energy island in the North Sea (which will contain the extended “Modular Offshore Grid” or “MOG II” – see below). The PEZ was split into three lots (700 MW maximum installed capacity for the first lot and between 1,255 – 1,400 MW maximum installed capacity for each of the next two lots), to be developed in two phases.

On 28 April 2023, the Belgian Government reached agreement in principle on the tender criteria for the new offshore wind concessions, including a support mechanism based on 2-way CfDs. This remains to be enacted into various legal implementation instruments (royal and ministerial decrees) and possibly subject to EU state aid approval.

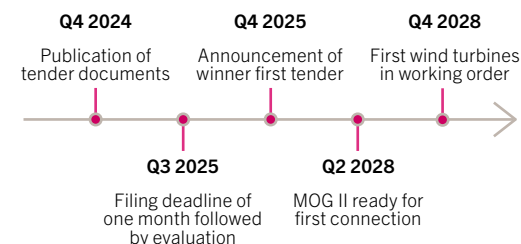
During a preparatory phase that has already kicked off, the legal implementation framework is being put in place, state aid approval is being sought (if needed), preliminary desktop and field studies are being carried out and the required permits and authorisations are being obtained by the federal administration.

The preparatory phase concludes with the publication of all legal implementation acts and tender packages and will be followed by the tender and construction phase (with a separate tender process for each lot/wind project, divided into two phases). For each tender, bidders will have nine months to prepare and submit their bids, followed by a three to six-month evaluation period for the Federal Public Service for the Economy (“FPS Economy”) to assess the submissions and designate the winners. From the announcement of the successful bidder, financial close must be achieved, and the entire wind project must be built and fully operational within 48 months. Subject to a decree establishing the final tender and permit criteria, bidders can propose that the sites be either fixed bottom or floating.

Timing remains imprecise preliminary at this stage and subject to a number of uncertainties. According to current timelines published by the Belgian Government, the preparatory phase is meant to be completed by Q4 2024, following which the tender packages (for the first tender phase in relation to lot 1) will be published (with a non binding call for interest

taking place already in Q2 2024, during the last stage of the preparatory phase). If this timeline is adhered to, bids in the first tender phase (lot 1) will be submitted in Q3 2025, with the announcement of the winners in Q4 2025 or Q1 2026 (depending on whether the FPS Economy takes three or six months for its evaluation). The first wind project (lot 1) would then need to be fully commissioned and connected to MOG II and Ventilus by Q4 2028. The second tender phase (for lots 2 and 3) would be launched at the beginning of 2026 in order to achieve commissioning and connection to MOG II and Boucle du Hainaut by the end of 2030.

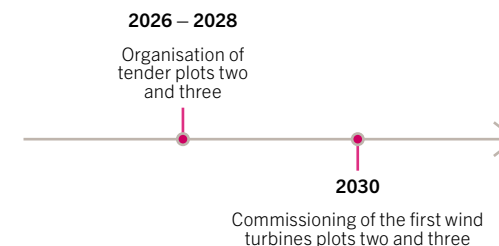
Timing tender Lots 1



* Permit Ventilus = scheduled for Q1 2025

** RD commissioning of MOG II = scheduled for Q2 2025

Timing tender Lots 2 and 3





Tender criteria and support mechanism

The competitive tender approach, whereby bidders vie for a domain concession mostly on price (ie, the strike price offered for a 2-way CfD with a 20-year term), differs from that used for the first offshore wind phase where subsidy levels were set in advance and occasionally renegotiated between the Belgian Government and the sector, often cutting developers' profitability. The new approach, along with a few other innovations (see below), should provide more certainty to investors in a market where wholesale power prices remain unpredictable.

The tender process, conditions and award procedure have yet to be established by Royal Decree (the "RD Tender"), and will be based, amongst other things, on the following principles set out in the Electricity Law:

- > Concessions will be awarded to the winning bidder (based on objective, non discriminatory and transparent criteria, taking into account the amount of Belgian Government subsidies required) simultaneously with the issuance of the required permits and authorisations. This means all the required environmental and other studies, including for MOG II, will be completed by the Belgian Government and the transmission system operator (Elia) in consultation with the "CREG". The concessions will then be awarded as a "package" with all the permits and authorisations included, similar to how offshore wind concessions are tendered in the Netherlands. Together with the compensation mechanism for delays in the completion or unavailability of MOG II (see below), this new approach should allow the Belgian Government to drive down the price.
- > Bidders will be subject to admissibility criteria, including on their technical, organisational, financial and professional capacity.
- > Winning bidders will enter into an agreement with the Belgian Government, setting out the parties' rights and obligations.

- > There will be rules, amongst other things, on the transfer and withdrawal of concessions, the start, duration and different phases of each concession, ancillary activities that can be developed, financial securities to be provided and civil participation initiatives that can be taken.
- > Winning bidders can benefit from support through a mechanism whereby subsidy levels will be based on the outcome of the competitive tender, except where the outcome of the tender procedure is a zero or negative bid (ie, where a bidder is prepared to pay the Belgian Government for the concession).
- > Selected bidders can renounce their concessions, subject to payment of a renouncement compensation.

On 28 April 2023, the Belgian Government set out the general tender (admissibility and award) criteria to be further developed in the RD Tender. The criteria has been guided by the concern to maximise social welfare benefits, amongst other things by (i) ensuring the highest possible injection of "renewable" energy into the grid; (ii) limiting risk (and therefore cost) for investors while avoiding windfall profits (through 2-way CfDs); (iii) keeping the energy prices low for companies and household consumers (amongst other things through the possibility of combining CfDs with PPAs – see below); (iv) enabling citizen participation; and (v) expanding knowledge and supporting the offshore industry and decarbonisation.

Admissibility criteria

Bidders must satisfy the following criteria:

- > To demonstrate their technical capability, bidders must have realised a minimum of 300 MW of offshore wind power capacity, for which they played an active role in the project management (no mere financial participations).
- > Bidders must be financially robust and stable, to be demonstrated by owning sufficient assets (worth EUR 75m for the first and EUR 150m for the second and third lot tenders) and provide a financial guarantee (with a face value of EUR 70m and EUR 140m respectively) to cover the construction phase.
- > Bidders must confirm compliance with cybersecurity rules.
- > Bids must be less than a maximum strike price (to be set based on a Belgian Government study), and must demonstrate a minimum installed capacity for their lot (as set by the "MD" Lots).
- > Bidders must make available at least 1% of their project's "CAPEX" to citizen participation. If the minimum threshold is not met, a non-release fine will be imposed.
- > Typical exclusion criteria apply, including that the bidder is neither in financial difficulty or under an outstanding recovery order under state aid rules, nor in arrears of its tax and social security payment obligations.

Award criteria

Strike price: 2-way Contracts for Difference (90 points)

By reducing the risks associated with the early stages of offshore wind development, support mechanisms have been instrumental to the offshore wind industry in Belgium and have been subject to significant changes over time in order to foster cost competitiveness and implement advanced computational capabilities.

Whereas the early support mechanisms were based on a guaranteed and fixed premium on generated electricity (“FiTs”), the Belgian legislator introduced a new mechanism, applicable to projects reaching financial close after May 2014,¹ involving a more competitive process through which developers tender for a CfD. This “1-way CfD” mechanism guarantees a fixed “strike price” (based on the “Levelised Cost of Electricity” or “LCOE”, representing the average cost of generating electricity over the lifetime of the wind project) if the reference electricity market price drops below that level. If electricity prices are higher than the LCOE strike price (representing an upside for the developer), there is no reverse payment obligation.

Through the Royal Decrees of 23 May and 26 May 2023² and following the example of Denmark, France and the UK, the Belgian legislator has further fine-tuned the CfD support mechanism in the pursuit of price predictability and stability. Under the new “2-way CfD” regime, the offshore wind developer will need to repay the Belgian Government part of the

upside if the market price is substantially higher than the strike price (ie, exceeding a certain threshold, essentially LCOE + 20 EUR/MWh).

The same 2-way CfD support mechanism will also apply to the future wind projects of the PEZ, based on the principles the Belgian Government has now outlined in the first award criterion, accounting for 90 out of 100 points.

Bidders will get to offer a strike price for a 2-way CfD with a 20-year term, with a variable premium or refund obligation depending on the reference price, and 30% indexation of the strike price annually. A 30% portion of the strike price can be indexed annually to reflect the evolving “O&M” cost. The total annual amount of Belgian Government support will be capped based on a study still to be carried out, which will also investigate the possibility of imposing a maximum number of full-load hours under the CfD.

During the first three years after commissioning, subject to certain conditions, developers can opt out of their CfD for a volume up to 50% of their total production, for a fixed price PPA not exceeding the CfD strike price plus 3 EUR/MWh (subject to the same 30% indexation and excluding service fees). Developers can opt out of an additional 25% to contract under a “PPA” with a renewable energy community (“REC”). If a developer has opted out of (a portion of) its CfD as set out before, it has a one-time fallback option to bring those volumes back under its original CfD under certain circumstances (ie, if a customer defaults, the PPA expires or terminates and (parts of) the corresponding volumes can no longer be placed in the market under an alternative PPA within a certain timeframe).

Innovative business models: citizen participation (10 points)

The remaining 10 points of the award criteria relate to the level of citizen participation that is provided for in the project, which can be demonstrated in three areas: financial participation, communication and access for renewable energy communities. Bidders will need to prepare a detailed plan setting out how the citizen participation across these areas will be achieved. The Belgian Government has set as an objective that citizens should be allowed to participate up to 3% of the project’s CAPEX, on top of the 1% already required under the admissibility criteria. Moreover, 2% of the CAPEX should be made accessible for renewable energy communities, which can be counted towards the aforementioned 3% (and, as the case may be, the 1% admissibility criterion).

Subject to these thresholds, bidders are free to structure their proposed citizen participation as they wish (eg, in the form of an equity participation or through debt instruments). If the citizen participation is structured through a public offering of shares, the thresholds will be assessed on the basis of the offer price of the shares. Beyond the 1% admissibility threshold, bidders are awarded a higher score if they make a larger percentage of the project available to the public.

The committed percentage of financial participation (including by RECs) will be verified three years after the commissioning date, with administrative fines applying if they are not met (subject to a one-year grace period).



¹ Rentel, Norther, SeaMade and Northwester 2.
² Published on 30 and 31 May 2023 respectively.



The Belgian Government has indicated its objective that at least a portion of the citizen participation will be structured through the creation of renewable energy communities in which citizens can collectively and actively participate in the development and operation of renewable energy activities. In the context of an offshore wind project, this could be organised in the form of a co-operative power purchase agreement. Bidders may reserve a portion of the equity investment for renewable energy communities, which would need to be formalised prior to financial close.

The distinct characteristic of renewable energy communities is that they entail more active involvement of the stakeholders than in the case of a purely financial participation.

Planning and grid connection

In accordance with the Electricity Law, all future wind projects will be connected offshore to the Modular Offshore Grid operated by Elia, which will be extended (MOG II) for this purpose and a single export cable will be drawn to bring the power to land. If MOG II is delivered late or becomes unavailable, Elia will need to pay compensation to the wind project developers, which also remains to be fixed but will presumably be similar to the compensation mechanism that was applied already in relation to the original Modular Offshore Grid.

Elia's two onshore grid reinforcement projects (Ventilus in Flanders and Boucle du Hainaut in Wallonia) are essential for the inland transmission of the newly generated electricity from the North Sea. Both projects entail the construction of additional infrastructure, in particular high-voltage lines and underground connections, but have received significant public resistance.

This gives rise to uncertainty over the envisaged timings for the future wind projects as set out above.

Key take-ways and next steps

For the new wind projects in the PEZ, the Belgian Federal Belgian Government will organise three competitive tenders for domain concessions with a maximum term of 40 years, supported by a 2-way CfD with a 20-year term based on the winning bidder's proposed strike price. A combination with a fixed-price PPA will be possible. Next to the strike price, bidders will be able to score 10% of the points with innovative business models relating to citizen participation.

This differs from previous tenders and should allow the Belgian Government to maximise social welfare by keeping energy prices low, while reducing the risk and cost for investors and avoiding windfall profits, as well as expanding offshore knowhow and fostering public acceptance.

To further reduce cost and uncertainty for developers, preliminary studies are being carried out in advance and all the required permits, authorisations and contractual documentation will be made available in tender packages to bidders prior to submitting their bids. All future wind projects will be able to connect their offshore export cables to MOG II. In case of late delivery or unavailability of MOG II, developers will be compensated. A key potential bottleneck are the onshore grid reinforcements required to bring the power to land, which are faced with a lot of public resistance, and which may have a major timing impact.

As immediate next steps, the Belgian Government aims to finalise all the required legal implementation acts, as well as all studies and permits, with a view to launching the tender packages for the first (lot 1) tender by Q4 2024. Further timelines are as set out above, but remain subject to change.



France



Targets for offshore wind farms

Targets and tools

The French Government recently announced a 40 GW target of offshore wind capacity by 2050 (c. 50 wind projects). Currently, 4,530 MW have already been awarded through rounds AO1-AO4. This would make France one of the leading countries in offshore wind development in Europe.

France aimed to reach 2.4 GW of installed capacity in 2023, and 5 GW in 2028 under the 2020-2028 multiannual energy planning scheme (*programmation pluriannuelle de l'énergie*). Given the current status of deployment of the offshore wind project, the 2023 target will not be reached. The development of an offshore wind project in France currently takes about eight to ten years. France has recently adopted new tools to help accelerate the process.

The 2023 law on the acceleration of renewable energy generation introduced a number of measures to speed up the studies, application and permitting phases of deployment of an offshore project located in the public maritime domain and/or the exclusive economic area. Grid connection is also facilitated by the possibility to anticipate grid connection works

in specific areas based on new maritime spatial planning to be adopted in 2024. The 2023 law also introduces the possibility for the generator to value the production of electricity under both a feed-in premium contract (support mechanism from the French Government) and a corporate power purchase agreement. The implementation decree is scheduled to be adopted this year or in 2024.

In the meantime, the Directorate-General for Energy and Climate launched a public consultation, which closed in June 2023, on the deployment of offshore wind projects. The consultation focused on improving the terms of the competitive tendering process (tighter competitive dialogue, simple call for tenders, pooling of projects, etc.), and the public support mechanism (feed-in premium contracts, corporate power purchase agreements, etc.).

Next steps will be the adoption in the course of 2023 of the energy and climate planning law (loi de programmation énergie-climat), created by the 2019 climate-energy law, and the adoption in 2024 of the third multiannual energy plan (programmation pluriannuelle de l'énergie), covering the period 2024-2033. The Green Industry Act, adopted on 11 October 2023 is also designed to encourage investments in the renewable energy sector and the creation of sustainable industrial sites in France (eg, wind turbine and blade factories, port of assembly).

Status

Location	Capacity	Status	Targeted COD
AO1 – Saint Nazaire	480 MW	Commissioned	N/A
AO1 – Fécamp	500 MW	Construction	2023
AO2 – Saint-Brieuc	500 MW	Construction	2023
AO2 – Noirmoutier	500 MW	Construction	2025
AO2 – Le Tréport	500 MW	Construction	2025
AO2 – Courseulles	450 MW	Construction	2025
AO3 – Dunkirk	600 MW	Construction	2027
AO4 – Centre Manche 1	1 GW	Awarded in 2023	2030
AO5 – South Brittany*	250 MW	Tender expected to be awarded in 2024	2030
AO6 – Mediterranean*	2 x 250 MW	Tender expected to be awarded in 2024	2030
AO7 – South Atlantic	1 GW	Tender expected to be awarded in 2024	2030
AO8 – Centre Manche 2	1.5 GW	Tender expected to be awarded in 2024	2031

*floating wind farm

Main characteristics of the legal framework currently applicable to offshore wind farms in France

Offshore wind projects are developed in France via public tenders launched by the Minister in Charge of Energy in collaboration with the Energy Commission Regulation (*Commission de Régulation de l'Énergie*), pursuant to the French Energy Code. Under such tender, specific areas are offered through tender, and the price is one of the criteria taken into consideration for award.

Support mechanism

The winner of the tender process is entitled to enter into a feed-in premium contract with Electricité de France SA (“EDF”) as offtaker under the conditions set by the tender specifications. EDF is, in turn, compensated by the French Government for sums paid out under the feed-in premium contract. This Government support mechanism is based on a market premium which is made available to the selected producer. Economically speaking, it works in a similar way to a 2-way CfD.

The market premium mechanism is designed to allow producers to reach a “reference price” included in their bid. EDF pays a premium compensating for the difference between the reference price and market price and receives the difference between the market price and the reference price. Under this mechanism, producers are responsible for placing their output on the market, which is usually done through entering into route to market PPAs with providers known as “aggregators”.

The contracts are considered as “administrative law contracts” under French law and are only binding once they are signed. As administrative law contracts, they can be unilaterally modified or terminated by the French Government, although the general principle is that this would result in full compensation to the producers.

Permitting

The authorisations necessary to build and operate the wind project are not automatically granted by the French Government after the award. Indeed, the projects which are located either on the public maritime domain, or the economic exclusive area, must apply for an environmental authorisation and/or single permit (depending on the location of the wind project). Offshore wind projects with a capacity above 1 GW must also benefit from a generation licence. In this case, the licence is automatically granted to the winner of the tender process.

Wherever the wind project is located (maritime public domain or exclusive economic area), the environmental authorisation or the single permit may set variable characteristics within the limits of which the wind project will be authorised to change after the authorisation has been granted. This flexibility for the developer results from the so-called “envelope” provided for by the French Environment Code.

With regard to projects located on the public maritime domain, a concession for the use of the public maritime domain must be granted to the producer under the general code of property of public persons. The occupation of the public maritime domain is free from fees throughout the duration of the feed-in premium contract pursuant to article 58-VI of Law no. 2018-727.

This article does not apply to the projects located in the economic exclusive area. However, an equivalent provision is included within the ordinance n°2016-1687 related to installations located in the exclusive economic zone.

Grid connection

The costs related to grid connections works are borne by the national transmission system operator (the “RTE”), pursuant to the French Energy Code.

Third-party challenges

Finally, to help accelerate the deployment of offshore wind in France and address one of the key issues which hindered its development since the first calls for tenders were launched more than 10 years ago, the French regulation has implemented a single level of jurisdiction to deal with challenges against the main authorisations and contracts related to offshore wind projects (eg, environmental authorisation, single permit, CfD). Indeed, the *Conseil d'Etat* now is directly competent to judge the challenge against the decisions related to offshore wind projects (including, *inter alia*, the environmental authorisation, the “ZEE” single permit, the generation licence and the feed-in premium contract).





Germany





Germany

Introduction

Germany is committed to achieve the EU climate targets and the 1.5-degree pathway as set out in the Paris Agreement. Therefore, the Renewable Energy Sources Act (*Erneuerbare-Energien-Gesetz* – “EEG”) and the Offshore Wind Energy Act (*Windenergie-auf-See-Gesetz* – “WindSeeG”) have been fundamentally changed with effect as of 1 January 2023. The aim is now an accelerated expansion of renewable energies to increase their share in gross electricity consumption from around 46% in 2022 to at least 80% by the year 2030. The electricity generation from renewable energies is expected to more than double from 234 TWh in 2022 to 600 TWh by 2030. The expansion targets for renewable energies as well as the tender quantities have been significantly adjusted upwards.

Regarding offshore wind projects, comprehensive measures have been introduced to achieve the expansion targets for offshore wind of 30 GW in 2030, 40 GW in 2035 and 70 GW in 2045 respectively as effectively as possible. These are very ambitious goals, especially in the short term. The offshore wind capacity to date stands at 8 GW in 2022 and is expected to reach 14 GW in 2027. The recent legislative measures mainly concern the tendering system. Some changes also aim to accelerate the planning and permit procedures.

The grid connection system has remained largely unchanged since 2017. In Germany, the grid connection is constructed and paid for by the transmission system operator. The project owner then obtains the right to use the grid connection by winning the tender.

An offshore wind project in Germany may be operated for 25 years from the time it is commissioned, with a one-time extension option of up to 10 years. After that, the operator must be able to dismantle the wind project. However, no decision has yet been made on the subsequent use of the offshore wind areas.

Notable development: revised tender system

All areas for offshore wind in the exclusive economic zone of Germany must be awarded through tenders carried out by the Federal Network Agency (*Bundesnetzagentur* – “BNetzA”). The areas to be tendered are derived from the site development plan (*Flächenentwicklungsplan*) issued by the “BSH” on 20 January 2023 and currently under ongoing revision. The volume of the auctions is between 8,000 MW and 9,000 MW for 2023 and 2024, 3,000 MW and 5,000 MW for 2025 and 2026 and 4,000 MW each year from 2027. Since January 2023, a distinction is made between centrally pre-investigated areas and not centrally pre-investigated areas. In the case of the latter, the project owner must carry out all pre-investigations himself, which is why commissioning is planned for about two years later.

The tender systems for both types of areas differ. What both new tender systems have in common, however, is that – as there have been “0-cent bids” in most offshore wind tenders in Germany since 2017 – they are no longer about support schemes, but only about the allocation of highly sought-after areas. As a result, high “entrance fees” must be paid. In Germany, there is an ongoing debate whether CfDs could be a good alternative to solve the problem of 0-cent bids. Of the bid value, 10% is to be paid within 12 months after winning the tender. The remaining 90% is due in equal annual instalments over a period of 20 years (ie, 4.5% of the bid value annually) from the date the first wind turbine is technically ready for operation.

Centrally pre-investigated areas

Under the revised central model, a mix of a financial and a qualitative (“beauty contest”) component is applied. The winning bidders are in no case longer entitled to get financial support (market premium), ie, they basically must pay to get a concession. The tenders will be carried out on (and the bids must be submitted by) 1 August 2023 and 1 August of the following years.

The bid payment – accounting for 60% of the evaluation – is the amount the bidder is willing to pay for the concession. In case of a similar score, the bid payment functions as a tiebreaker. If the amounts are similar, bidders get the possibility to increase their bid.

The four qualitative bid criteria – each accounting for 10% and together for 40% of the evaluation – are comprised of (i) the contribution to decarbonisation, (ii) the contribution to securing skilled labour, (iii) a high capacity in supply contracts (PPAs) and (iv) nature protection (namely the avoidance of sound pollution and sealing of the bottom of the sea).





Not centrally pre-investigated areas

For areas that have not been pre-investigated centrally, there is theoretically the possibility of financial support. Though, if there are several “0-cent bids”, a so-called dynamic bidding procedure with a second bidding component is used. This means that ultimately the financial component will be even more decisive than in the case of centrally pre-investigated areas. The tenders will be carried out on (and the bids must be submitted by) 1 June 2023 and 1 June of the following years.

In a first step, bidders bid for a market premium as state subsidy and the contract is awarded to the bidder who submits the lowest bid value. It is expected, however, that there will be several zero ct/kWh bids. In the first tender under the new rules on 1 June 2023, there were several 0-cent bids for each area.

Eligible for participation in the following dynamic bidding procedure are all bidders who have submitted a bid of “0 ct/kWh”. The bidder who submitted the highest second bid component will be awarded the contract. If several bidders have agreed to a bid level or have submitted identical so called intermediate round bids, the BNetzA will propose a further (higher) bid level until only one bidder remains. In the first tenders for not centrally pre-investigated areas from

1 June 2023, it took between 55 and 72 bidding rounds for the procedures to end. The tender results were significantly higher than in any other previous offshore tender worldwide, with winning bids ranging from EUR 1.56m per MW to EUR 2.07m per MW.

Further legislative measures

Several measures are aimed at accelerating the planning and permit procedures:

- > Since July 2022, the construction and operation of renewable energy systems is officially considered to be of overriding importance for public interest and public security (*überragendes öffentliches Interesse, öffentliche Sicherheit*). This regulation is very important for approval procedures in order to allow for easier exceptions, eg, from species protection.
- > In the case of centrally pre-investigated areas, the preliminary approval procedure is to be omitted entirely and replaced by a more expeditious planning authorisation process.
- > Specifications are to be issued regarding the duration of procedures for planning approval and authorisation.
- > Environmental assessments and participation rights are to be more clustered.

- > Technical supervision by the Federal Maritime and Hydrographic Agency (*Bundesamt für Seeschifffahrt und Hydrographie* – “BSH”) will run through the Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz* – “BMWK”) for all operations relating to the WindSeeG.
- > In future, offshore grid connection can be contracted out directly after the area has been incorporated in the overall site development plan, which will accelerate the award of contracts by several years.

An offshore realisation agreement has been concluded between the BMWK and the coastal federal states reflecting the adjusted expansion targets. The agreement contains steps for designating areas at sea, for ensuring offshore expansion is environmentally friendly, for crossing the territorial sea and for accelerating the individual processes involved. It sets specific, binding timetables and milestones for the construction of the grid connections needed.



Italy



Introduction to Italian market and offshore wind targets

The Italian Government is committed to developing offshore wind as part of its strategy to reduce its reliance on fossil fuels, improve its energy security, and create jobs and economic growth. The National Plan for Energy and Climate (“PNIEC”) sets a target of 2,1 GW of offshore wind capacity by 2030. However, the PNIEC is currently under discussion and this target might be increased due to the growing interest showed by investors and operators for offshore wind projects.

The Italian Government has committed to create a favourable regulatory environment for offshore wind development in Italy and is taking several steps to achieve its offshore wind targets and support operators and investors in this sector, including:

- > streamlining the permitting process for offshore wind projects
- > offering incentives in the form of 2-way contracts for difference (“CfDs”) for offshore wind projects through regular auctions

In anticipation of further regulatory announcements by the Italian Government, early-stage offshore wind projects for an aggregated power capacity of around 115 GW have been already announced and developers have been active in forming consortia and working towards obtaining approvals and lobbying Government to provide further support.

Authorisation procedure

The regulatory regime for offshore wind in Italy is still evolving. Offshore wind projects benefit from a dedicated authorisation procedure entailing the issuance of a single authorisation by the Ministry of Environment and Energy Security (“MASE”), also including the public concession for the use of sea area and the environmental impact assessment.

The MASE is expected to adopt in the coming months the guidelines aimed at detailing the regulation of the administrative procedures for the issuance of the single authorisation and co-ordinating the procedure for the granting of the public concession.

In addition, the Italian Government is expected to adopt a plan identifying the sea areas favourable for the installation of offshore wind projects (Piano di gestione dello spazio marittimo produzione di energia da fonti rinnovabili). Until the adoption of said plan, the areas qualified as favourable to the installation of offshore wind projects are the following:

- > disused offshore oil platforms and the two nautical miles surrounding area
- > ports area, for the installation of offshore wind projects up to 100 MW

Wind projects located in these areas benefit from shorter deadlines for the issuance of the single authorisation (60 days instead of 90 days).

Incentive regime

To support the development of offshore wind projects in Italy, the Italian Government is currently considering the incentive regime to be put in place to support these projects and the timings for the final approval of the same are currently not predictable. The incentive mechanism is expected to be based on an auction pay-as-bid system available only to already authorised projects.

The draft decree currently under approval (“FER2 Decree”) provides the publication of calls for tenders for the allocation of incentive tariffs for the development of renewable energy projects having power capacity equal to or higher than 1 MW, entailing the awarding of CfDs to renewable energy plants, within certain power capacity limits (ie, 3.5 GW for offshore wind projects).

In order to be admitted to the auctions, the projects must meet the following requirements:

- > have definitely accepted the interconnection proposal issued by the grid operator;
- > have been granted with the relevant authorization (Single Authorisation or the Environmental Impact Assessment decision); and
- > comply with the environmental, technical, and power capacity requirements detailed in the FER2 Decree.

The selected projects shall enter into operation within the deadlines provided by the FER2 Decree (ie, 43 months for wind projects).

The draft of the FER2 Decree has been sent to the European Commission for its check on the compliance of the incentive regime with the EU State Aid regulation. Following the approval by the EU Commission, it will be possible for the Italian Government to formally adopt the FER2 Decree.

Floating v fixed projects

Floating offshore wind projects are expected to play a central role in Italy's offshore wind sector given a shortage of shallow water sites off the coast of Italy and the ability to harness stronger and more continuous wind to generate more power.





Netherlands

Netherlands

Introduction

Offshore wind generation remains a cornerstone of the Dutch Government's ambition to reduce CO₂ emissions by 55% by 2030. The target for offshore wind in the Dutch North Sea has recently been increased to around 21 GW of installed capacity by 2030, 50 GW in 2040 and 70 GW in 2050.

Offshore wind policy

The North Sea Programme (*Programma Noordzee*), part of the National Water Programme (*Nationaal Waterprogramma (NWP)*) allocates the areas for future offshore wind project development in the Dutch territory of the North Sea.

The Dutch Government has published road maps for offshore wind which set forth the rollout sequence in which wind project zones and included sites will be developed, tender data and the projected generation capacity of each site. Clear project deadlines are included in the road map(s). The most recent three newly designated offshore wind areas are Nederwiek, Lageland and Doordewind. The Offshore Wind Energy Roadmap 2040 is expected to be published by the end of 2023.

Developers can optimise project plans and submit competitive bids in the tender process on the basis of site data made available to them by the Netherlands Enterprise Agency (*Rijksdienst voor Ondernemend Nederland (RVO)*), described further below. The transmission system operator, TenneT, has been designated the offshore grid operator. In that capacity it is responsible for connecting the wind projects to the (onshore) grid.

Legal and regulatory developments

The Dutch Offshore Wind Energy Act (*Wet Windenergie op zee*) (the "Act") provides for an integrated legal framework for the large-scale realisation of offshore wind energy in the Netherlands. The wind project site decision (*kavelbesluit*) (the "Site Decision") is the cornerstone of the Act. A Site Decision determines where and under what conditions an offshore wind project may be built and operated. Once a Site Decision becomes irrevocable, the RVO launches the tender process for offshore wind permits and the tender criteria. Though the developers will determine the type of foundation, the Dutch Government will steer floating sites if these are preferred. An offshore wind project can only be built after a wind permit, based on the Site Decision, has been issued and such permit is irrevocable.

The Act allows the Dutch Government to apply four types of tender process for a specific offshore wind permit, being: (i) a tender for the lowest subsidy bid (*subsidieprocedure*); (ii) a tender for the best feasibility offer (comparative assessment) (*vergelijkende toets*); (iii) a comparative assessment tender with a financial bid (*vergelijkende toets met financieel bod*); and (iv) a tender for the highest auction price (*veiling*).

The most recent tender rounds, and the upcoming tender round for the two 2 GW IJmuiden Ver wind projects have been or will be tendered by means of a comparative assessment plus a financial bid. On the basis of the comparative assessment, bids are being ranked on the basis of criteria laid down in the Act and the Ministerial Orders (*Ministeriële Regelingen*) drawn up for each offshore wind project tender. Such criteria relate to the certainty of the offshore wind project being completed (ie, among others the technical expertise of the developer and subcontractors and the developers' financial strength), and the manner in which the offshore wind project contributes to the energy supply. Moreover, other criteria regarding ecology and "ESG" as further set out below apply. The financial bid relates to the economic value of the permit to build and operate the offshore wind project. For IJmuiden Ver Alpha this has been set at €645m.

The Minister of Economic Affairs and Climate Policy will appoint the winner for each tender within 13 weeks of closure of the tender. The IJmuiden Ver tender is currently ongoing and bids must be submitted by the end of Q1 2024.

Over the last few years, the winning tenders resulted in prices being tendered without subsidy. Only grid connection costs are subsidised/publicly funded. In this context, corporate PPAs are currently widely accepted as being the route to market in the Dutch offshore wind market.





The Act has recently been amended to extend the maximum term of a wind permit from 30 to 40 years and to regulate the generation activities of other energy carriers (ie, hydrogen and ammonia) through offshore wind installations.

Large-scale offshore wind development in recent years led to a focus on the ecological limits of the North Sea, the integration of offshore wind into the energy system and the impacts on other users of the sea. In the latest tender rounds specific criteria on ecology and system integration played a significant role in the comparative assessment of the bids made under the tender.

The winning bids for the Hollandse Kust West tender in 2022 included nature-inclusive designs (including a bird corridor), various innovative piling techniques being used to measure and minimise the impact on marine life and adopting new control technology to significantly reduce collisions of birds and bats with offshore installations. In addition, the other winning bid for the Hollandse Kust West tender aligns the electricity generation with flexible onshore demand, subsurface battery storage and an offshore solar project of 5 MW.

The Dutch Government has indicated that it will assess bids on specific criteria. The extensive criteria as part of the IJmuiden Ver tender confirm this. Besides ecology and integration into the energy system, there is an increased emphasis on (i) compliance with supply chain due diligence and (ii) use of circular materials. Given the speed of ESG-related regulations in Europe there is likely more to come in this particular field.

In addition, for the IJmuiden Ver tender, it is contemplated that bidders must co-operate to achieve the offshore solar ambitions of the Dutch Government of 3 GW following 2030.

What can we further expect

Larger distances to onshore connection sites and the large capacity to be connected (approximately 4 GW) has made direct current technology (“HVDC”) more favourable, with the Dutch Government mandating the use of HDVC in projects. HVDC cables will connect the IJmuiden Ver offshore wind project to the onshore landing point. In addition, domestic production of hydrogen will depend in large part on offshore wind power and it is expected that offshore electrolysis will be required in the future given the increasing distances to onshore connection points.

A policy shift is imminent on the co-use of offshore wind locations. The Dutch Government intends to align co-use of offshore wind sites (eg, aqua culture, passive fishery, nature restoration and development, other types of renewable energy and storage) with the specifics of each location. Consequently, developers will need to incorporate co-use into their business case.

The Dutch Government is also looking closely at new artificial “energy islands” or “energy hubs” which will centralise the transmission of the energy they produce. These could not only host electrolyzers to convert wind power to green hydrogen but also offer connections to other neighbouring countries to allow the export of electricity and improve energy flows. In relation to this, the Dutch Government announced in 2023 that it will build its first large offshore green hydrogen factory next to the Ten Noorden van de Waddeneilanden offshore wind project. On the basis of the road maps, this offshore wind project will be tendered in 2027. The offshore hydrogen facility will be connected to the offshore hydrogen network operated by Gasunie, the national gas transmission system operator. The Dutch Government is conducting further feasibility and other studies that will enable the private sector to build their business case for offshore hydrogen production.



Norway

Norway

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State and outlook of offshore wind projects

Norway has recently undertaken significant efforts to establish a regulatory framework for offshore wind energy production and develop its initial large-scale offshore wind projects. The North Sea and the Norwegian continental shelf boast substantial wind resources and available space, making them well-suited for large-scale offshore wind production.

The Norwegian Government aims to designate areas with a projected capacity of 30 GW for offshore wind energy production by the year 2040. The industry has projected the potential market size for offshore wind in the North Sea basin from 2025 to 2040 to reach 60 GW.

In 2020, the Norwegian Government opened the first designated areas for licensing offshore wind projects at Utsira Nord and Sørilige Nordsjø II. Collectively, these areas have been approved for a total capacity of 4.5 GW. The tendering process for awarding these areas is expected to conclude by first quarter of 2024, with operational projects anticipated around 2030.

Additionally, the Norwegian Government has initiated evaluations of new potential offshore wind areas and plans to issue a new round of tender calls in 2025. Given the substantial capacity potential for offshore wind, it is anticipated that a significant portion of future offshore wind projects will be interconnected with Nordic and European electricity grids through hybrid interconnectors or a shared offshore grid.

In 2022, the Ministry of Petroleum and Energy requested recommendations on suitable offshore areas for wind power development. The proposal was prepared by the Norwegian Water Resources and Energy Directorate (“NVE”) and other central actors. The directorate group has named 20 areas for offshore wind that are recommended for further assessment. These areas are technically suitable for offshore wind and have relatively low conflicting interests. The next step is to initiate strategic impact assessments in three of these areas. The directorate group believes that several of these areas could be awarded in 2025, including expansions of Sørilige Nordsjø II (renamed Sørvest F) and Utsira Nord (renamed Vestavind F), and the additional area Vestavind B. NVE has also been tasked with initiating strategic impact assessments of the other areas that are relevant for announcement towards 2040. These assessments are planned to be completed by the end of June 2025.

The offshore wind promotion system

The Norwegian Government holds the authority to utilise and grant licences for wind energy within territorial waters and the Norwegian continental shelf. In Norway, the general principle is that these licences are awarded through an open tender process. The Norwegian tender process, governed by the Norwegian Offshore Energy Act, follows the key stages outlined below:

- > **Opening an Area for Licensing:** The process begins by identifying an area for offshore energy production and opening it for the licensing process.

- > **Division into Bidding Areas:** Once an area is designated for licensing, it is typically subdivided into smaller bidding areas, which are then announced for competition.
- > **Pre-Qualification Requirement:** If the Ministry of Petroleum and Energy establishes a pre-qualification requirement, applicants must undergo pre-qualification to participate in the award process.
- > **Competition for Exclusive Rights:** Pre-qualified applicants then compete for the exclusive rights to the bidding areas. This competition is typically conducted through either a monetary auction (eg, Sørilige Nordsjø II) or a competition based on qualitative criteria (eg, Utsira Nord).
- > **Environmental Impact Assessments and Licence Application:** Once the areas are awarded, the successful applicant must carry out project-specific environmental impact assessments and apply for licences for offshore energy production. Developers have two years, from the establishment of the project-specific assessment programme, to complete the assessments and submit a licence application.
- > **Detailed Plan Approval:** Within two years after the licence is granted, the developer must prepare a detailed plan for approval by NVE.
- > **Construction and Commencement of Operations:** Following approval of the detailed plan, the licensee has three years to construct the project and commence operations. Licences are granted for a duration of up to 30 years from the start of facility operation, with the possibility of an extension upon application from the licensee.

Tender process

In March 2023, the Norwegian Government made an announcement regarding the opening of the Utsira Nord (floating wind turbines) and Sørlige Nordsjø II (bottom-fixed wind turbines) areas for offshore wind development through a tender process. The allocation of these development areas is expected to be finalised by the first quarter of 2024.

The first phase of Sørlige Nordsjø II is a project area with a minimum of 1,400 MW and a maximum of 1,500 MW of installed capacity. This project will be connected to the onshore grid in Norway through a radial connection, allowing for a maximum grid connection access of 1,400 MW. The first phase of Sørlige Nordsjø II will be awarded through pre-qualification and a monetary auction with open bidding. The auction will focus on a 2-way CfD which will be granted to the winning bidder.

Utsira Nord consists of three project areas, with each area having a minimum installed capacity of 460 MW and a maximum of 500 MW. The Ministry has also provided the option to increase the capacity of each project area up to 750 MW if environmental assessments confirm its feasibility.

Regulatory permits

The primary licence necessary to establish an offshore wind project in Norway is the licence to establish a production facility in accordance with the Offshore Energy Act. Additionally, a separate licence for the establishment of offshore grid infrastructure is required, as governed by the Offshore Energy Act. Prior to applying for these licences, the developer must conduct a project-specific impact assessment.

Before commencing construction of a production facility, the concessionaire is obligated to submit a detailed development and operation plan to the Ministry for approval. This plan must address technical, safety, and environmental considerations, serving as a supplement to the licence as specified.

Regarding onshore grid infrastructure, the offshore wind developer must obtain a facility licence under the Norwegian Energy Act for electrical installations owned or operated by the developer. Furthermore, to engage in electricity sales, the wind project must apply for a standard trading licence. Depending on the specific project, additional licences or permits may be required.

Grid connection

As a general starting point, the Norwegian Government has outlined that offshore wind developers are responsible for the planning, construction, ownership and operation of the grid connection between the offshore production facility and the mainland. This encompasses bearing the costs associated with the grid connection and any necessary infrastructure reinforcements in the onshore grid.

Remuneration scheme

The Ministry of Petroleum and Energy has proposed to use a 2-way CfD as the support model for the first phase of Sørlige Nordsjø II and Utsira Nord. The contract price (strike price) will be decided through an auction, with a monthly reference period. The Ministry has suggested that the CfD support scheme should be valid for 15 years from commencement of operations. This arrangement effectively secures the developer's power price over the first phase of the operational period.

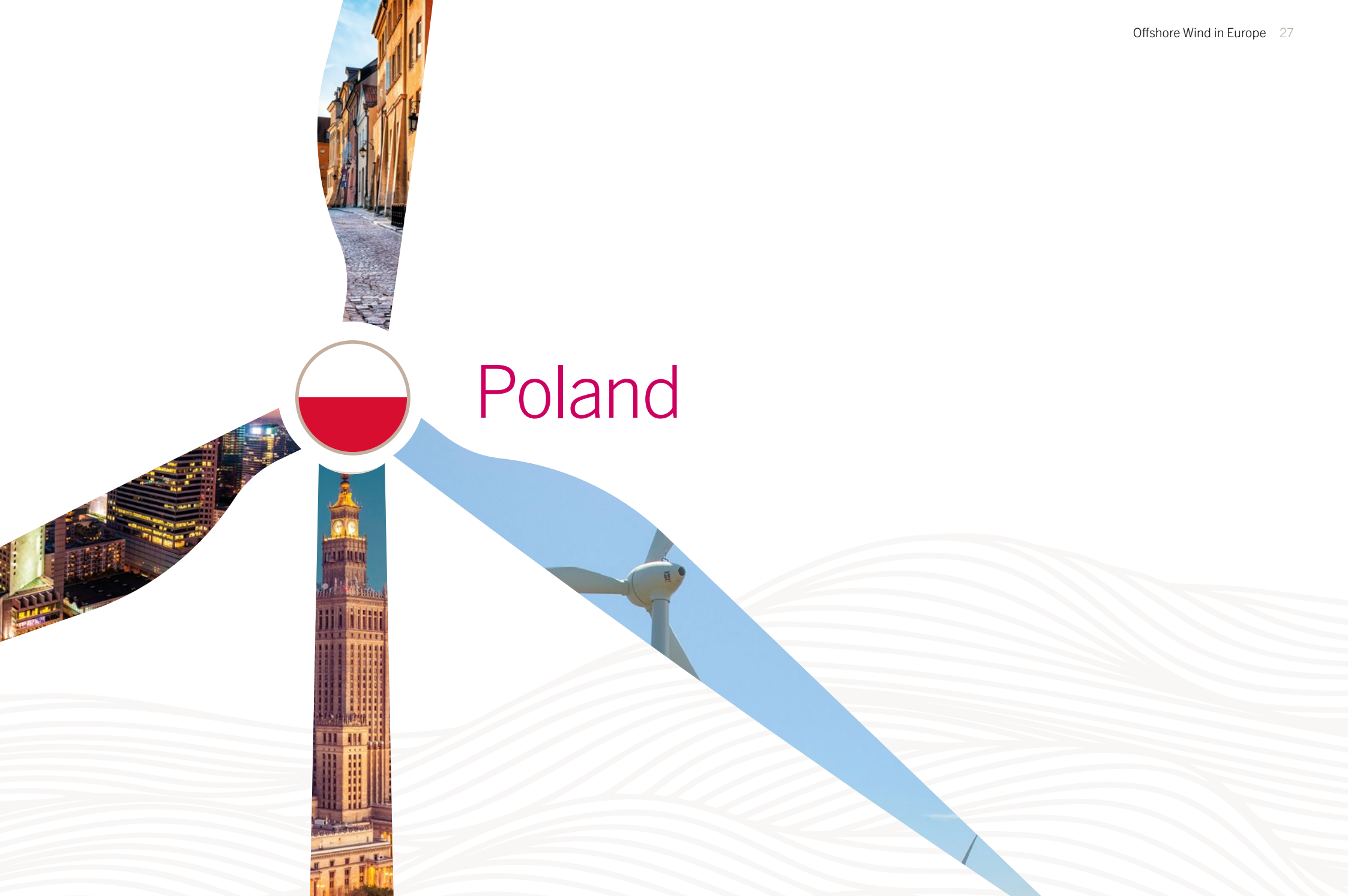
Upon announcing the Sørlige Nordsjø II and Utsira Nord areas, the Norwegian Government has stipulated that both state support and producer payments will be subject to an upper limit. A proposal has been presented to establish the limit at NOK 23bn. The level of support will depend on factors such as electricity prices and the quantity of electricity generated. The CfD scheme has received approval from the Norwegian parliament, and is awaiting approval from the EFTA Surveillance Authority (ESA).

As the CfD is designed solely as a financial instrument, the developer will concurrently be obliged to sell the generated electricity in the market at its own discretion and risk.

Tax

Resource rent taxation, which applies to location-specific natural resources with exceptional returns, is a fundamental part of the Norwegian tax system. This taxation framework is implemented in various sectors such as petroleum exploitation and hydropower production. However, in light of the prevailing circumstances concerning costs and power prices in the offshore wind sector, the current Norwegian Government has made it clear that no resource rent tax regime will be enforced on the initial offshore wind projects.





Poland

Poland

General overview – Polish support scheme for offshore wind farms

Although there are currently no operational offshore wind projects in Poland, the Polish Government plans to reach an installed capacity of 11 GW in offshore wind by 2040, including 5.9 GW by 2030. Some industry experts are even more optimistic and estimate that the overall potential of the Polish offshore industry will reach 33 GW.

The Polish Offshore Act of 2020 was adopted specifically to facilitate the development of offshore wind projects in the Polish Exclusive Economic Zone within the Baltic Sea. Support for offshore wind projects is based on a two-way CfD mechanism. Producers that are awarded support are free to sell energy on the market (on the power exchange or to a specific offtaker under a PPA) and any negative balance between the strike price determined individually under the support scheme and the market price of energy is compensated by a designated government agency. Conversely, any positive balance must be paid back to that government agency on an annual basis.

Under the Polish support scheme, even though it employs a contract for difference mechanism, energy producers do not enter into actual contracts with the government agency. Instead, terms and conditions of the support scheme are governed exclusively by the Offshore Act and other related legislation.

Support is granted for 25 years from the date of first generation of electricity in the offshore wind project with a power generation licence in place.

Participation in the Polish offshore support scheme

Support under the Offshore Act is to be granted in two phases. In the first (and current phase), support has been awarded by way of a limited number of individual decisions of the Polish Energy Regulator. In the second phase, support will be granted in competitive auctions to energy producers that meet certain formal criteria and offer the lowest energy prices.

The maximum capacity for the first phase of support (5.9 GW) has already been reached and CfD support has been awarded by the Regulator to the most advanced offshore projects, namely, MFW Bałtyk III and MFW Bałtyk II (JV Polenergia & Equinor), Baltica-2 and Baltica 3 (JV PGE & Ørsted), Baltic Power (JV PKN Orlen & Northland Power), BTI (RWE), B Wind and C Wind (JV EDPR & Engie).

The calendar of competitive auctions in the second support phase will be as follows:

- > 2025 – 4 GW
- > 2027 – 4 GW
- > 2029 – 2 GW
- > 2031 – 2 GW

The exact dates of the auctions have not been announced yet.

The capacity covered by these auctions may be decreased by the Polish Government if necessary to balance the supply and demand for energy. Such a decrease will be introduced by 31 August of the year preceding the year in which a given auction is to take place (eg, by 31 August 2024 for the 2025 auction). The maximum (reference) bid price (PLN/MWh) will be set out in governmental by-laws.





Requirements for auction

A candidate for an auction must provide:

- > a bank or insurance guarantee, or a cash deposit
- > a copy of the interconnection conditions or interconnection agreement concluded with the “TSO” or “DSO”
- > maps and permits as required by law
- > a supply and services chain plan
- > technical documents
- > information on acquired government aid

Key considerations for investors

Offshore wind projects can be developed within the Polish exclusive economic zone (EEZ).

The Polish permitting regime does not allow for one permit to cover all the administrative authorisations necessary for the development of an offshore wind project (ie, there is no decision having a concentrating effect). Instead, there are several matter-specific administrative permits required for various elements of an offshore wind project.

An offshore permit is a primary administrative decision which must be obtained to develop an offshore wind project and its export infrastructure from the minister in charge of the maritime economy.

An environment decision (preceded by the EIA procedure governed by Polish legislation and harmonised with EU law) must be obtained once offshore permits are secured.

The development of an offshore wind project and the ancillary infrastructure also requires a building permit. Following the completion of construction works for the offshore wind project, an investor must obtain a completion certificate.

Finally, it is necessary to obtain a power generation licence from the Regulator prior to the Commercial Operation Date. A power generation licence can only be applied for at the final stage of the project’s development and can only be obtained once the occupancy permit (completion certificate) is secured.

To ensure offtake of the energy produced by an offshore wind project, an investor needs to secure access to the power grid. An offshore wind project may be connected either to a transmission grid or to a distribution grid. Grid access is secured by two separate legal

instruments: (a) grid connection conditions followed by (b) a grid connection agreement. The grid connection agreement sets out the date for grid access completion, as well as the date for the first delivery of electricity from an offshore wind project, which cannot be later than 10 years from the date of the grid connection agreement. Failure to deliver the first energy within this deadline allows the grid operator to terminate the grid connection agreement. However, the transmission grid operator is obliged to conclude an annex to the grid connection agreement to align the deadline for the delivery of electricity to the grid with the deadline to produce energy for the first time under the offshore support scheme. Regulations protect investors against non-market redispatching of an offshore wind project or curtailment, and the relevant compensation is paid by the grid operator or the government agency responsible for executing financial settlements under the support scheme.

Offshore wind projects are not required to dispose of their offshore export transmission assets under the Polish unbundling regime. However, the grid operator has a right of first refusal on these assets if a project company does decide to dispose of them.



Portugal



Portugal

Overview

Portugal has a goal of reaching 10 GW of installed offshore wind capacity by 2030. Offshore wind projects will entail a shift in Portugal's energy strategy, boosted by developments in technology and based on a good track record of delivering renewable energy projects and a stable investment environment.

In Portugal, offshore wind development rights will be allocated through public competitive tender procedures (auctions most likely) or as a result of a request to be made by sponsors. The Portuguese Government is planning to launch its first offshore wind power auction by the last quarter of 2023. To prepare for the auction, the Portuguese Government has appointed different working groups, focusing on planning, port infrastructure and the terms of the auction; the latter group is responsible for proposing the structure, qualification and evaluation criteria and remuneration scheme for the auction. It completed a proposal for these matters in May 2023, now available, however, no decision has been adopted formally by the Government thus far.

The Government has published the list of pre-selected areas for offshore wind projects, which will be integrated into the National Maritime Spatial Planning: Viana do Castelo, Matosinhos, Leixões, Figueira da Foz, Ericeira and Sintra-Cascais, and Sines and Porto de Sines.

These eight areas, totalling 3,200km² offshore and 191km² near shore, with a maximum depth of 50 meters, are still under analysis to incorporate the results of a public consultation, but currently allow for the installation of fixed structures on the seabed. The total installed capacity for these eight areas adds up to roughly 10 GW.

Even though there are still no details on how exactly the offshore wind development rights will be allocated, the auction, which will be organised by the Portuguese Government, through the Directorate General for Energy and Geology (the "DGEG"), will be open to all interested developers, regardless of nationality.

Timelines for key legal developments

The Government has raised the 2030 target to 10 GW aiming to "move faster" on the country's energy transition; the working group has recommended a total of 3.5GW for the first offshore wind auction and the launch in the last quarter of 2023 (given strong investor interest). In October 2023, the Government announced the auction would be launched by the end of the month with an expression of interest phase, sponsors being encouraged to informally express concerns and suggestions.

This first auction is expected to cover five lots in three areas (Viana do Castelo, Leixões and Figueira da Foz), each with and to have a minimum capacity of 500 MW more than 1 GW, and is expected to happen in stages – a pre-qualification stage of no less than three months has been recommended.

What all interested parties need to know – the Portuguese market

Portugal has a mature and reputable electricity sector, with a proven track record in delivering renewable energy projects – both subsidised projects (with the first wave now transitioning to market prices) and market-led projects (currently the only model set out for new projects, outside the auctions).

The regulatory framework is quite stable and was redesigned and updated in 2022 to foster the demands of energy transition led policies;

more recently, several simplification measures have been adopted to streamline licensing processes and more are yet to be adopted. The Portuguese Government is committed to developing offshore wind in a sustainable manner. It has a number of policies and regulations in place to protect the environment and to ensure that the benefits of offshore wind development are shared widely.

Recent legislative changes have allowed for the simplification of licensing and environmental requirements and for the adoption of fast-track processes for environmental licensing and, more broadly, for the licensing of renewable projects.

In practical terms, the upcoming auction should allow bidders to simultaneously secure the grid capacity title (TRC) and the title of private use of the maritime space (TUPEM). The successful bidder will then need to obtain a licence for the offshore wind project and the relevant interconnection infrastructure before DGEG, which further includes separate environmental licensing (where applicable).

About the application and selection processes

The requirements for the bids are not yet known, however, we expect bids will need to include the following information:

- > The proposed location of the offshore wind project, within the area of each lot.
- > The proposed capacity of the offshore wind project.
- > The proposed price of the electricity generated by the offshore wind project.

We expect the criteria for the award to include price, innovation, employment generated, storage, biodiversity incentives and other.

The winning bidder must then apply for the permits, licences and authorisations and obtain the necessary licences in order to build and operate the offshore wind project.

Other key requirements for offshore wind development in Portugal are expected to include:

- > Environmental impact assessment: All offshore wind projects must undergo an environmental impact assessment ("EIA"). The EIA must assess the potential environmental impacts of the project including the impact on marine life, the impact on coastal communities, and the impact on the marine environment. Additionally, the entire licensing process is expected to be fully dematerialised – Geoportal PSOEM already identifies the easements and administrative restrictions.
- > Licensing: All offshore wind projects must be licensed by the Portuguese authorities. The licensing process includes an assessment of the project's technical feasibility, the project's financial viability and the project's environmental impact.
- > Grid connection: All offshore wind projects must be connected to the Public Electricity Grid. The grid connection must be approved by the Portuguese grid operator.
- > Operation and maintenance: All offshore wind projects must be operated and maintained in a safe and environmentally responsible manner. The operator of the project must have a plan for responding to accidents and emergencies.
- > Decommissioning: All offshore wind projects must be decommissioned in a safe and environmentally responsible manner. The operator of the project must have a plan for decommissioning the project.



Spain



Current situation and latest developments

The Spanish Government intends to facilitate the development of offshore wind energy to promote the country's leadership in R&D related to renewable energy and attain environmental objectives.

In this regard, the Spanish Government has set a target of 3 GW of offshore wind capacity by 2030. This is a relatively modest goal (compared to other European countries, such as France or Portugal). This is because Spain's sea is characterised by a relatively deep continental shelf, mostly requiring floating turbines.

For offshore wind facilities to be developed in Spain, a few regulatory changes must first be approved by the Spanish Government.

Spain's existing regulations for the development of offshore wind facilities are from 2007 and are quite outdated. The 2007 rules require a competitive process to obtain an exclusive right to carry out research on whether enough wind exists in a sea area. This investigation requires an environmental impact assessment and a permit to use that sea or port area for research. Once the wind is deemed enough, the Spanish Government must grant the regulatory approvals (preceded by an additional environmental impact assessment for the generation project) and a final sea or port concession.

In June 2021, the Spanish Government passed a moratorium until a new set of regulations is approved. During this moratorium, no new applications to develop commercial offshore projects will be admitted. The list of legal instruments that must be passed are enumerated in the "Roadmap for the development of offshore wind and marine energy in Spain" include:

- > A new mapping of the Spanish sea to define where offshore wind facilities can be located.
- > A new process to grant grid access and connection rights.
- > A new process to grant concession rights to use the sea space for energy generation.
- > A new framework and process to grant investment support mechanisms.

The processes mentioned above are expected to be (a) competitive tenders, (b) co-ordinated into a single procedure and (c) based on economic, environmental, zoning and energy criteria.

On 28 February 2023, the Spanish Government issued its mapping of the Spanish sea (through Royal Decree 150/2023, approving the Maritime Spatial Planning). It designates 5,000 km² of sea areas as locations of high potential for offshore wind energy distributed in four sea sectors: the North-Atlantic sector (in the vicinity of the regions of Galicia and Asturias), the Easter-Balearic sector (close to Girona and Menorca), the Gibraltar strait-Sea of Alboran sector (close to Malaga, Granada and Almeria) and the Canary Islands.

The February 2023 mapping indicated that the rest of the regulatory package pending to be approved was expected "before June 2023". However, the new mapping was met with criticism from associations in the fishing and tourism sectors and environmental activists. Some of these associations have challenged Royal Decree 150/2023 before the Supreme Court.

In addition, these criticisms were picked up by minority parties supporting the Government. No additional progress has taken place since then.

On 29 May 2023, the Spanish prime minister called an early election. The election was held on 23 July 2023, resulting in a hung Parliament. Negotiations to form a government are ongoing. If by 27 November 2023 Parliament has not elected a new PM, new elections will be triggered. Any new developments are expected once a new government takes office, either this Autumn or after that.





Pending regulatory milestones before auctions can happen

Under current regulations, the development of a renewable energy generation facility in the sea would require certain processes:

- > Spanish energy law provides for the allocation of grid access and connection rights through competitive tenders (in most cases).
- > Also, Spanish law establishes that ports, internal waters, the territorial sea and the natural resources of the economic zone and the continental shelf are part of the public domain and that exclusive rights over a port or sea area can only be obtained through a public concession, which are ordinarily granted through a competitive process.
- > Finally, the existing financial support scheme for new renewable facilities (which works like a CfD with the market operator) is granted through auctions.

The 2021 Roadmap notes that all these three need to be co-ordinated and adapted to streamline and make the development of offshore facilities financially attractive.

We expect that:

- > The granting of grid access and connection rights and exclusive rights over the sea will be combined into a single process, with the financial support either granted in the same or in a subsequent phase. The regulatory authorisation and the environmental impact assessment would be processed after the competitive tender.
- > In each competitive project, the Government will define the total capacity subject to competition and the area of the projects.
- > Bids will include commitments by the sponsor in relation to benefits to be given to the surrounding communities and territories, and assessment of the socio-economic impact of the project on other activities and local employment.
- > The award will be decided by considering a plurality of factors (including environmental, socio-economic, technical and energy aspects). A dialogue phase may be included before the award decision.
- > The remuneration framework will be granted depending on variables such as initial investment (similarly to the support scheme in place between 2013 and 2020) or the price of energy (as in the current support scheme, in place since 2020).
- > Additional expected changes would include a deep simplification of the 2007 rules and an extension of the mandatory regulatory deadlines to develop a project, given the need for more time to complete an offshore facility.

Expected timeline: not before the early months of 2024

Auctions have been expected for quite some time (the first auction was bound to be called in the first quarter of 2023) and the main players are readying projects. In any case, as the regulatory package still needs to be passed, and delays keep happening, we would not expect the auctions to be called before the early months of 2024.

Public information suggests that the first auction is expected to refer to the available area around the Canary Islands (specifically, in Gran Canaria).

In any case, future developments depend on the results of the July elections.



Sweden



Current regulatory regime

An open-door system, not a tender model

Sweden has one of the longest coastlines in Europe and there are significant opportunities for energy extraction in Sweden's marine areas. The current Swedish system for offshore wind power is an open-door system, which means that operators are free to submit applications for areas to be investigated and submit applications without any previous instruction from the Swedish Government. Consequently, several stakeholders could apply for a permit to establish offshore wind projects within the same or overlapping areas. The Swedish system for offshore wind power is not based on a tender model. However, the Swedish Agency for Marine and Water Management (Sw. *Havs- och vattenmyndigheten*) prepares proposals for marine spatial plans in Sweden, which are then adopted by the Government. The marine spatial plans provide guidance for authorities and municipalities when they plan or issue permits. In February 2022, the Swedish Government adopted the first marine spatial plans, which are designed to facilitate the expansion of offshore wind power corresponding to 20-30 terawatt (TWh) hours per year.

The Swedish Government has recently initiated an investigation to improve the application process for the establishment of offshore wind power.

Different regulatory regimes apply depending on the location of the wind project

Different regulatory regimes are applicable for offshore wind power depending on whether the wind project will be located within:

- > the Swedish maritime territory (Sw. *Svenskt sjöterritorium*)
- > within the Swedish economic zone (Sw. *Svensk ekonomisk zon*)

The Swedish maritime territory includes both the internal waters (Sw. *inre vattnet*) and the territorial sea (Sw. *territorialhavet*). Sweden's maritime territory includes both private and public waters. Pursuant to the Act (1966:314) on the Continental Shelf (Sw. *lag om kontinentalsockeln*), the seabed and its subsoil in public waters and the Swedish economic zone is referred to as the continental shelf.

Offshore wind projects located within the Swedish maritime territory require a permit for environmentally hazardous activities (Sw. *miljöfarlig verksamhet*) and a permit for activities affecting water (Sw. *vattenverksamhet*) in accordance with the Swedish Environmental Code (1998:808) (Sw. *miljöbalken*). Furthermore, a permit can only be granted if the municipality where the wind project shall be established approves the application.

Offshore wind projects located within the Swedish economic zone require permission from the Swedish Government according to the Swedish Act (1992:1140) on Sweden's Exclusive Economic Zone (Sw. *lag om Sveriges ekonomiska zon*). According to the Act on the Continental Shelf, a permit is required in order to investigate the seabed and lay electrical cables for wind power installations in public waters and in the Swedish economic zone.

Lack of possibility to acquire exclusivity for the establishment of offshore wind projects

In public and private waters, disposition of the water area is a prerequisite for the examination of an application for a permit to operate in the area. For wind power activities in public waters, a consent of disposition (Sw. *rådighetsmedgivande*) from the Legal, Financial and Public Procurement Agency (Sw. *Kammarkollegiet*), as representative of the public water area, is required to obtain disposition of the water area. However, a consent of disposition for activities in public waters does not provide an exclusive right to conduct activities within the water area, nor does a permit under the Environmental Code entail an exclusive right to conduct a certain activity in an area. The Legal, Financial and Public Procurement Agency cannot issue a consent of disposition in relation to a water area within the economic zone. Furthermore, disposition is not a requirement in order to apply for a permit to conduct an activity in the economic zone. Consequently, there is currently no regulatory framework for obtaining an exclusive right to establish a wind project in the public waters or within the Swedish economic zone.



Grid connection

High voltage power lines are nearly always required to connect the offshore wind projects to the onshore electricity supply system. In order to build and operate high voltage power lines, a concession is required in accordance with the Swedish Electricity Act (1997:857) (Sw. *ellagen*). Concessions are granted by the Energy Markets Inspectorate (Sw. *Energimarknadsinspektionen*). Svenska Kraftnät, a electricity certificate government-owned enterprise, is the transmission system operator and is responsible for the transmission grid in Sweden. The current connection process consists of a queueing principle based on the time the application for connection was submitted. If the requested need for transmission capacity can be met, the first project developer in the connection queue is asked to sign an agreement of intent for connection. If the connection is then deemed feasible, the project developer is given the opportunity to connect to the transmission grid at its own expense. This means that there is a risk that the first project in the queue is not the most advanced project in relation to the permitting process or has the potential to be connected first.

Possibilities for financing

According to the Act (2011:1200) on electricity certificates (Sw. *Lag (2011:1200) om elcertifikat*), Sweden has implemented an electricity certificate system for renewable electricity production. Electricity certificates constitute a means of financial support for certain producers. For each megawatt-hour (MWh) of renewable electricity produced, the relevant producer receives an electricity from the Government. However, wind projects that will be put into operation in the future will not be entitled to electricity certificates.

Legislative initiatives

On 29 November 2022, the Swedish Agency for Marine and Water Management reported on its assignment to examine questions regarding exclusive rights for the construction of wind projects in public waters and in Sweden's economic zone. The report primarily presented two solutions to the issue of Sweden currently having no regulatory framework for obtaining an exclusive right to establish a wind project in the public waters or in the Swedish economic zone. According to the report, the issue can either be solved by: (i) implementing a system of time-limited exploration permits, during which no other party can be permitted to explore the area; or (ii) introducing a referral system through which the Government identifies and reserves areas to call for tenders for the establishment of offshore wind power.

On 1 January 2023, Svenska Kraftnät was instructed to expand the transmission grid into areas in Sweden's territorial waters where there is potential for connecting additional electricity generation facilities. Svenska Kraftnät presented two alternative processes for project developers who wish to connect offshore electricity generation: (i) a new proposed process whereby a project developer connects the offshore electricity generation to the transmission grid inside Sweden's territorial waters (in this arrangement, the cost of connection shall be partly borne by Svenska Kraftnät); and (ii) the current process pursuant to which a project developer connects offshore electricity generation to an onshore connection point shall be developed, whereby project developers sign up for a developer pool, which allows several applications to be examined at the same time.

However, the newly elected Government wants to maintain the principle that the project developer shall bear the cost of connection to the transmission grid (the cost of connection is currently entirely borne by the developer). In light of this, Svenska Kraftnät has paused the process to expand the transmission grid in Sweden's territorial waters (see (i) above) and instead focuses primarily on developing the current process (see (ii) above).

The Swedish Energy Agency (Sw. *Energimyndigheten*) has been instructed to identify suitable areas to enable an additional 90-terawatt (TWh) hours of electricity production at sea. The Swedish Agency for Marine and Water Management has produced a proposal for new marine spatial plans based on the Swedish Energy Agency's material, which is out for consultation so that all concerned can comment.

On 4 May 2023, the Swedish Government initiated a Swedish Government Official Report (Sw. *statlig utredning*) to analyse how the establishment of offshore wind power can be improved and how the application process for wind projects within the Swedish economic zone could be more efficient and transparent. The purpose is to achieve an application process that provides conditions for the increased expansion of offshore wind power in Sweden. The committee shall analyse, *inter alia*, how exclusive rights for establishment of wind projects in public waters and the economic zone can be regulated and how a referral system can be designed for areas that are particularly suitable for sea-based wind power. The official report must be submitted by 28 June 2024.



United Kingdom

United Kingdom

Overview

The UK Government has committed to decarbonising its power system by 2035 and achieving net zero by 2050. It has announced an ambitious plan to deploy up to 50 GW of offshore wind by 2030, with up to 5 GW coming from floating offshore wind. Offshore wind has been an established part of the UK energy mix for well over a decade and will continue to play a critical role in the coming decades. The UK Government considers that there is c. 78 GW of offshore wind capacity in the UK pipeline, with 60% of this pipeline being fixed bottom technology and the remaining being floating. Approximately 6.4 GW of offshore wind capacity is in construction, due to be completed by the mid-2020s and a further 7.6 GW of offshore wind capacity is finalising procurement and preparing to commence construction.

The UK's primary Government support mechanism has been through the CfD scheme enacted by the Energy Act 2013; a private law contract between each generator and the Low Carbon Contracts Company Limited (the LCCC). Since its launch, the UK has run five allocation rounds for CfDs and these will be run annually from the most recent round (AR5) in March-April 2023.

The National Grid as Great Britain's electricity system operator (the "ESO") is responsible for managing the connection of offshore wind projects to the grid. As of March 2023, 280 GW of generation projects are currently seeking to connect to the grid, an increasing number

of which are seeking to do so between mid to late 2030s (compared to around 80 GW of connected generation already on the system). Delivering this capacity in a timely manner will be key to the UK meeting its net zero ambitions.

The Crown Estate and The Crown Estate Scotland grant agreements for lease ("Afl") (ie, an option over an area of seabed for offshore wind development) to potential offshore wind developers. In January 2023, The Crown Estate signed Afls with six offshore wind projects in its fourth leasing round, totalling c. 8 GW of offshore wind (covering North Wales, Cumbria and Lancashire coasts), bringing the total awarded capacity to 41 GW. The Crown Estate has also announced the development of the floating offshore wind projects with a leasing round for the first 4 GW (to be operational between 2030 and 2035) to take place in 2023. The Crown Estate Scotland awarded rights for 27.6 GW of new capacity through the ScotWind leasing round totalling 20 Afls, of which 13 are floating wind projects – meaning Scotland now has the largest pipeline of seabed agreements for commercial-scale floating wind projects. Several Scottish projects are also considering hydrogen as a possible offtake solution due to grid constraints. Finally, the Innovation and Targeted Oil and Gas is a new seabed leasing opportunity specifically for these projects to connect to oil and gas installations and provide them with low carbon electricity. Under this scheme, in March 2023, 13 projects have been offered exclusivity agreements allowing them to commence the developments.

Notable developments in the past year

Changes to the CfD

Ahead of the most recent allocation round for the CfDs (AR5 launched in March 2023), the UK Government implemented a number of changes to the CfD (as detailed in our article [here](#)). The most significant change was to minimise the flexibility for a generator to nominate a start date to take advantage of high merchant power prices, whilst still allowing flexibility to generators who face genuine delays in achieving commercial operations. The LCCC is empowered to issue a unilateral commercial operations notice when it considers that commercial operations have commenced, thereby triggering the generator's liability to pay difference payments.

The UK Government is exploring the introduction of non-price criteria into the CfD auctions (our previous article is linked [here](#)). The three proposed models are: the "top-up" to the CfD strike price (where the auction and bidding process remain the same. Projects that were successful in the auction and scored highly on the non-price factors would receive a top-up to their strike price for a period of their CfD contract); the "bid re-ranking" (where the current CfD "bid-stack" methodology would be directly impacted by the non-price factors; and an amendment to the valuation formula) (where the valuation formula used to determine the annual budget impact of a project bidding in a CfD allocation round would be amended

such that projects scoring more highly on non-price factors would be determined to have a proportionately lower estimated budget impact (and vice versa) with the intention of allowing additional projects to come in within budget and be successfully awarded a CfD contract.





Future allocation rounds

The Government consulted on its policy for future allocation rounds (as we discussed [here](#)) and published its responses on the changes to be implemented ahead of CfD Allocation Round 6 (“AR6”) (see further details [here](#)).

Following consultation, the Government has determined that renewable electricity generators supplying directly to offshore oil and gas facilities under private wire arrangements will be ineligible for CfD payments. This change will be implemented ahead of AR6.

The Government is continuing to consider whether “hybrid” or “multi-purpose” interconnectors (MPIs), whereby an offshore wind project would connect directly to an interconnector (an MPI-OFW) instead of using separate radial connections to the onshore electricity network should be eligible to compete in CfD allocation rounds.

The Government is retaining the phasing policy for fixed bottom offshore wind projects for the time being.

The Government consulted on publishing a list of types of technology to be included within the definition of “floating offshore wind” (specifically in respect of the type of foundations that would be deployed in deep waters) which would determine eligibility under the CfD Regulations. Following concerns from respondents on how the determination of appropriate technologies would be made, the Government is not including such a list of “eligible” technologies for floating offshore wind in AR6.

Non-CfD offtake

CfD Allocation Round 4 achieved a record low strike price of £37.35 per MWh (lower than onshore wind and solar) and was a key milestone in the UK’s offshore wind journey. No offshore wind projects won contracts in the CfD Allocation Round 5 auction. Given the current environment of supply chain pressures, inflationary cost increases, interest rate rises and increasing project costs, the UK Government will need to ensure that the CfD strike price continues to support investment in offshore wind in the UK. In this context, corporate power purchase agreements are becoming more common as part of an offshore wind project’s revenue stack (though we expect that some base level of CfD coverage will remain necessary for bankability in the near future).

Electricity generator levy

One of the most notable developments in the UK energy sector in this past year was the announcement of an electricity generator levy by the UK Government in its Autumn Statement (as we discussed [here](#) and [here](#)). It has been implemented through the Finance (No 2) Act 2023. It will apply to revenues from electricity generated between 1 January 2023 and 31 March 2028 from nuclear, renewables sources, biomass and waste (while gas, oil, coal and pumped hydropower as well as revenues from storage are all excluded). The 45% levy will apply to actual revenues above a benchmark price (which will start at £75 per MWh). Corporate groups and joint ventures will be assessed as a whole, and the levy will be

administered in the same way as corporation tax in respect of self-assessment, payment dates, interest and penalties etc. The levy will not apply to revenues earned under CfDs, capacity market payments and revenues from the sale of Renewables Obligation Certificates.

Grid connection challenges

Delays in grid connection are considered one of the biggest challenges to the UK achieving its ambitions for net zero power by 2035. The ESO is actively seeking to address this issue through a number of short-term and longer-term measures as we explain in our article [here](#).

The ESO completed the Transmission Entry Capacity (“TEC”) amnesty in April 2023 which allowed generation developers with connection agreements listed on the TEC register to confirm their willingness to terminate their agreement and leave the TEC queue at minimal or no cost, or reduce their TEC. The ESO announced that 8.2 GW of projects applied to terminate their contracts.

The ESO is proposing to develop new contractual terms for connection agreements to manage the queue more efficiently and to allow projects that are progressing to connect earlier and those that are not to leave the queue.

The ESO is enabling the 95 GW of battery and other energy storage systems (“BESS”) in the pipeline to connect to the grid more quickly under the agreement and that for an interim period, such systems may need to reduce their output without getting paid to do so.

Another step by the ESO has been to update the modelling assumptions in the calculation of the project connection dates to determine new Construction Planning Assumptions (“CPAs”). Similarly, as BESS projects use grid capacity when connected to the grid and when releasing it back onto the grid, the ESO has changed the calculation of this dual aspect impact on the system. It is now working with the developers to review existing contracted connections.

The ESO has launched a broader reform of the connections process which would allow projects to accelerate connection dates by submitting planning consents and meeting other agreed criteria.

The ESO is considering a complete system review of the Transmission Reinforcement Works for all contracted offers with a connection date after 1 January 2026 which would likely result in certain contracted parties’ connection dates being moved forward.

A fundamental element of the British Energy Security Strategy published in April 2022 is the Holistic Network Design (“HND”). The HND represents a centralised and strategic approach to network planning seeking to integrate connecting offshore wind projects to shore with the capability to transport electricity around Great Britain. It provides a high-level view of the required onshore and offshore electricity transmission network. Including connection recommendations for 23 GW of offshore wind and the associated transmission network infrastructure.

Transmission infrastructure

The Electricity Network Commissioner, Nick Winser was tasked in 2022 with advising the UK Government on hastening the delivery of transmission infrastructure in Great Britain. Winser delivered his response in June 2023. As we explain in our article [here](#), this includes technical and commercial recommendations ranging from the development of a Strategic Spatial Energy Plan to map out the demand and supply of electricity across Great Britain over a number of years to supply chain reforms and route design standardisation. On the legal and regulatory side, recommendations address the need for a centralised and strategic approach in the regulatory approval process, the need to balance competition for onshore transmission networks with the requirement for certainty on the pipeline of projects and a reduction in the overall planning process so as to be completed in a maximum period of twelve months.

Reforms and updates for Celtic Sea floating offshore wind programme

The Crown Estate has identified four project development areas (“PDAs”) in the Celtic Sea, with projects in the PDAs aiming to deliver up to 4 GW of electricity. The Crown Estate is proposing to revise the assessment criteria for bidders participating in this leasing round (“LR5”):

In the pre-qualification stage, developers wishing to participate in each leasing round must meet minimum criteria on a pass/fail basis. New technical and financial criteria have been included in LR5 including a requirement to demonstrate transferable experience in offshore construction and offshore development project management, a requirement to demonstrate financial strength and requirements in respect of health and safety.

The bidders who meet the minimum criteria move into a first round tender. The new requirements at this stage including demonstration by the bidders of access to ports as well as social-value related requirements in respect of local employment, environmental and community benefits. Each bidder who successfully passes this tender round will progress to a second round tender in which it is able to bid on a maximum of two PDAs through an ascending clock auction.

Successful bidders will enter into Afls for a maximum period of 10 years and it is expected that The Crown Estate will update the form of such agreement prior to LR5.

See our article [here](#) for further detail.



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