Industry Position

Key elements for offshore wind auction design

Today Europe has 32 GW of offshore wind power capacity. Governments have set targets for more than 150 GW by 2030. On 24 April 2023 nine countries signed the Ostend Declaration committing to build 120 GW by 2030 in the North Sea, the Irish and Celtic Seas.[1] Last year the countries around the Baltic Sea signed the Marienborg Declaration committing to deploy 19.6 GW by 2030[2]. And countries bordering the Atlantic, Mediterranean and Black Seas have also set targets for offshore wind capacity by 2030 as well.

We welcome this ambition and will do all that we can as an industry to deliver them. To that end, National Governments and the EU must rapidly implement the measures we need to drive accelerated offshore wind deployment. Europe must go from installing 3 GW/year today to at least 20 GW/year by the end of this decade. Dedicated policies to support scaling up the offshore wind supply chain are vital in this regard.

This paper outlines the key regulatory options and market incentives that will allow the offshore wind sector to scale up while maximising value for Governments and societies.

1. *EU Governments must enshrine their offshore wind ambitions in their national plans, indicate project timelines up to 2035 at the earliest, and tender out large volumes as early as possible.*
2. *The centralised tender approach should be the primary vehicle in meeting national offshore wind targets. The open-door approach[3] as an additional route is particularly suited for the development of PtX.*
3. *Governments should simplify and speed up permitting by promptly applying the Renewable Energy Directive's permitting provisions.*
4. *Governments can de-risk large offshore wind projects by offering Contracts for Difference, which provide a long-term stabilisation of revenues and protection for consumers.*
5. *Governments can also de-risk large merchant offshore wind projects by sharing development risks and unlocking the PPA market.*
6. *Governments should award projects based on their value to society and to the supply chain, rather than awarding merchant projects based on the highest financial offer.*
7. *Governments should avoid negative bidding which brings additional costs that need to be shouldered by consumers and/or the supply chain – at the time when it needs to ramp up significantly.*

[1] Belgium (6 GW), Denmark (5.3 GW), France (2.1 GW), Germany (26.4 GW), Ireland (4.5 GW), Luxembourg, the Netherlands (21 GW), Norway (3 GW), and UK (50 GW).
[2] Denmark (6.3 GW), Germany (3.8 GW), Estonia (1 GW), Latvia (0.4 GW), Lithuania (1.4 GW), Poland (5.9 GW), Finland (0.1 GW), Sweden (0.7 GW).
[3] The open-door approach – or developer-led approach - allows the developer to determine suitable locations, after which they can submit a request directly to the authority.

EU Governments must enshrine their offshore wind ambitions in their National Energy and Climate Plans, indicate project timelines up to 2035 at the earliest, and tender out larger volumes a soon as possible

The 2019 National Energy and Climate Plans (NECPs) envisaged just 71 GW of offshore wind in the EU by 2030. In the past three years Government ambitions have upgraded that figure to more than 100 GW in the EU alone. The UK has gone from an ambition of 30 GW to 50 GW in the same period. Additionally, EU Member States have also submitted Maritime Spatial Plans (MSP) as required by the MSP Directive (2014/89/EU). Altogether these plans have allocated more than 220 GW of offshore wind capacity across 17 Member States[4], enough to reach Europe's latest 2030 ambitions. **EU and non-EU Governments must work together and share best practices in light of these offshore wind ambitions, and in coordination with the industry**. Knowledge exchange and cooperation among countries can further drive this ambition and accelerate deployment of offshore wind projects.

Securing space is just the first step. **Countries should now aim to translate all MSPs and ambitions into national law. For EU countries the NECPs due this year will be key. They will have to define their energy mix up to 2030. But Governments should go one step further and provide clear volumes and auction dates for offshore wind auctions up to 2035.** Extending the planning horizon until 2035 or even further will give greater certainty to investors and encourage long-term investments in the supply chain.

Governments should then tender out large volumes and get them in the market as early as possible. This would facilitate project planning and give the necessary signals to the supply chain to invest in production sites and infrastructural upgrades. For example, Germany just closed its largest auction for a total of 7 GW, and Denmark committed to tender out at least 6 GW of offshore wind projects in 2023. This helps to facilitate long-term agreements between supply chain actors and can strengthen cooperation to optimise deployment schedules, existing infrastructure, and the best construction strategy across neighbouring projects.

Tenders should be sufficiently sized, to at least 1 GW, and should be more frequent. Countries should also set out mechanisms to recover the volume left over from undersubscribed tenders in a timely manner.

All this will also help TSOs to plan for the future grid, which needs project visibility well beyond 2035. EU Member States and TSOs are now drafting the Offshore Network Development Plans (ONDP) due in January 2024. These will be based on non-binding commitments, as per the TEN-E Regulation. The lack of binding commitments may lead to under/over-planning significant investments. EU and national frameworks should be better coordinated and underpinned by legally binding plans. And Governments should clarify **roles and responsibilities for grid infrastructure development, for both radial and hybrid connections, as soon as possible**. After roles have been defined, cooperation between Governments, TSOs, and other relevant stakeholders can help fast-track grid development and avoid bottlenecks in offshore wind deployment.

Finally, all Member States will have to revise their MSPs before 2030. They will have to confirm existing areas and start screening others for the post-2030 deployment phase. This should be done in parallel with defining Maritime Protected Areas and Restoration Areas. To this end, **Member States should aim to explore co-location and multi-use options** to solve spatial conflicts and to increase the functionality of the sea. Maritime planning should boost synergies across sea-based activities, rather than lead to a patchwork of single-use areas.

[4] "*Offshore Wind in EU maritime Spatial Plans*", WindEurope (September 2022)

The centralised tender approach should be the primary vehicle in meeting national offshore wind targets. The open-door approach as an additional route is particularly suited for the development of PtX.

Site leasing today is carried out either through a centralised or through a developer-led approach. The first requires authorities to open dedicated areas for offshore wind development, where developers can submit applications or bids. The developer-led approach - or open-door approach - allows the developer to determine suitable locations, after which they can submit a request directly to the authority.

A centralised and Government-driven approach helps to ensure that offshore wind projects are developed in a coordinated and strategic manner, with the Government playing a key role in site selection, planning, and decision-making. It streamlines the process for offshore wind deployment, can help to reduce costs, and makes it easier for developers to bid.

Based on these advantages, **a centralised and project-specific approach has been suitable so far in many markets, and should be the default approach for mature markets looking to meet their national offshore wind targets.** Centralised auctions also help to maximise the societal benefits of non-price criteria, such as biodiversity protection, supply chain development and energy system integration. But authorities need to be adequately staffed, deadlines and permitting procedures suitably defined and streamlined, and auction regimes sufficiently transparent.

Sealed-bid auctions[5], the model most used today, have so far been successful in supporting cost-reflective bids. And they are well suited to include non-price criteria in the awarding process. '**Dynamic descending clock' auctions**[6] also provide information transparency and a level playing field in the bid awarding process, but they are most suited for price-only tenders.

Given the need to accelerate offshore wind deployment and the limited capacity of authorities and TSOs, the open-door regime could be applied in parallel with Government centralised tenders. This two-track approach will ensure a speedy and cost-effective integration of offshore wind. The Government tender pipeline could guarantee a minimum required grid-connected production capacity to achieve general electrification and to drive targeted innovation on specific policy-objectives. And the market-driven open-door approach could allow merchant offshore wind projects linked directly to large-scale consumption units and for renewable power-to-X production. This would allow to work around potential grid bottlenecks and avoid TSO involvement in purely commercial and dynamic market-driven decisions. For open-door projects, national **Maritime Spatial Plans should predesignate relevant seabed areas in 'development zones' reserved for open-door applications.**

Country-specific geography and priorities might affect how this two tracks system could work in practice. With this in mind, Governments should lay out clear guidelines about area designation, site exclusivity, permitting, and the grid connection regime. They should also ensure the two parallel systems do not slow down or compete with one another, e.g., for limited supply chain availabilities. A level playing field between central projects and open-door projects needs to be established. **This will offer clarity and certainty to industry and investors, allowing projects to proceed faster and more cheaply.**

[5] A sealed-bid auction is an auction where all bids are collected in a time window.
[6] Dynamic descending clock auctions use multiple rounds where the strike price for a project starts high and then decreases over time until the lowest possible is offered.

Governments should also allow overplanting tendered sites, ensuring a fixed capacity to be grid-connected by the TSO through national tenders and allowing overplanted capacity on the same site for merchant grid connection or production of hydrogen and green fuels. This will be the case in the next Danish tenders.

Governments should simplify and speed up permitting by promptly applying the Renewable Energy Directive's permitting provisions.

All Member States must create a one-stop shop for permitting as soon as possible, as mandated by EU legislation. **A single contact point in the administration coordinating all relevant authorities will help to streamline the process, and make it fairer, more transparent, and more efficient.** Governments will have to adequately plan for enough human and digital resources to effectively process the number of applications. It is vital that these permitting teams are fully resourced and have marine knowledge and expertise to work off of the lessons learnt from past projects and other established markets.

In the case of centralised auctions, Governments can also help to reduce entry barriers to bidders by reserving the grid connection capacity and providing relevant resource assessments and pre-feasibility. This would cut the predevelopment cost of projects. It will also mean respecting the new permitting deadline, which is now 3 years for new offshore wind projects, including the grid connection permit and the evaluation of the Environmental Impact Assessment.

The Renewable Energy Directive's "*acceleration areas*" are less relevant for offshore wind. The MSP Directive has been shown to work well already in de-risking and speeding up projects. It requires all plans to undergo a Strategic Environmental Assessment, which is a macro-environmental, economic, and social assessment of the plan encompassing all activities at sea. Each wind farm will have to undergo a site-specific Environmental Impact Assessment, which increases the chance of securing a permit.

The goal is to have projects delivered successfully and with a reduced permitting risk. Improvements and efficiencies can be built up over the process. But this must not lead to shortcuts and lower quality. For example, surveys can be carried out together with a strong pipeline of projects. Scientific research can support regulators in dealing with the knowledge gaps, which still represent a major bottleneck. Sound evidence on environmental impacts from real life monitoring or research programmes would allow regulators to take a swift turn from applying the precautionary principle to propose mitigation measures that are cost-effective and tailored to site-specific conditions.

The population-based approach to species protection set out in EU legislation should also be implemented. This is crucial to helping us find the best mitigation and compensation measures for large offshore wind projects. In fact, the population approach is essential when considering the cumulative impacts of multiple offshore wind projects and allowing for off-site compensation measures - which might be most effective and could offer opportunities for collaboration between the offshore wind industry and environmental stakeholders. And **Governments must now treat offshore wind as being in the 'overriding public interest'**. This will help to deal with the legal challenges that often hold up the build-out of renewables. The new EU rules are here to strike a good working balance between the deployment of renewables and other societal interests.

De-risking investments and maximising the value of offshore wind projects

Building and operating an offshore wind farm does not come without risks. In recent months, geopolitics, inflation, and wide-ranging interventions in the electricity markets have made price negotiations and credit risk more of a concern for investors and project developers. On top of this, the scarce pipeline of projects in the past few years has prevented enough funds from being channelled into the offshore wind supply chain, which now has to quickly upscale its capacity and services.

To deliver Europe's ambitions, **Governments must help decrease the investment risk and provide adequate frameworks for sharing revenues of operating assets, to channel funding to the supply chain, and to maximise benefits for society.**

> ***Governments can de-risk large offshore wind projects by offering Contracts for Difference, which provides a long-term stabilisation of revenues and protection for consumers.***

Investors need long term revenue visibility. The cost of debt (interest rates) and revenue certainty are the most important elements to consider in reducing the cost of capital. Greater revenue certainty allows banks to lend money more cheaply or lend a higher proportion of total required capital.

2-sided CfDs have been the most successful instrument in closing the financial gap and lowering the risk of investment in renewable energy. The proposed EU market design reform recognises this and calls on Member States to use CfDs to support renewable energy projects.

A CfD provides a guaranteed price for the electricity generated, reducing the risk for investors, and increasing the stability of the revenue stream. It creates incentives for cost reductions and innovation. Importantly, revenue stabilisation helps to mitigate the impact of lower capture prices (the so-called cannibalisation effect) in a scenario with very high shares of renewables, which is what Europe is working towards.

As there is usually a gap of a few years between the award of the bid and the actual installation, fluctuations in commodity prices may occur. **The strike price of the 2-sided CfD needs to account for indexation, as well as inflation or changes in raw material prices prior to installation**. This is particularly relevant as shown by last year's spike in energy, raw material, and transportation prices, and may lead to big changes between the time of contract award and the actual delivery. Afterwards during operations, the strike price should also be inflated with the relevant Consumer Price Index to boost investor certainty by reducing risks related to inflation.

The 2-sided CfD is not a subsidy. Over the lifetime of a wind farm, a Government could well break even or even make a profit – not least as the costs of wind energy continue to fall and developers bid into the auction at lower strike prices. **And in the past year, the surge of electricity prices has shown CfDs to be very effective in protecting Governments and consumers by avoiding windfall profits due to extremely high gas prices.**

While CfDs have played and will continue to play a fundamental role in making sure projects are built and that the energy transition takes place, merchant projects should also be allowed – in the case of both centralised auctions and open-door projects. Investors must be able to secure a business case with PPAs and/or take the full merchant risk.

Governments can de-risk large merchant offshore wind projects by sharing development risks and unlocking the PPA market.

Offshore wind today is cost-competitive but still needs support from Governments to manage and share out the project risk. In fact, **merchant projects, or zero-bids in offshore wind auctions are possible in a specific set of circumstances in markets where offshore wind is mature not least where Governments take on and manage a share of the project risk.** Projects with favourable conditions, e.g., with a good wind resource, close to shore, and with port and supply chain availability, can be cost-effective and economically viable without Government-backed contracts.

For example, zero-subsidy auctions have worked in the Netherlands partly because the Dutch Government is willing to share development risks by providing the winner with all the necessary permits to build and operate the wind farms. **This gives projects extra speed and certainty**, allowing the industry to take greater risks on the financing side. The Netherlands also have a clear CO_2 pricing policy and electrification plans, which also provide clarity on the future development of electricity prices.

To this end, **PPAs will play a vital role in hedging the investment risk of merchant projects, and consequently in driving down financing costs**. They also have an important role to play in the energy transition and in the renewables-based decarbonisation of energy-intensive industries. **Given all this, Governments considering zero-subsidy bids should ensure that their PPA market is well-established and functioning effectively.**

Governments should award projects based on their value to society and to the supply chain, rather than awarding merchant projects based on the highest financial offer.

Merchant projects can be awarded based on non-price criteria and/or a financial offer for the concession payment, so-called negative bidding.

Tenders evaluated under non-price criteria help to encourage a high degree of innovation on policy-objectives other than price.

Merchant projects can maximise the implementation of non-price criteria. These projects do not fall under the provisions of the EU's State Aid Guidelines, which limit the weight of non-price criteria to 30% of the overall scoring. This is the case in tenders offering CfD. But merchant projects can go beyond and can allocate most weight to specific non-price criteria, making them the decisive factors.

The Netherlands, in their last zero-subsidy tenders for Hollandse Kust West VI and VII, opted for a combination of both non-price criteria and financial offer: 100 (out of 200) points were awarded for Ecological Innovation (HKW site VI) and System Integration (HKW site VII), while 20 points were given to the financial offer, a concession payment capped to €50m. These two auctions were well subscribed and boosted competition and innovation among the participants. The financial offer was capped, and the non-price criteria were the deciding factors.

When non-price criteria are the deciding factors, the scoring mechanisms have to be clearly defined, with as little ambiguity as possible. A quick and objective evaluation process can be achieved by making the assessment criteria more quantifiable. But most importantly, **non-price criteria must be designed to avoid ties among applications.** The benefits of making the industry compete to provide the best solutions for society, environment, energy system integration, and supply chain would be completely redundant if this isn't addressed.

In contrast, price-only tenders, based on financial offers encourage bidders to exhaust any headroom in the business case by maximising cost-out on CAPEX and OPEX, preventing any investment in the supply chain or on any other valuable element to society.

Rewarding projects based on the highest concession payment in auctions, rather than non-price criteria, will undermine the stability and growth of the offshore wind supply chain and must be avoided.

> ***Governments should avoid negative bidding which brings additional costs that need to be shouldered by consumers and/or the supply chain – at the time when it needs to ramp up significantly.***

When Governments prioritise the highest concession payment, it creates an intense cost pressure that leads to higher costs. Eventually, these imposed additional costs will either need to be passed onto consumers in the form of higher energy bills or absorbed by the supply chain – affecting its long-term viability.

This is exacerbated when concession payments are uncapped and asked upfront. It imposes immediate costs on developers during the period of greatest risk - wind farm construction.

Some Governments in mature markets and markets with clear export strategies may still look for models to share revenue and to make profit out of offshore wind projects. Any such approach needs to be developed together with the industry to ensure the solutions do not slow the delivery of deployment targets, do not undermine the development of the supply chain, and do not bring extra burdens to consumers. For example, concession payments could be based on annual settlements per MW or a percentage of revenue sharing over a certain price level (€/MWh delivered), rather than uncapped upfront payments.

In this context Governments should remember that CfDs can also bring revenue, particularly when electricity prices are high – while at the same time protecting consumers and stabilising revenues for developers. Regardless of the model, Governments should consider reinvesting lease round fees and other concession payments into supply chain build out.

Governments must also bear in mind that with more volumes offered on the market, the willingness to pay high amounts for winning projects or to award seabed leases will decrease, when other countries can offer better financing or development conditions. In this situation, price-based tenders could be undersubscribed – as was the case in Lithuania's first offshore wind tender.

The European Union has now realised that offshore wind is a strategic net zero industry and that expanding its supply chain is a priority – hence the inclusion of wind in the scope of the Net Zero Industry Act and the State Aid Temporary Crisis Transition Framework. National Governments need to understand this too, and should avoid policies that exert unnecessary pressure on the supply chain. High concession payments encourage developers to primarily focus on cutting costs, leaving fewer resources available to invest in a robust and sustainable supply chain.

Instead, **offshore wind auction criteria should impose specific tools to support the expansion of the supply chain**. This could include requirements to ensure project delivery, rewarding supply chain expansion, rewarding early contractual strategies (e.g., allowing upfront preselection of the main suppliers for port services, turbine, and foundations as part of the bid offer), standardising floating foundation design for mass production, rewarding alternative methods to help expand infrastructure and standardising logistical models.